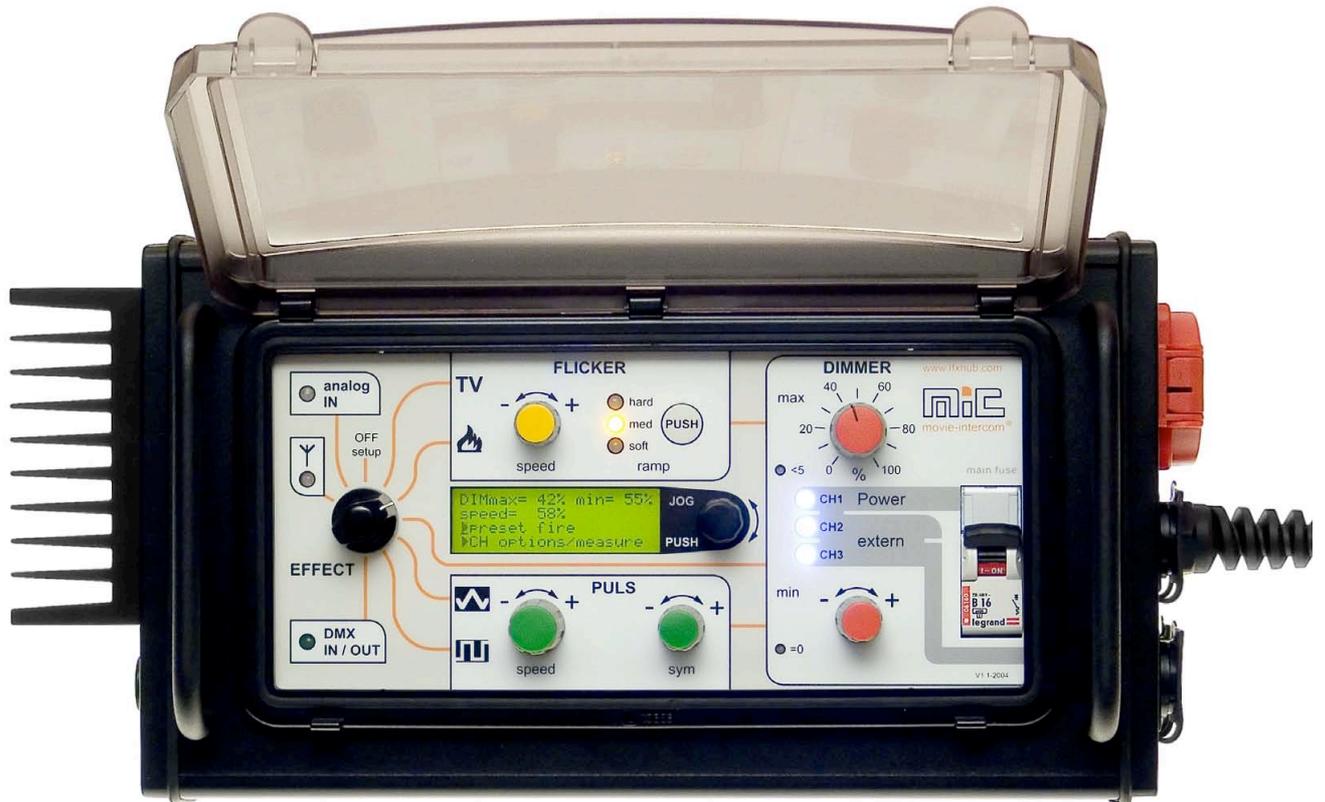


user manual

LFXHub®



LightingFX Tools
for professional filmmakers

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edition 2008-V9e

This user manual is valid for the LFXHub from
version V1.3-2007 if the latest software is installed
(the version number can be found on the control panel in
the right hand corner)

download the latest user manual:

<http://www.movie-inter.com/en/support/downloads/index.html>

This user manual is also available in German language

<http://www.movie-inter.com/de/support/downloads/index.html>

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1. safety first

please read me first

Please read this user manual before operation !

An LFXHub with the order code lfxhs (Schuko version) or lfxhc (CEE version) must be operated at a non-public power network **only** which provide 220 to 240 volts alternating current at 50 hertz!



An LFXHub with the order code lfxhu (US version) must be operated at a non-public power network **only** which provide 115 volts alternating current at 60 hertz!

Please check the operation voltage of the LFXHub **prior usage**. The operation voltage is shown on the label located at the bottom of the LFXHub.

Never connect **HMI**s or **HQI**s at the power output of the LFXHub!
Non-observance might destroy the HMI/HQI lighting equipment!



Operation is **allowed** for **tungsten lighting equipment ONLY** when connected to the internal dimmer pack of the LFXHub or to any other external dimmer pack!

Tungsten equipment using an internal dimmer device inline or using any other electronic control device must not be operated with the LFXHub!

Never connect the LFXHub to dimmed power networks!

You must inform your local fire department before you create artificial fire lighting effects using the LFXHub!



Do NOT operate the LFXHub in extremely warm and/or wet environments!
Maximum operation temperature is -20°C to +70°C (-4°F to 158°F).

The LFXHub might become hot during operation. The temperature of the housing might exceed 40°C (104°F). Please keep away the LFXHub from inflammable materials. Maintain a distance of at least 30 cm (12 inch) all around to inflammable material. Please make sure the environment of operation provides a sufficient cool air flow. Do not touch the housing before you are sure it will not burn your body.



Before a bulb of a connected lamp will be **changed make sure the LFXHub is unplugged** from the power network **and make sure the lamp is disconnected from the LFXHub!**



Voltage might be present when main fuse is turned off!

If the unit is damaged do not use the LFXHub! Check the LFXHub for damages prior operation.

Please keep the transparent lid closed when you use the unit in wet environment. Lock the lid with audible click using your thumbs on both



In case of an overload the internal main fuse will be triggered, the LCD turns off. Reduce the load and turn on the main fuse by pushing the lever in the position "I-ON".

Do not lead the power cable close to cables used by the sound department. The dimmed power signal of the LFXHub might interfere with the sound signals and may result in undesired noises for the recorded sound.



2. quick start

a

LFXHub connect to 220...240VAC/50Hz **or** 115 VAC/60 Hz

 check label on bottom for operation voltage



b

connect lamp + turn it on!



for tungsten lighting ONLY! 

| 1 | 2 | 3 |
|--|--|---|
| <p>preselect a category with the rotaray switch</p> <ul style="list-style-type: none"> ➔ FLICKER TV/Fire for flickering signals, e.g. fire, welding ➔ PULS triangle/rectangle for periodically signals, e.g. flasher, neon signs ➔ stand-alone dimmer (rotary switch in horizontal position) | <p>keep generated lighting effect or change preset with the Jogshuttle:</p> <ul style="list-style-type: none"> ➔ turn JOG > move CURSOR to "preset"  ...is flashing ➔ push JOG > preset list appears ➔ choose PRESET with same method | <p>adjust the brightness level with the upper red potentiometer "DIMMER max."</p> <p>eventually increase or decrease the lower brightness with "DIMMER min."</p> |



3. function overview

With the LFXHub you can...

- ... generate realistic looking lighting effects of ...
 - a TV set, a movie projector,
 - fire, candle, torch, welding, short-circuit,
 - a starting fluorescent tube,
 - flasher, neon lights, strobe lights
- ...use conventional film lighting equipment or standard bulbs (household type) with a maximum output power of 3.6 kW (UK version 220...240VAC) or 1.5 kW (US version 115 VAC) connected to the power output of the LFXHub.
- ...extend the output power using analog and/or DMX dimmer packs.
- ...control certain KinoFlo fixtures using the optional KinoFlo control cable.
- ...easily generate lighting effects using the twelve stored precision presets. All lighting effects can be individually changed. All stored "flicker curves" provide a resolution of 24/25 samples per second.
- ...adaptate the flicker curve to the power of the connected bulb. So the inertia of the filament can be adapted to the flicker curve with the new "ramp"-function. Or use "ramp" to choose the desired characteristic of a fire effect.
- ...measure and calibrate the upper and lower brightness limits. A lighting effect can be "frozen" > easy set-up of exposure limits.
- ...reproduce a generated lighting effect. All settings are displayed on the LCD.
- ...easily create mutli channel ligthing FX with flickering shadows when additional LFXHubs or dimmer packs are connected. The output channels CH2 and CH3 can be individually configured synchronous, delayed or inverted.
- ...add software to the LFXHub (requires optional cable) to install additional functions without shipping the LFXHub.



Extended connectivity and functions when used with optional accessories

The LFXHub provides several interfaces -inputs and outputs- to extend the functionality.

Each connected LFX tool of movie-intercom is automatically identified by the LFXHub. The suitable settings for the connected unit will be configured by the LFXHub without need of manual settings by the user.

- **three analog output channels** control external analog dimmer packs applying 0...10 VDC (SL10 Industriestandard) control voltage or simply other LFXHubs. Different signals at these output channels enable extraordinary 3D LightingFX.
- input for connection of the **Lighting sensor** or **Power sensor** > automatically synchronize a lighting effect of a practical with film lighting, activated ba an actor.
- The **external DMX-TX module** controls dimmer packs or dimmer-shutter using the DMX-512 protocol.
- The external optional **radio module** provides wireless controlable features. (currently in development)
- The external **remote (cable) dimmer** connected at the analog input replaces the internal dimmer poti and makes it possible to dim each effect from a place where ever you want.
- The external **trigger module** connected at the analog input enables the creation of **lightning effects** or flash effects (explosions, photo flash) when combined with DMX controlled dimmer-shutters using one or more HMIs up to 18 kW.
- control many **KinoFlo, Softlights, Photon Beard and other** fixtures with a dimming range of 5-100%.
- control **standard fluoros** when used with ECGs.

sync praticals
with lighting

DMX-512



3. basic functions (contd.)

In order to generate natural looking lighting FX there are additional gels for the fixtures required.

proposal for basic gels

| EFFECT | basic gel recommended | gel number |
|---------------------------|-----------------------|------------|
| Flicker TV | 1/1 CTB + 1/2 WD | 201 + 250 |
| Flicker fire | 1/1 CTO + 1/2 WD | 204 + 250 |
| Puls triangle / rectangle | arbitrary | |

**for your own safety: do not open the LFXHub!
RISC of electric shock! DANGER!**



symbols in this handbook

Safe time and read this manual!

Create more efficient lighting effects with the LFXHub.



CAUTION! please read this!



basic knowledge



application example

different versions of the LFXHub



Schuko, NEMA (US), CEE (UK)

Please read the safety regulations first on page 4!

included in delivery

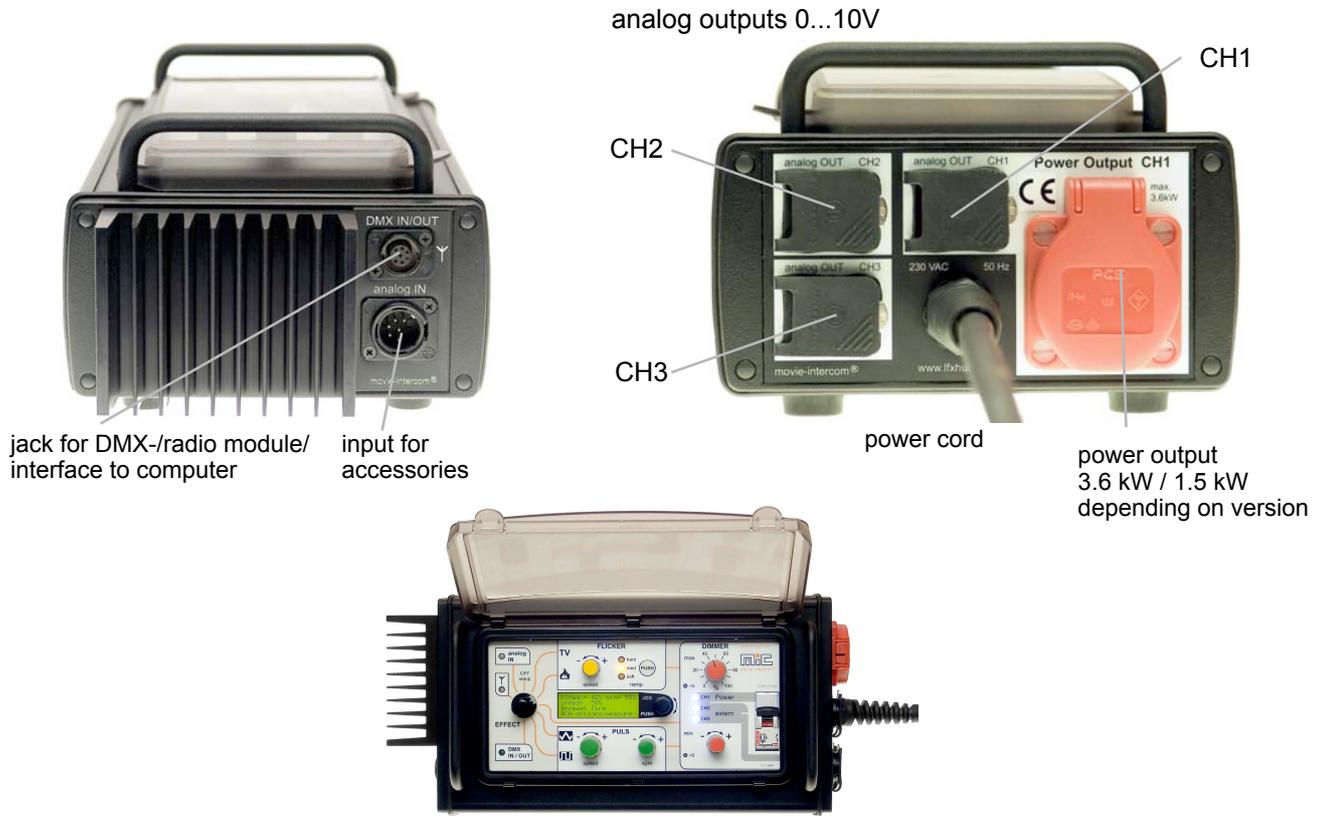
- LFXHub
- user manual
- Quick set-up cards

