V:Nano

User Manual & Terms of Use

ABOUT US

Syncronorm GmbH are highly motivated producers of high-end multimedia show design software, which features a most unique real-time 3D visualizer. Our dynamic & experienced team thereby operates on a world-wide scale, providing you with the best software & hardware solutions fitting to your dedicated project. From show-design, training-programs, instant support & consulting to continuously soft- & hardware development, the team at Syncronorm is eager to realize your visions. Syncronorm provide the most established & renowned products for the entertainment- & water-show sectors within the industry and beyond.

Standalone Showplayer

V:NANO

Made even for the roughest environments, the V:Nano represents Syncronorm's smart solution for smaller & more intimate fountain show installations. The V:Nano 512 or 1024 "music" show controller is a DIN-rail fan-less & ruggedized embedded system with a highly efficient low power CPU chipset. The V:Nano can withstands wider temperature ranges while featuring DMX 512/1990 ports, an isolated Ethernet port with 10/100 Mbit, a micro SD card slot and a IPS display. A perfect match for smaller stand-alone fountains as well as musical fountain installations, both feature 8x digital I/O's. The V:Nano is fully compatible with our fountain control system Depence. Easily enhance your workflow by uploading shows via SD card or your local network.

◢ TABLE OF CONTENTS

TABLE OF CONTENTS

◢ WELCOME TO SYNCRONORM

You made a great choice by purchasing Syncronorm's V:Nano hardware unit. Prior to commissioning the unit, please read the following instructions of use carefully and fully familiarise yourself with the unit. Ensure that all work on and with this unit is only carried out in accordance to these instructions. Adhere to the safety information for the correct and safe use of the unit. Keep these instructions in a safe place! Please also hand over the instructions, when passing the unit on to a new owner.

Preface

This document is a guideline for controlling the hardware of Syncronorm's show design & control software Depence. The information contained in this manual will give you a sufficient understanding of this product, helping you to use the unit correctly and effectively. Adhere to all instructions contained in this manual, when installing and operating this unit. Every person working with this equipment must read this manual before installation and commissioning of the equipment/device. Every person working with this device/equipment must read the manual before starting to work. Even personnel working with this device only occasionally must read and understand this manual before beginning to work. This manual must always be available at the site, where the device is located. Every user of this device must be aware of the location of the manual.

Checking the Scope of Delivery

Please check that the scope of delivery is complete. Keep the packaging for later transport. If components are damaged or missing, contact your Syncronorm supplier. To download the current software and firmware, visit the Syncronorm website at *www.syncronorm.com*.

Intended Use

The V:Nano Controller is a standalone entertainment controller for fountains and light control. The V:Nano, in the following referred to as „unit", may only be used as specified as follows:

• For controlling DMX and DMX-RDM compatible devices.
• For playback of multimedia shows created with Depence.

◢ SAFETY INSTRUCTIONS

⚠️

Safety Information

• READ ALL INSTRUCTIONS BEFORE USING (THIS UNIT).
• SAVE THESE INSTRUCTIONS.
• Special regulations apply for electrical installation in outdoor spaces. Only a qualified electrician may perform the electrical installation.
– The qualified electrician has the necessary professional training, knowledge and experience to perform electrical installation in outdoor spaces. The electrician can detect potential dangers and knows how to adhere to regional and national standards, regulations and directives.
– For your own safety, please consult a qualified electrician.
• Only connect the unit if the electrical data of the unit and the power supply match.
• Do not use the unit as a toy. Close attention is necessary when the product is used by or near children.
• Do not use the unit, if electrical lines or the housing are damaged.
• Never carry out technical changes to the unit.
• Only carry out work on the unit that is described in this manual.
• Always unplug the unit before working on it.
• Protect disconnected plug connectors from moisture.
• Only use original spare parts and accessories.
• Should problems occur, please contact the authorised customer service or Syncronorm GmbH.

Dangers resulting from non-adherence to the Safety Information

Please note that Syncronorm GmbH assumes no liability for damage, downtimes or malfunctions resulting from non-adherence to this installation and operating manual. By ignoring or not adhering to all of the safety information contained in this manual, you could endanger people, the environment and the system of this unit. For example, non-adherence to the safety information contained in this manual can lead to the following dangerous occurrences:
• A malfunction of important features of this unit
• Danger for persons due to electric shock

Safety-conscious Operation

As a user of this unit, ensure that you follow all safety information contained in this manual. Follow the accident prevention regulations at all times. If the unit is used in a location where internal regulations, operating and safety instructions apply, ensure that these regulations and instructions are also adhered to.

◤ SAFETY INSTRUCTIONS ⚠

Safety Information regarding Maintenance, Inspection and Installation Work

It is the owner/user's responsibility to ensure that all maintenance, inspection and installation work is carried out by authorized and qualified personnel, who have read and understood this manual. Only carry out maintenance work on this unit, when the unit system is switched off. Ensure that no pressure is applied to the unit and it is disconnected from the power supply (voltage-free) before carrying out maintenance or repair work.

Ensure that small malfunctions are immediately rectified by authorized personnel to avoid possible future damage, malfunctions and/or downtimes of the unit system. Certain maintenance work may require safety barriers to be removed and/or deactivated. If this is the case, ensure that all safety and protective devices/guards are re-installed and/or reactivated after completing the maintenance work.

Optional retrofitting and Production of Spare Parts

Changes or modifications to the device are only permitted after consultation with the manufacturer. Original spare parts and accessories approved by the manufacturer provide safety. We wish to stress that all parts and accessories not supplied by Syncronorm GmbH have neither been tested nor approved by Syncronorm GmbH. For this reason, the installation and/or use of such products can, under certain circumstances, negatively affect the specifications for the device. This could also lead to restrictions of the active and/or passive safety of the device. Syncronorm GmbH assumes no liability for damage resulting from the use of parts and accessories other than original Syncronorm GmbH parts.
In this case all guarantee expires.

