wings iobox i0

AVstumpfl®

SETUP · SD CARD · POWER · I/0 · DATA · STATUS · LAN (POE)

AVstumpfl®

User Guide

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General information about Wings IOboxes

What are Wings IOboxes?

Being part of the Avio System, Wings IOboxes serve as hardware interfaces and are used for various tasks such as light control via DMX, switching or serial control. They are able to communicate independently on the network and are displayed as network nodes in the Avio Manager.

The following IOboxes are available:

- **Wings IObox DMX** ...offers one input and one output for DMX512.

- **Wings IObox Relay** ...offers 16 floating relays.

- **Wings IObox Remote** ...offers 16 switch inputs.

- **Wings IObox Serial** ...offers four serial interfaces.

Via an RJ45 port and a network cable IOboxes are connected to the common network architecture and communicate via Avio protocol. Power is supplied either via network cables or, if supported by the switch, vie the external, original power supply unit. A web browser allows configuration of the Wings IOBoxes.

All settings are stored on the internal memory and, if available, additionally on an SD card by the Wings IObox. The configuration saved on the SD card can be transferred to any other IObox. If a defective IObox needs to be replaced, thanks to the information on the SD card the Wings IObox can immediately be set up correctly and is ready for further use.

Note: Further on, the multi-media software "Wings Vioso" is also called "Wings 5" for short.

Unit types and views

1. Setup button for resetting to the default configuration. See also ***Resetting to the default configuration.***

2. SD card slot for automatic backup of the configuration. Included in the delivery is a lockable retaining clip.

3. LEDs for indicating operating statuses:

   - **Power** ...lights up in red when power is supplied.

   - **I/O** ...lights up in yellow while information is being received or transmitted via in- or outputs.

   - **Data** ...lights up in blue while Avio data packages are being transmitted

   - **Status** ...flashes in green, after IObox has booted and is ready for operation.

4. The yellow LED at the RJ45 port indicates that there are LAN activities.

5. The green LED at the RJ45 port lights up when a 100 MBit-connection has been established.

Rear side of Wings IObox DMX

All IOboxes are provided with a power socket in the left corner of the rear side for supplying power via the original power supply unit.

Next to the POWER socket there is also one **DMX-IN** and one **DMX-OUT** port on the rear side of the IObox DMX. IN-LED lights up when signals are being received. Out-LED is permanently when the unit is in working order as in such a case a DMX signal is always transmitted.
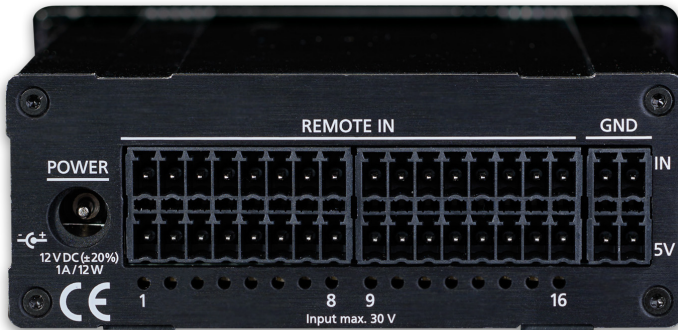
Rear side of Wings IObox Relay
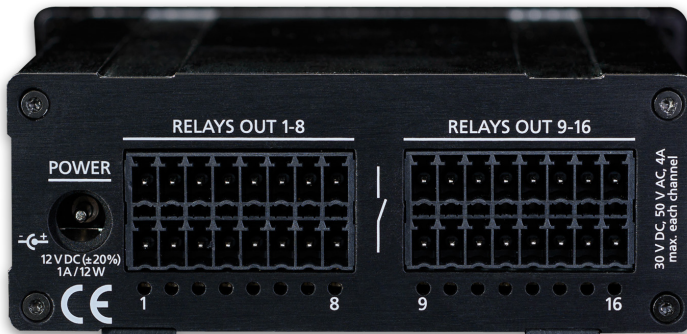
In addition to the POWER socket, relay outputs 1 to 16 are located on the rear of IObox Relay, which can be connected via the supplied printed-circuit board connect-

ors (FMC 1.5 by Phoenix Contact). The corresponding LEDs below the relay contacts light up when the contacts are closed.

Rear side of Wings IObox Remote

In addition to the POWER socket the rear side of IObox Remote accommodates switching inputs 1 to 16, which can be connected via the supplied printed-circuit board connectors (FMC 1.5 by Phoenix Contact). The corresponding LEDS below the switching contacts light up when voltage is applied to the IN-contacts (above), i.e. normally when they are connected to the 5V contact at the bottom. The four contacts on the right are grounded (GND).

