



Synchronorm V:Server



Instruction Manual

Table of Contents

Foreword	0
Part I Introduction	3
1 Welcome topic.....	3
2 Technical data.....	3
3 Checking the scope of delivery.....	4
4 Intended use.....	4
5 Safty information.....	4
Hazards encountered by the combination of water and electricity	4
Correct electrical installation	4
Safe operation	4
Qualifications and training of employees	5
Dangers resulting from non-adherence to the safety information	5
Safety-conscious operation	5
Safety information regarding maintenance, inspection and installation work	5
Optional retrofitting and production of spare parts	5
Part II Installation	6
1 Front Panel.....	6
2 Back Connectors.....	6
3 Getting Started.....	7
Connecting	7
First Start-Up	7
4 Settings.....	8
Folder and Project	8
V:PAD and V:3D	9
Synchronization	10
Input and Output Configuration	11
Setup Netw ork Connection.....	11
I/O Control.....	12
5 V:Server Commands.....	14
Part III Maintenance and cleaning	15
Part IV Guarantee	15
Index	16

1 Introduction

1.1 Welcome topic

Welcome to SYNCRONORM. You made a good choice with the purchase of this product V:Server U8/ U16 . Prior to commissioning the unit, please read the 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 with 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 the Synchronorm fountain control systems. 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. All persons working with this equipment must read this manual before installation and commissioning of the equipment/device. All persons working with this device/equipment must read the manual before starting 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.

1.2 Technical data

	V:Server U8	V:Server U16
Dimensions	19" 3HE 350mm depth (482 x 400 x 178)	
Weight	15kg	
Protection Class	IP20	
Operation Temperature	0..40°C / 0..80% humidity	
Power supply	110V / 230V AC max 300W	
Certification	CE	
DMX Output channels over ArtNET	4096	8192
Connectors	4x DMX-RDM Neutrik XLR 5 pin, optically isolated 2x XLR 3 pin symmetric Audio output 1x XLR 3 pin SMPTE Timecode output 2x RJ45 Ethernet 2x DVI output 1x RS232 3x USB 2.0	
Memory	60 GB internal SSD	
Display	4 x 40 segment LCD display with 5 keys	
Scope of delivery	Hardware, System documentation	

1.3 Checking the scope of delivery

Check that the scope of delivery is complete. Keep the packaging for later transport. If components are damaged or missing, contact your Synchronorm supplier. The DEPENCE software can be installed on PCs using the Windows operating system. To download the current software and firmware, visit the Synchronorm website.

1.4 Intended use

V:Server U8 / U16 , referred to in the following as "unit", may only be used as specified in the following:
- For controlling DMX and DMX-RDM compatible units (e.g. pumps, nozzles, spotlights).

1.5 Safty information

Hazards to persons and assets may emanate from this unit if it is used in an improper manner or not in accordance with its intended use, or if the safety instructions are ignored.

This unit can be used by children from the age of 8 and by persons with physical, sensory or mental impairments or lack of experience and knowledge, as long as they are supervised or instructed on how to use the unit safely and are able to understand the potential hazards. Do not allow children to play with the unit. Do not allow children to clean or maintain the unit without close supervision.

1.5.1 Hazards encountered by the combination of water and electricity

- The combination of water and electricity can lead to death or severe injury 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.

1.5.2 Correct electrical installation

- Electrical installations must meet the national regulations and may only be carried out by a qualified electrician.
- A person is regarded as a qualified electrician, if, due to his/her vocational education, knowledge and experience, he or she is capable of and authorized to judge and carry out the work commissioned to him/her. This also includes the recognition of possible hazards and the adherence to the pertinent regional and national standards, rules and regulations.
- For your own safety, please consult a qualified electrician.
- The unit may only be connected when the electrical data of the unit and the power supply coincide. The unit data is to be found on the unit type plate or on the packaging, or in this manual.
- Ensure that the unit is fused for a rated fault current of max. 30 mA on the mains side by means of a fault current protection device.