Dangers encountered by the Combination of Water and Electricity

• The combination of water and electricity can lead to death or severe injuries from electrocution, if the unit is incorrectly connected or misused.
• Prior to reaching into the water, always switch off the mains voltage to all units used in the water.
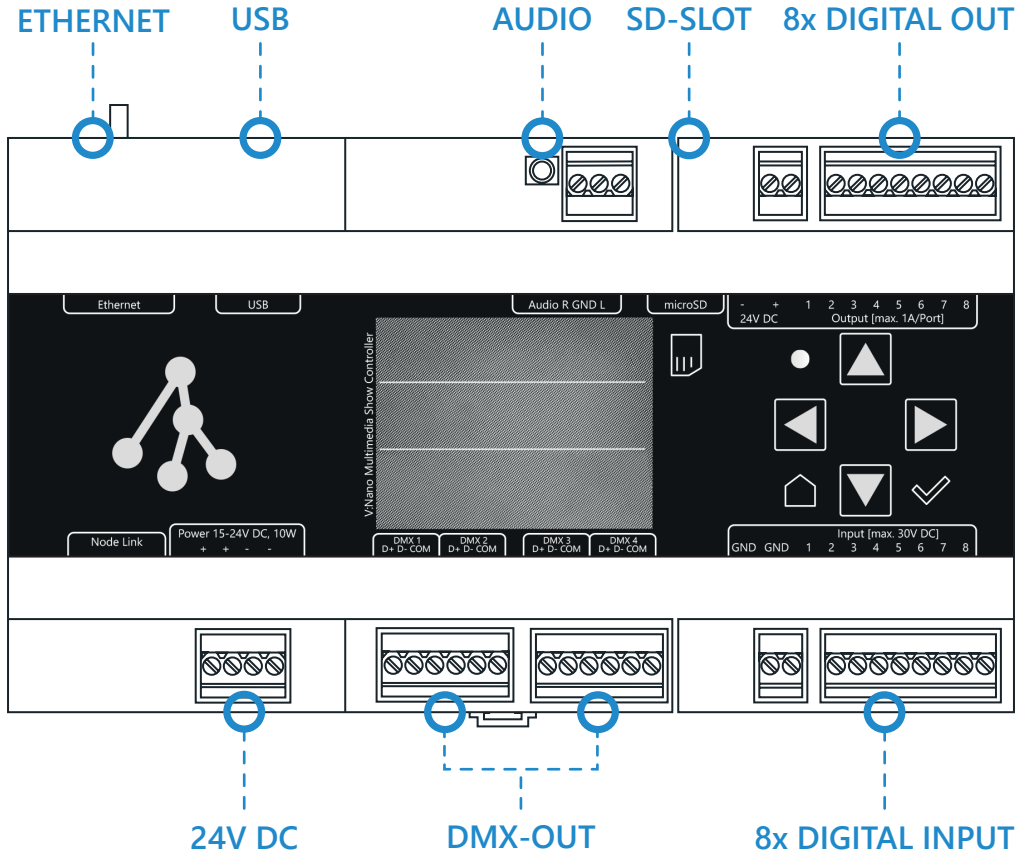
Assembly

Fastening variants:
• Installation on cap rail 35 mm × 7.5 mm (according to EN 50022).
• Wall mounting with screws.
Ambient conditions:
• Dry, dust-free, no direct sunlight.

◢ OVERVIEW

Front

ETHERNET　　USB　　　　AUDIO　　SD-SLOT　　8x DIGITAL OUT

24V DC　　　　**DMX-OUT**　　　　**8x DIGITAL INPUT**

Dimensions

◢ OVERVIEW
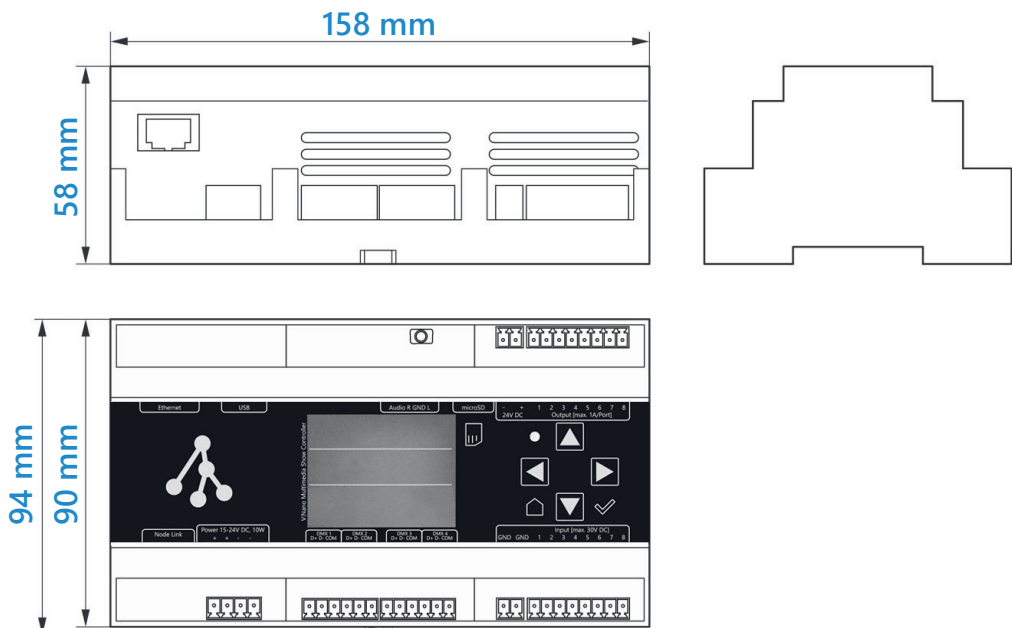
Technical Data

	V:Nano 512 | V:Nano 1024 Music
Dimensions	158x94x58mm
Weight	0.33kg
Protection Class	IP20
Operation Temperature	0...40° / 0...80% humidity
Power Supply	24V DC / 0.42 A / 10W
Certification	CE
DMX Output	512 Channel DMX-RDM | 1024 Channel DMX-RDM
Digital Output	8x Digital Output (24V DC, max 1A)
	4x DMX-RDM 512ch | 4x DMX-RDM 1024ch
	- | Audio (AUX/3-pin)
Digital Input	8x Digital Input (max 30V DC)*
Memory	micro SD Card (FAT32 max 32GB)
Display	240x320px IPS
Synchronization	1x USB 2.0
	1x Node Link RJ45 (10/100 MBit)
	1x Ethernet RJ45 (10/100 MBit)
Scope of delivery	V:Nano unit, Documentation

*One Digital-Input can be used to connect an optional available digital Anemometer.

◢ INSTALLATION

Installation on Cap Rail

Unpack carefully and get the V:Nano device out of the cardboard box. Remove the packing material from the device.

The housing is suitable for installation on a cap rail 35 mm × 7.5 mm.