optional accessories

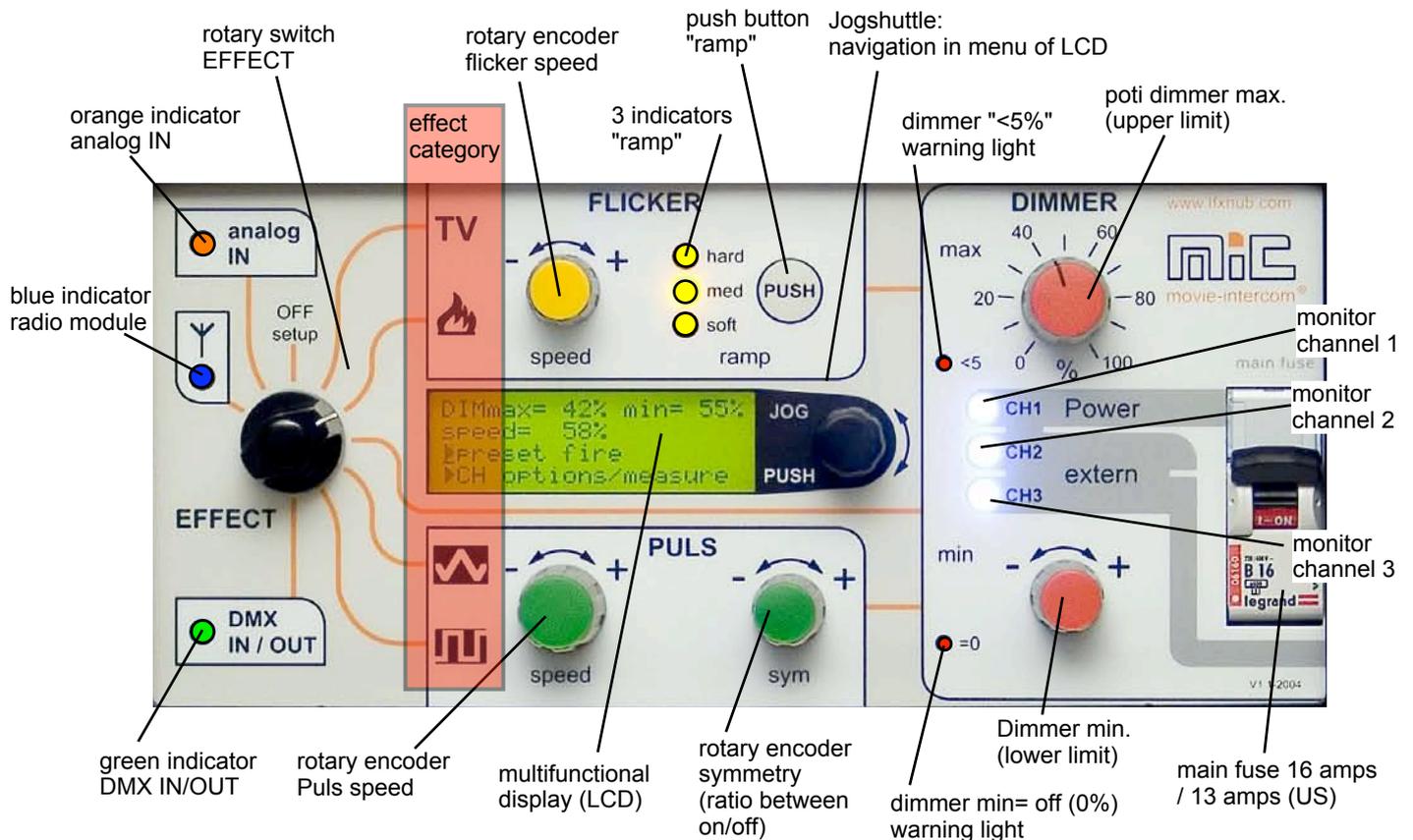
- **cable remote dimmer** (*order code: crdi*) provides dimming (DIMMER max) from remote places, connection at "analog IN", the remote dimmer is extendable with the universal cable order code: crdi
- external **DMX-TX module** (*order code: dmxt*), controls DMX-512 devices order code: dmxt
- **KinoFlo control cable** (*order code: kflo*) provides plug & play control of KinoFlo's DivaLite, ParaBeam and ParaZip fixtures order code: kflo
- **LightingSensor** (*order code: lise*), **optical detection** > synchronize practicals with film lighting using the LFXHub as power activator order code: lise
- **PowerSensor** (*order code: poses* with schuko connectors 220...240 VAC, *order code: poseb* for UK version with BS1363 connectors or *order code: poseu* for US version 115 VAC), **electrical detection of a practical** when plugged inline > synchronize practicals with film lighting using the LFXHub as power activator order code: poses, poseb, poseu
- **LightningFX trigger module** (*order code: lix*) triggers a sequence of **lightning effects** of a thunderstorm, flash effects of explosions, photo flash effects using the LFXHub as a control unit for DMX controlled dimmer-shutters combined with one or more HMIs up to 18 kW. order code: lixt
- **universal cable** (*order code: unic*), links either two LFXHubs with each other or is extension cable for the cable remote dimmer, trigger module, KinoFlo control cable, Lighting sensor or Power sensor. order code: unic
- waterproof **case** for LightingFX Tools order code: p155

4. controls, indicators and interfaces of the LFXHub

inputs, outputs / interfaces



controls and indicators

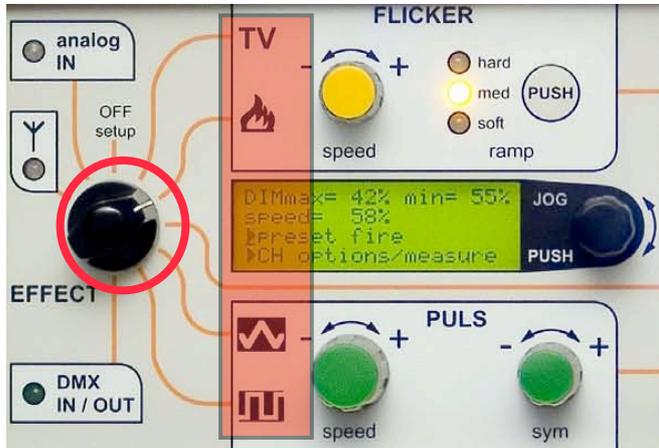


5. function of the jogshuttle / navigation in the multifunctional display (LCD)

generate a lighting effect with the flicker- or puls generator



1. use the rotary switch "EFFECT" to select one of the generator categories



| category | generator | signal out |
|-----------|-----------|--|
| TV | FLICKER | generates flickering brightness alternations |
| Fire | | |
| triangle | PULS | generates periodically brightness alternations |
| rectangle | | |

Each generator module contains three non erasable stored presets. Depending on the position of "EFFECT" the multifunction display (LCD) shows the relevant parameters of the effect mode.

Functions of the other positions of "EFFECT" will be explained in other chapters.

- The rotary switch points leads to an effect generator module via the red line of the control panel. "Puls triangle" is selected in the example above, this means only the green rotary encoders are relevant now.
- Basic functions can be used without the LCD. Use "speed" and "sym" to adjust the signal.
- The LCD shows the digital values of "DIMMER max", "DIMMER min", "speed" and eventually "sym(-metry) in a range from 0...100%. Each value changes in realtime when a rotary encoder will be moved.
- If the LFXHub is turned on the recently used parameters are shown on LCD and used promptly even though the LFXHub is unplugged from power for 27 years.



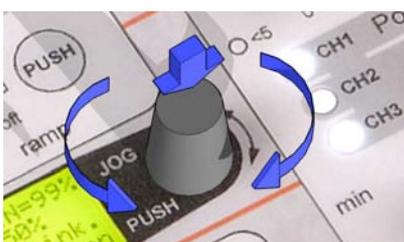
2. selecting extended functions by navigation with the jogshuttle in the menu

Within the LCD the jogshuttle can select presets, can configure output channels and can retrieve the measurement feature.

Turning the jogshuttle moves the cursor within a menu level to a selection. The position is indicated by a flashing cursor.

| | | |
|-----------------------|-------------------|--|
| a selection can be... | a menu point >> | jump to one menu level lower |
| or | selection point ● | selects one of the selectable points, non-selected points remain blank > turn/push JOG |
| or | "back" << | jump to menu level higher |

PUSH the jogshuttle to execute an action



example :

```
DIMmax= 75% min= 0%
speed= 50%
»preset: feat. film
»measure/CH options
```

push JOG →

```
my recent setting
● feature film
news
video clip <<
```

when << is not visible, you are in the top level of the menu

5. function of the jogshuttle / navigation in the multifunctional display (contd.)

The structure of the menu is for the categories flicker TV, flicker fire as well as Puls -triangle, -rectangle are nearly identically.



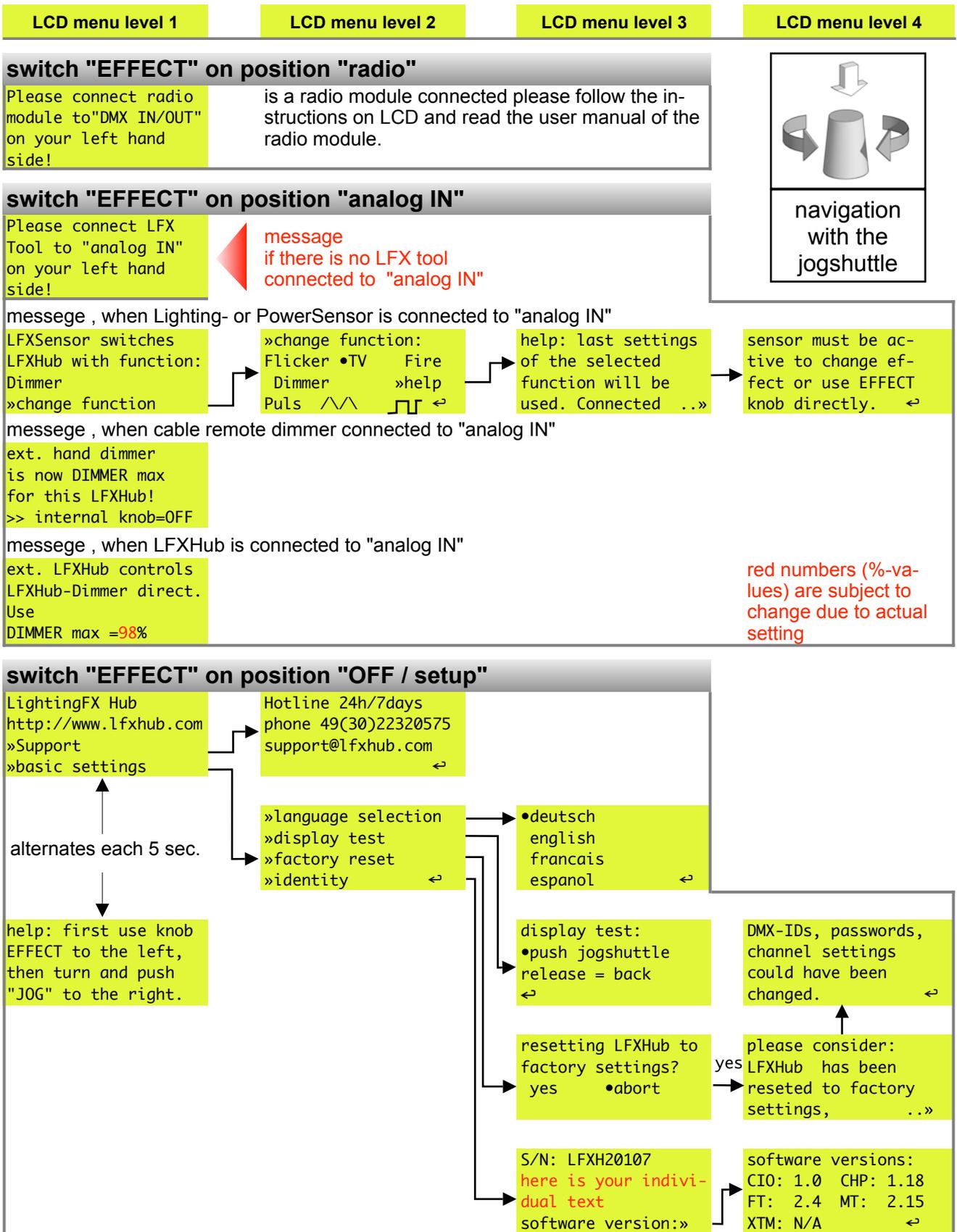
hint

The designation "my recent setting" within the preset list automatically stores the recent used settings of a changed preset.

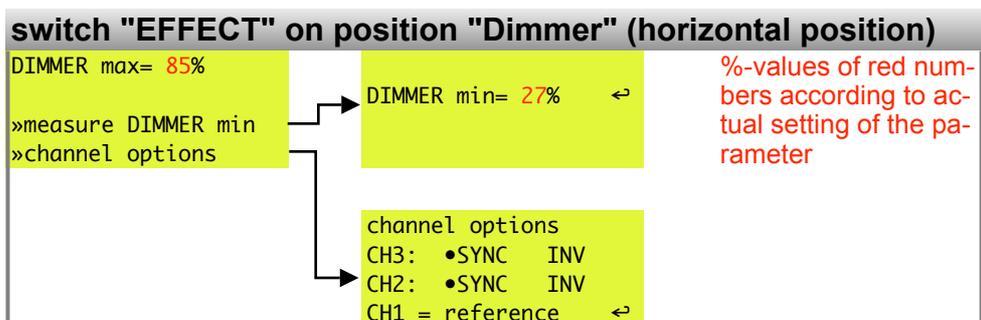
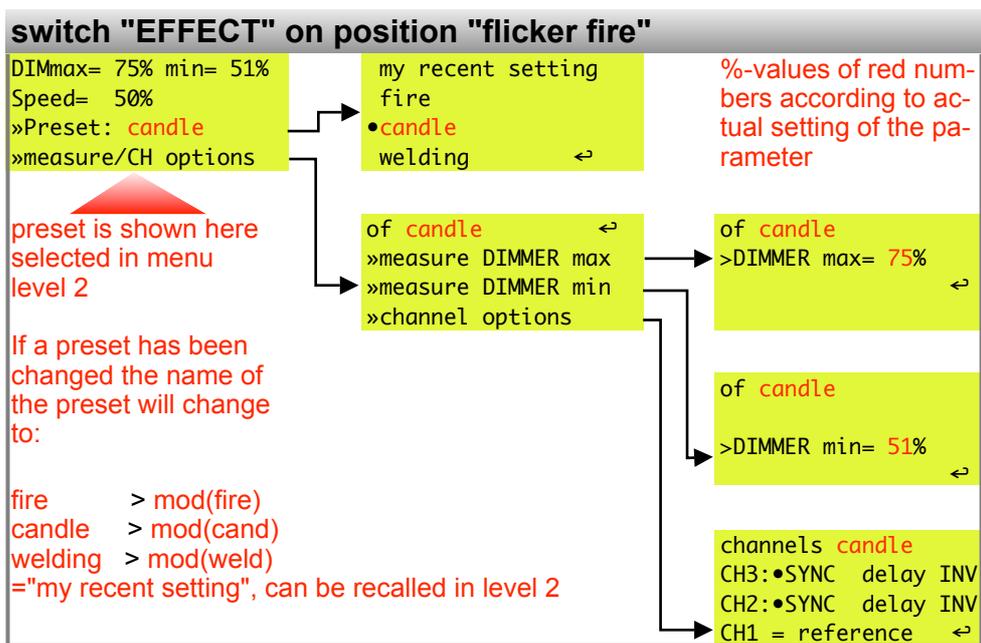
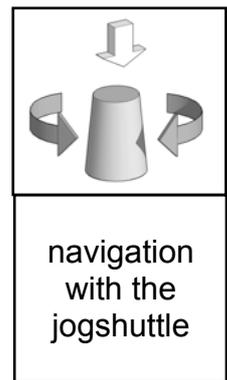
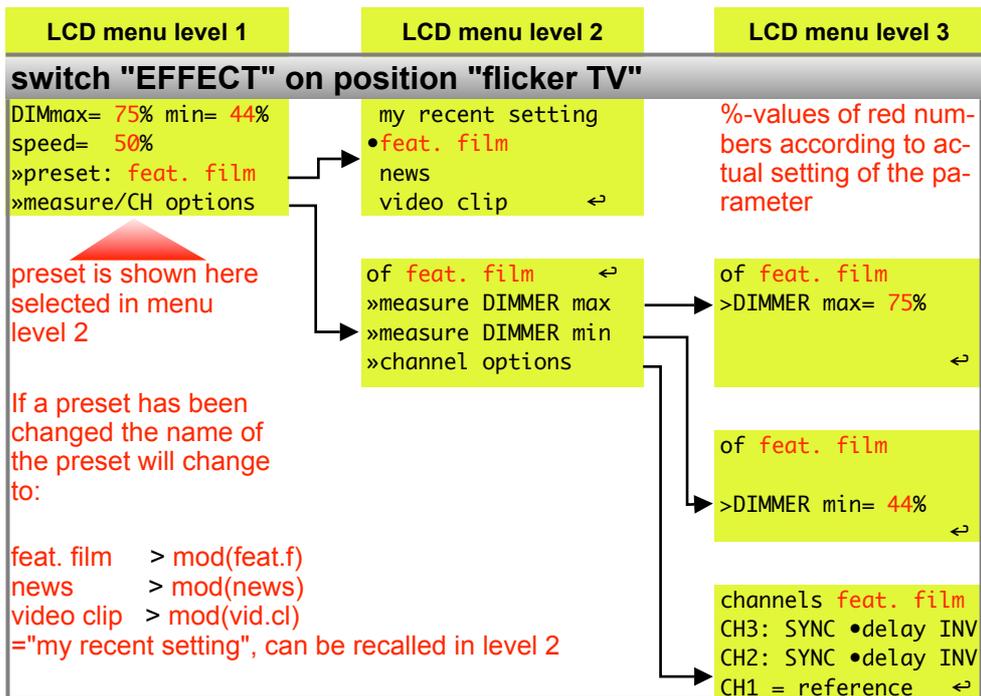
This feature is usefull if you would like to compare your individual settings with the settings of a preset.