1.5.3 Safe operation

- Never operate the unit if either the electrical cables or the housing are defective!
- Do not carry or pull the unit by its electrical cable.
- Route cords/hoses/lines in a way that they are protected against damage, and ensure that they do not present a tripping obstacle.
- Only open the unit housing or its attendant components, when this is explicitly required in the operating instructions.
- Only execute work on the unit that is described in this manual. If problems cannot be overcome, please contact an authorized customer service point or, when in doubt, the manufacturer.
- Only use original spare parts and accessories for the unit.
- Never carry out technical modifications to the unit.
- Only operate the unit if no persons are in the water!
- The unit, the connections and plugs are not water-proof and must not be routed or installed in water.

1.5.4 Qualifications and training of employees

- Ensure that installation personnel have the required technical qualifications.
- Also ensure that all operating personnel are sufficiently qualified.
- Ensure that maintenance work is only performed by personnel authorized for this purpose, e.g. specialists of SYNCRONORM GmbH or personnel with **suitable training**.

1.5.5 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
- Hazards for persons due to electric shock

1.5.6 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.

1.5.7 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.

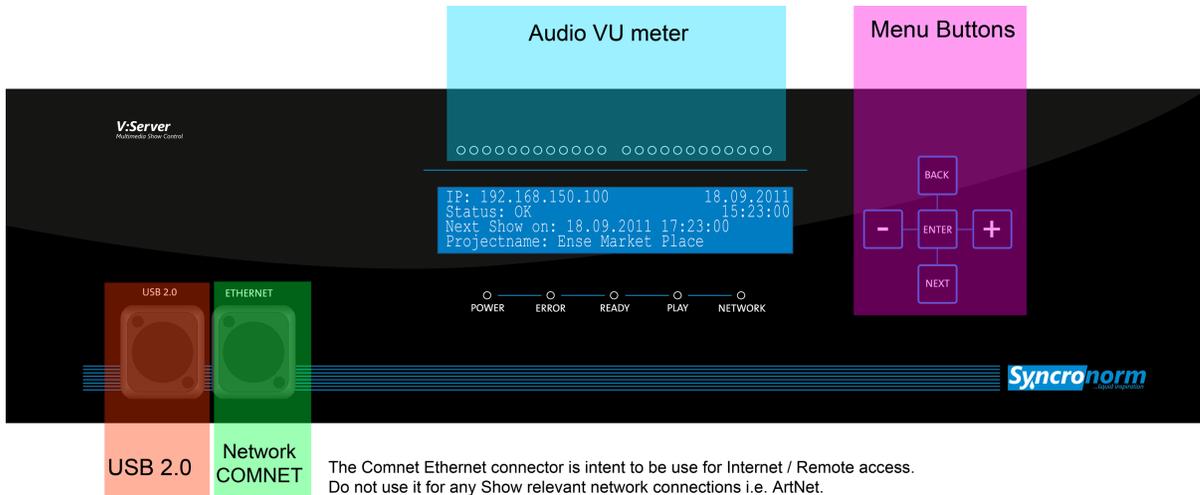
1.5.8 Optional retrofitting and production of spare parts

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 parts.

2 Installation

2.1 Front Panel



2.2 Back Connectors



2.3 Getting Started

Get out carefully the device out of the cardboard box and remove the packing material of the device. Place the device on a secure underlay or screw in the device in a 19"-rack. Use a plastic wave washer for the rack bolts, because otherwise the special spatter repelling front panel foil could be destroyed.

2.3.1 Connecting

1. Make sure you have switched off the device on backside.
2. Now connect a IEC power cord with 110/230V AC to the device
3. Connect the V:Server to your Shownet Network using the Ethernet connector on BACKSIDE
4. Connect an USB Keyboard, Mouse or Touch Screen to one of the available USB-Ports
5. Connect a Monitor to one of the DVI connectors
6. Connect your DMX devices