• Installation:
- Attach the housing to the cap rail and push against the housing until the lug at the bottom engages.
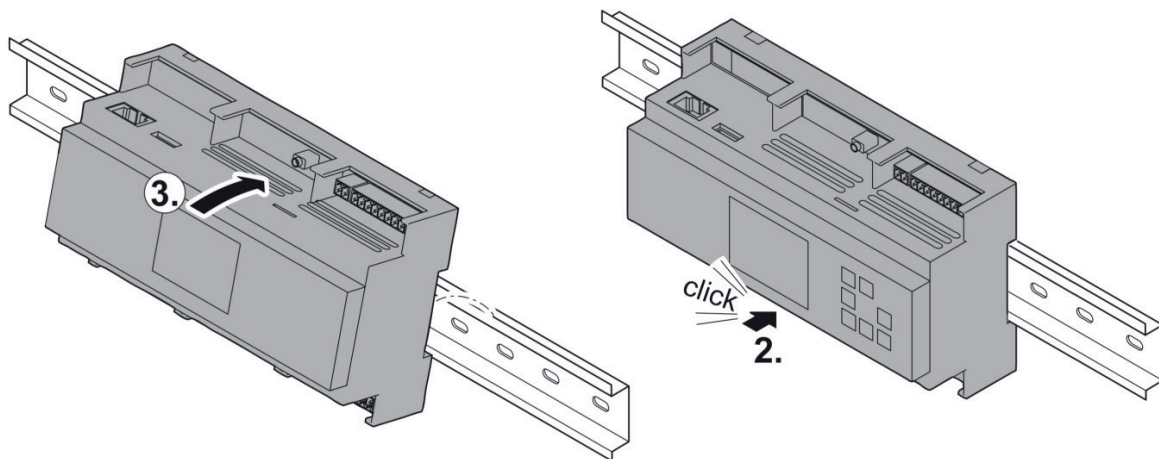
Disassembly

• Disassembly:
- Use a screwdriver to pull on the lug at the bottom and remove the housing from the cap rail.
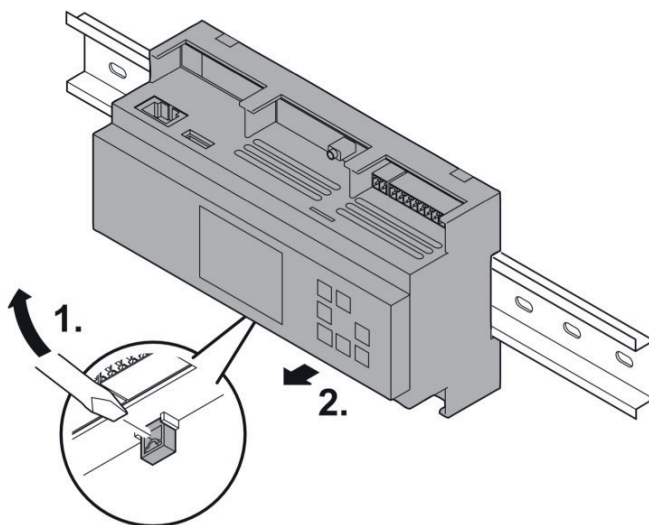
◢ INSTALLATION

Wall Mounting

• How to proceed:
- Pull the three lugs from the housing until the screw holes are visible.
- The lug at the bottom is also used to unlock the housing during cap rail mounting. Pull on this lug with force until it disengages from its position and the screw hole is accessible.
- Use suitable installation material for the installation surface to securely fasten the housing.
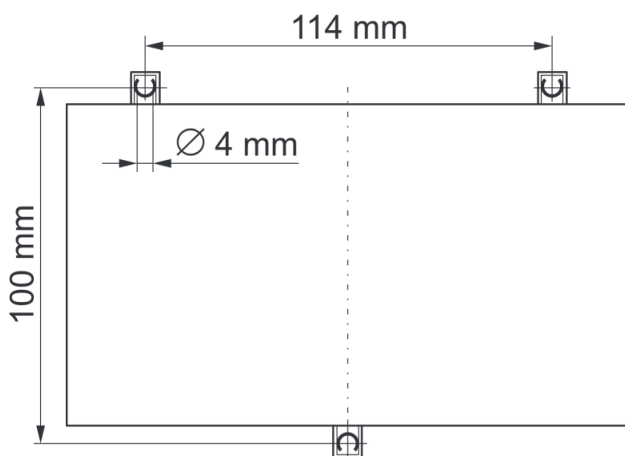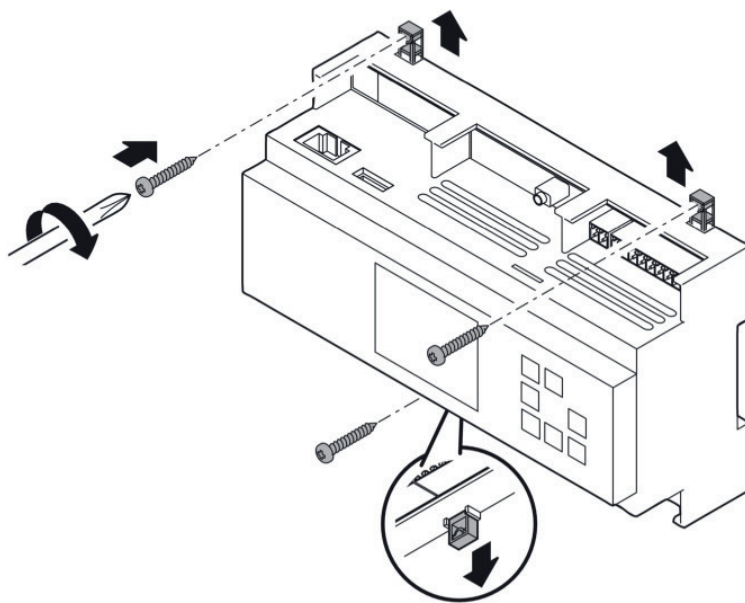
ELECTRICAL CONNECTION

Voltage Supply

Hazardous electrical secondary voltage of power packs without electric insulation.
This may lead to severe injuries or death.

Only use power packs with electric insulation!

Features of external voltage supply:
- Electronic power pack with DC decoupling between primary and secondary side
- Output voltage: 24 V DC
- Maximum residual ripple of the output voltage: 5 %

Power 15-24 V DC

| − | − | + | + |

− 24 V DC +
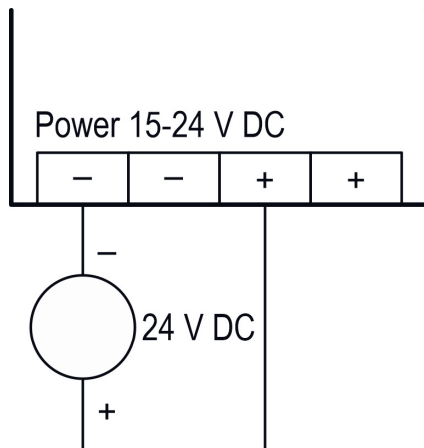
DIGITAL INPUTS

Features

• Configurable, galvanically isolated
• Connection of external systems or sensors
• Input voltage range: -5 V DC ... +30 V DC
• Low level: -5 V DC ... +5 V DC
• High level: +11 V DC ... +30 V DC

You can connect the Syncronorm GmbH anemometer (SN-STVNA) to digital input 1.