Also "my recent setting" will be stored in the LFXHub without any temporary limit (separate storage for flicker TV, flicker fire, Puls triangle, Puls rectangle).

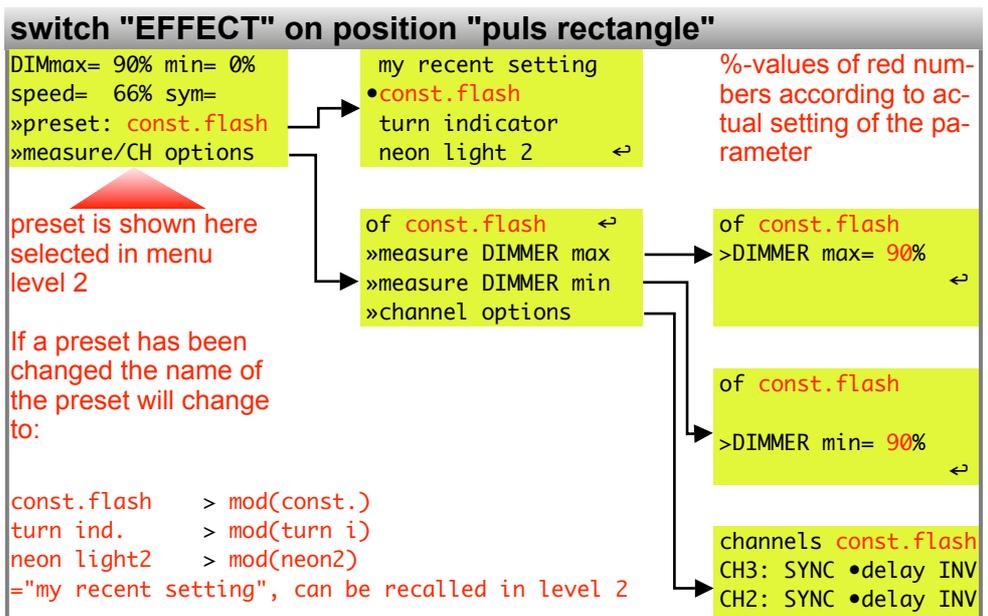
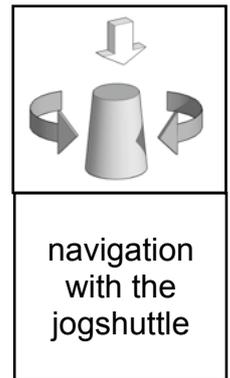
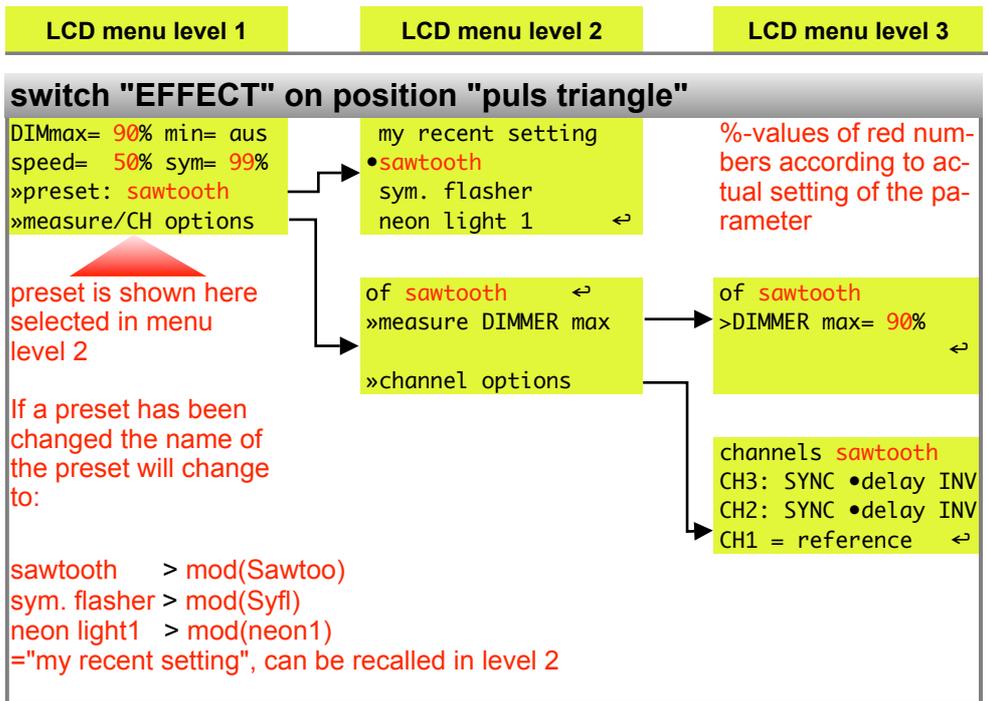
6. menu structure



6. menu structure (contd.)



6. menu structure (contd.)



| | |
|---|--|
| switch "EFFECT" on position "DMX IN/OUT" | |
| Please connect DMX-module at "DMX IN/OUT" on your left hand side! | if a DMX-module is connected please follow the instructions on LCD and read the user manual of the DMX-module. |

7. basic settings

Basic properties and settings of the LFXHub can be set within the menu item "OFF/ set-up".



language selection

Informations on the multifunctional display are available in four languages:

```
deutsch
•english
français
español ←
```

1. turn "EFFECT" to position "OFF / setup"
2. select "basic settings" > "language selection"
3. select the required language from the list



Push the "back"- symbol or turn the rotary switch "EFFECT" to the desired position.

HINT:

The language selection is not influenced by a factory reset of the LFXHub.

display test

checks functionality of all segments of the multifunctional display (LCD).

```
display test:
•push JOG
release = ready ←
```

1. turn "EFFECT" to position "OFF / setup"
2. choose "basic settings" > "display test"

As long as the JOG is pushed all segments of the LCD turn to a black color and all LEDs except the white indicators for CH1, CH2 and CH3.

To check the white LEDs (output indicators) turn "EFFECT" to "Dimmer" (horizontal position) and set "Dimmer max" to 100% > the white LEDs will come on.

The contrast adjustment of the LCD will be regulated automatically.

resetting the LFXHub to factory settings

The LFXHub stores settings carried out by the user. These settings concern "my recent setting" in the preset list of each flicker TV, flicker Fire, Puls triangle and Puls rectangle.

Parameters of "my recent setting", the individual presets, e.g. flicker speed, ramp, puls speed, symmetry, DIMMER min and the channel settings are stored temporal unlimited in the LFXHub. A "my recent setting" storage spaces is overwritten when an individual storage is changed by the user.

The individual storage ("my recent setting") will be saved even if the LFXHub has no power supply. The LFXHub does not contain any battery > maintenance free.

We do recommend resetting to factory settings if the LFXHub is returned to the rental department. So every lighting crew starts with same conditions.

```
resetting LFXHub
to factory settings?
yes      •No
```

1. turn "EFFECT" to position "OFF / set-up"
2. choose menu item "basic settings" > "factory reset"
3. confirm with "yes"

If you have agreed the reset information will be displayed which settings might have been changed.



7. basic settings (contd.)

identity of the LFXHub

Each LFXHub obtains a unique serial number and an individual text which is displayed in the identity menu item. This text contains e.g. the name and phonenumber of your company. The identity can be retrieved in the multifunctional display.

```
S/N: LFXH20106
Wow Rentals Berlin
call +49-30-07896655
software version:»
```

1. turn "EFFECT" to position "OFF / setup"
2. choose menu item "basic settings" > "identity"

identity sample

The identity can not be changed by the user later.

advantage:

- In case of a theft of the LFXHub the unit can be identified clearly.
- Your company data such as your company's name, the branch office and your phone number or email address are displayed on LCD for your advertisement and defines this LFXHub as your property.
- The identity helps you to organize rentals from other companies even if the labels of your company are removed from the housing of the LFXHub.
- These informations can never be lost.

The text of the identity is requested to you by movie-intercom before the LFXHub leaves the Lighting FX tools factory.

The individual text consist of two lines with 20 digits each.

Hint:

The serial number of the LFXHub is also noted on the unit label located on the bottom of the device.

software versions of the LFXHub

Depending on software version of your LFXHub, there might be different functions (e.g. DMX or lightningFX).

On order to find out which software version is installed please...

```
software versions:
CI0: 1.0  CHP: 1.18
FT:  2.4  MT:  2.15
XTM: N/A   ↵
```

1. turn "EFFECT" to position "OFF / setup"
2. choose menu item "basic settings" > "identity" > "software versions"

The software of each LFXHub can be updated with the latest version. Please contact movie-intercom if you are not sure to have the latest installed.

CHP version 1.8: latest version **without** the lightning FX upgrade
 CHP version 2.4: latest version including the lightning FX upgrade

June 2008

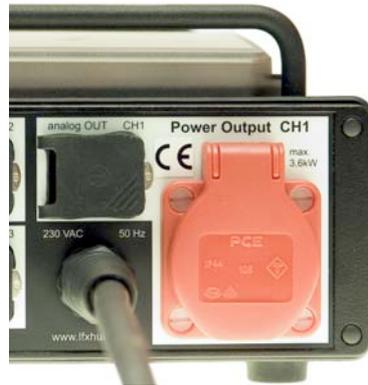
We recommend to order the movie-intercom newsletter. You would be informed promptly about new software updates for the LFXHub.

8. first operation

After having read the safety information on page 4, chapter 1, connect the LFXHub to the power network.

Connect a tungsten lamp to "POWER output CH1".

The automatic circuit breaker "main fuse" can shut down the LFXHub immediately.



Preselection

Use the rotary switch "EFFECT" to select the desired category. The white marker of the switch points to one of the symbols within the boxes on the control panel.



The lighting effect starts immediately. The white monitor LEDs for CH1, CH2 and CH3 begin to flicker, flash the same way as the connected lamps at the power output CH1.

The recently used settings generate a lighting effect. It doesn't matter if it was a preset or an individual setting.

When additional dimmer packs are not connected only monitor LED for channel 1 (CH1) is relevant. Channel 1 provides a power output at the LFXHub and via DMX / analog out.

The multifunctional display shows information about the actual used preset. It shows the options to modify the output channel settings and measuring and calibrate the brightness limits.

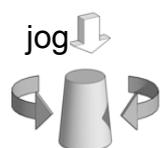
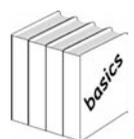
The dynamically incremental encoders

Changes of the parameters "speed", "sym" and "Dimmer min" are accomplished by so-called "**dynamically** incremental encoders".

Opposite "DIMMER max." (potentiometer with mechanical stop) incremental encoders rotate endless. While you turn an incremental encoder you can feel a detent in your finger, at the same time the value will change on LCD with every detent.

Slow rotation of an incremental encoders results in slow changes of the value, fast rotation of an incremental encoders results in fast changes of the value,

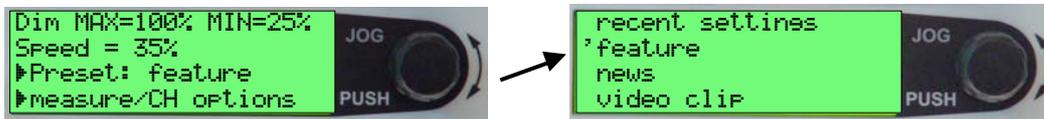
The black incremental encoder "jog shuttle" provides the navigation and selection of menu items within the multifunctional display. Additionally it has a push button function.



8. first operation (contd.)

The presets

It is very easy to create a natural looking lighting effect with 12 stored precision presets.



Advantage of the presets:

➤ the LFXHub automatically configures all necessary parameters used for the specific lighting effect - except the set-up of "DIMMER max", the potentiometer.

The selection of a preset has to be chosen with the jog shuttle.

Each preset has its own characteristic. This means the shape of a flicker curve varies from preset to preset. Each effect mode (flicker TV, flicker fire, puls triangle, puls rectangle) provides three ready to use presets plus one memory space for the recently used settings.

3x4=12

Please read the following chapters to find out more about the different characteristic of each preset.

The numbers in percent correspond to the lighting effect of the connected film lighting on the basis of a preset of LCD's line 3.

A selected preset will change its name when, e.g. the preset "feature film" has been modified manually to "mod(featt.f)".

The display of the actual settings in percent values on the multifunctional display makes it easy to reproduce the lighting effect exactly.



Dimming

Each generated lighting effect can be dimmed.

The LFXHub provides the limitation of the

➤ **upper** (with "max") brightness level

and

➤ **lower** (with "min") brightness level.

So the brightness level alternates between these two values and are individually adjustable by the user.

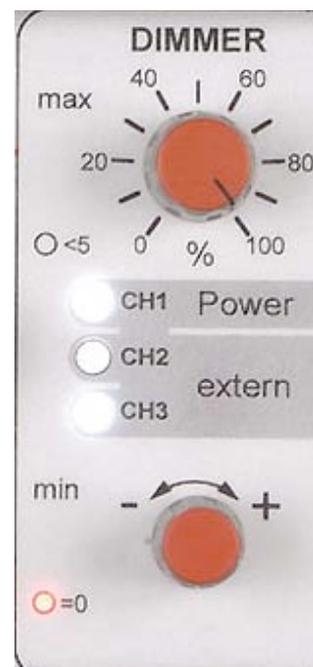
Dimming the upper level ("max") a potentiometer is used because the handling is better with the most important knob of the LFXHub.

Dimming is independently of the location within the menu and can be adjusted at every moment.

The "DIMMER min" knob is a rotary encoder.

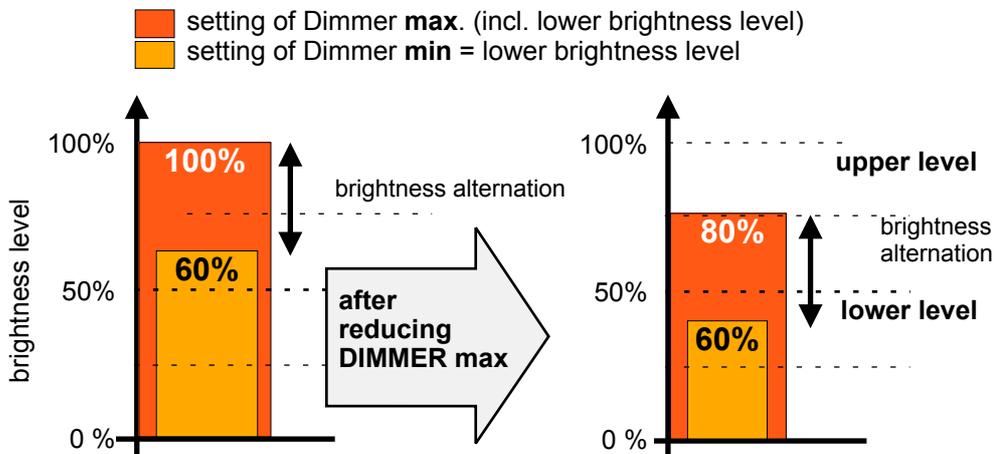
relation between "DIMMER min" and "DIMMER max"

If the maximum brightness level is reduced, at the same time the minimum brightness will decrease!



8. first operation (contd.)