Rear side of Wings IObox Serial

In addition to the POWER socket, the rear side of IObox Serial also contains interface ports A to D. LEDs RX, TX and IR (bottom left corner) indicate when information is received or transmitted.

Note: It is planned to use port D for an optional IR-diode for controlling IR-controllable devices.

Technical Data

The following applies to all Wings IOboxes

- 10/100 MBit RJ45 Ethernet connection with Power over Ethernet (IEEE 802.3af-2003)

- Power supply: 12 V, 1A max.; only the supplied AC adapter may be used for external power supply.

- Width x Height x Depth: 98 mm x 34 mm x 137 mm

Wings IObox DMX

- Ports: 1 DMX 512 input, 1 DMX 512 output with 3-pin sockets XLR-M (In) and XLR-F (Out) (acc. to IEC 61076-2-103)

- A shielded cable with an impedance of 110 ohm must be used. The output must be terminated with a 120-Ohm resistor after the last device. A max. number of 32 devices can be connected to the output without any repeater.

Wings IObox Relay

- Ports: 16 Relay switch outputs

- Maximum contact load: 30 VDC, 48 VAC, 1.5 A

- Resistance of closed contact: 30 mA (at 1A, 6VDC)

- Isolation resistance of open contact: 1000 mOhm (at 500VDC)

- Minimum contact life: 150,000 switch cycles at a load of 1.5A, 48VAC

Wings IObox Remote

- Ports: 16 digital inputs

- Maximum input voltage: 30 Volt, minimum input voltage 2 Volt (for logic 1)
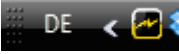
Wings IObox Serial

- Ports: 4 RS232 connectors (Sub-D 15 mm)

Configuration of Wings IOboxes

The modules can be configured in a web browser.

1. Connect your Wings IOboxes to the network and hook up the power supply.

   Note : If you have no Wings IOBox you can simulate it for test purposes. At the bottom right corner right-click the tray icon for **Avio Service** and select **Simulate** followed by choosing the corresponding IObox. Enter a name and click **Start Simulation**.

2. Start the Avio Manager or, if it is already open, click **Refresh** a the top of the module in order to display the Wings IOboxes as network nodes.

   Note: If the IObox is is not listed, your computer's address range differs from that of the IObox. In order to set the IObox to your address range make the following entries:

- Change your PC's address range temporarily to the address range specified on the type plate of the IObox.

- Now the IObox should be listed in Avio Manager and you can start configuration. The IP address is changed in the **Setup** menu.

- After changing the IP address of the IObox you can change the address of your PC back to the old setting.

3. To open the configuration dialog right-click the Wings IObox and select **Open in Web Browser**.

The following configuration menus are available at the top: Values, Connect, Connections and Setup.

- **Values** ...displays the value status of the DMX channels selected under **Select Port**.

- **Connect** …is used for connecting to other nodes. On the website of the corresponding IObox it is possible to make incoming (reading) connections.

  Section **Local Node** shows the ports and channels of the module for which the web site was opened. Here the channel can be highlighted another node is to write to.

  Section **Remote Nodes** shows all nodes of the network. Every time menu item **Connect** is clicked the network is read in. It allows selection of the channel which is to write to the local channel selected before.

  Note: Currently, there is no option to decide whether the connection is to be scaled or if the values are to be transferred as they are.

- **Connections** … displays the node connections, which may also be deleted, if necessary. Since every node saves only its own connections click **Get remote nodes** to read in the entire network with its AVIO nodes and to display the outgoing connections.

- **Logic** ...is used for installing and configuring scripts that allow mathematical or logic functions, for example. See also Avio Scripts.

Setup …serves for configuring name, network address and logging. It also allows the IObox to be locked and reset. After making the alterations in the Setup menu you have to restart the IObox be clicking Restart at the very bottom or disconnecting it from the mains supply.

Resetting to the default configuration

1. Disconnect the IObox from the mains supply.

2. Using a pen, press and hold the setup button at the front while connecting the box to the mains supply. Hold the button pressed until booting is done.

Using Wings IOboxes to control devices

Controlling devices via DMX or relays

Using Wings IObox DMX you can control devices via Wings 5 or Wings Touch.

Using Wings 5

The variables are the interfaces to the Avio System and need to be created in Wings 5 first.

1. In the Media Pool **Variables** create a new **Value Variable** by right-clicking it. In order for the variable to show up as channel in Avio Manager you need to check box **-> Avio** in the Media Pool.

2. There are various options available:

    -   In a universal track right-click and create a data or switch object and drag and drop the required variable onto the object. In the Wings AV Suite Help see also *Programming data objects* and *Programming switches*.

    -   You create a Variable trigger, which allows you to set variable values or change them within a certain period of time, e.g. for fading light in or out. Using a trigger list you can perform various actions independently of the timeline. In the Wings AV Suite Help system see also *Creating a trigger*, *Executing a trigger* and *Executing several triggers according to a list*.

