vsm TTP10

User Manual

Version: 4.0/1

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Revision History

Version	Edition	Changes	Firmware Version
1	2014-05-20	Initial draft	
2	2014-06-13	Initial Release	
4.0/1	2017-03-31	New Overview graphics & template	0.11

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1. Welcome

About this Manual

This document describes how to install and setup the **vsm TTP10** within a VSM system.

Note that a system may comprise several software and hardware components.

Other useful documents include the:

- **vsm Software User Manual** - more about **vsmStudio**, the main configuration and administration tool, plus other software components: **vsmPanel**, **vsmWebPanel**, **vsmTimeSync**, etc.
- **vsm Gear User Manuals** - more about other hardware panel and interface options.

All Lawo manuals are available from the **Download-Center** at www.lawo.com (after **Login**).

Look out for the following which indicate:

Notes - points of clarification.

Tips - useful tips and short cuts.

Warnings

Alert you when an action should *always* be observed.

Lawo User Registration

For access to the **Download-Center** and to receive regular product updates, please register at:

www.lawo.com/user-registration.

2. Important Safety Instructions

General Safety

Warning

Exposure to excessive sound pressure levels can lead to impaired hearing and cause damage to the ear.

Please read and observe ALL of the following notes:

- Check all of the hardware devices for transport damage.
- Any devices showing signs of mechanical damage or damage from the spillage of liquids MUST NOT be connected to the mains supply or disconnected from the mains immediately by pulling out the power lead.
- All devices MUST be grounded. Grounding connectors are provided on all devices. In addition, all low-voltage devices external to the system must also be grounded before operation.
- For Scandinavian countries, ALWAYS use a grounded mains connection, to prevent the device from being grounded through Ethernet or other signal connections.
- Do NOT use the system at extreme temperatures - observe the temperature range and humidity specified in the installation instructions.
- Do NOT expose devices to liquids which may drip or splash.
- Do NOT place objects filled with liquids, such as vases, upon a device.
- Only service staff may replace batteries.
- CAUTION: Danger of explosion if battery is incorrectly replaced - Replace only with the same or equivalent type.

Servicing of components inside a device MUST only be carried out by qualified service personnel according to the following guidelines:

- Before removing parts of the casing, shields, etc. the device MUST be switched off and disconnected from all mains.
- Before opening a device, the power supply capacitor MUST be discharged with a suitable resistor.
- Components that carry heavy electrical loads, such as power transistors and resistors, should NOT be touched until cool to avoid burns.

Servicing unprotected powered devices may only be carried out by qualified service personnel at their own risk. The following instructions MUST be observed:

- NEVER touch bare wires or circuitry.
- Use insulated tools ONLY.
- DO NOT touch metal semi-conductor casings as they can bear high voltages.

Eye Safety

Warning

This equipment may use Class 1 Laser products which emit invisible laser radiation that may lead to eye injury.

- NEVER look directly into optical components or optical fibre cables.
- Fit protection caps to close any unused optical components.
- Connect all optical fibre cables BEFORE turning on the equipment.

Defective Parts/Modules

Warning

vsm TTP10 contains no user-serviceable parts. Therefore DO NOT open the devices other than to perform the procedures described in this manual.

In the event of a hardware defect, please send the system component to your local service representative together with a detailed description of the fault. We would like to remind you to please check carefully whether the failure is caused by erroneous configuration, operation or connection before sending parts for repair. Please contact our service department before sending parts for repair.

First Aid (in the case of electric shock)

Warning

DO NOT touch the person or his/her clothing before power is turned off, otherwise you risk sustaining an electric shock yourself.

Separate the person as quickly as possible from the electric power source as follows:

- Switch off the equipment.
- Unplug or disconnect the mains cable.
- Move the person away from the power source by using dry insulating material (such as wood or plastic).

If the person is unconscious:

- Check their pulse and reanimate if their respiration is poor.
- Lay the body down and turn it to one side. Call for a doctor immediately.

Having sustained an electric shock, ALWAYS consult a doctor.

3. Introduction

The **vsm TTP10** has been designed as an alternative to the LBP series. In addition to touch-panel button operations, the TTP10 offers meter monitoring and the freedom of using virtual faders. The touch panel has been developed specifically for use with vsmStudio in OB vans and studios. The use of embedded components and an adapted embedded operating system guarantee a robust, maintenance-free and long-living system that meets the high requirements of mobile and stationary applications. High-quality materials and the innovative design of the panel give it both a robust and sophisticated appearance.

