

# ON AIR LIGHT

User Manual EN/US

V2.1



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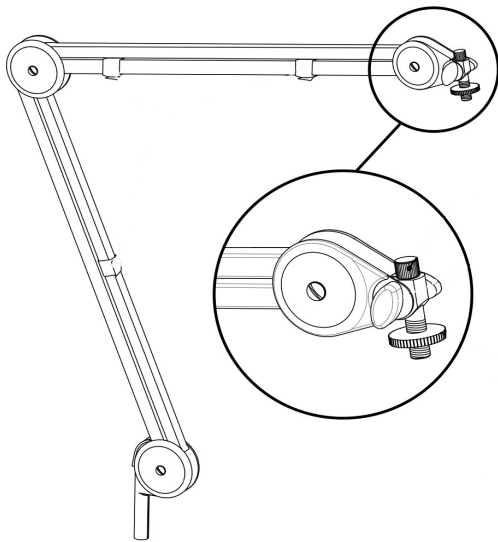
## Introduction

You just opened a box with revolutionary products, the contents of the box deliver you the OnAir Lights together with a control box, revolutionary because it is actually completely universal, and will fit on any system and microphone boom arm.

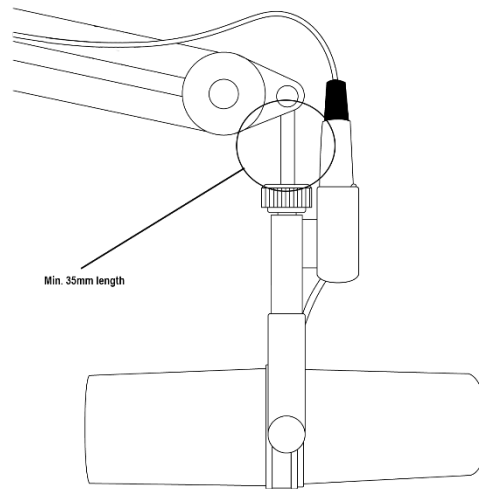
But of course you already know, that was the main reason you bought this product.

Our product undergoes constant updates, so check the online manual for the latest information on the products.

Well let's go and install the system, there are 2 types of boom arms, type with longer mounting rod and types without.



Extension rod needs to be installed.



No need for the extension rod.

When the mounting rod is shorter than 35mm and or is thicker than 13mm an extension rod needs to be installed.

## Installation

After unpacking the box, you will find 2 light fixtures with 2,5 meters of cable, 1 control box, 1 control cable and 1 USB to micro USB.

**\*Important, because everyone nowadays has the USB adapter for connecting to the mains (230v) the adapter needs a minimum of 2 Amps if used in full order (4 light fixtures)\***

- Unscrew your microphones until the 3/8" mount is clear.
- Measure the length of the mount, standard this will be 35mm or longer (including thread), and maximum 12mm thick, then you don't need the mounting adapter.
- Otherwise mount the 3/8" mounting adapter.
- Mount the light fixtures on the boom arm with the cable pointing towards the arm.
- Lead the cable over or through the boom arm if possible.
- Connect the other end of the cables to the control box to port 1 and 2 (Fig 1.)
- Connect the control cable to input 1 of the control box. (Fig.2)
- Connect the control cable to your mixer / mixing system, you need a GPIO free from any circuit (you may contact us for information on your system) or if you are using Midi, connect the USB cable to the computer with the payout software.
- If you are using GPIO on your mixer, you can connect the USB power cable to a USB power adapter, or any other USB power source (2A) including a computer.
- Power up

Fig.1



Output side (lights)

Fig.2



Input side (from payout)

