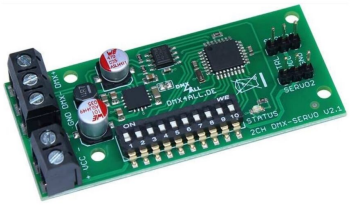

DMX4ALL DMX Servo Control 2 RDM Interface Pixel LED Controller User Manual

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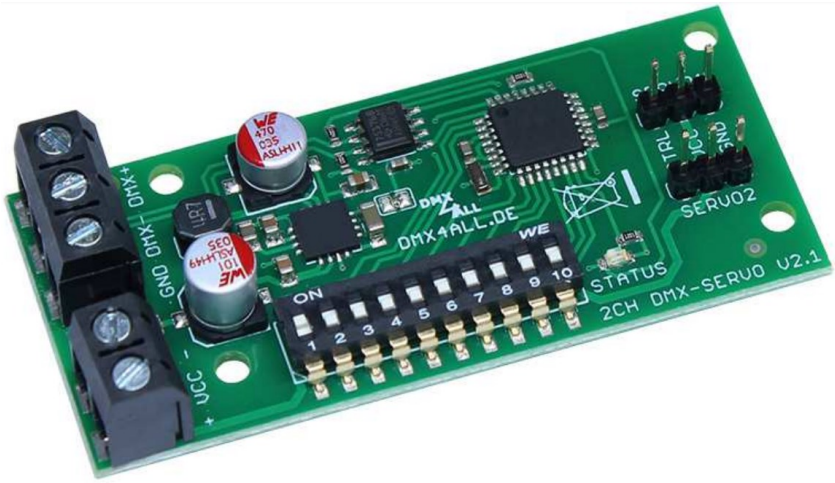


For your own safety, please read this user manual and warnings carefully before installation.

Contents

Description

The DMX-Servo-Control 2 is designed for controlling of two servos via DMX.

Two Servos
The DMX Servo Control 2 has two servo ports. Each can be controlled via one DMX channel.

Servos with 5V up to 12V DC can be used
The supply voltage of the DMX-Servo-Control 2 is between 5V and 12V. Servos with a supply voltage within this range can be connected directly.

Adjustable Servo control signal
The controlling occurs via an adjustable pulse width.

Compact Design
The design and the compact construction allows an installation of this small assembly in areas that do not offer much space.

LED-Display
The integrated LED is a multifunctional display for showing the current device status.

DMX Addressing
The DMX addressing is settable via a 10-position DIP switch.

RDM Support
The DMX Servo Control 2 allows configuration via RDM over DMX

Data sheet

Power supply: 5-12V DC 50mA without connected servo
Protocol: DMX512 RDM
Servo-Voltage: 5-12V DC (corresponds to the supply voltage)
Servo-Power: max. 3A in sum for both servos
DMX-Channels: 2 Channels
Connection: 1x screw terminal / 2pin 1x screw terminal / 3pin 2x pin header RM2,54 / 3pin
Dimension: 30mm x 67mm

Content

- 1x DMX-Servo-Control 2
- 1x Quick manual german and english

Connection

ATTENTION :
This DMX-Servo-Control 2 is NOT ADMITTED for applications whom has safety-relevant requirements or in which dangerous situations can occur !

LED-Display

The integrated LED is a multifunction display.

During to the normal operation mode the LED lights permanently. In this case the device is working.

Furthermore, the LED shows the current status. In this case the LED lights up in short pitches and then is missing for longer time.

