GEO TECHNIK

GeoDim 1 Universaldimmer

Operating Manual

GeoDim 1 Universaldimmer

GeoDim dimmers have been developed for the use at events, tv studio, industry, catering trade, cinema and conference room.

Installation and setup has to be done by a technician. Please read this manual carefully before starting the installation, to secure the optimized function of your dimmer.
If there appear at any time any malfunctions or mechanical defects at the dimmer or the electrical wiring, please disconnect the dimmer immediately from the mains power and get in contact with the technical service.

The dimmer can be used for mobile applications or hanged in trusses or mounted onto a wall. The opening of the dimmer is NOT required. At mobile use over dace floors, stages or any other public areas the dimmer has to be protected against falling down with a safety line.

To prevent over heating at continuous use, the dimmer may be used only at free air circulation - not covered.
Operation only in dry areas.
The dimmer contains parts under dangerous voltage. At opening the dimmer or when the housing is broken, there is danger for your life.

TECHNICAL DATAS

Power supply:	1 phase 220 – 230 volts, 50 - 60Hz.
	max. 10 amps. (depends of the connected load)
	The supply line must be protected by a fuse /breaker with.
	max. 16 amps.
Maximum power consumption:	2,3 kwatts
Input :	DMX 512 / 1990
	Analog 0 ... +10 volts dc
	Potentiometer control
Output :	1 load channel for max. 2300 watts load.
	inductive load (mech. transformers max. 2000 watts)
	resistive load (incandescent or quartz lamps max. 2300 watts)
Minimum load:	60 watts (optionally available with 10 watts)
Housing:	Metal housing for use in dry rooms. (IP 30)
Protection:	load: magn. breaker 16 amps /C 250V
	electronic: fuse 0,2 amp slow blow 250V
Ambient temperature:	0 deg. C° ... 35 deg. C° (higher ambient temperatures are
	possible at lower output loads / derating. Please inquire)
Dimensions:	W 120 mm x h 70 mm x depth 200 mm
Weight:	1,3 kg / 1,5 kg

Subject to be changed.

Inputs:

XLR-5 plug
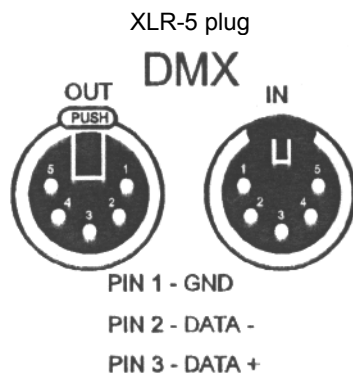
DMX:
Pin 1 = Electronic ground
Pin 2 = Data -
Pin 3 = Data +
Housing = Ground (shealding)

Analog:
Pin 1 = -
Pin 5 = + 10 volts

These inputs are only for control voltages. At higher voltages over 10 volts the dimmer will be damaged.

DMX Input:
The dimmer can be controlled by standard DMX-512 protocol (control console).
Connect the DMX input as above and select the required DMX adress. Now the control of the dimming intensity works via the DMX signal.

0 -10V Analog Input:
It is possible to control the dimmer by an external 0 ... 10 volts dc voltage.
Connect the analog input (XLR pin 1 and 5) as shown above. Now the dimming intensity corresponds to the analog voltage changings. 5 volts will result 50% lamp brightness, 10 volts give 100%

Example how to connect a potentiometer:
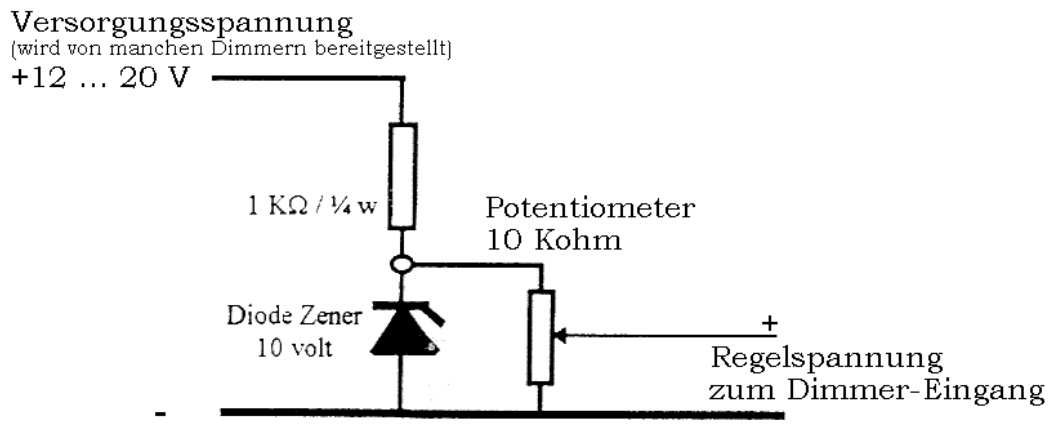
[Optionally 1-10V Analog Input / EIB installation bus operation]
To drive the GeoDim 1 over an EIB actor, the dimmer input can be configured as current sink.
Pin 4 and 5 of the XLR connector have to be bridged.
Now the 10 volts control voltage is supplied to the input connector.