## Werking

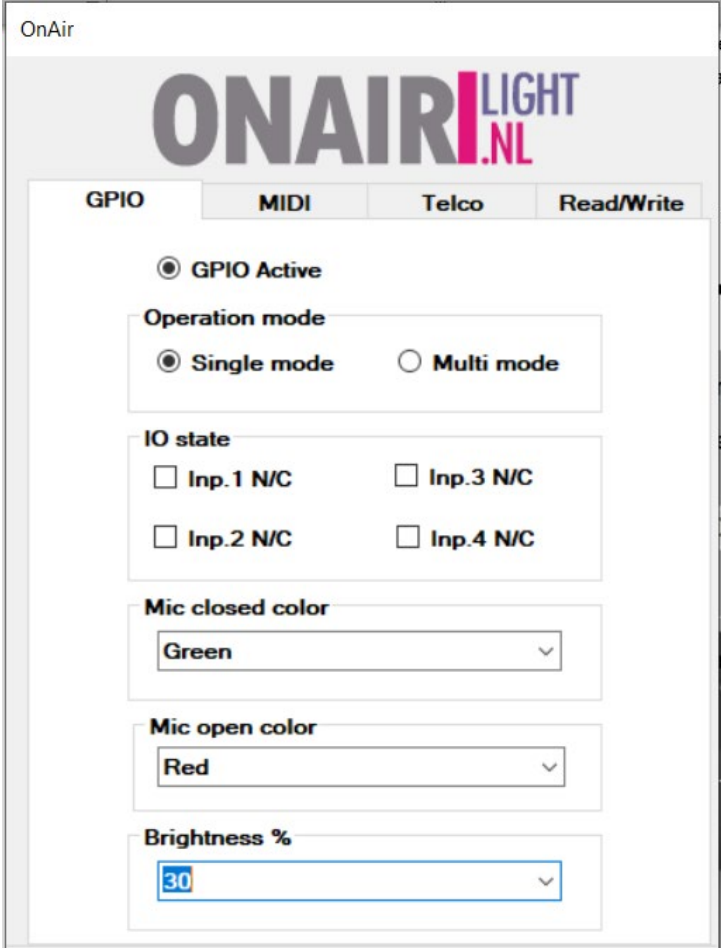
The minimum setup is 1 control box and 1 connected light, when you connect the box the first light will display the status.

1. Flashing yellow, the default settings are loaded (first start)
2. Flashing blue, the saved settings are loaded.

To be able to adjust the settings you need the software, the installation package can be downloaded from our website ([url](#))

Install the software, connect the control box to your computer, and launch the application via the shortcut on your desktop.

After the application has been started, it will try to find the connected control box, if that does not work, a message will appear indicating that the port cannot be found automatically, in which case you can select the correct port yourself in the **Read/Write** tab, and after selection the application will initialize the box, and the settings from the box will be loaded.