3. In the Avio Manager the variables are listed under **Wings 5** - **ValuesOut**. You can now make the connection between the variable and with the corresponding IOBox ouput. See *Wings Avio Manager* in the Wings AV Suite Help pages.

Info

- To keep an overview in Avio Manager name the variables appropriately. Please note that variable names must not contain any spaces or special characters. Otherwise, Wings 5 will make the necessary corrections automatically.

- Trigger execution can also be enabled in the Avio Manager by linking up a trigger with a Wings Touch button. See also ***Wings Avio Manager*** in the Wings AV Suite Help System.

Using Wings Touch

In order to control switch values or continuous values (e.g. DMX) use the corresponding controls on the user interface.

1. In Wings Touch create the required controls on the user interface. The following controls are suitable:

   - **Buttons**

   - **Switches** and **Toggle buttons** as switches with two conditions

   - **Faders** as sliders for a variable change of a value

   It is essential to enter meaningful **names for the controls** which allow identification in the Avio Manager. In Wings Touch controls can be right-clicked and option **Hide in Avio** be chosen if you want to exclude them from control via Avio (e.g. menu buttons) in order to increase clarity in the Avio Manager.

2. After starting the Viewer by pressing the **F5** key you can link up the controls with the required Wings IObox output in the Avio Manager. See ***Wings Avio Manager*** in the Wings AV Suite Help pages.

Remote control using Wings IObox Remote

IObox Remote allows control of playback and executing of triggers in Wings 5. A great variety of different trigger functions offer a wide range of control functions. See also *Trigger actions* in the Wings AV Suite Help pages. However, it is also possible to control other Avio devices via IObox Remote.

1. In order to execute trigger actions you start by creating the corresponding trigger in Wings 5 and entering a suitable name. See *Creating a trigger* in the Wings AV Suite Help pages.

2. In Avio Manager the triggers can be found under **Wings 5 - Triggers** and under **Wings 5** - **Control** the functions Play, Pause, Start Presentation, Continue, Stop and Escape. You can now make the connection with the corresponding IObox Remote channel. See *Avio Manager* in the Wings AV Suite Help pages.

Controlling devices via RS232 and network communications

Sending serial commands requires a driver which needs to be loaded in IOBox Serial. Available drivers are listed in Wings 5 after clicking **Extras** - **Open folder** ▶**Drivers**.

1. Open IOBox Serial in the web browser by right-clicking node **Serial** in Avio Manager and selecting **Open in Web Browser**. In the web browser click menu **Drivers** at the top of the window.

2. Under **Add Driver** click **Search** and select the appropriate driver in the file dialog. The supplied drivers can be found in the following folder:

   C:\ProgramData\AV Stumpfl\Drivers

   Note: This folder is usually hidden and not displayed in the Explorer. In such a case search for the drivers by entering **.ptd* in the search field.

3. Click **Open** and **Upload** following which the driver is loaded in the IOBox.

4. Under **Driver Files** highlight the loaded driver and click **Add Driver** following which the driver will be installed and be ready to be used.

5. At the top under **Installed Drivers** highlight the corresponding driver and the interface parameters will be displayed below. Make the appropriate settings and assign an interface from **Port A** to **Port D** to it. Following this click on **Change** to accept the configuration.

   Important note: Do not forget to restart the IObox (disconnect power supply or click **Reset** in the Browser). This is definitely required for changes, such as deleting or updating drivers, as otherwise there may be double entries in the Avio Manager.

6. In Avio Manager under node **Serial** you will find the loaded drivers and their commands. In order to execute a command you click Edit and enter the required parameter, e.g. **1** for a command such as "Play" without any special parameters. The commands can be linked up to Wings Touch control elements for easy and convenient operation.

Attention! Currently, the drivers of IObox Serial are not yet saved to SD card.

AV Stumpfl contacts

Should there be any questions which cannot be answered in the help section, please tell us about this. If you encounter any problems using Wings 5, please use the **Support Function**. If you have any questions or would like to make any suggestions you can reach us on the phone from Monday to Thursday from 8.00 to 12.00 and from 13.00 to 16.30 and on Fridays from 8.00 to 12.00.

Outside these hours we can offer fee-based emergency support:

Our emergency hotline is available every day between 8 am and 10 pm at +43 7249 42811-900. However, we would like to point out that we charge EUR 30,00 net for every 15-minutes. Please bear in mind that we may not be able to answer your call immediately. In order to ensure that we can return your call as soon as possible and offer best-possible support we are asking you to leave a message with your

Company name

- Name

- Telephone number

- Dongle or customer number

on the answering machine and we will call you within one hour.

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