

BOSSCOM

# Powerlink Switch Airplay

## User manual

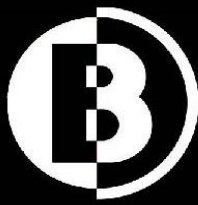




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## **INTRODUCTION**

The BOSSCOM Powerlink Switch Airplay is a converter and an automatic source switch with 8 pin DIN, SPDIF/TOSLINK and DIN-8/RCA inputs and is 100% B&O<sup>®</sup> compatible. This device provides you a solution for many problems in audio and video installations, such as feed-in of any audio/video sources to B&O<sup>®</sup> systems, connection of B&O<sup>®</sup> speakers to audio/video devices of other manufacturers etc.

### **IMPORTANT:**

The following functions of the BOSSCOM Powerlink Switch Airplay are universally valid and will no longer be described separately when shown in the application examples on the following pages:

#### **1. Which sources can be connected?**

Any stereo audio sources can be connected to INPUT 1 (DIN-8/RCA), INPUT 2 (DIN-8) and SPDIF/TOSLINK INPUT which has a volume controlled output (e.g. Apple<sup>®</sup> Airport Express, SONOS<sup>®</sup> ZP90, Loewe, Samsung, Panasonic televisions, DVB receivers, etc.). The BOSSCOM Powerlink Switch Airplay is NOT suitable for converting 5.1 data stream via SPDIF.

#### **2. 100% standard compliant B&O<sup>®</sup> Powerlink signal.**

B&O<sup>®</sup> sources connected to Powerlink signal will simply be looped through. All other audio signals - whether digital or analog - will be converted into 100% standard compliant B&O<sup>®</sup> Powerlink signal including the circuit voltage required for the B&O<sup>®</sup> speakers.

#### **3. Automatic source management with priority circuit.**

The BOSSCOM Powerlink Switch Airplay is not only a Powerlink converter but also automatic source management. The connected sources have different priorities which can be chosen by using the DIP switches on the bottom side of the Powerlink Switch Airplay. Please follow the instructions on the page 9



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**4. Automatic source activation through signal recognition.**

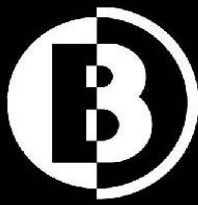
As soon as a signal is present, it will be recognized by BOSSCOM PL Switch Airplay and a Powerlink signal with circuit voltage will be generated. If the source no longer delivers a signal (e.g. if it is turned off or muted), an intelligent circuit shall provide a delay of approximately 1 minute - only then the Powerlink signal will be turned off and the B&O<sup>®</sup> speakers go into Standby mode. This is necessary, for example, for longer speaking pauses in audio books and gives you sufficient time to select the next song for playback from your music library.

**5. Automatic source activation at IN 1 through external circuit voltage.**

If the source connected to INPUT 1 has a circuit voltage (e.g. B&O<sup>®</sup> Powerlink or Loewe<sup>®</sup> TVs with circuit voltage) then they have the great advantage of not being required to wait the otherwise necessary time delay of approx. 1 min in order to be able to hear the active audio source in the other inputs once again. This function is only available for INPUT 1 and can be turned on or off via a sliding DIP switch 1 on the bottom side. This type of source activation is preferable to the otherwise commonly used method of signal recognition. If no source is connected to INPUT 1, this trigger function should also be activated.

**6. Automatic source activation for TOSLINK INPUT with Apple<sup>®</sup> Airport Express.**

A special characteristic occurs if the Apple<sup>®</sup> Airport Express is connected to TOSLINK INPUT. The BOSSCOM Powerlink Switch Airplay is optimized so as to evaluate the special SPDIF signal from Apple<sup>®</sup> Airport Express - i.e. a signal is no longer present (e.g. if Airplay is no longer active or the iPod<sup>®</sup> is muted), the SPDIF signal is turned off immediately, and the B&O<sup>®</sup> speakers go into Standby mode - the otherwise necessary delay time of approx. 1 minute is also not necessary for Apple<sup>®</sup> Airport Express. Please follow the DIP Switch instruction on the page 9.