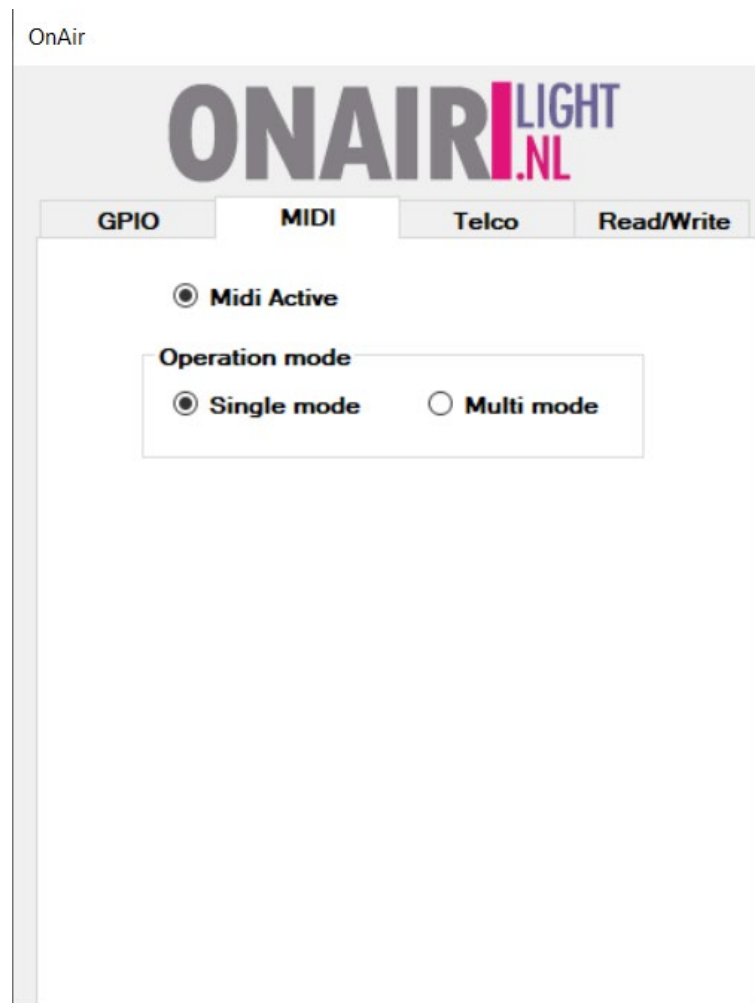


The screenshot shows the ONAIR LIGHT .NL software interface. The title bar reads "OnAir". The main header features the logo "ONAIR LIGHT .NL". Below the header, there are four tabs: "GPIO", "MIDI", "Telco", and "Read/Write". The "GPIO" tab is currently selected. The settings are organized into several sections:

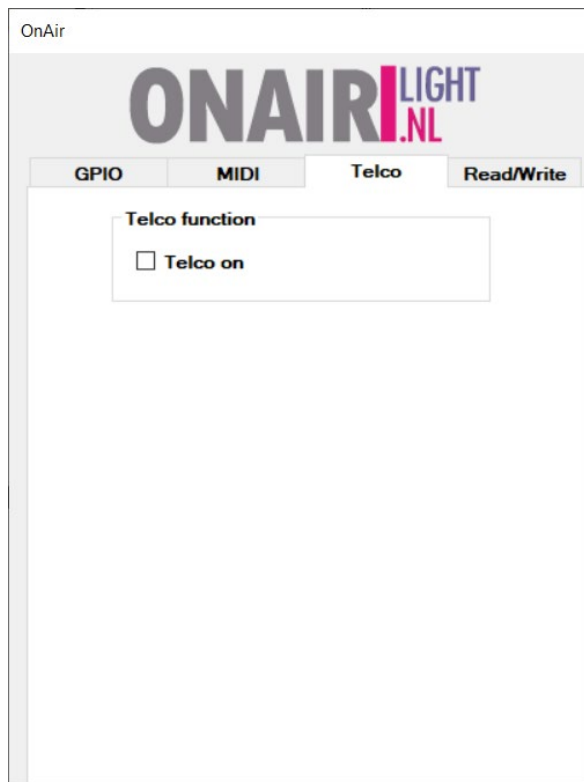
- GPIO Active:** A radio button is selected.
- Operation mode:** Two radio buttons are present: "Single mode" (selected) and "Multi mode".
- IO state:** Four checkboxes are arranged in a 2x2 grid: "Inp.1 N/C", "Inp.2 N/C", "Inp.3 N/C", and "Inp.4 N/C". All are currently unchecked.
- Mic closed color:** A dropdown menu is set to "Green".
- Mic open color:** A dropdown menu is set to "Red".
- Brightness %:** A dropdown menu is set to "30".

The settings as you personally wish can now be set.

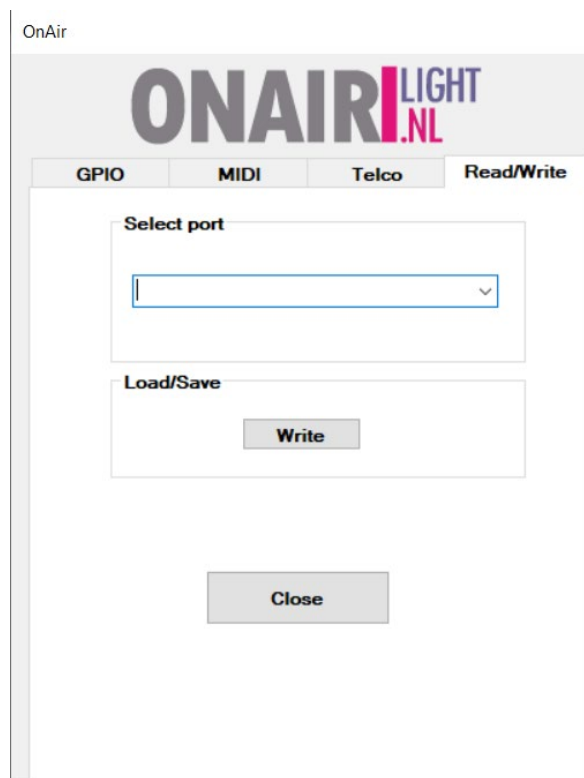
1. **GPIO** Activates GPIO Mode.
2. **Operation mode** choice between switching all lights via input 1 or each light has its own input.
3. **IO state** choose per input whether the contacts are normally open or normally closed, off is normally open, on is normally closed
4. **Mic closed color** choose the color of the lights when the microphone channels are closed (off).
5. **Mic open color** choose the color of the lights when the microphone channels are open (on).
6. **Brightness** brightness of the lights in %.