Actor connection:
Pin 1 – to the negative actor output
Pin 5 – to the positive actor output

This operation mode is only available on request.
If the dimmer works in this mode, but no actor connected, then it will give 100% light intensity. (As common at dimmable electronic fluorescent ballasts)

How to start the dimmer:

If the power cord of the GeoDim is plugged into a Schuko socket (230 volts), it is ready fore use.
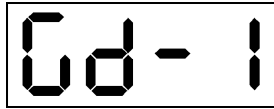
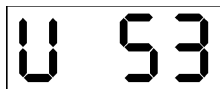**Gd-1**   Initialisation on the display. (**G**eo**D**im **– 1**)

After 5 sec. the disply is automatically switched into the menu mode.

Menu Mode:
In the standard operation mode the display shows the valid DMX adress. With the Up /Down buttons you can select different menu points.

Menu Points (Main Menu):

A001   DMX Adress (0-501)

U 53   Display Level Unit (dimming level in 0-100% or in 0-255 bit)

SEtU   Setup – Access to sub menu points.

Menu Mode - Submenu – DMX Adress

A001   The digit „A" means „DMX adress", and the following digits show the selected DMX adress value.

If there is a small dot blinking on the right of the display, the GeoDim is receiving a DMX signal. If there is no blinking dot, no DMX is received.

DMX Adress Adjustment:
Press the enter key and the first digit will blink. With the Up /Down keys you can select any adress between 1 and 512.
Press the Enter key to save your selection. To exit this adjustment mode without any changing, please use the ESC function (press Up and Down at the same time).

Menu Mode – Submenu - Intensity Level
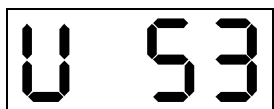
U 53   Here is shown the actual intensity value. The digits 2 to 4 show the dimming level in 0 - 100%.

Press the ENTER key and the ‚U' will blink. Now you can change the dimming level with the UP / DOWN keys or with the Data fader.
Press the Enter key to save your adjustment. To exit this adjustment mode without any changing, please use the ESC function (press Up and Down at the same time).

Menu Mode – Submenu - Setup

SEtU Press „ENTER", to enter the setup mode.
There you can adjust and modify many parameters.

Setup Menu Points:

NodE Dimming Mode Adjustment (off, on, switch, time, linear, logaritm).
The regulation curve (relation between input signal and dimming output) can be chnanged.

PrEH Preheat Level (Minimum output level) (0-39%)

HiGH Max. output value (49-100%)
To limit the output voltage. For special lighting applications or to enlarge life time of lamps or to be able to use 110 volts light bulbs without any transformer.

Attention – At use with 110 volts bulbs, there is the maximum output power of 1000 Watt allowed.

rEuE Inverts max. and min. brightness at DMX use (high DMX level will result a low brightness, a low DMX level will give a high light output)

0 10.U Activates 0-10V analog inputs

diSP Display contrast (10-100%)

rAnG Display Range (Dimming output value is displayed in 0 -100 % or in 0 - 255 bit)

tinE Operating hours (0 - 9999 h)

rESE Reset, recalls manufacturers paramerters.

UEr.2 Shows software version number.

Setup Menu Mode – Preheat

```
PrEH
```

To fix an absolute minimum level. The dimmer cannot give out a lower level, than the selected preheat level (minimum value).
Press ENTER to acces this menu point.

```
27
```
This is the active minimum level. The value is displayed in 0-100%.

Press ENTER to change this value. The display starts blinking. With the Up / Down keys you can change this value between 0% and 39%.
Press the Enter key to save your adjustment. To exit this adjustment mode without any changing, please use the ESC function (press Up and Down at the same time).

Setup Menu Mode – High (Max Level)

```
HiGH
```
To fix an absolute maximum level. Here you are able to limit the dimming output at a maximum level. Press ENTER to acces this menu point.

```
87
```
This is the active max. level. The value is shown in 0 – 100%.
Use the UP DOWN keys to change this level
between 50% and 100% .
The digits are blinking.

Press the Enter key to save your selection. To exit this adjustment mode without any changing, please use the ESC function (press Up and Down at the same time).

Setup Menu Mode – Reverse DMX

```
rEuE
```

Here you can invert the received DMX signal level.
Press the ENTER key to see the active value on the display:
'on' or 'off'.

```
on
```

'on' means reverse active. A high DMX level will result a low dimming level
With decreasing the DMX level, the dimming output will increase.
Press the UP or DOWN key, to disactivate this function.

```
oFF
```

'oFF' means DMX standard.
Press UP or DOWN, to change this setting.