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## APPLICATION EXAMPLES

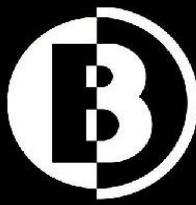
### A. Apple Airplay function



Connect an Apple<sup>®</sup> Airport Express to SPDIF/TOSLINK INPUT of the BOSSCOM PL Switch

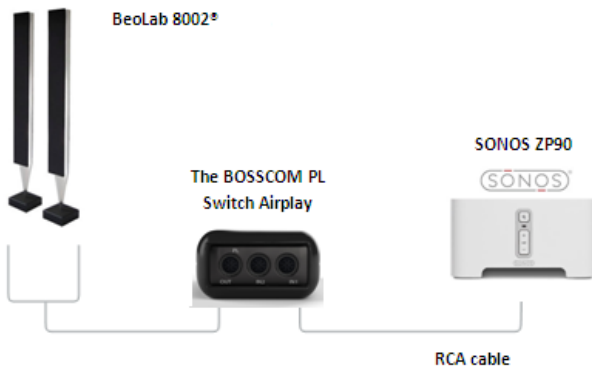
Airplay via optical cable (fiber optic) and equip your B&O<sup>®</sup> system or your B&O<sup>®</sup> speakers with the Airplay function.

As soon as you use the Airplay function with your iPhone, iPad or iPod Touch and activate DIP Switch 3 (ON position) the sound will be optically transmitted from Apple<sup>®</sup> Airport Express via SPDIF cable and will be converted from BOSSCOM Powerlink Switch Airplay as a standard Powerlink signal (including circuit voltage). And, if the Apple<sup>®</sup> Airport Express no longer emits a signal (e.g. if Airplay<sup>®</sup> is no longer active or the iPod is muted), the Powerlink signal will immediately be turned off and the B&O<sup>®</sup> speakers will go into Standby mode.

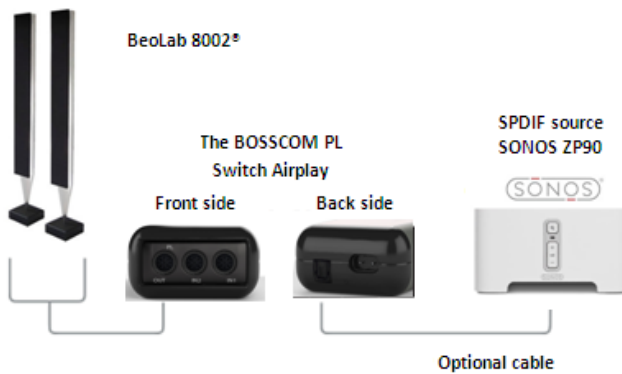


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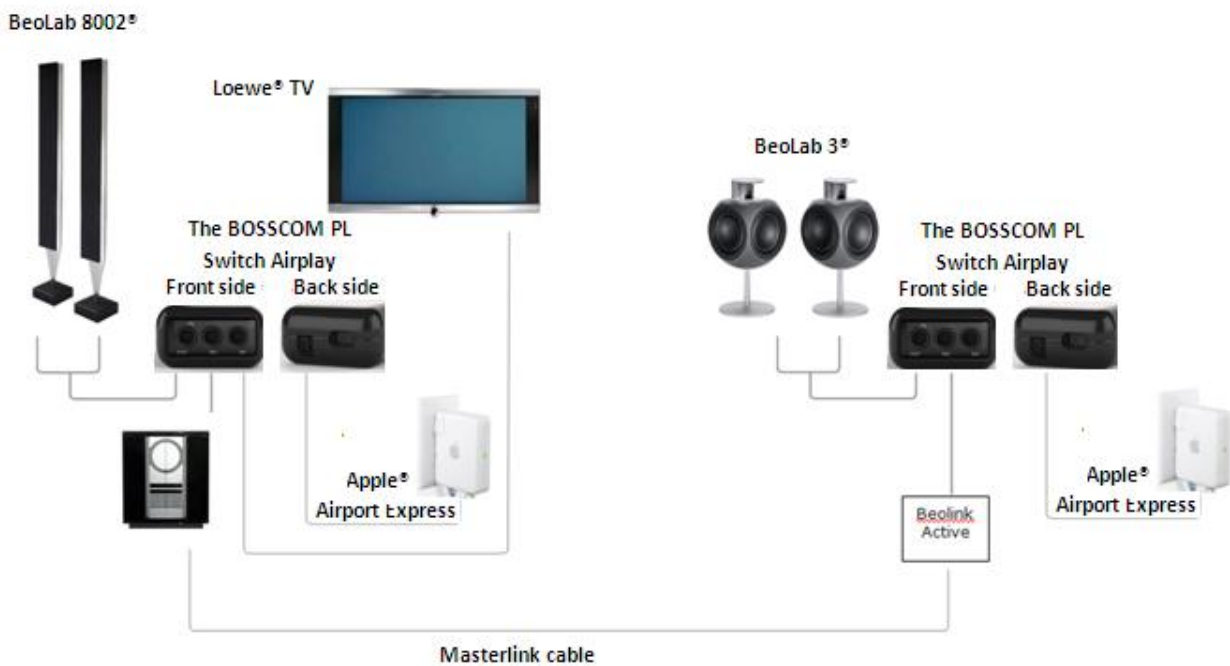
### B. Stereo RCA => B&O Powerlink

