

# NanoSD Player

User Manual



DMX <sup>®</sup>  
4  
ALL



This user manual refers to the current firmware status V2.02 !  
If necessary please make a firmware update.

## Description

The **NanoSD Player** is a Stand-Alone DMX- or a LED-Pixel-Player.  
A digital LED-Stripe can be connected directly at the output.

### Switchable output

The NanoSD output can be switched between DMX and several LED control signals.  
So DMX-Devices or digital LED-Stripes with LEDs which can be controlled individually can be controlled directly from the NanoSD Player.

### Several LED-Chips

The NanoSD Player supports a lot of several LED-Chips.  
A list for all compatible LED-Stripes is available in the data sheet.

### Blue LED-Display

The NanoSD Player status LED has a blue LED.

### IR-Sensor

Via the integrated IR-Sensor the NanoSD Player can be controlled via an optional IR-Remote control.

### Easy Configuration

A user friendly configuration via the DMX-Configurator allows a fast and uncomplicated setting of all parameter as well as reproduction of the programs.

### Programming via SD-Card

The programming occurs only via a SD-Card.  
So, all settings are available independent of the project.

### High quality and compact design

The NanoSD Player is designed with two 3pin screw connectors with a compact aluminium housing.

### Firmware-Update-Function

To use future functions the NanoSD Player offers a Firmware-Update-Function.

## Data sheet

<b>Power supply:</b>	5-12V (from LED-Stripe or external power supply) ~ 300mA @ 5V / ~ 120mA @ 12V
<b>Output:</b>	Controlling signal for digital LED-Stripe or DMX-Signal with 512 channels
<b>Supported LED-Chips:</b>	APA-101, APA-102, APA-104 DycoLED PB3, DycoLED PC5 INK1002, INK1003 LPD1101, LPD6803, LPD8803, LPD8806 LPD1886 8Bit, LPD1886 12Bit (8Bit controlled) MagiarLED III flex SK6812 RGB, SK6812 RGBW, SK6822, SK9822 TM1804, TM1812, TM1814, TM1829 UCS1903, UCS1912, UCS2903, UCS2912 UCS9812 (8Bit control), UCS9812 (16Bit control) WS2801, WS2811, WS2812, WS2813, WS2812B WS2815, WS2818, WS2821
<b>Color sequence:</b>	RGB adjustable; SingleColor white, red, green, blue
<b>Pixel groups:</b>	adjustable, 1 – 99 Pixel
<b>Input:</b>	Digital LongDistance-Control input IR-Sensor
<b>Connection:</b>	2 pieces 3pin screw terminal (removable)
<b>Program memory:</b>	Micro-SD-Card (accessory)
<b>Operation:</b>	Button and LED-Display at the device IR-remote control (accessory)
<b>Further Functions:</b>	Cue-List RGB-Filter Firmware-Update-Function
<b>Dimensions:</b>	7mm x 42mm x 23mm
<b>Delivery :</b>	NanoSD Player 2 pieces 3pin screw terminal User manual (german)