Features:

- Embedded system platform with adapted baseboard
- Atom N450 processor
- Capacitive touch behind a solid glass-surface
- IP54 frontally
- Small and comfortable aluminium-housing
- Foot and VESA 75 installation

4. Overview

TTP10

Display	10,4'' TFT (1024x768) with ISP (85°/85°/85°/85°) and LED backlight (500 cd/m²); capacitive Touch
CPU	Fanless Atom N450, 2GB RAM, 8 GB Non-volatile Memory
OS	Windows 7 Embedded with write filter
Communication port	1 x Ethernet
Dimensions	260 x 210 x 65 (WxHxD) when folded down to 0 degrees including pedestal
Weight	approx. 3,2KG
Power Consumption	<25W @12VDC/2,01A max
Working Environment	0°C-50°C non-condensing humidity

5. Operating Conditions

This device is built to be used in a non-condensing environment within a temperature range of 10-35°C. Under or overshooting this working temperature range may cause fast aging of components or even malfunction of the whole device.

Spillage of any liquids e.g. coffee, coke, water... onto/into the device may cause damage.

The storage temperature of the device must be within -20°C to 60°C with a maximum of 75% non-condensing relative humidity at 60°C @ 0VDC supply-voltage.

DO NOT throw, drop or bend the unit and make sure that there is no strong permanent mechanical pressure on any side of the housing at any time.

Before installing or using this device, always read and observe the Important Safety Instructions.

6. Preparing for Operation

The TTP10 has an active write filter so it won't store any changes of the OS or the applications except when the device receives a reset command via vsmDiscover. Due to this please apply all needed settings first and then use the "Reset" button in vsmDiscover to write the changes to the non-volatile memory. If the device lose power before a vsmDiscover reset command has been sent, it will also lose all changes that have been made since last start.

All Lawo vsm devices will be shipped with DHCP enabled network configuration. If you don't have a DHCP network ask your administrator for static network settings and edit the "Network" section if required.

Do the following settings in VSM Discover: 

Network	
Dhcp Address	False
Gateway	192.168.16.5
IP Address	192.168.17.111
IP Mask	255.255.248.0
Mac Address	00-13-16-01-28-E7
Network Name	TTP10-28-e7

To connect the device to a vsmStudio, edit Server 1 – 4 and the Panel ID in the "Application" section.

Application	
Background	Abstract
Panel Color	96; 112; 128
Panel ID	8
Platform	Microsoft Windows NT 6.1.7601 Service Pack 1
Rotate Screen	False
Server 1	vsm-1A
Server 2	vsm-1B
Server 3	vsm-1C
Server 4	vsm-1D
vsmPanel Version	3.0.110.0
Commands	
Calibrate Touchscreen	(Press Button to Execute)

The Location and Comment fields in the "Misc" section are to easily allocate the device in your environment.

Misc	
Comment	Panel 8
Location	Studio 1

Press "Apply" button if you are sure you have entered the settings correctly. Perform a reboot with the "Reset" button to store the configuration to the non-volatile memory.

7. Technical Specifications

7.1 Connectors

7.1.1 Power

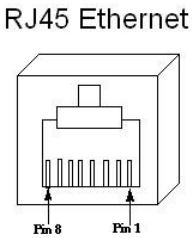
Connector (**Desktop-panels only**) for 12 V DC supply: 4-pin Hirose HR10A-7P-4P locked bayonet joint compact connector for better cable traction relief.

Pin	Signal
1	GND
2	GND
3	+12V
4	+12V

It is understood that if NOT using the original Power-Supply-Unit, you need to make sure that there is only one single 12V DC-supply with a maximum tolerance of 3% within the 12V. It has to be taken care, that the external supply uses a circuit-breaker, fuse or another kind of short-circuit-protection to never allow a current >5A @12VDC per device. Do NOT connect the device at reverse polarity at any time.

7.1.2 Ethernet

Ethernet communication port to vsmStudio



Pin	Signal	Color of a standard TIA-568A-shielded twisted pair patch cable (CAT5 or higher)
1	TX+	white/green
2	TX-	green
3	RX+	white/orange
4	NC	blue
5	NC	white/blue
6	RX-	orange
7	NC	white/brown
8	NC	brown

Notice for wiring:

NC: No connected; do not connect to any signal or supply.

Only use shielded CAT5 (or higher standard) -specified networkable. Refer to TIA-568A or TIA-568B for wiring. Do not use cable-traces longer than 100m (328ft) between the device and network-switch for 100BASE-T communication. Make sure to do proper wiring and use shielded RJ45-plugs for shielded cable on both ends of the line.

8. Cleaning the Display

The best way to clean the display of TTP10 is to use a soft cloth and smooth window-cleaner-fluid. Do not expose the window-cleaner directly to the display, but to the cloth and then wipe softly over display.