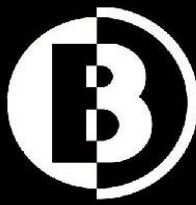


### C. SPDIF => B&O Powerlink



### D. Powerlink Switch Airplay in the link room





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## CONNECTION

### Front



#### **OUTPUT (Powerlink output)**

8 pole DIN socket

Pin 2 - Ground

Pin 3 - Output L

Pin 4 - Powerlink Mute circuit voltage (5 V DC) Pin 5 - Output R

#### **INPUT 1**

8 pole DIN socket

Pin 2 - Ground

Pin 3 - Input R

Pin 4 - Input for circuit voltage/trigger signal (5-15 V DC) to activate INPUT 1 (e.g. Powerlink Mute)

Pin 5 - Input L

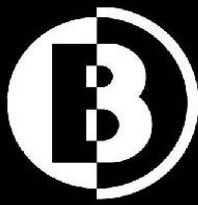
#### **INPUT 2 - (Powerlink input)**

8 pole DIN socket

Pin 2 - Ground

Pin 3 - Input R

Pin 4 - Powerlink Mute circuit voltage (5 V DC) Pin 5 - Output R



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## Back side



## SPDIF/TOSLINK INPUT

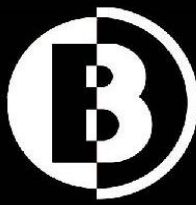
Connection option for volume controlled, digital audio signals via optical cable with Toslink connectors. Ideal for Apple Airport Express (Airplay)<sup>®</sup> or SONOS ZP90<sup>®</sup>.

## Mains connection

Connect Euro power socket with the included power cable to the socket.

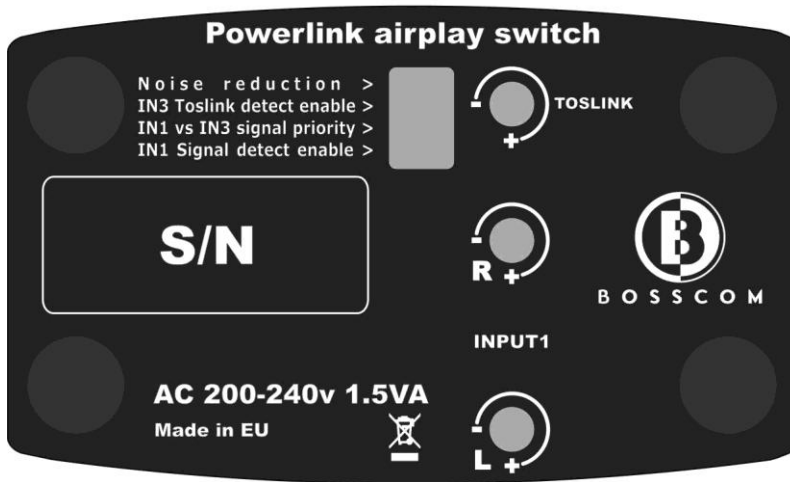
ATTENTION: Before doing so, all other cables should already be connected!





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## Bottom side



## DIP Switch positions

### DIP Switch 1: Sound level IN1 auto detect enable

ON: IN1 input automatically activates by sound level => 15mw or trigger pin4

OFF: IN1 input can be enabled only by voltage level =>5v on trigger pin4

### DIP Switch 2: Signal priority IN1 vs. SPDIF/TOSLINK INPUT

ON: IN1 have priority over SPDIF/TOSLINK INPUT

OFF: SPDIF/TOSLINK INPUT has priority over IN1

### DIP Switch 3: SPDIF/TOSLINK INPUT enable

ON: SPDIF/TOSLINK INPUT enabled

OFF: SPDIF/TOSLINK INPUT disabled

### DIP Switch 4:

ON: Enable noise reduction on older B&O systems

OFF: Disable noise reduction.