1. **Midi mode** Here you activate the Midi mode, the GPIO mode will be automatically switched off.
2. **Operation mode** choice between switching all lights via input 1 or each light has its own input.



1. **TELCO function** Enables or disables the Telco function.



If all settings have been made according to your personal taste and situation, click "Write" to save the settings.

You cannot click the "Write" button if no settings have been changed.

After saving, the first light on the control box will display the status of your changes.

1. Green flashing, settings saved successfully.
2. Flashing red, settings can be used, however, an error has occurred. (restart the box)

When all your preferences are set, click the write button, your settings will be stored in the box.

Notice that the write button will not be clickable when no settings are changed.

After clicking the write button, the first light fixture will indicate whether the settings are stored.

- Blinking Green, settings stored successfully.
- Blinking Red, Settings can be used, but an error occurred (restart the box)

After the settings are stored, you can disconnect the box from your computer to use it with GPIO, of course you need to plug it in to an USB adapter (2A) in case off Midi, connect it to the playout computer.

**ATTENTION: DO NOT DISCONNECT DURING THE WRITING PROCESS WAIT FOR THE SUCCESS MESSAGE!**

After you are satisfied with the settings, press the Close button.

## **Different operation modes:**

### **GPIO Mode**

Check the settings of your mixer, and if the appropriate output will switch on and off when you operate the microphone sliders. (some mixers require software to activate the GPIO)

Use a unshielded 3,5 mm stereo jack to connect the inputs, Sleeve = Common, Ring = Input 1, Tip = Input 2

(common wire color are yellow = sleeve, red = ring, white = tip)

Contacts used are normally open, so they close when the microphone is on.

**ATTENTION: The contacts used need to be absolutely potential free from any other currents.**

### **Telco Function**

When the TELCO function is invoked in the settings, input 4 (tip on input connector 2) will act as input for the telephone fork on or off signal, in multi GPIO mode (dipswitch 1 on) output 4 will be unused. If a caller is on the phonenumber, the telco GPIO needs to close, in this case, when opening 1 of the microphones, the light will be yellow.

In the case that no caller is active, the telco GPIO will be open, and the microphone active light will be red as normal.

The Telco function is not (yet) available in Midi mode.

### **Midi mode**

In your Playout or Midi software you will be able to choose the 'OnAirLightV1.2' device.



In Midi mode, you can send Midi messages to the OnAir box, dip switches 1 and 8 need to be in the on position, if your playout software only has 1 Microphone button, dip switch 1 needs to be off in order to light up all the lights.

The only Midi message received is a Note On message.

You can however control the on and off colors by the velocity option.

Color codes in hexadecimal 0x46=red, 0x3C=green ,0x32=blue ,0x28=magenta ,0x1E=cyan ,0x14=yellow ,0x0A=white ,0x00=off.

Color codes in decimal 70=red, 60=green ,50=blue ,40=magenta ,30=cyan ,20=yellow ,10=white ,00=off.

Note numbers for the lights are 1, 2, 3, 4

Messages are send in a 3 byte format.

First byte = Note On, Second Byte = Note number, Third byte = velocity

Example: Note On, Note number 01, decimal velocity 70 will turn the first light to red.

In most cases the message will look like this '90 01 46' as the transmission will be in Hex format

Where 90 is the Note On, 01 is the Note Number, 46 is the velocity.

For information on how Midi is used on your system, refer to the manual of your Playout software.