2.3.2 First Start-Up

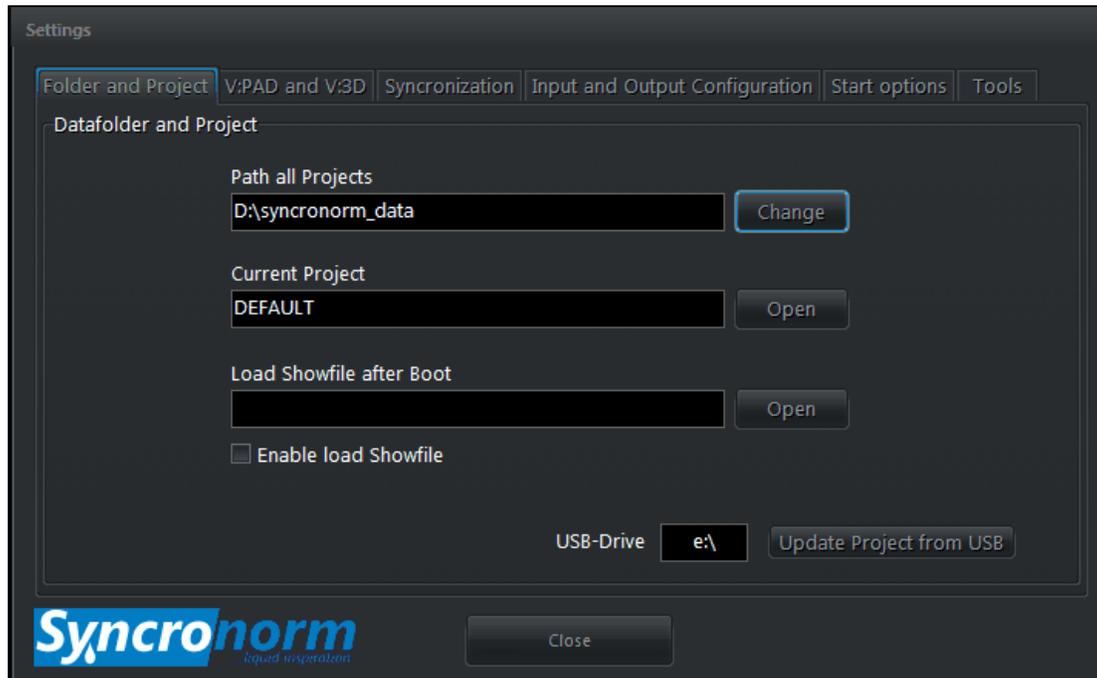
1. Switch on the Device on backside
2. Wait until the V:Server boot is finished, this can take several minutes on first start up.
3. As soon as you can see the Info page the Server has start up completely

See [Setup Network Connection](#) to setup all Network settings to get access to your V:Server using V:PAD.

2.4 Settings

To avoid unwanted access to the all Settings of the V:Server, they are secured by a default Password. Right after startup the "Settings" button will be disabled by default. Click on "Login" and type in "deponce" as password in lower cases.

2.4.1 Folder and Project



Path to Projects

This option can change the internal project folder.

Current Project

Here you can manually load an existing project.

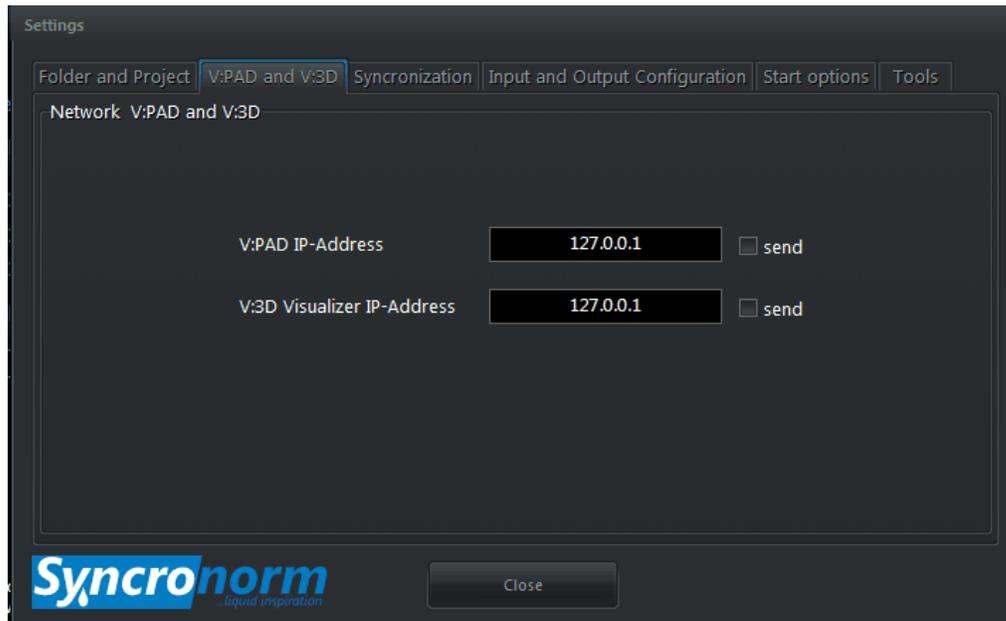
Load Showfile after Boot:

This option will load a specific Sequence (show) after startup

Update Project from USB

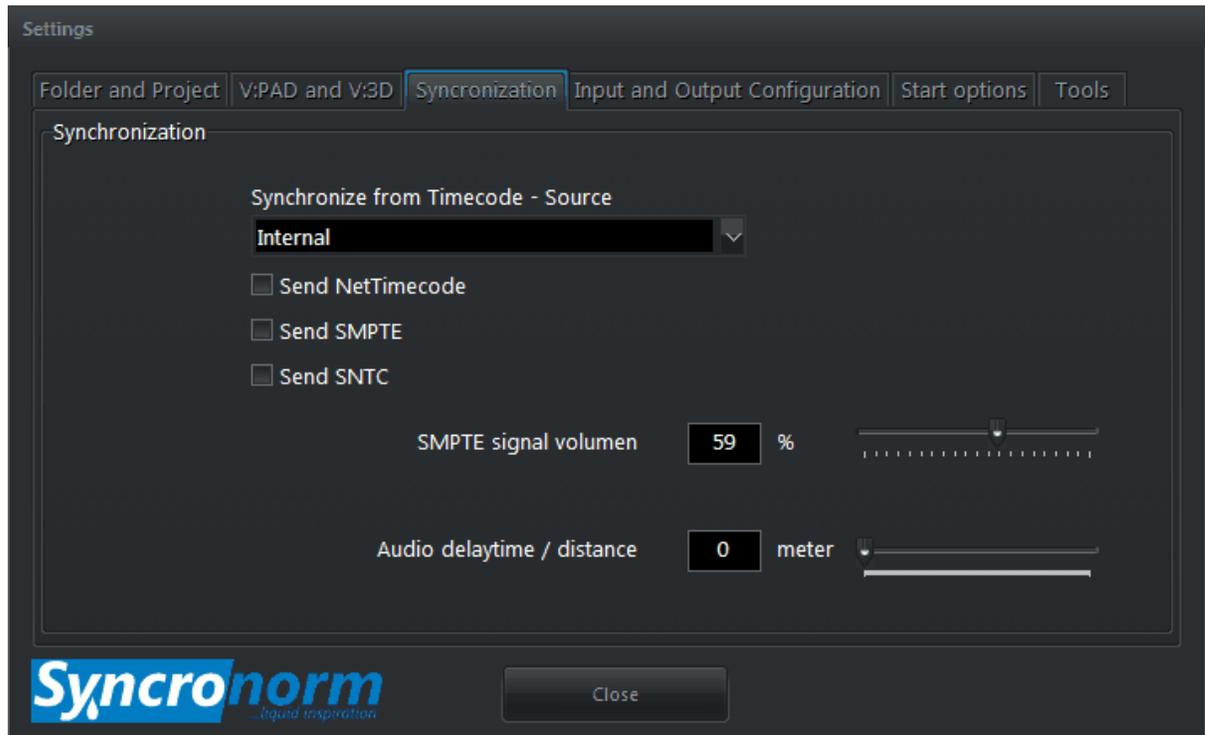
This option can be used to import a full Project from any USB-Stick. This is also available using the Front-Panel.