• Wind speed measurement is used to control the height of outdoor fountains based on the wind speed.
• Prerequisite: The speed channels of the pumps must be linked to the wind fader.
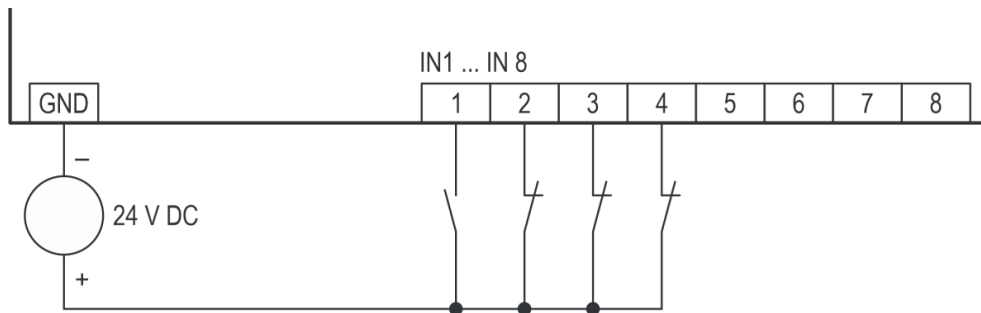
Connecting the Anemometer
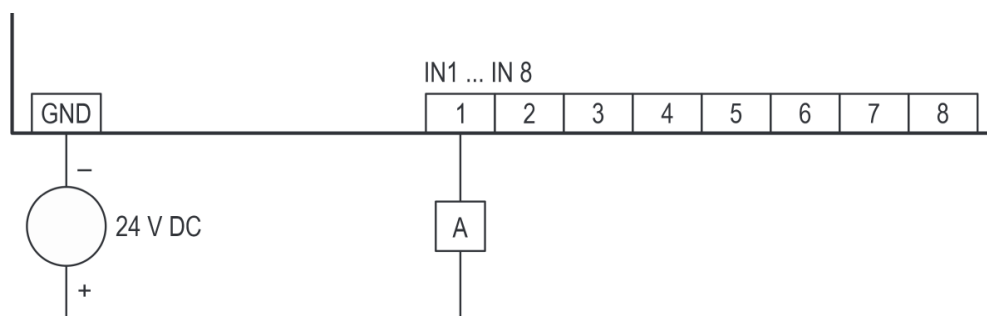
DIGITAL OUTPUTS

Features

• Configurable, galvanically isolated
• Maximum load per output: 1 A with 24 V DC
• Active outputs are reset after a controller restart

You can control the outputs in two modes with values from 0 ... 255:

Mode	Range	
	OFF	**ON**
Standard	0...127	128...255
Remanent	10...50	128...255

In remanent mode you can prevent accidental shut-down of the digital outputs because a value in a range from 10 ... 50 must be used.
    • Example application: One output is to remain active after the end of the show to leave a large consumer switched on until the next show.
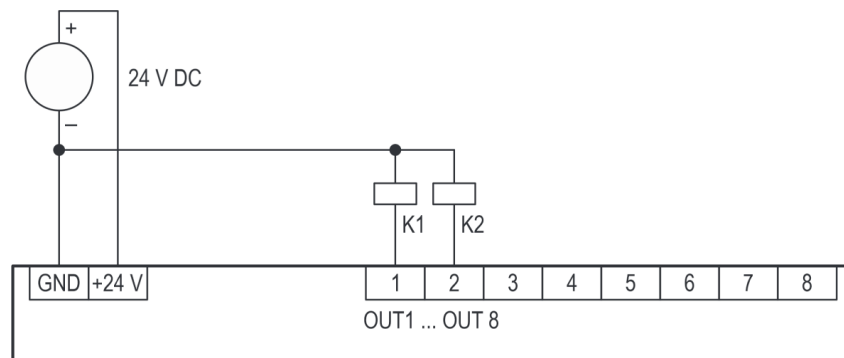
DMX Connection

Features:
• Four DMX/RDM lines
• 32 DMX-compatible units can be connected to each DMX/RDM line
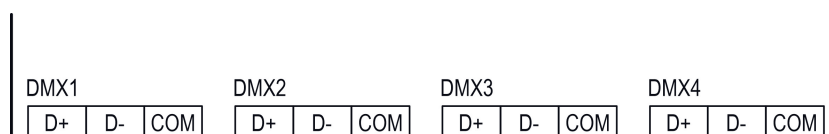
DIGITAL OUTPUTS

Audio Output

Features:
• Galvanically isolated stereo output for controlling a sound system
• Connection via 3.5 jack bush or 3-pin terminal strip

```
┌─────────────────────────────┐
│  ◎   │  R  │ GND │  L  │     │
│ AUX  └─────┴─────┴─────┘     │
│                             │
│                             │
└─┘                         └─┘
```
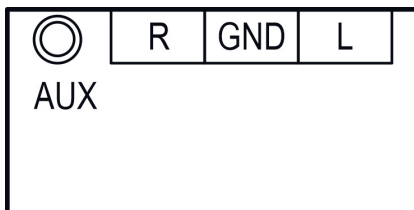
microSD Card Slot

Features:
• Supports microSD cards
• Memory size: max. 32 GB, file system: FAT32
• Interface for the transfer of show files, show planner, music files and software updates.
• Only remove or insert the microSD card during active operation when no show is being played.

USB Connection

Features:
• Supports USB 2.0
• Memory size: max. 32 GB, file system: FAT32
• Interface for the transfer of show files, show planner, music files and software updates.