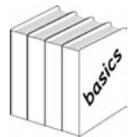
Relation between DIMMER max opposite DIMMER min



The value of DIMMER min always depends on the value of DIMMER max.

We strongly recommend to adjust the upper brightness limit ("DIMMER max") **at first** and **then** adjust the value of DIMMER min.

The measurement feature will be explained in chapter 9.



➤ As a basic principle both dimmer knobs control all output channels.

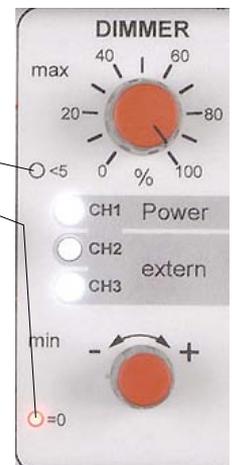
helpful indicators

Informative indicators support the practical use on location.

- when the value of "DIMMER max" is below 5% the red LED "<5" is flashing
- when the value of "DIMMER min" is zero then the red LED "=0" is steadily on

When the function "puls triangle" is selected the value of "DIMMER min" is automatically set to zero. The LED "=0" comes on. Function of "DIMMER min" is disabled here.

So it is possible to see the state of the LFXHub's dimmer from far away.



corresponding information:

- chapter 9. measurement and calibration of brightness limits
- chapter 14, page 37 cable remote dimmer

9. measurement and calibration of brightness limits

The measurement feature for the maximum and minimum brightness settings guarantees precise calibration of complex lighting compositions.

A lighting effect will be "frozen" to define the exposure of the scene, all connected lamps light steadily as well as the lamps connected at external dimmers.

The method of "measure" is the same for all categories.

First measure "DIMMER max"

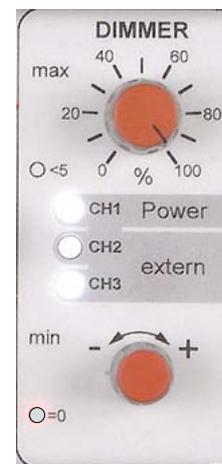
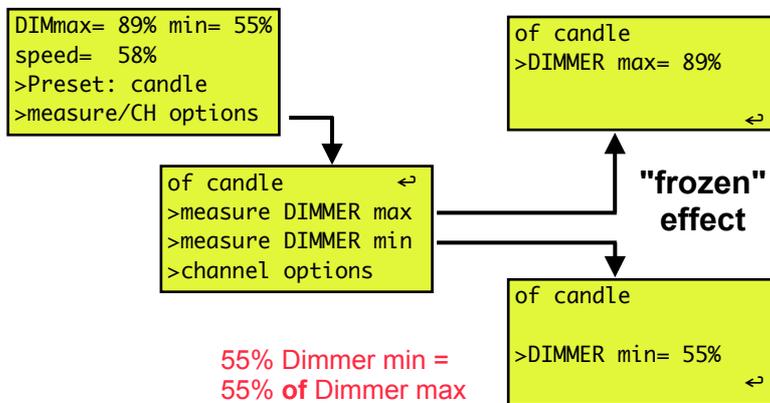
- select the menu item "measure / CH options".
- select "measure Dimmer max" > adjust required maximum brightness

then

- select "measure Dimmer min" > adjust required minimum brightness

Dimming can be carried out when the effect is running without a change to the measure menu.

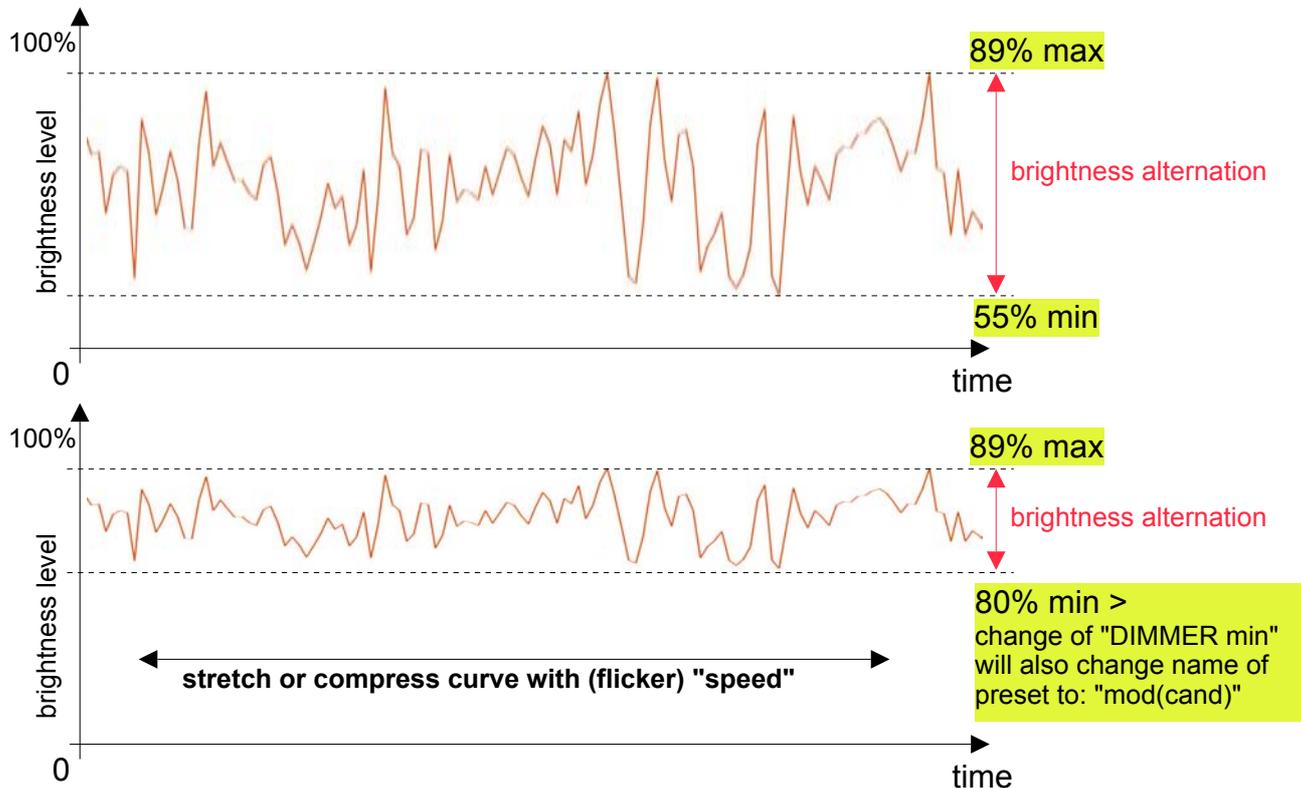
IF THE UPPER LEVEL IS CHANGED AT THE SAME TIME THE LOWER LEVEL WILL CHANGE.



⬆ upper brightness limit (potentiometer)

⬇ lower brightness limit (rotary encoder)

example:
flicker curve "candle" with chosen dimmer values



10. flicker module and its presets



The flicker module generates unsteady flickering brightness alternations.



The flicker signal can be varied in speed, transitions ("ramp"), characteristic (preset) and the upper and lower brightness limits, with "DIMMER min" the lower brightness level

will never fall below this value. Also three output channels can be varied.

Using a preset all necessary parameters of the LFXHub are automatically configured except the upper brightness level must be set with the poti "DIMMER max".

All flicker signals have a resolution of 24/25 samples per second.

The flicker signals of "TV" and "🔥" are elementary different:

"TV" simulates a lighting effect of a TV set or a movie projector. The stored TV flicker curves consist of "cuts" (abrupt brightness alternations) and "pans" (slow brightness alternations). The stored presets in the category "TV" provide different genres of the "movie".

🔥 simulates a lighting effect of a fire, a candle or a welding effect as well as short circuit effects. The generated signal simulates the brightness alternations of all kinds of fire and the "malfunction" of electrical devices.

Increase the "speed" of the effect by turning the yellow encoder clockwise, decrease it by turning "speed" anticlockwise. The value of the speed is read out in percent on the LCD.

TV Presets

- ➡ turn "EFFECT" to position "TV" > the menu is visible as shown to the right

```
DIMmax= 89% min= 55%
speed= 58%
>preset: feat. film
>measure/CH options
```

TV

Connected lamps begin to flicker. "DIMMER max" should not be set to zero.

The function "ramp" is automatically set to "hard" because the "TV screen" shall change abruptly pretending to show a "cut".

| TV preset | characteristic of the lighting effect | individual preset |
|--------------|--|-------------------|
| feature film | alternating brightness varies with high contrast | mod(feat.f) |
| News | longer sections with few changes of brightness followed by fast variations | mod(news) |
| video clip | fast alternating brightness levels | mod(vid.cl) |

characteristica of the preset

- ➡ change of preset:
 - select "preset" from the menu shown above
 - > list in next menu level will come up as shown here>
- ➡ select desired preset from list with JOG

```
my recent setting
•feature film
news
video clip
```

10. flicker module and its presets (contd.)

If one of the relevant encoders have been changed the name of the reset will change to "mod(xyz)". These values remain stored in the LFXHub until the values have been changed again.

```
DIMmax= 89% min= 55%
speed= 58%
>preset: mod(feet.f)
>measure/CH options
```

The memory will always be overwritten by the new values and can be recalled in the menu item list as "my recent setting".

Fire preset

- turn "EFFECT" to position "🔥"
LCD will look as shown to the right

```
DIMmax= 89% min= 55%
speed= 58%
>preset: candle
>measure/CH options
```



Connected lamps begin to flicker. "DIMMER max" should not be set to zero. One of the "ramp" stages is automatically selected when a preset has been chosen.

Characteristic of the presets

| preset | characteristic | individual preset |
|----------|---|-------------------|
| candle | lighting effect of a candle with a light airflow | mod(cand) |
| fire | looks like a vivid glow of a fireplace | mod(fire) |
| welding* | hard brightness alternations, hard transitions, DIMMER min is set to zero | mod(wel) |

- select an other preset:
select a menu item from the preset list
- select desired preset with JOG

```
my recent setting
•candle
fire
welding
```

* "welding" can also be used as a short-circuit effect, or a "broken" fluorescent tube effect using a standard tube with a magnetic ballast connected at the power output of the LFXHub

These values remain stored in the LFXHub until the values have been changed again.

The memory will always be overwritten by the new values and can be recalled in the menu item list as "my recent setting".

Ramp - adaptation to bulb inertia

The new "ramp" - function adapts effects to the duration of persistence of various types of film lighting bulbs.



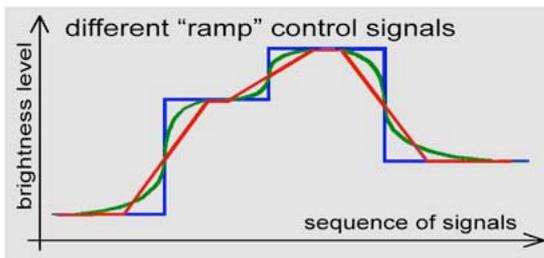
The timing difference between the moment of electrical deactivation and the time of a completely extinguished light depends on the power of the bulb.

Transitions of flicker curves would look different with the same signal used at different lamp types. The "Ramp"-feature adapts the flicker curve to the lamp type.

Even with a standard bulb the lighting effect looks natural!



10. flicker module and its presets (contd.)



ramp

- blue:** hard > hard transitions
- red:** medium > medium transitions
- green:** soft > soft transitions

"ramp" can always be changed manually using the push button. The LEDs "hard", "med" and "soft" will change with every push on the "ramp" button.

If a preset is selected the LFXHub sets "ramp" to the settings stored in a preset.

general features of multi channel lighting effects

The LFXHub always generates a lighting effect with three channels.

If there are no additional external dimmers are used a single channel lighting effect can be accomplished using the internal dimmer pack of the LFXHub > channel 1.

In this case the white monitor LED for channel 1 is relevant only, visible on the control panel.

➤ channel 1 is equivalent to the internal dimmer pack of the LFXHub and is equivalent to CH 1 of the analog output and/or the to DMX output (requires optional DMX module).

There are many options to control external dimmer packs with the LFXHub.

Thus multi channel capability of the LFXHub effects Lichteffekte für alle Effektkategorien erzeugt werden.

➤ additional use of channels 1, 2 and 3 using an external dimmer pack...

➤ ...via DMX when used with the optional external DMX-TX module

➤ ... using the analog outputs for dimmer packs providing a control input voltage of 0...+10VDC

➤ Also use one or both methods if you require a higher output power for CH1

advantage of this method:

- + virtually unlimited output power
- + use dimmer packs which are available
- + Mischung vom internen Dimmerpack des LFXHub, von DMX- und analogen Packs möglich
- + daisy chain DMX dimmer packs
- + the result of the lighting effect is independent of the used interface

Please find more information about the connection of external dimmer packs in chapter 13, page 30

Multi channel effects for "fire" and "TV"

Fire effects using three channels makes it possible to generate extraordinary fire effects with flickering shadows. The precision flicker curve will delay or invert the output signals at channels 2 and 3. The value of delay is coupled with the yellow "speed" button.

Three channel TV effects makes it easy to use red, green and blue lights > RGB effects. Besides the brightness of a TV effect the color of the light will change.

Additionally the channel settings can be adapted to your personal requirements. Configure the channel settings manually within the menu item "CH options" to synchronize, delay or invert.

3D



DMX-512
0...+10V

10. flicker module and its presets (contd.)

The output channels are automatically configured when a preset is selected. The table shown below displays the configuration of the output channels.



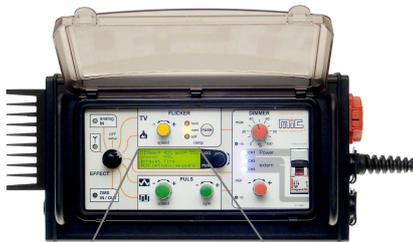
| output setting with according preset | | | | |
|--------------------------------------|--------------|-----------|-------------|-------------|
| module | preset | CH1 | CH2 | CH3 |
| TV | feature film | reference | delay | delay |
| | news | | delay | delay |
| | video clip | | delay | delay |
| Fire | candle | | delay* | delay* |
| | fire | | delay | delay |
| | welding | | synchronone | synchronone |

* set to "sync" when used with software version CHP < 1.15

In order to check the software version of the LFXHub please refer to chapter 7, page 15

Manual configuration of the output channels

controlling LFXHub (Master)



channels feat. film
 CH3: SYNC •delay INV
 CH2: SYNC •delay INV
 CH1 = reference ←

The output channels can be configured manually via the menu item "CH options" using the jog shuttle.

The channel settings are valid for the analog and DMX outputs.

1. turn "EFFECT" to "fire" or "TV"
2. select menu item "measure / CH options"
3. select menu item "channel options" as shown to the left

| definitionen of the channel abbreviations | |
|---|---|
| SYNC | signal is synchronously referring channel 1 |
| delay | signal is delayed referring channel 1 |
| INV | signal is invertiert referring channel 1 |

The channel settings are also stored in the individual preset "my recent setting".

If the channel settings are changed manually the name of the preset changes to "mod(xyz)" in the LCD's first level.