Readymade scripts can be downloaded from our website for Virtual DJ, Mairlist and Mixxx

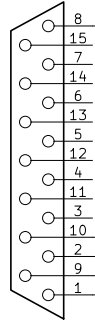
That's all there is to it !!!!

Enjoy!!

## Technical information

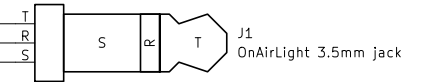
- Input power, 5 volts DC / 2.1 Amperes
- Input holds some current so GPIO needs to be free from ground.
- Box measurements 100mm x 70mm x 32mm
- Light fixture measurements 25mm x 40mm
- Control cable: 3 lead TRS connector, length 2500mm
- USB cable: USB-B and Micro USB connector, length 1000mm
- Midi version

J0  
Remote A



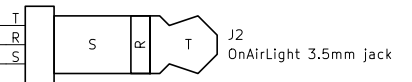
Aansluiting op input 1 van de OnAirLight box

Aansluiting op input 2 van de OnAirLight box



Port 1 OnAirLight Box

T = Input 1  
R = Input 2  
S = shield



Port 2 OnAirLight Box

T = Input 3  
R = Input 4  
S = shield

**OnAirLight**

Sheet: /

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**Title: OnAirLight connection diagram Allan&Heath XB series Mixers**

Size: A4

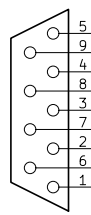
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Rev:

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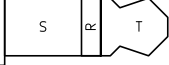
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J1  
GPIO 1



Aansluiting op input 1 van de OnAirLight box

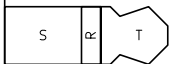
Aansluiting op input 2 van de OnAirLight box



J2  
OnAirLight 3.5mm jack

Port 1 OnAirLight Box

T = Input 1  
R = Input 2  
S = shield



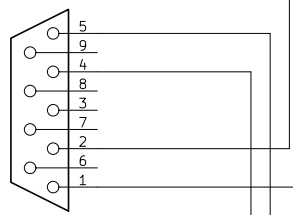
J4  
OnAirLight 3.5mm jack

Port 1 OnAirLight Box

T = Input 1  
R = Input 2  
S = shield

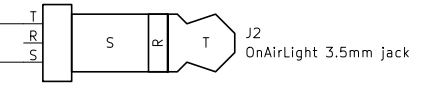
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Size: A4	Date:	Rev:
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J1  
GPIO 1



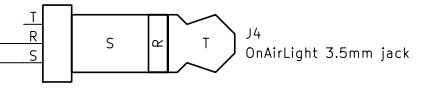
Aansluiting op input 1 van de OnAirLight box

Aansluiting op input 2 van de OnAirLight box



Port 1 OnAirLight Box

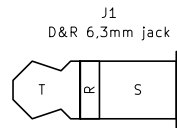
T = Input 1  
R = Input 2  
S = shield



Port 1 OnAirLight Box

T = Input 1  
R = Input 2  
S = shield

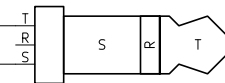
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Size: A4	Date:	Rev:
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Mic On connector on D&R

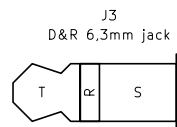
T = Common  
R = Normaly open  
S = Normaly closed

Aansluiting op input 1 van de OnAirLight box



Port 1 OnAirLight Box

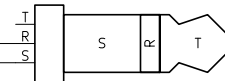
T = Input 1  
R = Input 2  
S = shield



Mic On connector on D&R

T = Common  
R = Normaly open  
S = Normaly closed

Aansluiting op input 2 van de OnAirLight box



Port 1 OnAirLight Box

T = Input 1  
R = Input 2  
S = shield

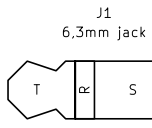
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KiCad E.D.A. kicad (6.0.9)

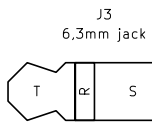
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Rev:  
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J1  
6.3mm jack