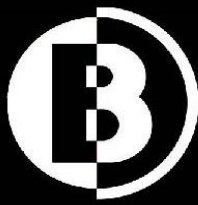
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Status		Signal path	Comment
IN1 pin4 = (5 to 12v)		IN1 =>OUT	All DIP switches or other inputs do not care. LED = (single short blink).
DIP1 ON DIP2 ON DIP3 ON	Sound IN1 detected, TOSLINK connected	IN1 =>OUT	LED = (single short blink).
DIP1 ON DIP2 OFF DIP3 ON		IN3 =>OUT	LED = (triple short blink).
DIP1 OFF DIP2 don't care DIP3 ON		IN3 =>OUT	LED = (triple short blink).
DIP1 OFF DIP2 don't care DIP3 OFF		IN2 =>OUT	LED = (double short blink).
DIP1 don't care DIP2 don't care DIP3 don't care	No sound in IN1 input and no optical link	IN2 =>OUT	LED = (double short blink).
IN1 selected, IN1 AutoDetect enabled (DIP1 ON) <b>and no sound at this moment (IN1 signal lost).</b>		IN1 =>OUT, after 60 seconds IN2 or IN3	LED 50% ON, 50% OFF – 60 sec countdown timer.

*IN3 => SPDIF/TOSLINK INPUT*

LED: Short ON, long OFF – (number of blinks indicate selected channel)

50% ON, 50% OFF: AutoDetect enabled, IN1 selected but 60 seconds timer counting down because no signal level on IN1 at this moment.



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## SIGNAL AMPLIFICATION

Due to the different audio & video equipment standards in the market there is a possibility to control (boost or reduce) the sound level for INPUT 1(left and right channel) and SPDIF/TOSLINK INPUT.

### **INPUT 1 sound level control**

The right and left channels can each be regulated separately.

Turning counterclockwise (to the left) reduces the volume 3 times and turning counterclockwise (to the right) increases 6 times. E.g. 100 mw can be reduced up to 33 mw and increased up to 600 mw.



### **SPDIF/TOSLINK INPUT**

The BOSSCOM Powerlink Switch Airplay has a digital processor inside. It gives the opportunity to control left and right channel at the same time.



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## SAFETY INSTRUCTIONS



The connection to the power grid occurs via the supplied power cord. A damaged connecting cable may not be repaired. The operating voltage must match the local mains voltage.



Protect the device from moisture and wetness. Do not operate the device in the rain. The device may not be operated in the vicinity of water, a bathtub, sink, wet room, swimming pool, or humid areas.

Do not set objects filled with liquids, such as vases, glasses, bottles, etc. onto the device.

Avoid direct sunlight or placement near radiators, heaters, or similar devices.



If the device is suddenly moved to a cold or warm location, condensation may form inside the device. Before turning it on, wait until the device has reached room temperature.

In order to protect the device during lightning storms, or if it will not be monitored or used for some time, pull the plug. This avoids damage to the device due to lightning strikes and power surges in the power grid.

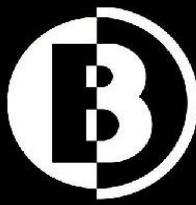
Improper use will invalidate the warranty!



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## TECHNICAL DATA

Powerlink Signals	INPUT 1, INPUT 2 and OUTPUT is compatible at 100% B&O®
Remote power	ON/OFF via external switch - INPUT 1 voltage (5-15 V DC) to 8-pol DIN input socket
Automatic switch	“ON” as soon as the NF signal is INPUT 1 and 2 present, “OFF” (Standby, if no NF signal is present for longer than approx. 1 min (exception: no dwell time at Apple® Airport Express at SPDIF/TOSLINK INPUT)
Level boost INPUT 1	Possible to reduce 3 times and increase 6 times. Each separated to be regulated via L and R
SPDIF/TOSLINK INPUT	Stereo control (both channels at the same time).
Inputs	INPUT 1   8 pol-DIN (NF/Powerlink) INPUT 2   8 pol-DIN (Powerlink) INPUT 3   SPDIF/TOSLINK (controlled by stereo)
Output	OUTPUT   8 pol DIN (Powerlink)
Power supply	200-240V~ 50 Hz
Dimensions	110 x 73 x 35 mm (L x B x H)
Weight	217 g.
Color	black/grey
Warranty	2 years
Accessories included	Power cable (Euro plug), Adaptor cable for INPUT 1 (3 RCA =>DIN), TOSLINK M to TOSLINK M, TOSLINK M to 3.5mm optical cable.



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## BLOCK DIAGRAM