## Connection

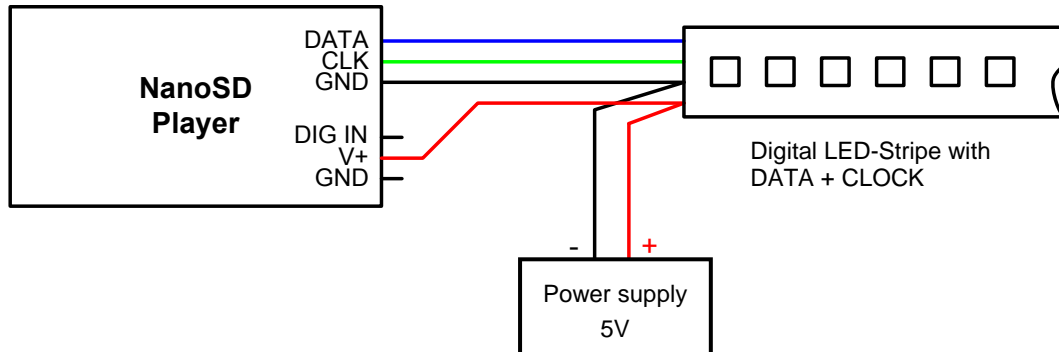


GND  
V+ (5-12V)  
DIG IN  
GND  
CLK / DMX-  
DATA / DMX+

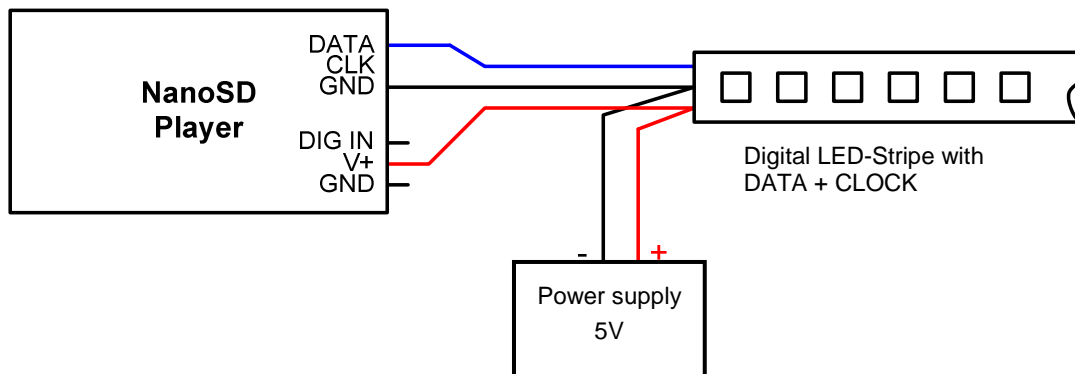
Output assignment for several LED-Stripe types:

<u>LED-Stripe Type</u>	<u>CLK / DMX-</u>	<u>DATA / DMX+</u>
APA-101 / APA-102	CLK	DATA
APA-104		DATA
Dyco LED PC3 / PC5	CLK	DATA
GS8208		DATA
INK1002 / INK1003		DATA
LPD1101 / LPD6803	CLK	DATA
LPD1886		DATA
LPD8803 / LPD8806	CLK	DATA
MagiarLED III	CLK	DATA
SK6812 / SK6822		DATA
SK9822	CLK	DATA
TM1804 / TM1812		DATA
TM1814		DATA
TM1829		DATA
UCS1903 / UCS1912		DATA
UCS2903 / UCS2912		DATA
UCS9812		DATA
WS2801	CLK	DATA
WS2811 / WS2812(B)		DATA
WS2813 / WS2815 / WS2818		DATA
WS2821	DMX-	DMX+

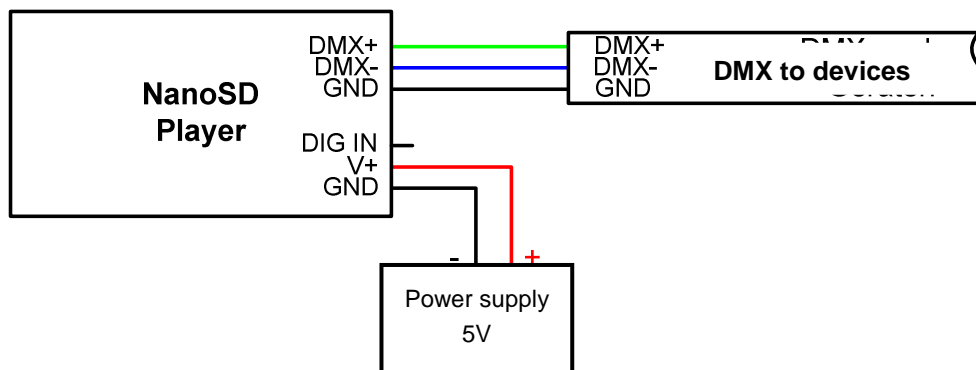
**Example for connecting Stripes with two controlling signals (CLK+DATA)**



**Connecting example for Stripes with one controlling signal (DATA)**



**Connecting example for DMX-devices**



## Operation



The **NanoSD Player** has a button as well as a LED to operate direct at the unit.

Pushing the button calls the programs in order.

Furthermore the **NanoSD Player** has an IR-Sensor which is placed at the devices front. Via an IR-remote control (accessory) further functions can be executed.

## Micro-SD-Card

The **NanoSD Player** needs a Micro-SD card for the program memory (not included). This will be slided-in underneath the IR-Sensor with the contact downwards.

By inserting the Micro-SD-Card slide it in until a clicking sound is audible.

For removing the Micro-SD-Card please push again until a clicking sound is audible. The card will be pressed out ca. 2mm and can be removed.



Use only Micro-SD-Cards or Micro-SDHC-Cards with class4 or higher.

The Micro-SD-Card must be formatted with the File-System FAT16 or FAT32.

It is recommended not changing the file names which were given by the DMX-Configurator.

## Configuration / Create programs

The settings configuration and the program creation take place user-friendly via the Windows-Program DMX-Configurator.