We recommend a factory reset when the LFXHub is returned to the rental department. Please refer to chapter 7, page 14 (factory reset)

11. LFXHub as stand-alone dimmer

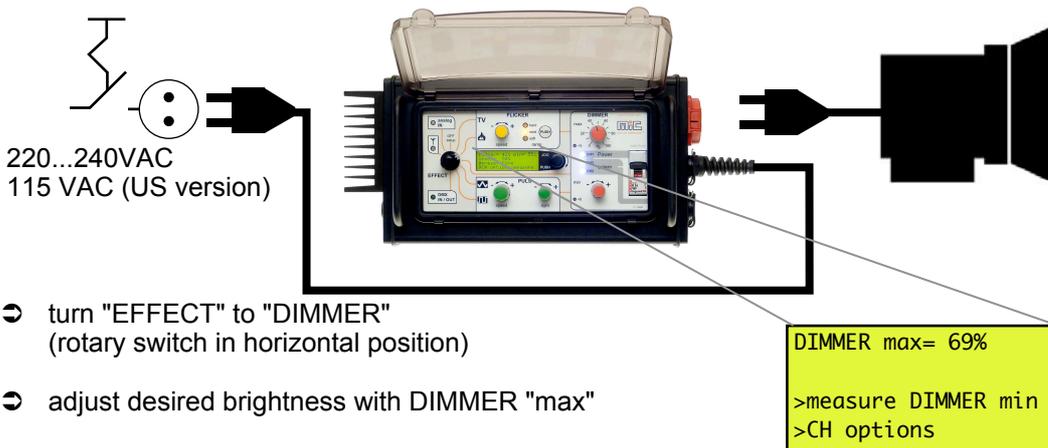
The LFXHub can be used as stand-alone Dimmer. All connected lamps light steadily.

application example:

Switched dimmed lighting applications without turn on delay when the dimmed lamp is switched on or off.



Connect the LFXHub between the power cord of the lamp and the switched power line.

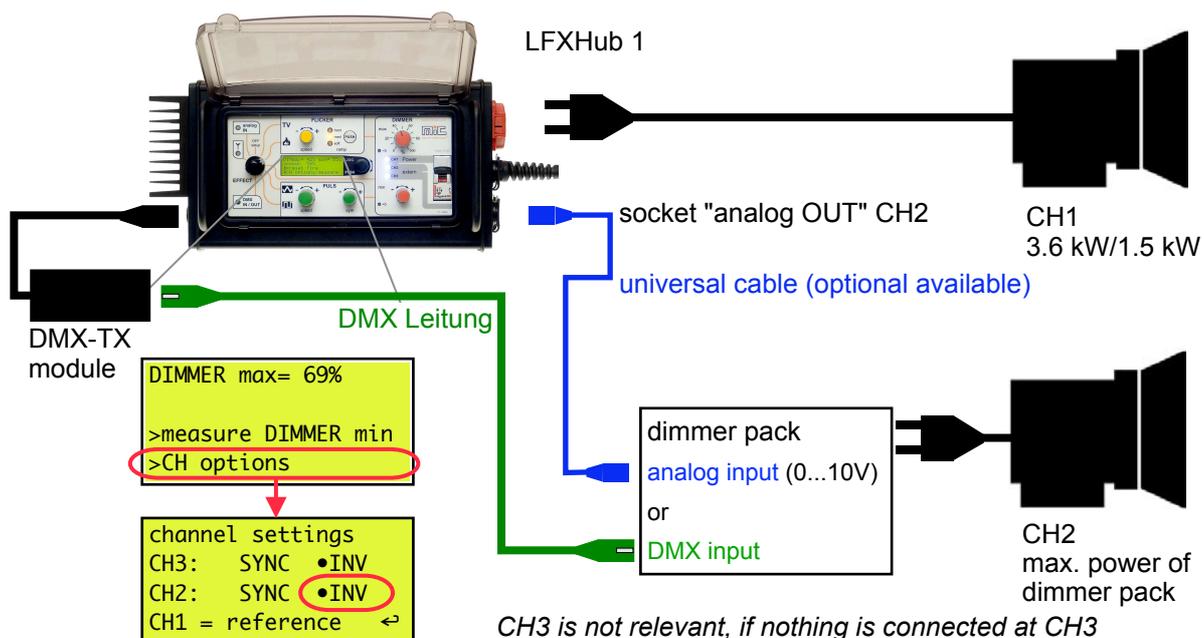


Lighting mixer

With an additional dimmer pack is used, e.g. a second LFXHub or an analog or DMX dimmer pack, it is very simple to accomplish a two channel cross fading lighting mixer.

Use "DIMMER max" of LFXHub 1 to fade lighting situation #1 (connected lamps on LFXHub 1, CH1) to lighting situation #2 (connected lamps on dimmer 2; CH2 of LFXHub 1).

Instead of a third party second dimmer pack you can use a second LFXHub with a universal cable.



CH3 is not relevant, if nothing is connected at CH3

instead of using the internal dimmer pack for CH1 use an external dimmer pack as shown for CH2

11. LFXHub as stand-alone Dimmer (contd.)

LFXHub 2:

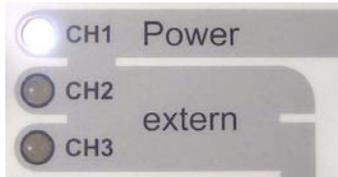
"DIMMER max" should be set to 100%.

Use "DIMMER max" of LFXHub 2 to adjust the maximum brightness of this channel.

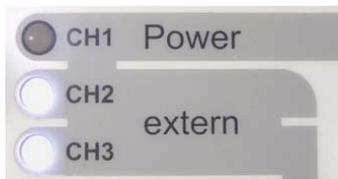
LFXHub 2 is used as a dimmer pack controlled by LFXHub 1.

LFXHub 1:

cross fading between two lighting situations



fader



LED "<5" is flashing,
when "Dimmer max <5%"

- CH1  LFXHub 1
- CH2  dimmer 2
- CH3  dimmer 3

- CH1  LFXHub 1
- CH2  dimmer 2
- CH3  dimmer 3

hint

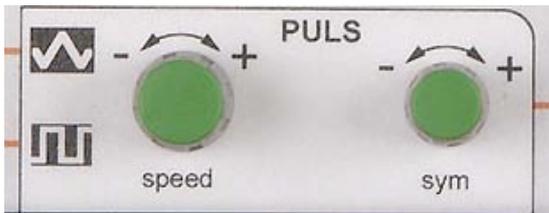
Cross fading also works great with the external cable remote dimmer (optional available) connected at LFXHub 1.

Please refer to chapter 14, page 33 (cable remote dimmer controls LFXHub) how to use the cable remote dimmer.

The cross fader also works with any compatible dimmer pack connected to the LFXHub.



12. puls generator and its presets



The puls module generates periodically lighting alternations.



The signal can be adjusted in speed, symmetry ("sym"), basic characteristic (preset) and the upper and lower (for rectangle only) brightness limits with the

DIMMER. The three output channels can be varied individually.

The selection of a preset automatically configures all these parameters; the maximum brightness must be set by the poti "DIMMER max" manually.

The puls generator signal always starts at zero cross and rising edge of the signal. Especially when this signal is triggered by an external source e.g. a Lighting- or Power-Sensor this feature opens lots of applications.

application example: neon signs, warning lights

Triangle presets

➔ turn "EFFECT" to position 

```
DIMmax= 89% min= OFF
speed= 17% sym= 99%
>preset: sawtooth
>measure/CH options
```



Connected lamps begin to flash periodically. The generated signal dims up and down (triangle positive or negative sawtooth).

"DIMMER max" should not be set to zero.

The minimum brightness "DIMMER min" in  -mode is automatically set to zero. LED "=0" is on. The rotary encoder "DIMMER min" has no function.

Detailed characteristic of one period of a preset is described in the list below. This period will be repeated until the triangle effect is turned off.

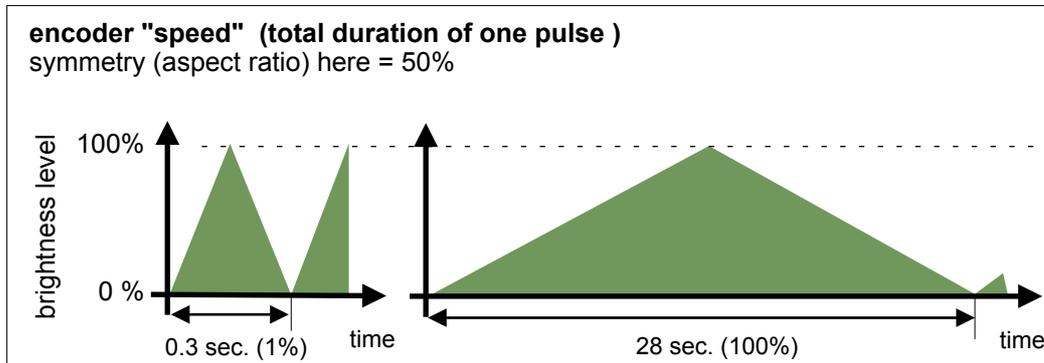
Hint

If one or more than one relevant setting is changed manually the name of the preset will change in the multifunctional display to "mod(xyz)".

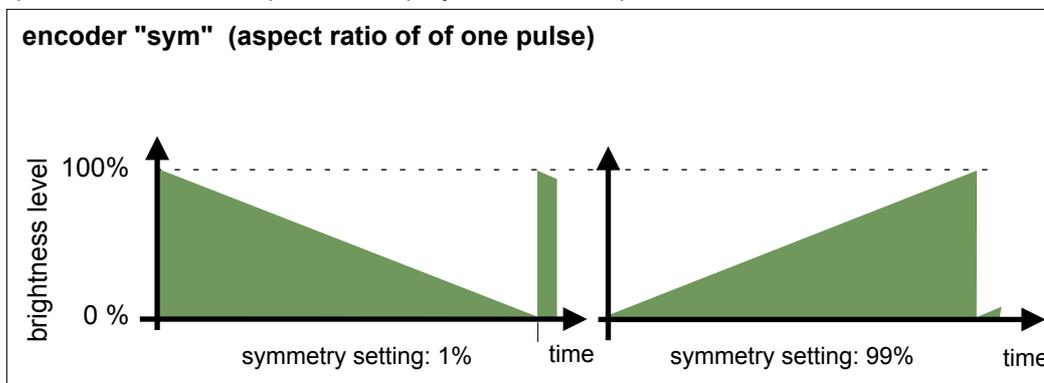
| preset | characteristic | preset name when any parameter of an original preset has been changed |
|--------------|---|---|
| sawtooth | slowly increasing brightness within 7 seconds followed by abrupt darkness (positive sawtooth) | mod(sawtoo) |
| sym. flasher | dimming up and down within five seconds (triangle) | mod(sym.f) |
| neon signs 1 | dimming up within two seconds, then brightness decreases abruptly to zero | mod(neon 1) |

12. puls generator and its presets (contd.)

influence of the green rotary encoders to the signal



Turning "speed" clockwise increases the speed, turning anticlockwise decreases the speed. The value of "speed" is displayed on LCD in percent.



Turning "sym" clockwise increases the aspect ratio, turning anticlockwise decreases the symmetry. The value of "sym" is displayed on LCD in percent.

Please remember: the rotary encoders are dynamically > slow rotation: slow changes, quick rotation: quick changes.

Decreasing the value of "DIMMER max" flattens the curve seen from the highest level of the signal.

rectangle presets



- turn "EFFECT" to position  the LCD should look like the window shown to the right

```
DIMmax=100% min= 30%
speed= 63% sym= 70%
>Preset: constr. fl
>measure/CH options
```

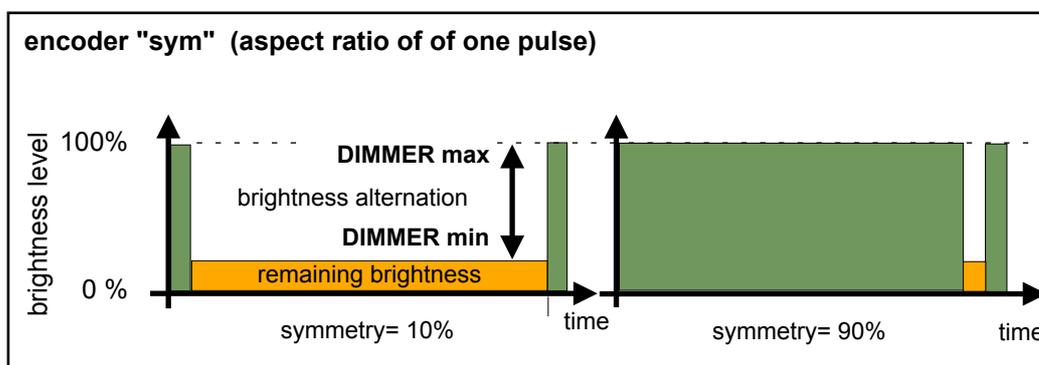
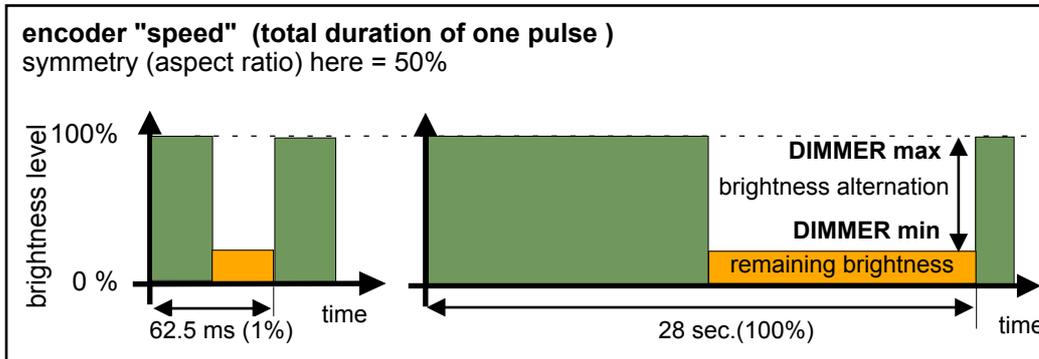
All connected lamps begin to flash.
 "DIMMER max" should not be set to zero.

A minimum brightness can be added with "DIMMER min". The value of this lower brightness level defines the intensity of the remaining lighting. The lighting is never completely turned off.

| preset | characteristica describes one period | preset name due to change of a parameter |
|-----------------------------|---|--|
| construction flasher | short flashes; sequenced flashes with three channels can be performed when additional dimmers are connected at "analog out" (0,3 seconds flash followed of a 2,5 seconds break) | mod(const.) |
| turn indicator neon signs 2 | symmetric flasher as used in a car lighting effect of a neon sign is 2 sec on then 1 sec off, minimum brightness is set to 30% | mod(turn i) mod(neon 2) |

12. Puls generator and its presets (contd.)

influence of the green rotary encoders according to the signal

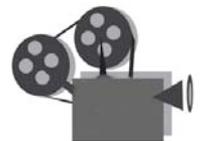


The rectangle puls generator has an extended speed range from 62.5 ms (16 Hz) to 28 seconds. Create strobe light effects by choosing speed to 100%.

Strobelight effects with the rectangle generator

example application: flicker of a movie projektor

The newest software for the LFXHub extends the speed range for the rectangle generator. For that reason strobelight effects with a maximum flicker of 16 Hz are now possible to generate. The generated "projector flicker" looks great e.g. with KinoFlos' Parabeam.



Guide to "projector flicker":

- turn "EFFECT" to position "rectangle"
- choose preset "construction flasher"
- set green knob "speed" to 100%
- turn green knob "sym" anti-clockwise > set symmetry to a value of about 20%
- increase "Dimmer min" slowly until the flicker effect gets the required exposure

use a single channel only
or sync all channels in the menu manually

All ever sold LFXHubs can be upgraded with this new feature by software upload.

multi channel effects with triangle and rectangle signals



Please read general information about multi-channel effects on page 22.

Two channel or three channel lighting effects require additional external dimmer packs. Please connect either DMX or analog dimmer packs or simply link one or two additional LFXHubs to the "master" LFXHub.

Generate a virtually unlimited number of variations of neon signs and flashers with changing colors or a three channel construction flasher as a three channel sequencer. As already explained concerning the flicker presets the channels can be configured individually to synchronise, inverted or delayed in the menu "CH options".