The number of the flashing lights is equal to the event number:

Status- Number	Error	Description
1	No DMX	There is no DMX-Address
2	Addressing error	Please check, if a valid DMX-Start Address is adjusted via the DIP-Switches
4	Configurationstored	The adjusted configuration is stored

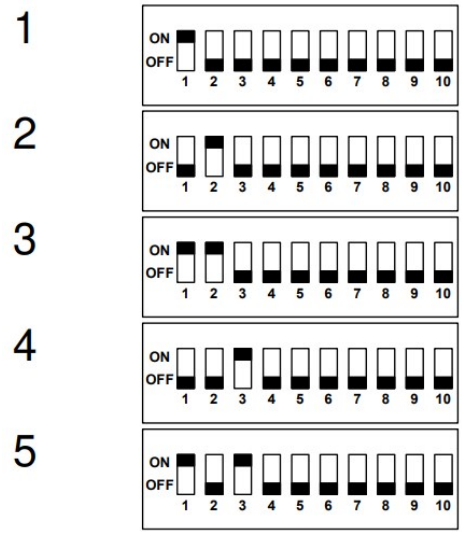
DMX-Addressing

The Start Address is adjustable via DIP-Switches.

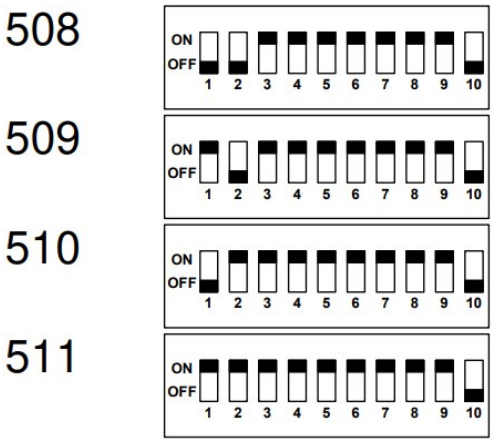
Switch 1 has the valency 20 (=1), switch 2 the valency 21 (=2) and so on up to switch9 with the valency 28 (=256).

The sum of the switches showing ON is equal to the start address.

The DMX start address can be also adjusted via the RDM parameter DMX_START ADDRESS. For RDM operation all switches must be set to OFF !
Address **Switch**



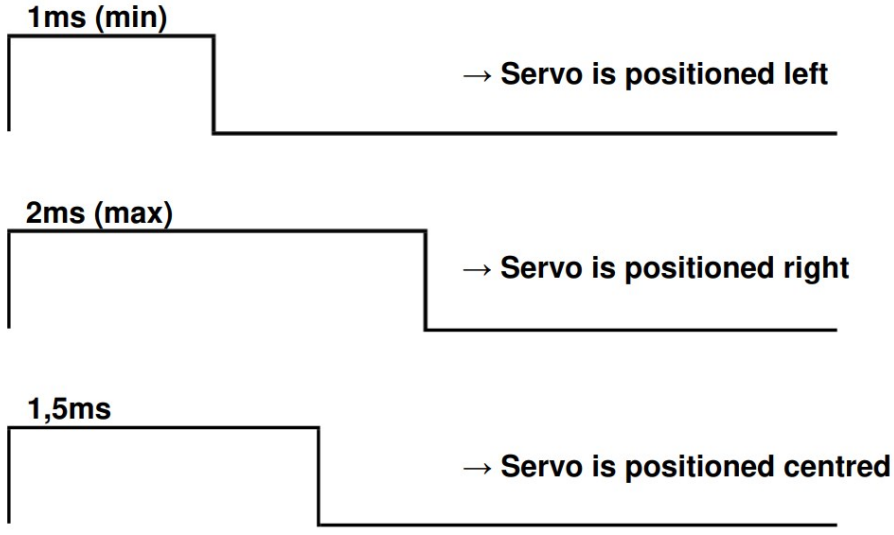
Address **Switch**



Servo control signal

⚠ The signal which is send to the Servo consists of a High-Impulse and a Low one. The pulse duration is important for the Servo.

Normally this impulse is between 1ms and 2ms, which is also the standard setting for the DMX-Servo-Control 2. These are the end positions of the Servos where it is not limited mechanically. A pulse length of 1.5ms would be the Servo middle position.



Adjust Servo control signal

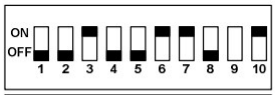
In according to the used Servo it can be advantageous to adapt the impulse-times. The minimum time for the left position can be set within the range 0,1-2,5ms. The maximum time for the right position must be bigger than the minimum time and can be maximum 2,54ms.