Press the Enter key to save your selection. To exit this adjustment mode without any changing, please use the ESC function (press Up and Down at the same time).
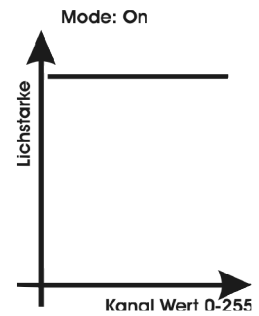
Setup Menu Mode – Mode

NodE Here you can assign one of five dimming curves to the dimmer
Press ENTER to acces this menu point.

Mode: On
Lichstarke / Kanal Wert 0-255

On 'On' means:
The channel is always on.
It cannot be controlled and gives continuously 100% on the output.

Mode: switch
Lichstarke / Kanal Wert 0-255
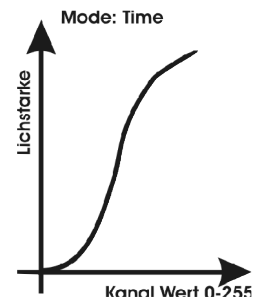
Suit 'Swit' - Switch Mode:
(The dimmer can only switch on or off, like a relay.) Recommended
to control mh lamps or other not-dimmable fixtures or motors,
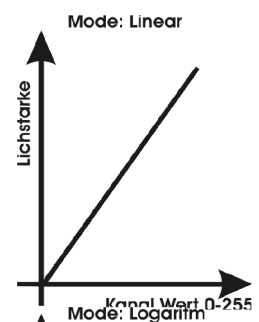like projection screens, stage curtains, jalousies etc.

Mode: Time
Lichstarke / Kanal Wert 0-255
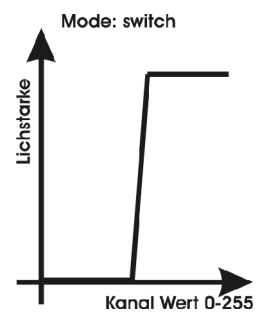
tinE ‚time':
The dimming curve is lik a „S".
Recommended for TV studio / movie.

Mode: Linear
Lichstarke / Kanal Wert 0-255

LinE ‚linear'
Relation of input level and dimming output is linear. The standard mode.

Mode: Logaritm
Lichstarke / Kanal Wert 0-255

LoGA ‚logarithm'
Relation of input level and dimming output is logarithmic.
Recommended to dim fluorescent lamps.
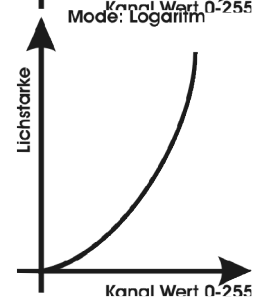
Press the Enter key to save your selection. To exit this adjustment mode without any changing, please
use the ESC function (press Up and Down at the same time).

Setup Menu Mode – 0-10V Input activation

Here the 0-10V analog input can be activated.
Press ENTER to see the active adjustment.

'oFF' means: The analog input is disactivated.
Press the UP or DOWN key to activate the input.

'on' means: The analog input is activated. The GeoDim can be controled
over this input.
Press the UP or DOWN key to disactivate this input.

We suggest to disactivate the analog input, if it is not used. So the dimmer is protected against any signal disturbance.

Setup Menu Mode – Display

Here you can adjust the display brightness.
Press ENTER to see the active level adjustment.

With the UP / DOWN keys you can adjust the brightness between 10% and 100%.

Press the Enter key to save your setting. To exit this adjustment mode without any changing,
please use the ESC function (press Up and Down at the same time).

Setup Menu Mode – Range

```
rAnG
```
Here you can select the units in wich the dimming level is shown on the display (% or bit).
Press ENTER to to see the actual selection.

```
100
```
The active range is „%" - the output level is displayed in 0 - 100% .
Press UP or DOWN to change this range.

```
255
```
The active range is „bit". The dimming level is shown in 0 – 255 bit.
Press UP or DOWN to change this range.
Press the Enter key to save your selection. To exit this adjustment mode without any changing, please use the ESC function (press Up and Down at the same time).

Setup Menu Mode – Time – Operating Hours

```
tinE
```
Shows, how long the dimmer has been used.
Interesting for rental or for maintenance periods.
This adjustment cannot be resetted.

```
0027.
```
The blinking point shows the seconds.
Press ENTER to exit this mode.

Setup Menu Mode – Reset

```
rESE
```
Here you can reset all parameters to the factory parameters.
Attention - all your previous settings and lighting scenes will be erased !
Press ENTER to activate this mode - the display starts blinking.
Now press and hold the UP and DOWN keys at the same time 5 seconds. Press until the blinking will stop. Now the factory settings are recalled and the memories are empty.

Setup Menu Mode – Software Version

```
UEr.2
```
The last digit shows the actual software version number.

Manufactured in EU by:

GEO-TECHNIK   30. July 2005

www.dimmer.de