- Please find more information how to connect dimmer packs > chapter 13, page 30

12. Puls generator and its presets (contd.)

The output channels are automatically configured when a preset is chosen.

| channel configuration of PULS presets | | | | |
|---|---------------------|------------------|-------|-------|
| module | preset | CH1 | CH2 | CH3 |
|  | sawtooth | reference | delay | delay |
| | sym. flasher | | INV | INV |
| | neon signs 1 | | delay | delay |
|  | contruction flasher | | delay | delay |
| | turn indicator | | SYNC | INV |
| | neon signs 2 | | SYNC | INV |

The combination of the three output channels and the settings of speed and symmetry provides a virtually unlimited number of neon sign lighting effects.

The channel configuration can be reset using the factory reset feature. Please refer to chapter 7, page 14 (factory reset)

Manual configuration of the output channels for triangle and rectangle signals



```
channels mod(sawtoo)
CH3: SYNC •delay INV
CH2: SYNC •delay INV
CH1 = reference ←
```

The output channels can be configured manually with the menu item "CH options" using the jog shuttle.



The channel settings are valid for the analog and DMX outputs.

1. turn "EFFECT" to  or 
2. choose "measure / CH options"
3. choose "channel options"
4. select the desired configuration with the JOG

| definitionen of the channel abbreviations | |
|---|--|
| SYNC | signal is synchronously referring to channel 1 |
| delay | signal is delayed referring to channel 1 |
| INV | signal is invertiert referring to channel 1 |

For each puls category there is one individual memory space (1x for "triangle" and 1x for "rectangle") available. The individual memory space stores the parameters of speed, symmetry, Dimmer min and the output channel settings.

If a channel setting is changed manually the name of the preset will change to "mod(xyz)".

The hardware connection procedure is the same as used for flicker multi channel LFX. please refer to page 22, chapter 10 (flicker module and its presets)

13. connecting external dimmer packs / power extension

The LFXHub can control numerous external dimmers.

connectivity options of dimmer packs:

- | | | |
|----------|--|-----------|
| A | control analog dimmer packs (with 0 to +10 VDC control input) | ⇒ page 31 |
| B | control DMX dimmer packs (DMX-512) | ⇒ page 32 |
| C | control fluorescent tubes using an ECG/EB (electronic ballast) | ⇒ page 33 |
| D | control KinoFlo / Softlights / Photo Beard and other fixtures | ⇒ page 34 |
| E | control several LFXHubs as dimmer packs | see below |

please consider

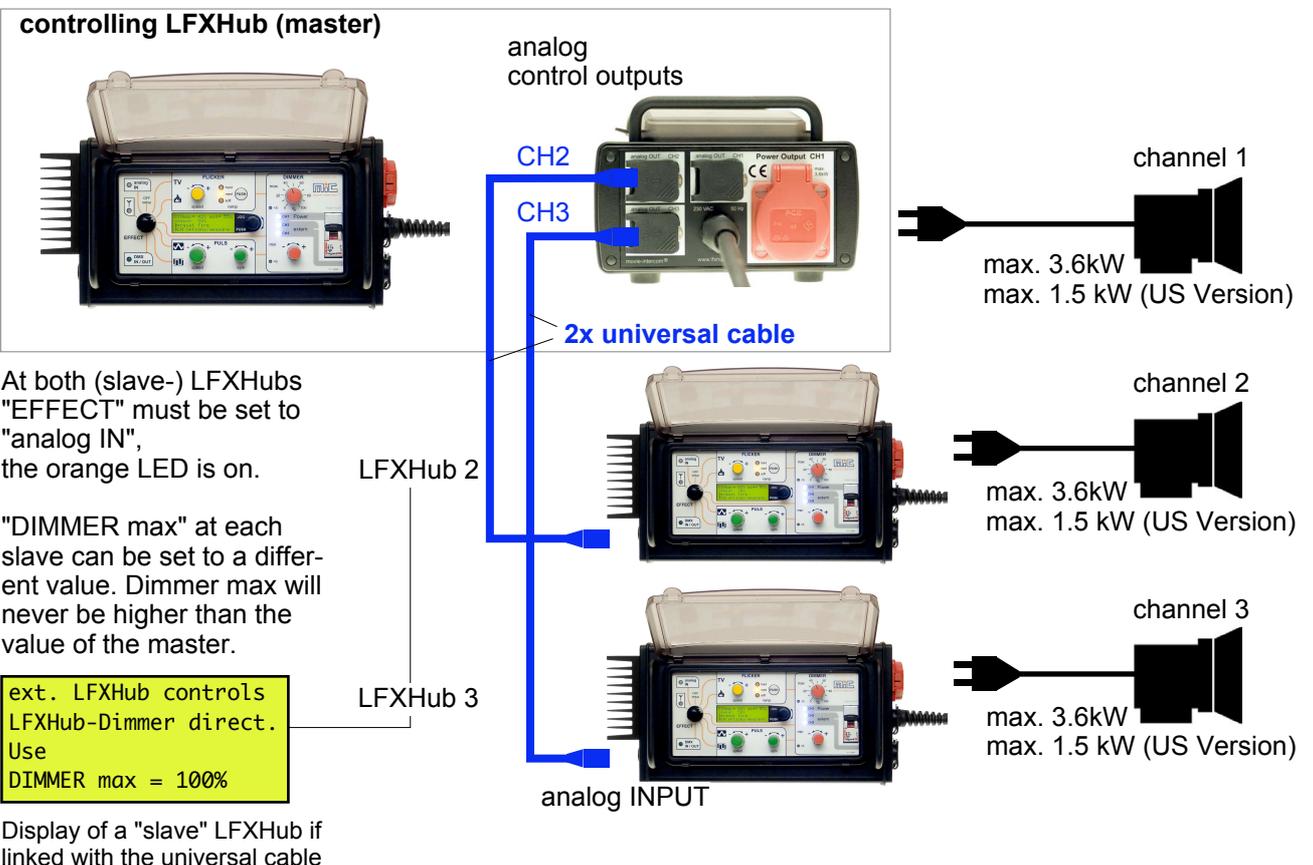
- The poti "DIMMER max." is the master dimmer for each output channel.
- The signals can also be modified using the menu "channel options" of the LFXHub.

movie-intercom does not guarantee any function with third party devices.

E: control several LFXHubs as dimmer packs

required equipment: one or two additional LFXHubs
 one or two universal cables (order code: unic)

advantage: separate dimming of channels 2 and 3



13.A control analog dimmer packs

The LFXHub can control up to three additional dimmer packs at the analog outputs CH1, CH2 and CH3.

Connect the external dimmer pack using a Neutrik NC6MX connector at the LFXHub. The connector is available at <http://www.neutrik.com>. Required connector type: NC6MX

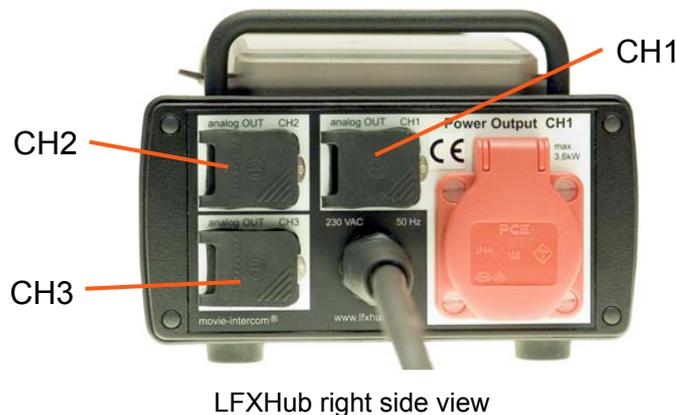
Each analog output channel supports one or more dimmer packs using the SL10 industry standard (0...+10VDC). Maximum output current: 15 mA / channel

please consider:

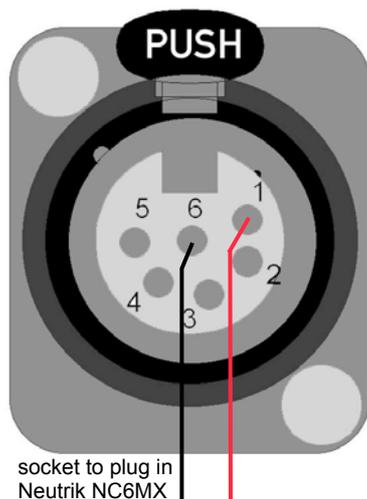
- The poti "DIMMER max." is the master dimmer for each output channel.
- The signals can also be modified using the menu "channel options" of the LFXHub.

movie-intercom does not guarantee any function with third party dimmer packs.

The pin assignments of all output jacks are identical.



The control signal at "analog OUT" CH1 is the same as at the internal dimmer pack of the LFXHub



socket "analog OUT" CH1, CH2 and CH3 at LFXHub
The pin assignment is (badly) visible on the socket.

dimmed output signal at "analog OUT"
 Pin 6: ground
 Pin 1: 0...+10VDC

CAUTION! Please only use the pins discribed above, otherwise mal-function might occur!

Hint
 Ground pins of all three output sockets are linked with each other internally.



13.B control DMX dimmer packs

In order to control DMX dimmer packs the optional available DMX-TX module must be connected. The DMX-TX module is an optional available accessory for the LFXHub.

DMX-TX module



output for DMX-512 receiver
5-pin XLR socket
behind protector shield

status indicator for DMX

connector
connect at socket "DMX IN/OUT" of the LFXHub

Please consider:

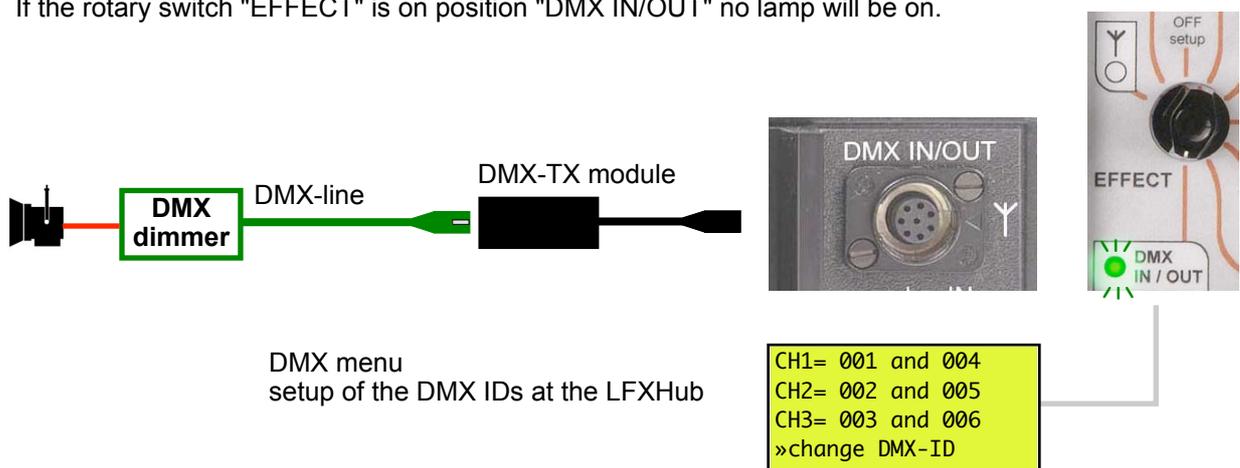
- The poti "DIMMER max." controls every channel of the LFXHub
- additionally the output signals can be configured using the channel setup menu of each preset

movie-intercom does not guarantee any function with third party devices.

Each DMX-address (ID) can be setup within the LCD using the JOG of the LFXHub.

The DMX-TX module supports up to six different DMX-IDs. The channels 1, 2 and 3 transmits to different DMX-IDs. It means channel 1 will transmit DMX-ID 001 and 004 at the same time as shown in the menu below.

If the rotary switch "EFFECT" is on position "DMX IN/OUT" no lamp will be on.



The menu shown above is only visible if the external DMX-TX module is connected.

For further information about the DMX-TX module please refer to the user manual of the DMX module.

All user manuals are available at
<http://www.movie-inter.com/en/support/downloads/index.html>

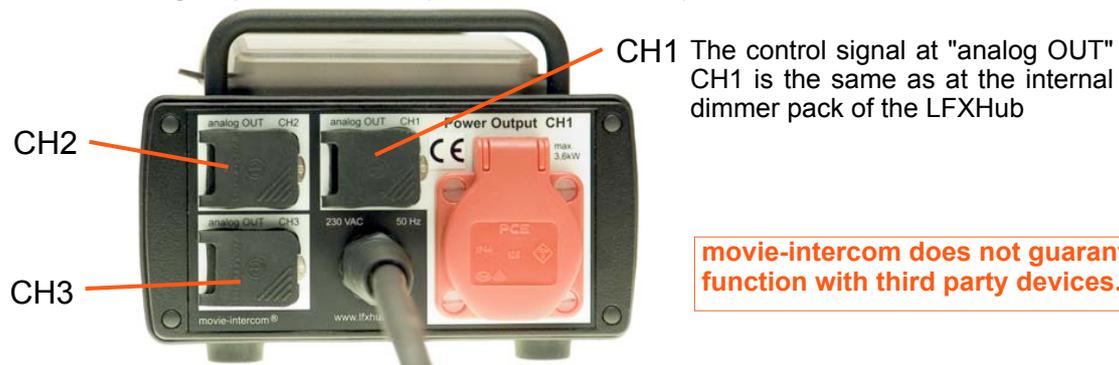
13.C control fluorescent tubes using an electronic ballast

The analog outputs (CH1, CH2 and CH3) of the LFXHub can control devices which are compliant to the SL10 industry standard (0...+10VDC).

Therefore usual fluorescent tubes equipped with an **electronic control gear (ECG/EB)** can be dimmed with the LFXHub. In order to achieve this control feature please replace the "magnetic" ballast with an electronic ballast. EBs (ECGs) are available at you local electric supplier.

Please find more information about ECGs from Osram here: http://www.osram.com/osram_com/Professionals/index.html.

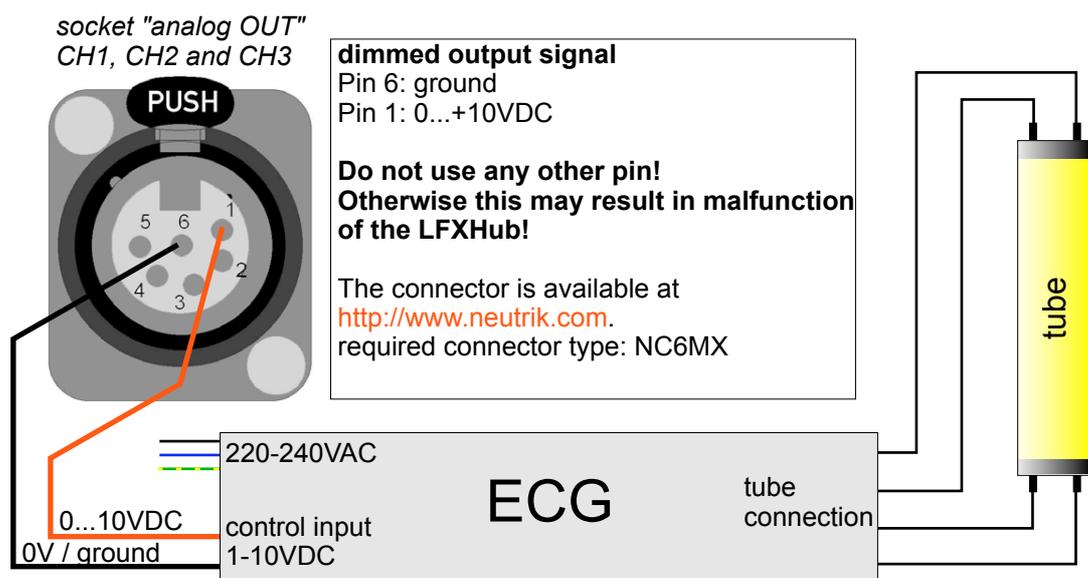
LFXHub analog outputs 0...10VDC (max. 15mA / channel)



There is at least one EB/ECG required for every channel.
Most ECGs are "flickerfree" (please refer to the data sheet of the ECG).

important notice:

- "DIMMER max. will control all output channels at the same time.
- additionally the signal sequence of the output channels can be individually modified using the menue item "CH options".
- Due to its physical properties a fluorescent tube can never be dimmed down to zero.
- max. connection of six EBs for each output channel of the LFXHub
- Please consider that EBs have a turn-on and turn-off delay therefore it is not advisable for use with switched circuits.