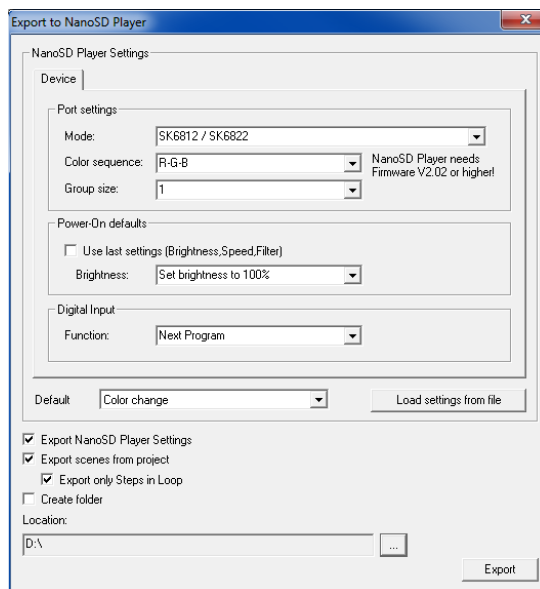
The DMX-Configurator 4PIXX is available in the current version as download on [www.dmx4all.de](http://www.dmx4all.de) under software.



Use only the DMX-Configurator with version 2.0.9 or higher !

The procedure for creating programs is available in the User Manual for the DMX-Configurator.

After creating the programs the export can be carried out under **Project**→**Export**→**NanoSD** :



The menu **NanoSD Settings** contains the NanoSD Player device-settings. These will be explained on the following pages.

**Load settings from File** reads out the devices settings from an existing file which were created before. Please specify the config.cfg file here.

The remarkable export-possibilities show which elements should be exported.

**Export NanoSD Settings**

The devices settings will be exported

**Export scenes from project**

The scenes included in the project will be exported

**Export only Steps in Loop**

Only the steps which are included in one loop will be exported

**Create folder**

Creates the exported files in one folder which is generated. This option offers the possibilities to store the exported files from a specific project to an external medium.

Under **Location** you have to specify the path where the files should be written. Please choose directly the SD-Card and don't create a folder to use the SD-card afterwards in the NanoSD Player !

**Export** starts the export process

## Device Settings

The **NanoSD Player** can output directly a controlling signal for digital LED-Stripes or output a DMX-Signal.

The setting **MODE** specifies, if DMX or a digital LED-Stripe should be controlled.

If a digital LED-Stripe is chosen, the color order (**Color sequence**) as well as the pixel group size (**Group size**) has to be selected.

The **Power-On defaults** defines the brightness values by starting the NanoSD-Player

If **Use last settings** is activated the last settings will be restored by starting.

If a special brightness value should be access after starting, so this value is to be chosen under **Brightness**.

**Default program** specifies which scene is started by power on.

*No start scene* - There is no replay starting

*Last selected scene*- The last chosen scene will be started

*Play Cue-List* - Starts the Cue-List

*<Scenename>* - Starts the selected scene



## Pixel groups

The **NanoSD Player** supports pixel groups with an adjustable length which can be configured during the data export.

Each Pixel group behaves like a single Pixel which is controls about 3 DMX-Channels (RGB) / 4 DMX-Channels (RGBW) or 1 DMX-Channel (Single color).

Depending of the selected LED-Protocol a different quantity of Pixel can be connected at the output (controlled Pixel):

LED-Protocol	max. RGB Pixel/Pixel groups	max. controlled Pixel
APA-101	680	2039
APA-102	680	4097
APA-104	680	680
DycoLED PB3	680	4097
DycoLED PC5	680	326
GS8208	680	680
INK1002 / INK1003	680	680
LPD1101 / LPD6803	680	680
LPD1886 8Bit	680	907
LPD1886 12Bit (8Bit controlled)	680	680
LPD1886 12Bit (12Bit controlled)	680	680
LPD8803 / LPD8806	680	2720
MagiarLED III	680	2039
SK6812 / SK6822	680	680
SK6812 (RGBW)	510	510
SK9822	680	4097
TM1804 / TM1812	680	680
TM1814	508	508
TM1829	680	680
UCS1903 / UCS1912	680	680
UCS2903 / UCS2912	680	680
UCS9812 (8Bit controlled)	389	389
UCS9812 (16Bit controlled)	389	389
WS2801	680	2720
WS2811 / WS2812 (B)	680	680
WS2813 / WS2815 / WS2818	680	680
WS2821*	170	170