Please proceed as following for the settings:

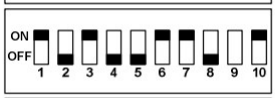
- Turn on the DMX-Servo-Control
- Set DIP-Switch 9 and 10 on OFF
- Set DIP-Switch 10 on ON
- Set via the DIP-Switched 1-8 the Minimum time
- Set DIP-Switch 9 on ON
- Set via the DIP-Switched 1-8 the Maximum time
- Set DIP-Switch 10 on OFF
- The LED lights up 4x as confirmation that the settings are stored
- Set via DIP-Switches 1-9 the DMX-Starting address

The time-setting takes place with the DMX-Addressing via the DIP-Switches in 10µs steps. Thereby the set value with 0,01ms is multiplied, so for example a value of 100 results in a value of 1ms.

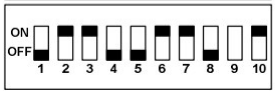
1,00ms
= 100 x 0,01ms



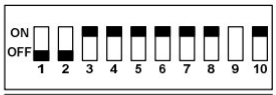
1,01ms
= 101 x 0,01ms



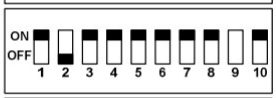
1,02ms
= 102 x 0,01ms



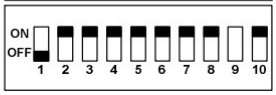
2,52ms
= 252 x 0,01ms



2,53ms
= 253 x 0,01ms



2,54ms
= 254 x 0,01ms



⚠ The RDM parameters LEFT_ADJUST and RIGHT_ADJUST can also be used to set the pulse time.

RDM

(from Hardware V2.1)
RDM is the short form for **R**emote **D**evice **M**anagement.

As soon as the device is within the system, device-dependent settings occur remotely via RDM command due to the uniquely assigned UID. A direct access to the device is not necessary.

⚠ If the DMX start address is set via RDM, all address switches at the DMXServo-Control 2 must be set to OFF ! A DMX start address set by the addressswitches is always prior !

This device supports the following RDM commands:

Parameter ID	Discovery Command	SET Command	GET Command	ANSI/ PID
DISC_UNIQUE_BRANCH	✓			E1.20
DISC_MUTE	✓			E1.20
DISC_UN_MUTE	✓			E1.20
DEVICE_INFO			✓	E1.20
SUPPORTED_PARAMETERS				E1.20
PARAMETER_DESCRIPTION			✓	E1.20
SOFTWARE_VERSION_LABEL			✓	E1.20
DMX_START_ADDRESS			✓	E1.20
DEVICE_LABEL			✓	E1.20
MANUFACTURER_LABEL			✓	E1.20
DEVICE_MODEL_DESCRIPTION			✓	E1.20
IDENTIFY_DEVICE		✓	✓	E1.20
FACTORY_DEFAULTS		✓	✓	E1.20
DMX_PERSONALITY		✓	✓	E1.20
DMX_PERSONALITY_DESCRIPTION			✓	E1.20
DISPLAY_LEVEL		✓	✓	E1.20
DMX_FAIL_MODE		✓	✓	E1.37

Parameter ID	Discovery Command	SET Command	GET Command	ANSI/ PID
SERIAL_NUMBER[1)]			✓	PID: 0xD400
LEFT_ADJUST[1)]		✓	✓	PID: 0xD450
RIGHT_ADJUST[1)]		✓	✓	PID: 0xD451

1. Manufacturer depending RDM control commands (MSC – Manufacturer Specific Type)

Manufacturer depending RDM control commands:

SERIAL_NUMBER
PID: 0xD400

Outputs a text description (ASCII-Text) of the device serial number.
GET Send: PDL=0
Receive: PDL=21 (21 Byte ASCII-Text)

LEFT_ADJUST
PID: 0xD450

Sets the high time length for left servo position.
GET Send: PDL=0
Receive: PDL=2 (1 Word LEFT_ADJUST_TIME)