Safety instructions of the manufacturer must be fulfilled!
Wiring must be accomplished by authorized stuff only!

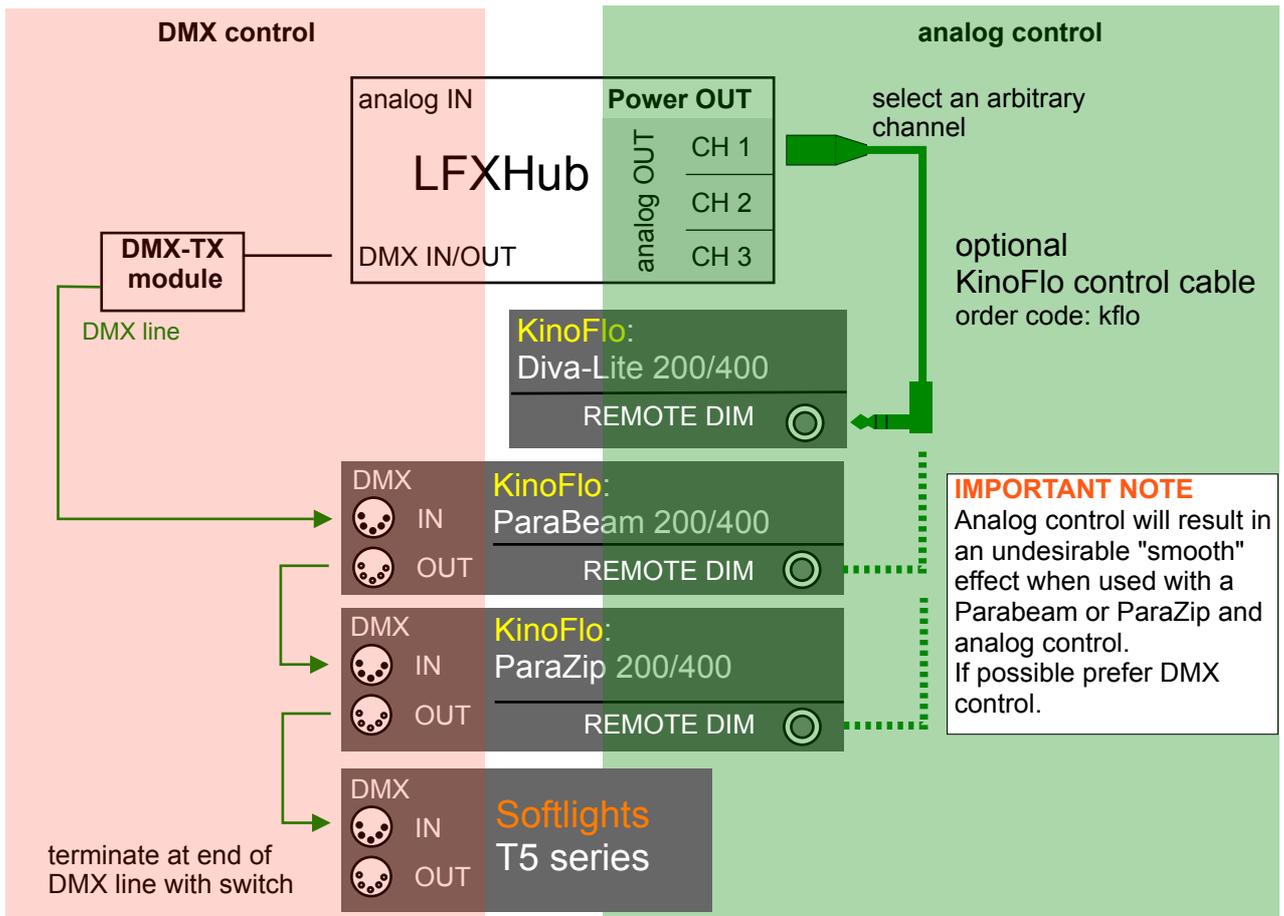
13.D control KinoFlo / Softlights and other fixtures

The LFXHub is perfectly fine to control some KinoFlo fixtures or Softlights T5 fixtures. Create stunning fire effects or TV effects using these tubes/ballasts.

compatible fixtures: DivaLite 200/400, ParaBeam 200/400, ParaZip 200/400, Softlights T5 series
 Only these fixtures are dimmable from 5 to 100%.

applications:
 - remotely controllable from the LFXHub, create lighting effects of fire, TV or any
 - daisy chain when used with DMX

control options



models 400 support two DMX channels. Set switch "DMX DIM CHANNELS" to "4" for two channel mode (CH 2 of fixture is automatically set to the selected channel +1), set to "2" for single channel mode.

DMX address of LFXHub must match to DMX address of the KinoFlo fixture. Please allocate the DMX addresses of the LFXHub within the "DMX IN/OUT" menu.

Manufacturer links

- KinoFlo fixtures under <http://www.kinoflo.com>
- Softlights T5 under <http://www.softlights.com>

movie-intercom does not guarantee any function with third party devices.

important notice:

- "DIMMER max. will control all output channels at the same time.
- additionally the signal sequence of the output channels can be individually modified using the menu item "CH options".
- Due to its physical properties a fluorescent tube can never be dimmed down to zero.
- max. connection of six fixtures for each output channel of the LFXHub when used with analog control
- Please consider that all fluorescent tube ballasts have a turn-on and turn-off delay therefore it is not advisable for use with switched circuits.

13.D control KinoFlo / Softlights and other fixtures

| compatible fluorescent tubes, dimmable with the LFXHub. | | | | |
|---|--------------|-------|--------|--|
| fixture | manufacturer | input | | preferred control with the LFXHub |
| | | DMX | analog | |
| DivaLite 200/400 | KinoFlo | - | yes | control via REMOTE DIM only > use KinoFlo control cable (order code: kflo) |
| ParaBeam 200/400 | | yes | yes | DMX, analog control using the REMOTE DIM input will result in an undesirable "smooth" effect. |
| ParaZip 200/400 | | yes | yes | |
| T5 classic | Softlights | yes | - | DMX, at fixture turn dimmer level to zero for control with the LFXHub |
| T5 BIG ONE | | yes | - | |
| T5 small | | yes | - | |
| T5 medium | | yes | - | |
| T5 long one | | yes | - | |
| Highlight 110 | Photon Beard | yes | - | must have DMX option installed, at fixture turn dimmer level to zero for control with the LFXHub |
| Highlight 220 | | yes | - | |
| Highlight 330 | | yes | - | |
| Highlight 440 | | yes | - | |
| Radiant 170 | | yes | - | |
| Lumapanel | Lumapanel | yes | - | DMX |

If you are viewing the PDF version of this manual please click on fixture name to get online information

The table shown below contains lamps using the "switched DMX mode". It means a tube is switched on at a certain dim level.

Turn switch of lamp to "fixture" mode for DMX control.

E.g. with a 4 Bank ballast tube #1 is on from 12 % dim level, tube #1 and #2 are on from 37% dim level, lamp #1-3: 64 %, all lamps from 84% dim level. For detailed information how to set up the DMX addresses please refer to the corresponding user manual.

| compatible fluoros, switchable with the LFXHub via DMX: | | | |
|--|--------------|--------------|---------------------------------------|
| fixture | manufacturer | mode | perfect for effects of the LFXHub... |
| 4Bank DMX Ballast | KinoFlo | DMX switched | flasher, sequenzer, neon sign FX, ... |
| VistaBeam 300/600 | | | |
| Image 85/45 | | | |

If you are viewing the PDF version of this manual please click on fixture name to get online information

14. optional modules for the LFXHub using "analog IN" - general

Optional modules can be connected at the analog input of the LFXHub. This feature will extend the functionality of the LFXHub. All connected modules are automatically identified by the LFXHub. The menu will change according to the connected device.



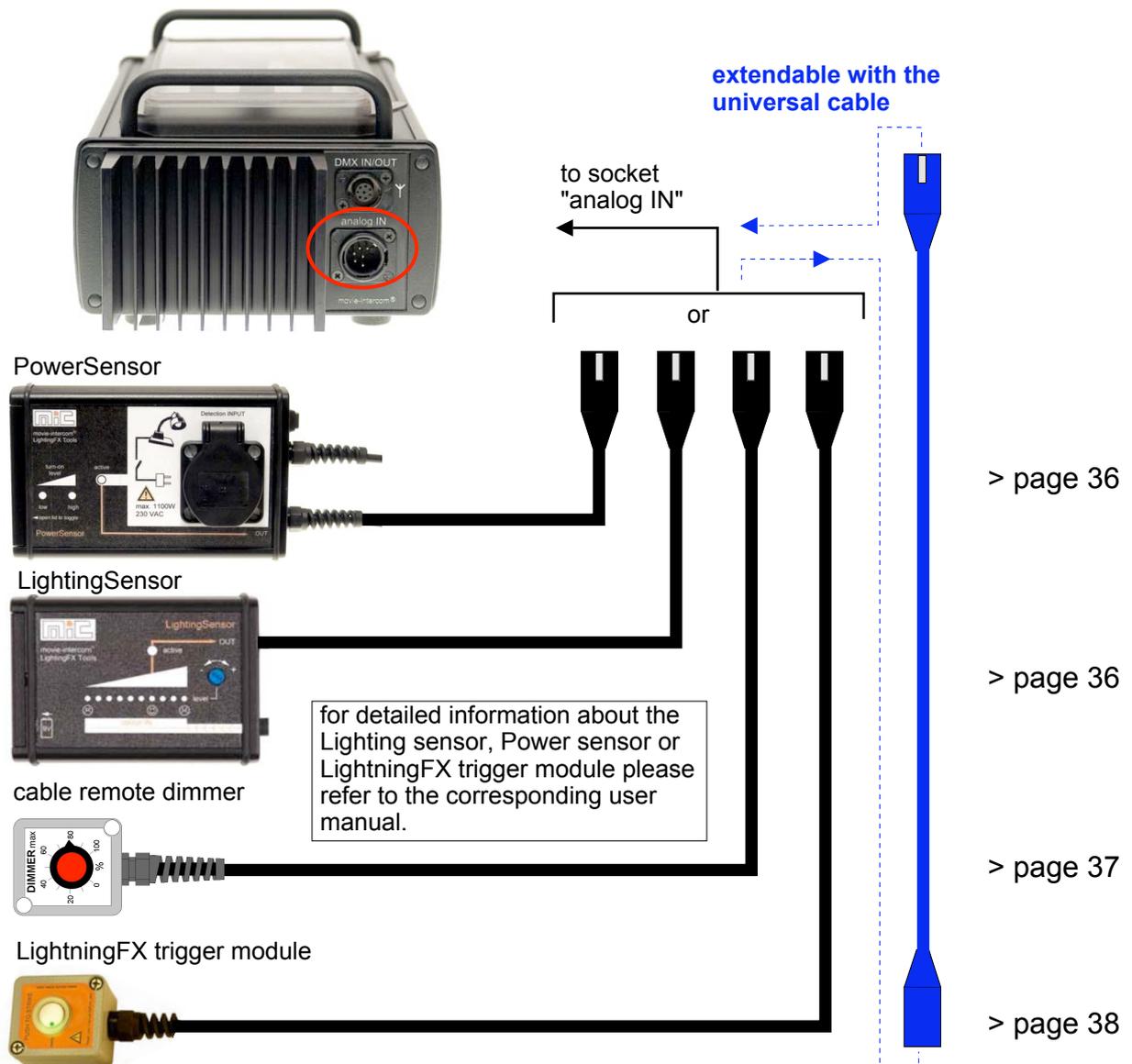
Is "EFFECT" on position "analog IN" information about the connected LFX Tool is shown on the LCD.



- ➔ turn "EFFECT" to position "analog IN"
- ➔ If there is no LFX tool connected "analog IN", the orange LED is flashing
- ➔ Each movie-intercom LFX tool connected at "analog IN" is automatically recognized by the LFXHub. Depending on the connected module suitable functions are initialised in the LFXHub.

Please connect LFX tool to "analog IN" on your left hand side!

connection of external LFX Tools at "analog IN"



14. optional modules for the LFXHub using "analog IN" - sensors

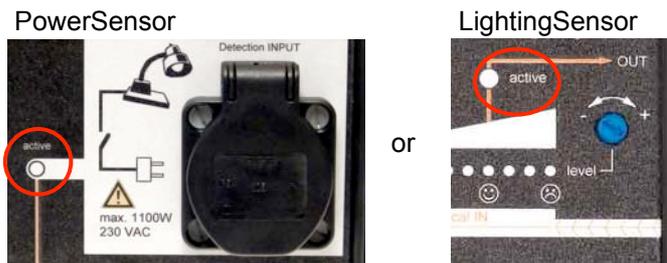
The LightingSensor with optical detection or the PowerSensor with electrical detection can activate or deactivate every function the LFXHub can generate.

Linking a sensor with the LFXHub makes it easy to create actor-controlled lighting.

A connected sensor at the analog input of the LFXHub is automatically identified.

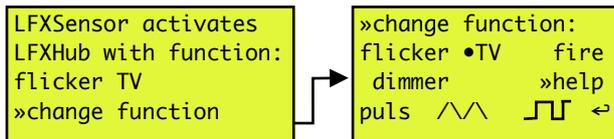
LightingSensor or PowerSensor controls LFXHub

- With an active control signal of a sensor (the white LED "active" is turned on at the sensor) the LFXHub activates an arbitrary function.
- With an inactive control signal of a sensor (the white LED "active" is off at the sensor) all lamps connected at the LFXHub are switched off.



The rotary switch "EFFECT" is in position "analog IN".

If a LightingSensor or PowerSensor is connected at "analog IN" the menu looks like this:



Please choose the function which shall be activated with an "active" signal of the sensor.

application example 1:

The actress turns on a lamp on the sideboard using the original switch in the power cord of the practical.



The PowerSensor attached to the lamp power cord monitors the change in current and activates the film lighting connected to the LFXHub.

Additionally the intensity of the connected film lighting can be dimmed using "DIMMER max".

application example 2:

An actor blows out a candle flame and, via the LightingSensor, thus deactivates the flicker preset "candle" generated by the LFXHub.



That's the way it works great:

- turn "EFFECT" to "flicker fire"
- create a "candle" effect with a preset or your individual setting

The sensor always activates the recently used setting of the selected flicker category, puls module or stand-alone dimmer module.

- turn back "EFFECT" to position "analog IN"
- select the desired function (in the example above: "flicker fire" with a candle preset)

Alternatively the setting of "speed", "sym", "DIMMER max.", "DIMMER min" and "ramp" can also be changed when the sensor sends an active signal.

Channel settings of a category must be set prior turning back the rotary switch "EFFECT" to position "analog IN".