2.4.2 V:PAD and V:3D



If you want to send back DMX Data to V:PAD i.e. for recording old show, you can here define the IP address of the PC where V:PAD is running. Same for V:3D as monitoring on an additional PC. Check out I/O Configuration to setup specific Universes to be sent to V:PAD or V:3D. See [I/O Control](#)

2.4.3 Synchronization



In this window you can setup all Timecode settings for being Timecode Master or Slave. The V:Server supports 3 different Timecode formats: SMPTE (Analog over XLR Connector on backside), NTC (Nettimecode over Ethernet), SNTC (Synchronorm Timecode over Ethernet). Here you can also adjust the SMPTE signal volume.

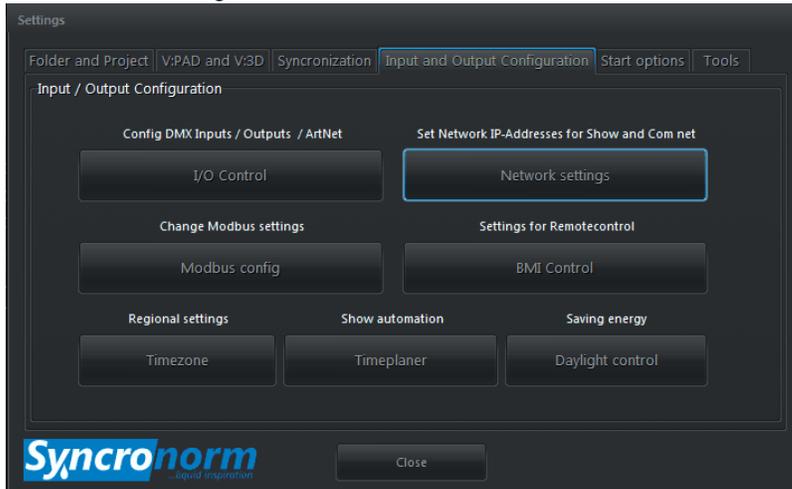
Additionally the V:Server offers the possibility to add an Audio Delay i.e. if your Audience is too far away from the speakers.

2.4.4 Input and Output Configuration

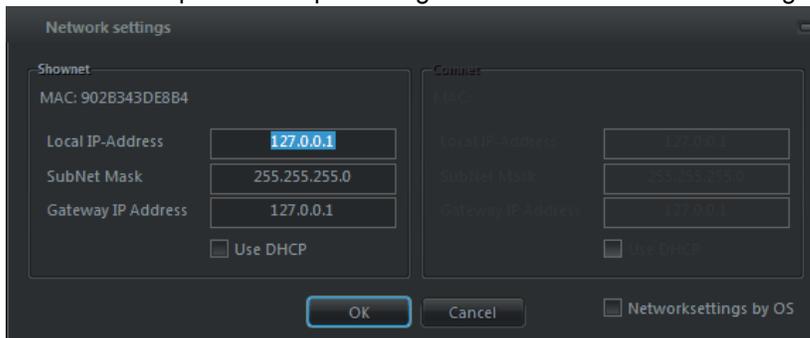
2.4.4.1 Setup Network Connection

To be able to connect to your V:Server you need to setup the IP-Addresses one time. To get access to the Settings of the V:Server you need to Login first:

1. Press on the "Login" Button and use as password "deponce" in lower case.
2. Now the "Settings" button will be enabled



3. In the tab "Input and Output Configuration" select "Network Settings"



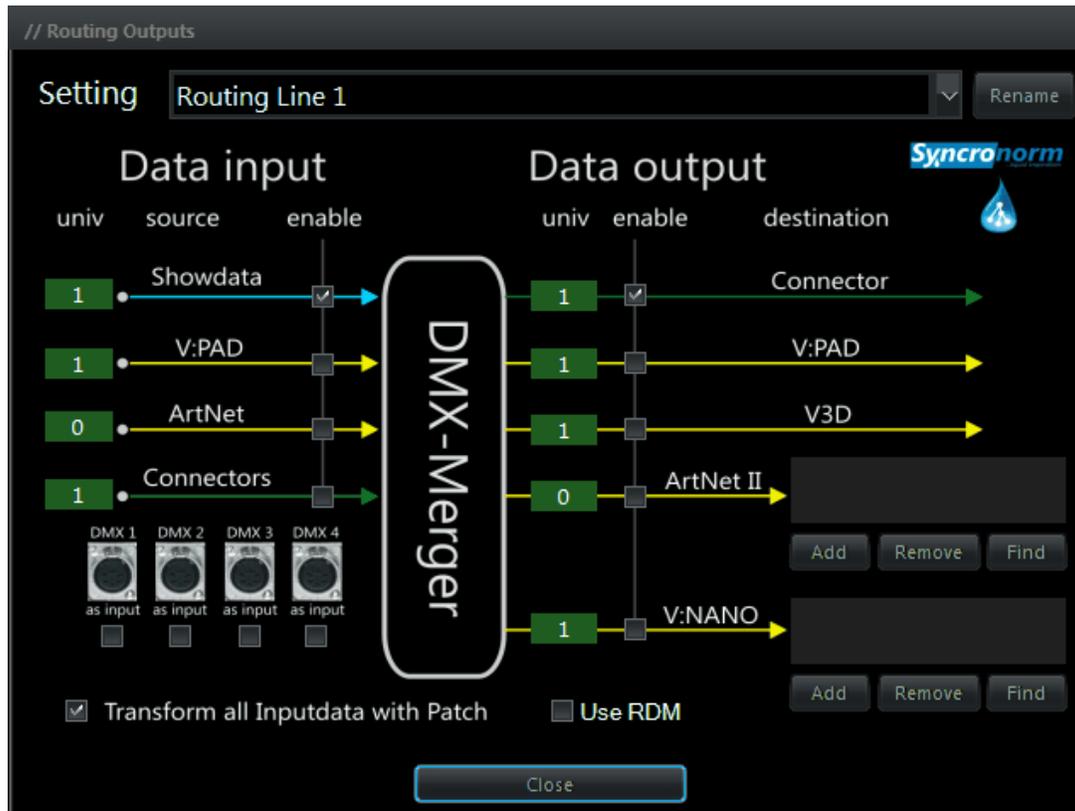
4. Assign a valid IP address for Shownet and if you also want to use Comnet for running a TeamViewer application in background, you can also setup an additional IP address for Comnet. Note that it is always recommend to use static IP addresses instead of using DHCP.

Now, V:PAD should be able to connect to your V:Server as soon as they are in the same Network.

2.4.4.2 I/O Control

The DMX-Routing is one of the most powerful features of the V:Server. It gives you the possibility to route DMX signals in any direction, from and to any source.

To open the configuration go to: "Settings > Input and Output Configuration" and select "I/O Control"



The I/O control offers you 16 free configurable setups called "Routing Lines". Each "Routing-Line" can be used to route one DMX-Universe. As the graphic explains, all Data coming from the Left side are INPUTS and on right side are OUTPUTS.

Data input

Showdata:

These are all Universes are internally calculated by the V:Server, so finally the current running show.

V:PAD

Means all DMX data are currently sent by a potentially connected V:PAD. This is disabled by default. This option is only used in some special cases i.e. where you want to keep control over a specific universe using V:PAD (live). As soon as V:PAD is used as DMX-Input the V:Server will switch in "Interface" mode and will simply forward all DMX-Data.

ArtNet:

Here you can merge in any ArtNET input, i.e. from an external console. Note that ArtNET Universes are counting by 0.

Connectors:

Here you can define an physical DMX input connector to merge in. By default the Universe 1 is coupled with the DMX-IN connector on backside. Here you can also change a DMX-Output connector to be an Input (Gender changer needed) if you need more than one DMX-Input universe.

Data output

Connector:

Will send out the merged DMX-Data to the physical XLR DMX-Outputs on backside.