Ethernet Connection

Features:
• RJ45 socket
• 10/100 Mbit/s Ethernet
• Internet connection

Node Link

Features:
• RJ45 socket
• 100/1000 Mbit/s Ethernet, protocol: O-Net
• Connection with SyncroNode
• Using the Ethernet switch, up to 16 SyncroNode can be connected (cascading)

◤ SWITCHING ON

Switching on the Voltage Supply

1.   The LED first lights up purple, then white.
        – The unit starts. The start takes approx. 20 s.
2.   The LED slowly flashes green. The "Home" menu is displayed.
        – The unit has been started successfully.
3.   The LED lights up blue.
        – The controller has successfully found nodes or is being operated without nodes.
4.   Set the network address. (→ Settings)
5.   Set the date and time. (→ Settings)

OPERATION

Operating and Display Elements

Display Button	Function	Controller	Node
○	LED, operating display, status display	✓	✓
◀ ▶	Left arrow button: Go to previous menu Right arrow button: Go to next menu	✓	✘
▲ ▼	Arrow button up: Select previous menu item / decrease value Arrow button down: Select next menu item / increase value	✓	✘
⌂	Home button: Return to "Home" menu	✓	✘
✓	Confirm input	✓	✘
SET	Press and hold button for 5 seconds to restore factory settings, then restart	✘	✓

Status Displays

Status LED	Description	Controller	Node
Flashing green	No nodes connected	✓	✘
Blue light	Normal operation, nodes connected or operation without nodes	✓	✘
Flashing blue rapidly	The discovery function has been activated in the controller to identify the node	✘	✓
Purple light	The unit is in starting phase 1	✓	✓
White light	The unit is in starting phase 2	✓	✓
Red light	CPU malfunction	✓	✓
Flashing red	Malfunction in the show application	✓	✓
Yellow light	Firmware update for the CPU active	✓	✓

OPERATION

Menu Structure

A flowchart showing the menu structure of the device.

- Home
  - Main
    - Scheduler
    - Show Player
      - Schowplayer Select Show
    - RDM
      - DMX<1>
        - Count <1>
          - More ....
            - Device Label
            - Address
              - Select List
            - Personality
            - Sensors
            - Firmware
      - Select Node
        - Node <1>
      - RDM List
    - I/O Ports
      - Input Actions
        - INP <1>
      - Input State
      - Output Stae
      - Anemometer
    - Master
      - Windfader <1>
    - Settings
      - Universe DMX
      - Digital Outputs
        - DO Patch/Mode
      - Time and Date
        - Time Zone
      - Network
      - Oase Flashwall
      - Modbus
      - Software version
      - Mac-Address
      - Webserver
        - Remote Control
      - License Information
    - Nodes
      - Node 1
        - Universe DMX
    - Notifications
      - Messages

OPERATION

Description of Menus

Home:

The "Home" menu is the standard view on the display of the WECS III Controller.
• The menu is displayed a few seconds after starting the controller.
• Press the Home button to immediately navigate to the "Home" menu.

Parameter	Description
V:Nano 1024 Music	Shows the controller type.
- <no show is playing> -	Shows the name of the currently running show.
Nodes:	Shows the number of nodes connected with the controller.
Devices:	Shows the number of units connected to the controller and to the connected nodes.
Anemometer:	Shows the wind speed measured by the anemometer in [m/s]. Prerequisite: An anemometer is activated in the menu "I/O Ports".

Main:

In this main menu you can navigate to the sub-menus.
In the "Home" menu, press the input key to navigate to the "Main" menu.
• To configure the V:Nano Controller, navigate to the required sub-menu in this menu.

Parameter	Description
Scheduler	(→ Scheduler)
Show player	(→ Show Player)
RDM	(→ RDM)
I/O Ports	(→ I/O Ports)
Master	(→ Master)
Settings	(→ Settings)
Nodes	(→ Nodes)
Notifications	(→ Notifications)

Scheduler:

Home → Main → Scheduler
The menu shows the status of the integrated timer. You can activate or deactivate the sched-uler.
Program the Scheduler using the software for show programming.

█ OPERATION

Parameter	Description
Scheduler	Switch on/off the time planner

Show Player:

Home → Main → Show Player
In the menu you can start a show (WDS file) on the microSD card. In addition, the currently running show is displayed.

Parameter	Description
Stop Player	Stop the currently running show
Play Show	Navigate to the sub-menu to select and start a show saved on the microSD card
- <no show is playing> -	Currently running show Display only

Show Player Select Show
Home → Main → Show Player → Play Show

Parameter	Description
<Show 1> <Show 2> <Show 3>	Shows saved on the microSD card You can select and start the desired show

RDM:

Home → Main → RDM
The menu is intended for displaying and setting up RDM-compatible units connected to the DMX outputs of the controller or the node.

Parameter	Description
DMX1	Overview of active units connected to the respective DMX port.
DMX2	Navigate to the respective sub-menu containing details of the DMX port.
DMX3	
DMX4	
Select Node	Navigate to the sub-menu with the available nodes.
RDM Lists	Navigate to the sub-menu for saving unit lists and processing service lists.

OPERATION

DMX<1>

Home ➤ Main ➤ RDM ➤ DMX<1 ... 4>

Parameter	Description
Count	Shows the number of units connected to the RDM port.
New Discovery	Starts a search for units connected to the RDM port.
RDM State	Switch on/off RDM port.

Count <1>

Home ➤ Main ➤ RDM ➤ DMX<1> ➤ Count <1>

Parameter	Description

No. <001/001> SD: -	Shows the unit status.
	   Possible statuses: ON, OFF, ERR
	   Use the up and down arrow button to scroll through the unit list.

Varionaut 150 <xxx> Serial: <178218218> Addr: <002>	Shows unit information.
[Press Enter for more]	Navigate to the respective sub-menu containing additional information and parameters for the unit.

◤ OPERATION

More ...

Home ➜ Main ➜ RDM ➜ DMX<1> ➜ Device <1> ➜ More ...

Parameter	Description
Device label	Navigate to the respective sub-menu containing details.
Address	
Identify	Identify the unit.
Reset	Reset the unit.
Personaltity	Navigate to the respective sub-menu containing details.
Sensors	Shows a list of sensors and sensor values of the unit.
Firmware	

Device label

Home ➜ Main ➜ RDM ➜ DMX<1> ➜ Device <1> ➜ More ... ➜ Device label

Parameter	Description
Device label	Shows the name of the unit.
<xxx>	You can edit the name.

Address

Home ➜ Main ➜ RDM ➜ DMX<1> ➜ Device <1> ➜ More ... ➜ Address

Parameter	Description
<002>	Shows the DMX address of the unit. You can edit the address.

Personality

Home ➜ Main ➜ RDM ➜ DMX<1> ➜ Device <1> ➜ More ... ➜ Personality

Parameter	Description
Personality <1. RGB-Mode>	Shows the active personality. Navigate to the respective sub-menu containing additional personalities.

Sensors

Home ➜ Main ➜ RDM ➜ DMX<1> ➜ Device <1> ➜ More ... ➜ Sensors

Parameter	Description
Temperature	Shows the sensor values measured in the unit.
Voltage	
Speed	

◢ OPERATION

Firmware

Home ➜ Main ➜ RDM ➜ DMX<1> ➜ Device <1> ➜ More ... ➜ Firmware

Parameter	Description
Firmware	Shows the current firmware version of the unit.
Update	Performs a firmware update on the unit. For this purpose, a valid file "<firmware.obf>" is located on the microSD card. The file is provided by the OASE service.