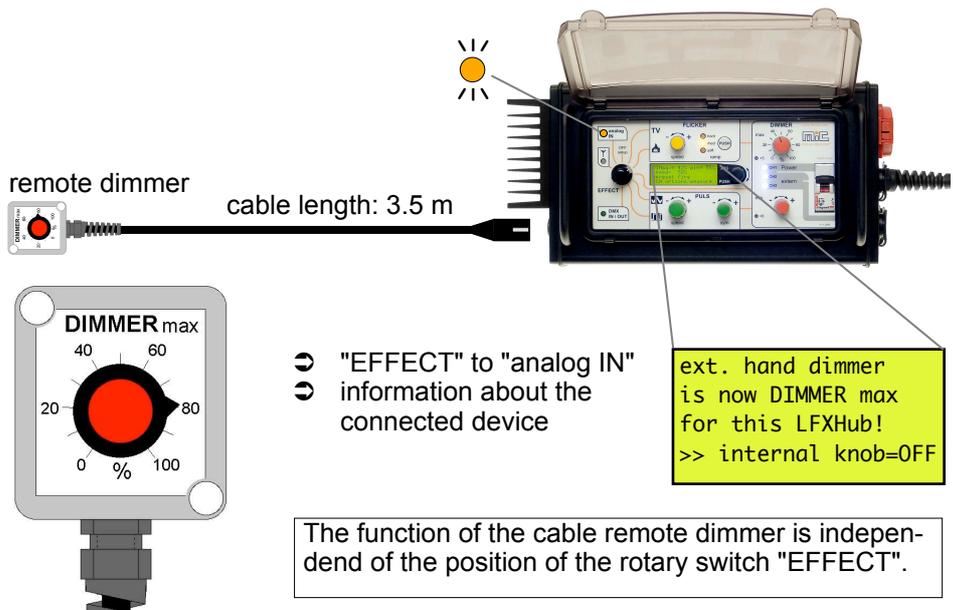
User manuals of all LightingFX Tools are available at <http://www.movie-inter.com/en/support/downloads/index.html>

14. optional modules for the LFXHub using "analog IN" - ext. dimmer

Cable remote dimmer controls LFXHub

The (optional available) cable remote dimmer (*order code: crdi*) controls "DIMMER max" of the LFXHub. It is automatically identified by the LFXHub, no set-up is required.

The cable remote dimmer resumes the control of the built-in poti "DIMMER max." of the LFXHub.



As long as the cable remote dimmer is connected to "analog IN" the orange LED "analog IN" is steadily on.

The cable of the remote dimmer can be extended with max. two universal cables.

The selected value of the remote dimmer's "DIMMER max." is displayed digitally on LCD.

14. optional modules for the LFXHub using "analog IN" - trigger module

LightningFX trigger module controls LFXHub

The lightningFX module is an optional available plug & play extension for the LFXHub. With the lightningFX application you can generate realistic looking lighting effects of ...



- a lightning effect of a thunderstorm ...
- a moving lightning effect of a thunderstorm using three different channels ...
- a single flash of a photo camera or an explosion flash...
- many irregular flashes of photo cameras made by some journalists or explosions from different directions ...

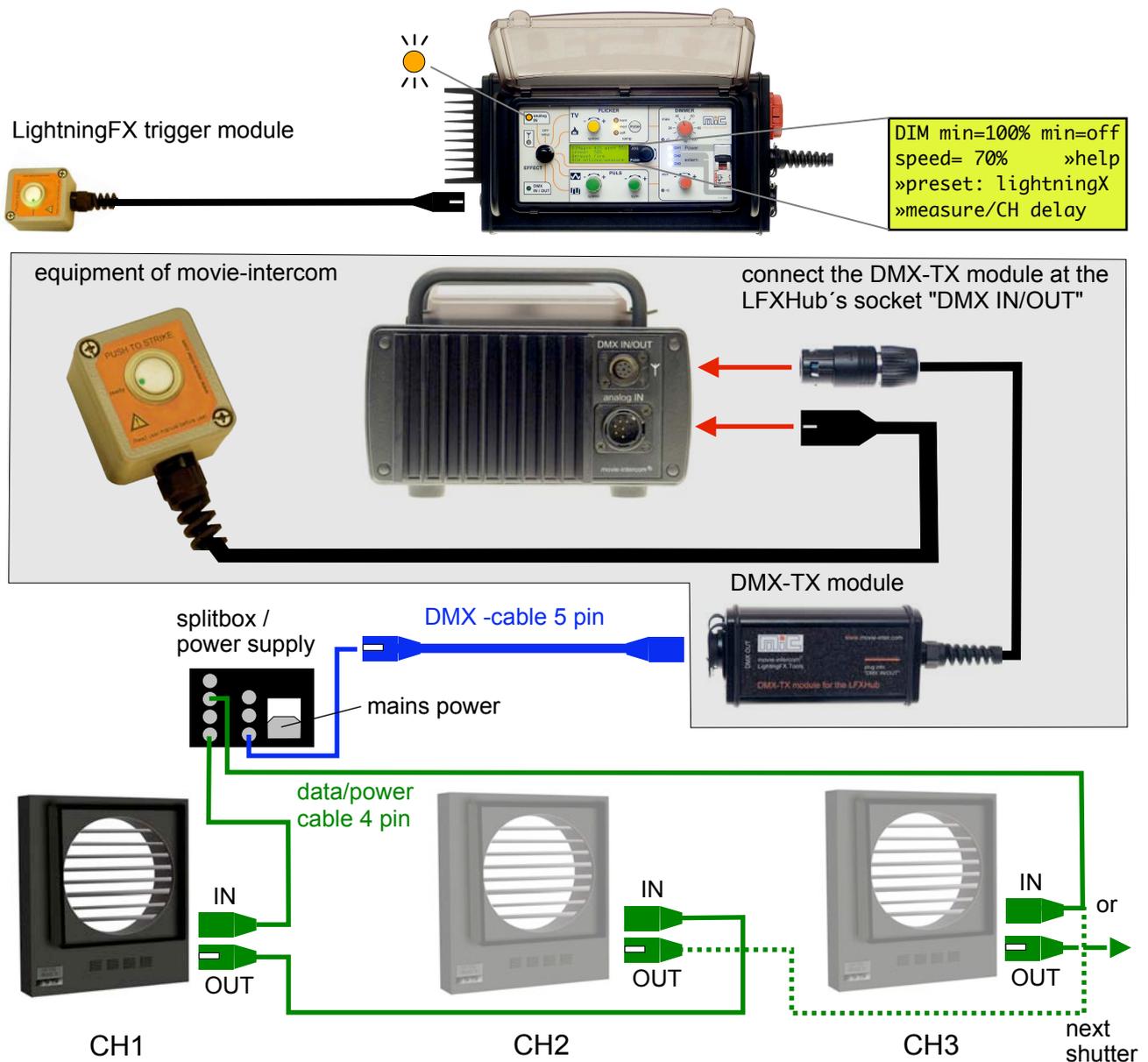
...using conventional HMI(s) up to 18 kW with attached DMX controlled dimmer-shutter(s), mounted instead of the barndoor of the lamp.



The trigger module is automatically identified by the LFXHub. Menu will change as shown below when plugged in.

The LightningFX app requires a software upgrade of the LFXHub.

Please refer to the user manual of the lightningFX trigger module for detailed information > <http://www.movie-inter.com/en/support/downloads/index.html>



15. optional DMX module

With the optional available DMX-TX module you can...

DMX-512

- ➔ control an unlimited number of DMX dimmer packs, DMX controlled dimmer-shutters or any DMX-512 compatible device.

The external DMX module will be plugged into the "DMX IN/OUT" socket of the LFXHub. If "EFFECT" is in position "DMX IN/OUT" information about the connected device is displayed, the DMX addresses can be configured. In this position of "EFFECT" all output signal are set to zero, all connected lamps are off.



- ➔ turn "EFFECT" to position "DMX IN/OUT"
- ➔ If no LFX tool is connected at "DMX IN/OUT":
> the green LED is flashing
- ➔ when DMX-TX module is plugged in >

Please connect DMX module to "DMX IN/OUT" on your left hand side!

CH1= 001 and 004
CH2= 002 and 005
CH3= 003 and 006
»change DMX-TX-ID

connection of the external DMX module at "DMX IN/OUT"



Please find further information about DMX on page 32, chapter 13B "control DMX dimmer packs".

For detailed information please refer to the user manual delivered with the DMX module <http://www.movie-inter.com/en/support/downloads/index.html>

16. optional radio module

With the optional available radio module you can...

- ⇒ switch on/off and dim every function of the LFXHub wirelessly.
- ⇒ update the software of the LFXHub wirelessly (requires additional hardware)



If "EFFECT" is in position "Y" information about the connected device is displayed.



- ⇒ turn "EFFECT" to position "Y"
- ⇒ If no LFX tool is connected at "DMX IN/OUT": the blue LED is flashing >

Please connect radio module to "DMX IN/OUT" on your left hand side!

connection of the external radio module at "DMX IN/OUT"



For detailed information please refer to the user manual delivered with the radio module.

The radio module is currently under construction

17. software update of the LFXHub

The functionality of the LFXHub is based upon software.

Additional software can be installed to the LFXHub to extend the functionality e.g....

- language packets
- functions with new features (e.g. DMX)

The required software will be send as a CD or will be send to you by e-mail.
It is not necessary to send the LFXHub to movie-intercom to the install software.

system requirements

- data cable for the LFXHub (optional available)
- PC with Windows 95 / 98 / 2000 / XP and serial interface (COM-port)

installation procedure

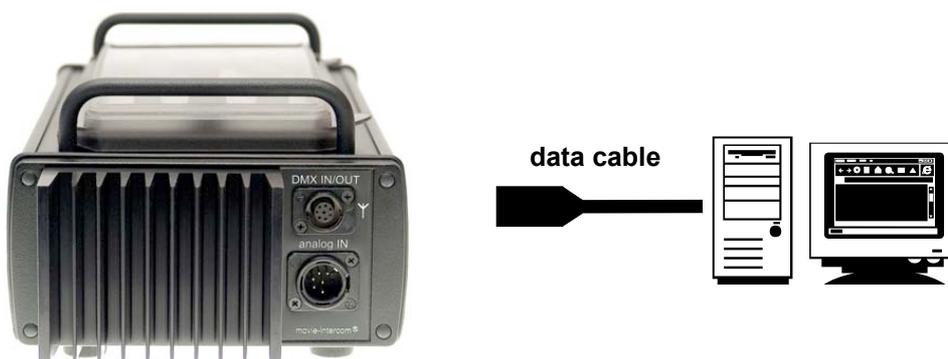
1. remove all external components from the LFXHub and disconnect loads of "POWER OUT".
2. Plug in the data cable in socket "DMXIN/OUT" and connect the SUB-D plug of the data cable to a COM-port of the PC.
3. Connect the LFXHub with the power plug to stable 230 V /50 Hz power network.
4. turn the rotary switch "EFFECT" to position "radio"
5. launch your PC and double click the EXE-database received from movie-intercom and follow the instructions.

Please be aware:

The power of your PC and the power of the LFXHub must not be interrupted during the installation process.



connection of PC data cable (order code: pcda) at "DMX IN/OUT"



For detailed installation instructions please refer to the user manual delivered with the software update / upgrade.

18. trouble shooting / maintenance

Possible problems using the LFXHub might be solved here.

Basic conditions for operation

1. The LFXHub, especially the power cord, has no damages.
2. The operation voltage of the LFXHub is 220 - 240 VAC /50 Hz or is 115 VAC / 60Hz for the US model
2. The built-in main fuse is turn on.
4. The multifunctional display of the powered LFXHub is illuminated independent of the position of "EFFECT".

In case of a malfunction the internal fuse of the power supply could have been triggered. This internal fuse is self resetting. Please wait 10 minutes and try again. Do not open the the LFXHub, it is not necessary.

| symptom | possible fault | solution |
|--|---|--|
| A connected lamp does not work | The power network has no power. Is the LCD illumination on? | use powered mains socket |
| | The switch of the connected lamp is turned off | turn it on |
| | the connected lamp is inoperative | change lamp |
| flicker effect looks bad | the value of "DIMMER max" is too low | increase "Dimmer max" |
| | the value of "DIMMER min." is too high | decrease "DIMMER min." |
| | LFXHub is in measurement mode | at first determine "DIMMER max", then "DIMMER min" go back to the top level menu using "return" in the menu with the JOG |
| puls effect looks bad | the value of "DIMMER max" is too low | increase "Dimmer max" |
| | the value of "sym" is too high | decrease "sym" |
| device does not work although all settings are correct | Did you use the LFXHub in wet environment? Humidity might be too strong inside the LFXHub. | Leave the LFXhub dehumidify at a warm and dry place for at least one hour. |

If you have a problem which can not be solved by this manual, please disconnect the LFXHub from the mains and contact movie-intercom.

cleaning the unit

ONLY clean the unit when disconnected completely from mains!

Use a clean slightly wet cloth. After that basic cleaning use a cloth dipped in spirit for the transparent lid to clean.

disposal

In order to avoid any possible effects resulting from the disposal of electrical and electronic equipment containing substances damaging the environment and human health, the European Parliament and Council directives

2002/96/EC on waste electrical and electronic equipment (WEEE) and

2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) have been transferred into national law in all EU member states.

The product you have purchased was developed in line with the current state of the art in an environmentally friendly manner and with the view of recycling.

The product is labelled with the symbol illustrated above. If you wish to dispose this product, this symbol obliges you to do so separately from industrial sorted waste.

Waste equipment should be shipped to movie-intercom. We will dispose the waste for you.

Electrical equipment does not belong in regular waste.



19. specifications

| basics | | | |
|--|--|---------------------------------------|--|
| | order code: lfxhs schuko version | order code: lfxhc CEE version (UK) | order code: lfxhu NEMA (US version) |
| power supply | 220-240 VAC / 50 Hz | | 115VAC/60Hz |
| operating temperature | -20°C ...70°C (-4°F ... 158°F) | | |
| protection level with closed lid | IP22 | | |
| dimensions (l x b x h) excluding power cable | 360 x 170 x 120 mm (14.1" x 6.7" x 4.8") | | |
| weight | 5,1 kg | | 5,0 kg (11 pounds) |
| internal dimmer pack | | =CH 1 | |
| max. output power | 3600 W @ 230VAC | | 1500 W @ 115VAC |
| peak output current | 250 A for 10ms | | |
| upper dimmer level range (max) | 0...100% | | |
| lower dimmer level range (min) | 0...99% | | |
| interfaces | | | |
| analog OUT | 3x: CH 1, CH 2, CH 3 | | |
| according to industrial standard SL10 | 0...10V DC each channel, short-circuit proof | | |
| output configuration individual selection per channel | synchronous, delayed, inverse opposite CH1 | | |
| analog IN | 0...10V DC | | |
| connected LFX Tool is automatically identified | | | |
| DMX OUT | requires optional available DMX-TX module | | |
| DMX channels | 3 channels + 3 channels mirrored, each with other DMX address | | |
| DMX address of LFXHub per channel | 1 ... 512 | | |
| stored presets | | | |
| resolution of every preset | 24/25 samples per second | | |
| flicker generator | | | |
| TV category | presets: feature film, news, video clip + individual memory for "my recent setting" | | |
| fire category | presets: fire, candle, welding + individual memory for "my recent setting" | | |
| puls generator | | | |
| triangle category | presets:: sawtooth, sym. flasher, neon lights 1 + individual memory for "my recent setting" | | |
| rectangle category | presets:: construction flasher, turn indikator, neon lights 2 + individual memory for "my recent setting" | | |
| manual settings rectangle / triangle | | | |
| speed range | for triangle 0,3...28 seconds, for rectangle 67.5 ms...28 seconds | | |
| symmetry | ti=1...99% | | |

20. address / support

Do not hesitate to contact movie-intercom.
We are looking forward to support you!

| | | |
|--------------------|---|---|
| postal address | movie-intercom Urbanstr. 171B 10961 Berlin Germany |  |
| phone 24h / 7 days | +49 (0)30 - 22 32 05 75 |  |
| fax | +49 (0)30 - 22 32 05 71 |  |
| e-mail | support@movie-inter.com |  |
| web | http://www.movie-inter.com |  |

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Tmax= 80% min=off
speed= 17% sym= 99%
Preset sawtooth
WCH options/measure

TV

FLICKER

speed

soft

ramp

JOG

PUSH

PULS

speed