V:PAD

This option can be used to send back DMX-Data to VPAD, i.e. if you want to record an incoming DMX-Signal in a show (Recording old shows). See [V:PAD and V:3D](#)

V:3D

This is used to send DMX-Data to a PC where V:3D is running in Network, i.e. for monitoring. See [V:PAD and V:3D](#)

ArtNET:

Here you can define one or multiple ArtNET Nodes which should receive the DMX-Data of the current DMX line. Note that ArtNET Universes are counted by 0.

V:Nano

Same as by ArtNET you can define one or multiple V:Nano devices in the Network to work as DMX Interfaces.

Transform all Input Data with Patch

This option is enabled by default and will calculate all incoming DMX signals depending on the current patched fixtures, which means that in case of any Profile or Virtual Master is assigned to a channel, this will be calculated in the result.

Use RDM

This option will enable the RDM functionality.

2.5 V:Server Commands

The V:Server offers a simple but powerful commandline interface, which can be sent over network or using the Info page. If a command expects an seperate parameter they are splitter using a pipe sign "|"

Command	Info	Example
HELLO	Test if Server is available. Answer "OK"	
CONTROL	Opens the Windows control surface	
RELEASE	Unload the current project	
BOOT	Loads a specific Project	boot ProjectName
REBOOT	Reloads the current Project	
LOAD	Loads a specific Show	load MyShow
PLAY	Play the loaded Show	
ADDTIMEOFFSET	Add a offset to showtime	addtimeoffset 00:00:01:00
STARTTIMEPLANNER	Starts the automatic Timeplaner	
STOPTIMEPLANNER	Stop the Timeplaner	
GETSHOWLIST	Will list all available shows	
GETBOOTLIST	Will list all available Projects	
STARTSYSTEMUPDATE	Start a Firmware update	
GETCURRENTBOOT	Shows current loaded Project	
GETCURRENTSHOW	Shows current loaded Show	
GETSERIALNUMBER	Shows device Serial Number	
SETAUDIOVOLUMEN	Set the audio output volume	setaudiovolume 80
GETTIMELOCKDATE	Shows the Date when System will be locked	

3 Maintenance and cleaning

The device requires regular maintenance.

Carry out maintenance in accordance with the maintenance schedule:

If necessary, update your software version

Important information!

Maintenance work must be carried out only by qualified expert personnel.

4 Guarantee

For this SYNCRONORM unit purchased by you, SYNCRONORM GmbH assumes a **24 month manufacturer's guarantee in accordance with the guarantee conditions laid down in the following**. The guarantee period starts with the first purchase from an SYNCRONORM specialist dealer. In other words, in the event of a resale, the guarantee period will not start again. If services 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.

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

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. Wear 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 an SYNCRONORM 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 us, SYNCRONORM GmbH, Graf Gottfried Strasse 122, 59755 Arnsberg, Germany by returning to us the unit or part of the unit subject to complaint, freight free, at your own risk, accompanied by a copy of the original purchase receipt from the SYNCRONORM specialist dealer, this guarantee document and written information of the fault encountered.

Index

- A -

ArtNet 12
Audio Delay 10

- B -

Back Connectors 6

- C -

Commands 14
Comnet 11
Connecting 7
Connectors 12
Current Project 8

- D -

Dangers 5
DMX-Routing 12

- F -

Folder and Project 8
Front Panel 6

- G -

Guarantee 15

- I -

I/O Control 12
IP-Addresses 11

- L -

Login 8

- M -

Maintenance 15
Master 10

- N -

Network Connection 11
NTC 10

- P -

Password 8
Path to Projects 8

- Q -

Qualifications 5

- R -

RDM 12
Routing Lines 12

- S -

Safety information 4
scope of delivery 4
Settings 8
Showdata 12
Shownet 11
Slave 10
SMPTE 10
SMPTE signal volume 10
SNTC 10
Synchronization 10

- T -

Technical data 3
Timecode 10

- V -

V:Nano 12

V:PAD and V:3D 9