Select Node

Home ➜ Main ➜ RDM ➜ Select Node

Parameter	Description
Node 1	Shows all nodes connected to the Controller.
Node 2	Shows the number of connected units for each node.
...	Navigate to the respective sub-menu containing details of the node.
Node 16	

Node <1>

Home ➜ Main ➜ RDM ➜ Select Node ➜ Node <1>

Parameter	Description
DMX 1	Shows the DMX ports of the node and the number of units connected to each node.
DMX 2	Navigate to the respective sub-menu containing details on the RDM port. (DMX<1>)
DMX 3	
DMX 4	

RDM lists

Home ➜ Main ➜ RDM ➜ RDM lists

Parameter	Description
Save List	Saves the RDM list of all stations locally in the unit. The RDM list is loaded automatically after the unit is switched on.
Clean List	Deletes the RDM list locally in the unit.
CSV to RDM [RUN]	Import data in csv format from the micro SD card. Only for people trained by Syncronorm.
CSV to RDM [RETRY]	Re-import data in csv format from the micro SD card. Only for people trained by Syncronorm.
Export CSV [RUN]	Export data in csv format to the micro SD card. Only for people trained by Syncronorm.

◤ OPERATION

I/O Ports

Home ➜ Main ➜ I/O Ports

The menu shows the status of the eight digital inputs and eight digital outputs. The outputs can be activated manually.

Parameter	Description
Input Actions	Navigate to the sub-menu "I/O Ports Input Actions" containing details about the actions of the digital inputs.
Input State	Navigate to the sub-menu for displaying the statuses of the digital inputs.
Output State	Navigate to the sub-menu for manually switching on/off the digital outputs.
Anemometer	Navigate to the sub-menu for switching on/off the digital input of the anemometer.

Input Actions

Home ➜ Main ➜ I/O Ports ➜ Input Actions

Parameter	Description
INP1 Action	Navigate to the respective sub-menu "I/O Ports Input Actions" containing details about the action of the digital input.
INP2 Action	
...	
INP8 Action	

INP<1>

Home ➜ Main ➜ I/O Ports ➜ Input Actions ➜ INP<1>

Parameter	Description
INP<1>	Shows the action that is performed when the digital input is set.
Raise	Action when the input switches from 0 to 1.
Release	Action when the input switches from 1 to 0.

Input State

Home ➜ Main ➜ I/O Ports ➜ Input State

Parameter	Description
INP1	Shows the current status of the eight digital inputs.
INP2	
...	
INP8	

OPERATION

Output State

Home ➜ Main ➜ I/O Ports ➜ Output State

Parameter	Description
OUT1	Separate switching on/off of the eight digital outputs
OUT2	
...	
OUT8	

Anemometer

Home ➜ Main ➜ I/O Ports ➜ Anemometer

Parameter	Description
State	Activate/deactivate the digital input for the Syncronorm anemometer.
Wind speed	Shows the wind speed measured by the anemometer in [m/s].

◢ OPERATION

Master

Home ➜ Main ➜ Master

The menu shows the status of the master, submaster and windmaster. The masters can be modified manually. The windmaster can be configured.

Parameter	Description
Grandmaster	Higher-ranking master for reducing the DMX values for the windmaster and submaster. Adjustable range: 0 ... 100 %
Windmaster 1	Navigate to the respective sub-menu containing settings for the windmaster
Windmaster 2	
Windmaster 3	
Submaster 1	Additional masters
Submaster 2	Adjustable range: 0 ... 100 %
Submaster 3	

Windmaster <1>

Home ➜ Main ➜ Master ➜ Windmaster <1>

Parameter	Description
Windmaster <1>	The Windmaster is automatically adjusted based on the wind speed. The interpolation points (data points) change the conversion curve of speed and Windmaster. Adjustable range: 0 ... 100 %
Point 1	Three pre-set interpolation points
Point 2	From the set wind speed in [m/s] a DMX value is reduced to the set value in [%].
Point 3	Adjustable range of wind speed: 0 ... 99 m/s Adjustable range of DMX value: 0 ... 100 %
Ramp down	Decrease ramp for the DMX value determining how fast to reduce it when the wind speed exceeds a pre-determined speed. Adjustable range: 0 ... 100 %/seconds
Ramp up	Increase ramp for the DMX value determining how fast to increase it when the wind speed drops below a pre-determined speed. Adjustable range: 0 ... 100 %/seconds
Waiting Time	Waiting time in seconds until the master increases the value again. This is intended to compensate for brief breaks in the wind.

■ OPERATION

Settings

Home ➜ Main ➜ Settings

This menu is used to adjust the Controller.

Parameter	Description
Name: <VNano>	Controller name. You can edit the name.
Universe DMX	Navigate to the sub-menu for patching the DMX ports.
Digital Outputs	Navigate to the sub-menu containing details on the digital outputs.
Time and Date	Navigate to the sub-menu for setting the date and time.
Network	Navigate to the sub-menu containing the network settings.
Webserver	Navigate to the sub-menu containing the web server settings.
Oase Flashwall	Navigate to the sub-menu containing the network settings of a OASE Flashwall.
Modbus	Navigate to the sub-menu containing the Modbus network settings and the configuration.
Software-Ver.	Shows the current software versions on the unit.
MAC-Address	Shows the network MAC address.
OS-Version	Shows the current operating system version.
Licence Information	Software licence information.

Universe DMX

Home ➜ Main ➜ Settings ➜ Universe DMX

Parameter	Description

DMX 1	Patching the DMX ports.
	    You can edit the DMX ports.
	    You can assign any Universe (U) to a DMX port.
	      The maximum number of Universes depends on the number of supported DMX channels.
	    One Universe corresponds to 512 DMX channels.

DMX 2	
DMX 3	
DMX 4	

Digital Outputs

Home ➜ Main ➜ Settings ➜ Digital Outputs

Parameter	Description
DO 1	A Universe and a DMX address can be assigned to each output. You can select either the mode "Normal" or "Remanent". (→ Digital outputs)
DO 2	
...	
DO 8	

OPERATION

Time and Date

Home ➜ Main ➜ Settings ➜ Time and Date

Parameter	Description
Time	Set UTC time. Format: HH:MM:SS
Date	Set date. Format: YYYY:MM:DD
Time zone	Set time zone. UTC<+2>: "+2" is the difference of the local time from the "Green-wich Mean Time" (GMT).
Get time NTP	Set the time automatically via a time server. This function is only available if the Controller is connected to the internet.