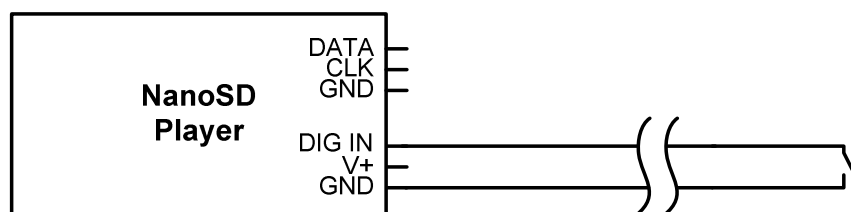
\* = No pixel groups possible

## Digital controlling input (DIG IN)

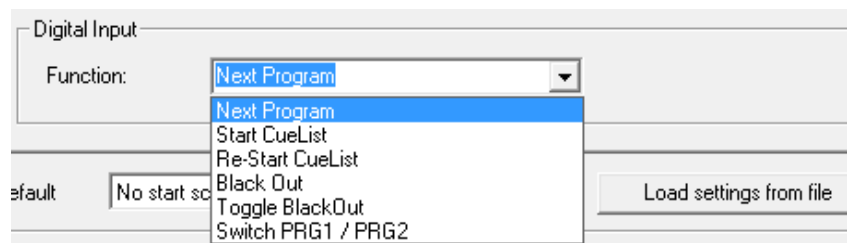
The controlling input allows a continued shifting of the replayable programs via an external button. Each tipping results in shifting to the next program.

The digital controlling input DIG IN is executed as LONG DISTANCE input, which allows using longer supply lines to the switching elements. It is recommended not to exceed a cable length of 50m.

The inputs wiring takes place via a button to GND in accordance to the following image:



The function of the control input DIG IN is defined in the configuration during the data export from the DMX Configurator:



Next Program	It will be switched to the next program
Start CueList	The CueList is executed
Re-Start CueList	The CueList will be restarted from the beginning
Black Out	All values are output with 0% as long as the input is active
Toggle BlackOut	It will switch the BlackOut on every turn (BlackOut on / BlackOut off)
Switch PRG1 / PRG2	Program1 is executed if DIG IN is not active Program2 is executed when DIG IN is active

## IR-Remote control

An additional IR-Remote control can be used to control the NanoSD Player. This is available as accessory.



### Choosing the program

By activating the button **1** up to **9** the programs 1 up to 9 can be called directly. After pressing **SELECT PROG** the programs can be called in order with the buttons **+** and **-**.

### Call up the Cue-List

**AUTO RUN** starts the Cue-List if it exists and if it contains entries.

### Output On/Off

**BLACK OUT** switches the output off and by tipping on again.

### Playback speed setting

After pressing **SPEED** the playback speed can be adjusted via the buttons **+** and **-**.

### Brightness setting

The brightness setting occurs according to the configuration of the „Enable RGB filter“ within the DMX-Configurator for all channels global or separated for red, green and blue.

After pressing **R**, **G** or **B** via the buttons **+** and **-** the brightness is adjustable. If „Enable RGB Filter“ is activated the settings for the colors occurs separated. Otherwise the brightness will be adjusted for all channels.

## Execute the Firmware-Update

The **NanoSD Player** has a Firmware-Update-function which allows transferring prospective Firmware-versions. A Firmware-Update occurs via the SD-Card.

Please procedure as follows:

- Copy the Firmware-file (firmware.bin) on a SD-card
- Turn off the NanoSD Player (remove power supply)
- Plug in the SD-card into the device
- Push the button and hold
- Turn on the NanoSD Player (Connect power supply)
- The LED flashes 10x
- Meanwhile release the button
- Wait until the Update has finished  
It is signalled with a fast flashing LED
- Turn off the NanoSD Player
- The Firmware-File (firmware.bin) can be deleted from SD-Card

## Factory Reset

To reset the **NanoSD Player** into the delivery status please proceed as follows:

- Turn off the NanoSD Player (remove power supply)
- Remove SD-Card
- Push the button and hold
- Turn on the NanoSD Player (Connect power supply)
- The LED flashes with code 4 as confirmation
- Release button

## Accessory

### Digital LED Pixel Stripes



### Power supply 12V



### IR remote control



### Micro SD-Karte



## CE-Conformity



This assembly is controlled by a microprocessor and uses high frequency. In order to maintain the properties of the module with regard to CE conformity, installation into a closed metal housing in accordance with the EMC directive 2014/30/EU is necessary.

## Risk-Notes

You purchased a technical product. Conformable to the best available technology the following risks should not be excluded:

**Failure risk:** The device can drop out partially or completely at any time without warning. To reduce the probability of a failure a redundant system structure is necessary.

**Initiation risk:** For the installation of the board, the board must be connected and adjusted to foreign components according to the device paperwork. This work can only be done by qualified personnel, which read the full device paperwork and understand it.

**Operating risk:** The Change or the operation under special conditions of the installed systems/components could as well as hidden defects cause to breakdown within the running time.

**Misusage risk:** Any nonstandard use could cause incalculable risks and is not allowed.

**Warning:** It is not allowed to use the device in an operation, where the safety of persons depend on this device.

## Disposal



Electronical and electronic products must not be disposed in domestic waste. Dispose the product at the end of its service life in accordance with applicable legal regulations. Information on this can be obtained from your local waste disposal company.



DMX4ALL GmbH  
Reiterweg 2A  
D-44869 Bochum  
Germany

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