SET Send: PDL=2 (1 Word LEFT_ADJUST_TIME)
Receive: PDL=0

LEFT_ADJUSTTIME
200 – 5999

Funktion
WERT: x 0,5µs = Impulszeit LINKS
Default: 2000 (1ms)

RIGHT_ADJUST
PID: 0xD451

Sets the high time length for right servo position.
GET Send: PDL=0
Receive: PDL=2 (1 Word RIGHT_ADJUST_TIME)

SET Send: PDL=2 (1 Word RIGHT_ADJUST_TIME)
Receive: PDL=0

LEFT_ADJUST_TIME
201 – 6000

Funktion
WERT: x 0,5µs = Impulszeit RECHTS
Default: 4000 (2ms)

Factory Reset

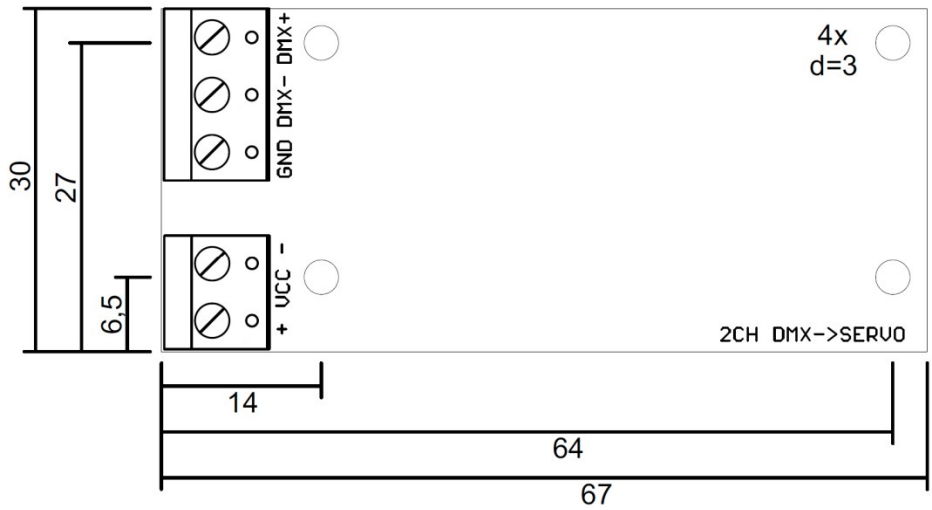
Before performing the factory reset, read all the steps carefully

To reset the **DMX-Servo-Control 2** to the delivery state proceed as follows:

- Turn off the device (Disconnect power supply !)
- Set address switch 1 to 10 on ON
- Turn on the device (Connect power supply !)
- Now, the LED flashes 20x within ca. 3 seconds
  While the LED is flashing, set switch 10 to OFF
- The factory reset is now performed
  Now, the LED flashes with event number 4
- Turn off the device (Disconnect power and USB supply !)
- The device can now be used.

If another factory reset is necessary, this procedure can be repeated.

Dimensions



CE-Conformity

This assembly (board) 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.

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

Warning

This device is no toy. Keep out of the reach of children. Parents are liable for consequential damages caused by nonobservance for their children.

Risk-Notes


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

DMX4ALL GmbH
Reiterweg 2A
D-44869 Bochum
Germany

Last changes: 20.10.2021

All information contained in this manual was arranged with largest care and after best knowledge. Nevertheless errors are to be excluded not completely. For this reason I see myself compelled to point out that I can take over neither a warranty nor the legal responsibility or any adhesion for consequences, which decrease/go back to incorrect data. This document does not contain assured characteristics. The guidance and the characteristics can be changed at any time and without previous announcement

Documents / Resources

	**DMX4ALL DMX Servo Control 2 RDM Interface Pixel LED Controller** [pdf] User Manual DMX Servo Control 2 RDM Interface Pixel LED Controller, DMX Servo, Control 2 RDM Interface Pixel LED Controller, Interface Pixel LED Controller, Pixel LED Controller, LED Controller, Controller