Network

Home ➜ Main ➜ Settings ➜ Network

Parameter	Description

IP	Set IP address
	    Factory setting: 192.168.003.011
	The IP address should be part of the same subnet as your PC. Example:
	    WECS III Controller: 192.168.003.011
	    Your PC: 192.168.003.020

SNM	Set subnet mask.
	    Factory setting: 255.255.255.0
	If necessary, adapt the subnet mask so that the controller and your PC are in the same subnet. Example:
	    IP: 192.168.003.xxx
	    Subnet mask: 255.255.255.000

GW	Define gateway address. The factory setting is 192.168.3.1. Ask your administrator if you wish to adapt the address.

Oase Flashwall

Home ➜ Main ➜ Settings ➜ Flashwall

This function is only required if you wish to control an OASE Flashwall.

Parameter	Description
IP	Set IP address of the OASE Flashwall.
Universe	Set Universe. Default setting: 1
Flashwall	
OFF	Switch on/off function. Default setting: OFF

OPERATION

Modbus

Home ➜ Main ➜ Settings ➜ Modbus

Parameter	Description
Modbus	Switch on/off Modbus.
IP	IP address of the Modbus slave (e.g. WAGO-PLC). The IP address should be in the same subnet as the Controller. After completing the input, the Controller is automatically re-started.
Type	Connection type You can select UDP or TCP. Default setting: UDP. If you change the connection type, the Controller is automatically restarted.
Addr	Selection of the DMX address and the Universe to be sent via the Modbus protocol. Example: U:002; A:001 DMX address 1 of Universe 2.
Function code	You can select from three different Modbus function codes: FC3, FC16 and FC23. Default setting: FC3
Range	Setting of the number of DMX channels from the address "Addr" that are to be transmitted. Permitted values: 1 ... 99 Default setting: 1
Unit-ID	Setting of the unit ID of the Modbus slave. Permitted values: 0 ... 99 Default setting: 0
REG OUT	Register of the Modbus slave into which to write the DMX values. Example: 32000
REG IN	Register of the Modbus slave to monitor and read out. 10 values each are read in from the indicated register, e.g. register 100. Afterwards the registers 100 ... 109 are read in cyclically.

Software version

Home ➜ Main ➜ Settings ➜ Software version

Parameter	Description
VNano <1024>	Shows the V:Nano model.
<V1.4 B0356>	Shows the firmware version of the V:Nano Controller.
MC-Firmware	Shows the firmware version of the MC chip.
MC-Bootloader	Shows the bootloader version of the MC chip.

OPERATION

MAC-Address

Home ➜ Main ➜ Settings ➜ MAC-Address

Parameter	Description
MAC-Address <40:2E:71:99:91:7A>	Shows the MAC address of the V:Nano Controller.

Webserver

Home ➜ Main ➜ Settings ➜ Webserver

Parameter	Description
Control permission	Navigate to the sub-menu to enable the web server for operation. Enter the number of days before this activation automatically expires. Input 999: Time-unlimited activation
Login reset	Reset log-in data for the web server.

Control permission

Home ➜ Main ➜ Settings ➜ Webserver ➜ Control permission

Parameter	Description
Remaining days	Enter the number of days for which the web server is enabled for operation. Input range: 0 ... 999

Licence Information

Home ➜ Main ➜ Settings ➜ Licence Information

Parameter	Description
License Information can be found as "LicenceInfo.txt" on SD-Card	Open source licence information.

◤ OPERATION

Nodes

Home ➤ Main ➤ Nodes

The menu shows the status of the connected nodes. Among other things, you can assign a DMX-Universe to the ports.

Parameter	Description
Node 1 (Connected)	Lists the 16 nodes and shows each of their statuses.
Node 2	Example:
...	Node 1 (Connected): Node 1 is connected to the Controller
	Navigate to the respective sub-menu containing details of the node.
Node 16	

Node <1>

Home ➤ Main ➤ Nodes ➤ Node <1>

Parameter	Description
State: (Connected)	Shows the status. (Connected): The node is connected to the controller.
Discovery	Identify node. The LED of the node flashes for a few seconds.
Name: Node 1	You can edit the name of the node.
Remove	Removes the connection to the controller.
Universe DMX	Navigate to the respective sub-menu containing details on the Universe DMX.
Reset Webserver	Resets the password and user name.
Software Version	Shows the node software version.

Universe DMX

Home ➤ Main ➤ Nodes ➤ Node <1> ➤ Universe DMX

Parameter	Description
DMX 1	Patch DMX port.
DMX 2	You can assign a DMX-Universe to each port.
DMX 3	
DMX 4	

◤ OPERATION

Notifications

Home ➜ Main ➜ Notifications

The menu shows the information and error messages.

Parameter	Description
Show Messages	Navigate to the sub-menu containing details on the event and error messages.

Messages

Home ➜ Main ➜ Notifications ➜ Messages

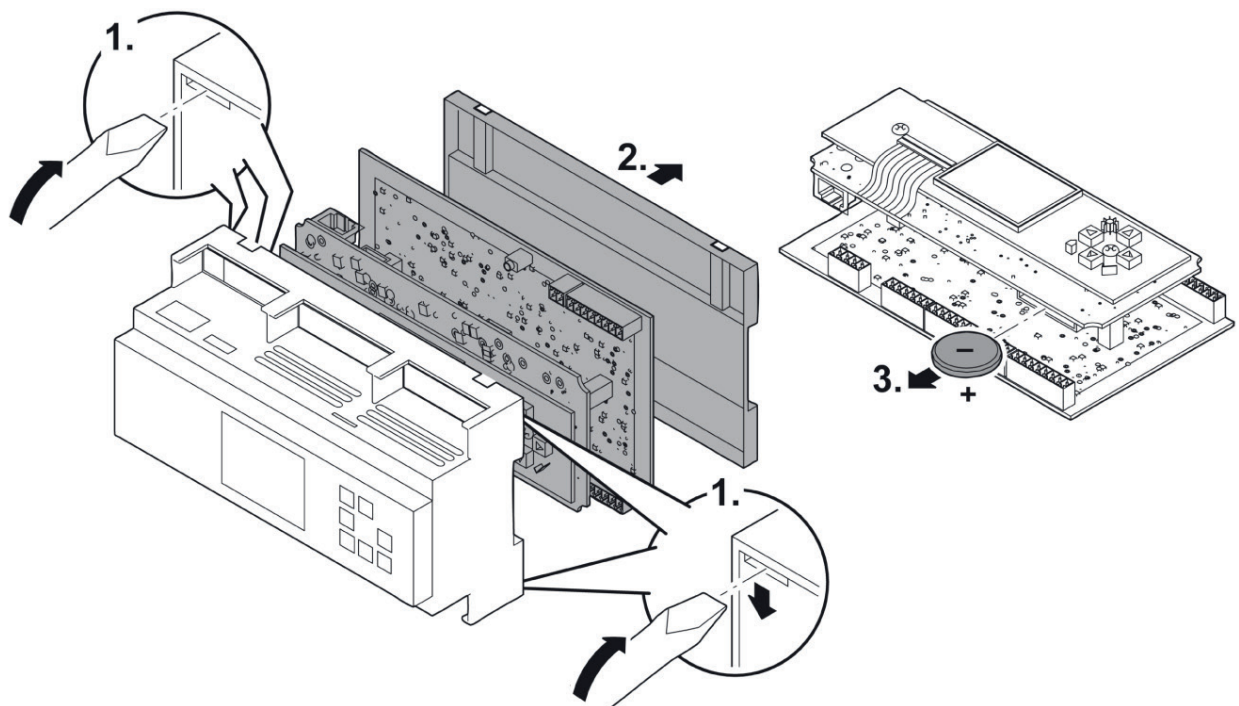| Parameter	Description
Acknowledge	Confirm message. Once the error is eliminated, the message will disappear automatically.
RDM Node <2> Port <4> Device <4>: <39389183913 Varionaut 150> <"Sensor 6 Overvoltage>	Parameter for locating the unit and error.
Message 1 of <6>	Number of current messages. Display only