Mic On connector on BCS xx

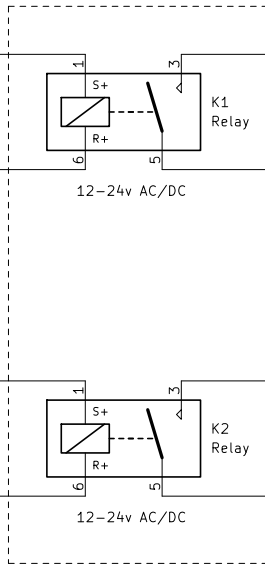
T = Light on (+12v DC)  
R = Not used  
S = GND (0v DC)



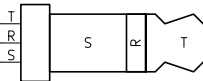
J3  
6.3mm jack

Mic On connector on BCS xx

T = Light on (+12v DC)  
R = Not used  
S = GND (0v DC)



Not included



J2  
OnAirLight 3.5mm jack

Port 1 OnAirLight Box

T = Input 1  
R = Input 2  
S = shield

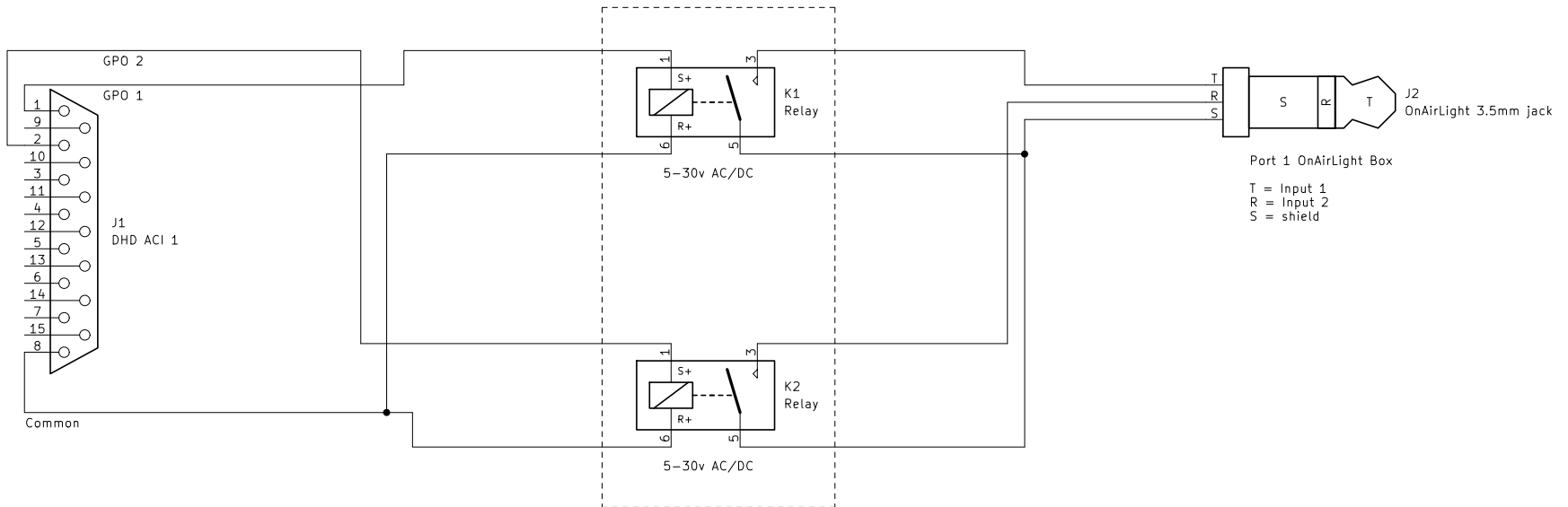
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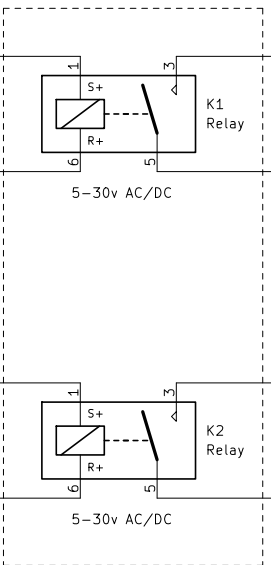
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Rev:  
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Port 1 OnAirLight Box

T = Input 1  
R = Input 2  
S = shield



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**OnAirLight**

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**Title: OnAirLight connection diagram Sonifex S Series Mixers**

Size: A4

Date:

Rev:

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