◢ MAINTENANCE

Maintenance & Cleaning

Do not use aggressive cleaning agents or chemical solutions. These agents can damage the housing, impair the function of the device and harm animals, plants and the environment.
• Clean the unit from the outside only with a damp cloth or a dry dusting brush.

Changing the Battery

The battery in the V:Nano Controllers buffers the voltage for the electronic system to prevent data loss in the event of a longer supply voltage failure. The battery should only be replaced by an expert.

• Prior to starting work, switch off the voltage supply.
• Pull all plug connections, remove the inserted microSD card if applicable and remove the hous-ing from the cap rail or wall.
• Carefully remove the rear panel of the housing.
• Carefully remove the electronic module from the housing.
• Do not touch electronic components.
• Push the used battery out of the holder and insert the new battery.
    – Required battery type: CR2032
    – When inserting the battery, ensure correct polarity. The plus pole of the battery must make contact with the holder.
• Fit the electronic module in the housing in reverse order.

◢ MAINTENANCE

Malfunction Remedy

Malfunction	Possible Cause	Remedy
• No Display	• No Voltage Supply	• Check Connection
		• Switch on Voltage Supply
	• Supply Voltage incorrectly connected (poles versed)	• Correctly connect Supply Voltage
• No DMX signal on Universe 1	• DMX Cable incorrectly connected	• Check DMX Cable Connection on the V:Nano
	• DMX Ports are set to an incorrect Universe	• In the "Settings" menu, under "Universe DMX", check the Universe patching
• RDM not functional	• DMX cable incorrectly connected	• Check DMX Cable Connection on the V:Nano
	• The DMX Units do not support RDM	• Use RDM-compatible Units
	• A splitter between the units and the V:Nano is not RDM-compatible	• Use an RDM-compatible Splitter
	• RDM is deactivated	• In the "Settings" Menu, activate RDM
• One digital output is always activated	• Manual setting of the "Toggle Out" function is given priority over control via V:Nano software	• In the "I/O Ports" menu, reset the output using the "Toggle Out" function
• The time and date are displayed incorrectly after the power supply is inter-ru	• The internal buffer battery is fault	• Replace buffer battery

◢ DISPOSAL

Protecting the Environment

For the transport and Protective packaging, environmentally friendly
materials have been choosen that can be supplied normaly recycling.
Do not just dispose of these materials with your normal household waste,
but make sure that they are collected for recycling
This product is subject to the European Waste Electrical and Electronic
Equipment Directive (WEEE).
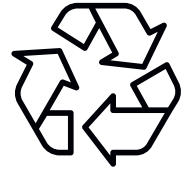
Disposal

Do not dispose of this unit with household waste.
Dispose of the unit by using the return system provided for this purpose.

Disposal of Batteries:
Do not dispose of batteries with household waste.
• Only dispose of batteries by using the return system provided for this purpose.
As the end user you are legally obligated to return dead batteries. Return is free of charge.
• Return batteries to where you bought them or dispose of batteries using the public return and recyc-
ling systems in your town or municipality.

Labelling of batteries containing harmful substances
PB = Battery contains lead
Cd = Battery contains cadmium
Hg = Battery contains mercury
Li = Battery contains lithium

◼ GUARANTEE

Syncronorm GmbH assures a 12 month manufacturer's guarantee for this specific Syncronorm unit, purchased by you. This guarantee only exists in accordance to the specific guarantee conditions lad down as follows:

The guarantee period starts with the purchase from a Syncronorm GmbH specialist dealer. In the event of a resale, the guarantee period will not start again.
If services by Syncronorm GmbH are provided under the terms of this guarantee, this does not lead to extension or renewal of the guarantee period. Your legal rights as a purchaser, especially those ensuing from the warranty, persist. They are not restricted by this guarantee.

Syncronorm warranties are limited to our product only and do not extend to any direct, indirect or subsequential loss under any circumstances.

Misusage of the device leads to a loss of guarantee!

Guarantee Conditions

SYNCRONORM GmbH guarantees impeccable, purpose-related properties and workmanship, expert assembly and proper functionality. Subject to our discretion, the guarantee refers to free-of-charge repair or free-of-charge supply of spare parts or of a replacement unit respectively. Should the unit type concerned no longer be manufactured, we reserve the right, at our discretion, to supply a replacement unit from our range that is closest to the type subject to complaint. Claims, the origin of which can be traced back to installation and operating faults as well as lack of care, e.g. the use of unsuitable cleaning materials or negligent maintenance, use other than that intended, damage due to accidents, falls, impact, effect of frost, cutting plugs, shortening cables, calcium deposits or improper attempts to repair the unit, are not covered by our guarantee. We hereby refer to the proper use as specified in the instructions of use that form an integral part of the guarantee. Wearing parts such as bulbs etc. are exempted from the guarantee.

The refund of costs for removal and installation, checks, claims for lost profit and damages are exempted from the guarantee together with further reaching claims for damages and loss of whatever nature caused by the unit or its use. The guarantee is only valid in the country in which the unit was purchased from a Syncronorm GmbH dealer. This guarantee is governed by German law under the exclusion of the agreement of the United Nations covering contracts, governing the international sale of goods (CISG) regulations. Guarantee claims can only be brought forward by presenting the sales receipt to

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by returning the unit or part of the unit's subject of complaint to us, freight free, at your own risk, accompanied by a copy of the original purchase receipt from the Syncronorm GmbH specialist dealer, this guarantee document and written information of the fault encountered.

YOUR NOTES