



# BSS-Cases

*Operation manual*

*For ATEM Mini and ATEM Mini Extreme cases*

V2.6-2022



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## **BSS-Case**

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Thank you for deciding to buy a BSS case.

We are a small manufacturer that uses practical experience to develop products for live streaming and components for video hardware and accessories for practical use.

We always strive to ensure that our products are of high quality and durability which meet the user's requirements. In addition, we are looking for the optimal balance between requirements and costs. You can therefore choose the right technical design for your specifications.

We are grateful for your feedback on the application, improvements or requests for our products.

Plüderhausen, January 2023

BSS-Streaming Service

Daniel Breitenbücher

## Validity

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These instructions apply to the following BSS case models and their options.

model name	Item number	from model year
BSS-Case Economic	ART-000252	03/2022
BSS-Case Basic	ART-000033	05/2021
BSS-Case Professional	ART-000129	05/2021
BSS-Case SDI	ART-000360	10/2022
BSS-Case Extreme	ART-000247	04/2022
BSS-Case Professional Extreme	ART-000277	04/2022
BSS-Case Extreme SDI	ART-000379	12/2022

## Safety instructions

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Please read all instructions and illustrations prior to the initial use of your device. Proceed accordingly. Non-observance of the operating instructions and safety notes can lead to electric shock, fire or serious injuries!

Unless otherwise stated, the instructions and safety information apply to both the ATEM Mini case and the ATEM Mini Extreme case.

- Only use the case lying down with its lid open and in consideration of the ambient conditions.
- Do not use the BSS case in the rain or under the influence of water or humidity.
- Do not open the screwed covers or flaps.
- Keep the case dry and clean.
- Do not lean on the ATEM Mini cover plate in the case.
- Avoid impact or excessive pressure on the case and its components.

- Always disconnect the case from the power supply after use by first disconnecting the components using the on / off switch and then pulling the power plug.
- Only use connection devices that are compatible with the connection values of the ATEM Mini and the monitors used. Further information can be found in the operating instructions of the respective manufacturers.
- If foreign bodies / liquids have penetrated through the ventilation openings of the BSS case, pull out the power plug immediately and contact our service department.
- To avoid scratches, place a soft, thin cloth between the screen and the ATEM Mini during storage and transport.
- Store the BSS case in a dry and clean environment.
- Have the case repaired only by qualified specialists and only with original spare parts.
- Do not use the case again if the on / off switch is defective, the fan is not operating or any other built-in component or part is defective.
- As long as no ATEM Mini or ATEM Mini Extreme is installed in the case, there is a risk of tipping over due to the changed center of gravity. Therefore, when opening the cover, hold the case in a horizontal position with the help of a second person until the installation is complete.
- Current information can be found at:  
<https://bss-streamingservice.de/en/download/>

## Proper use

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The BSS case is intended to transmit and record live streams with proper use of the available connection options of a built-in ATEM Mini in dry, clean and dust-free environments. The correct position for the case while in use is only in a lying position with the lid open.

## Connections BSS Case Economic

The following connections on the BSS case are arranged in a user-friendly manner. Different connection sockets can be installed in the BSS Case Professional.

### Front side

- On/Off switch (A)
- Blind cover or option: headphone connection 3.5mm stereo jack (B)



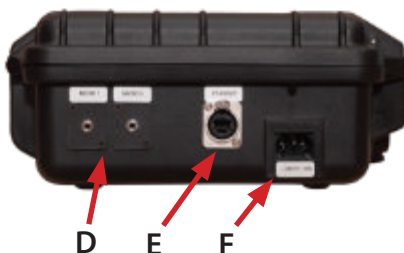
### Right side

- Fan (C)



### Left side

- Audio connections 2x3.5mm jack stereo unbalanced (D)
- Ethernet connection socket RJ45 (E)
- Mains connection 230V Version: C14 (F)



### Reverse side

- USB-C (G)
- Blind cover (H)
- HDMI in (I1-I4)

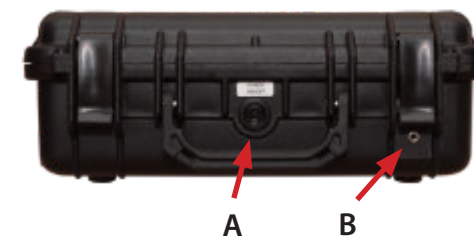


## Connections BSS Case Basic

The following connections on the BSS case are arranged in a user-friendly manner. Different connection sockets can be installed in the BSS Case Professional.

### Front side

- On/Off switch (A)
- Headphone connection 3.5mm stereo jack (B) or optional 6.35mm stereo jack



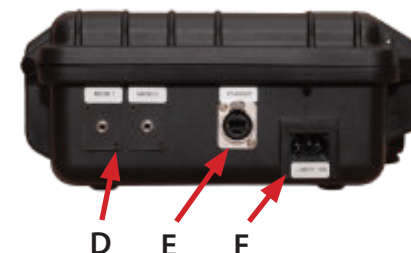
### Right side

- Fan (C)



### Left side

- Audio connections 2x3.5mm jack stereo unbalanced (D)
- Ethernet connection socket RJ45 (E)
- Mains connection 230V Version: C14 (F)



### Reverse side

- • USB-C (G)
- • HDMI out (H)
- • HDMI in (I1-I4)



## Connections BSS Case Professional

The connections on the BSS Case Professional correspond to those of the BSS Case Basic with the following changes.

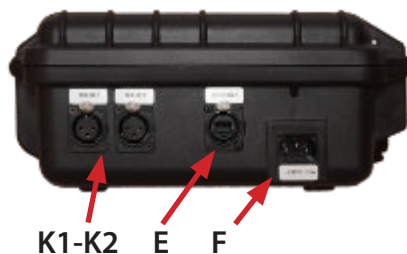
### Front side

- On/Off switch (A)
- Headphone connection 6.35mm lockable stereo jack socket (J)



### Left side

- Mains connection 230V (D)
- Ethernet connection socket RJ45 (E)
- Audio connections (2x female XLR-3-pin stereo unbalanced) (K1-K2)



## Connections BSS Case Professional SDI

The connections on the BSS Case Professional correspond to those of the BSS Case Professional with the following changes.

### Reverse side

- USB-C (G)
- HDMI out (H)
- HDMI in (I3-I4)
- SDI in - BNC 75Ω (L1-L2)



## Connections BSS case options: USB / battery connection

The connections on the BSS Case Professional correspond to those of the BSS Case Professional with the following changes.

### Front side

- LED display battery operation (M)
- 5A fuse (N)



### Right side

- USB A (O)
- Battery connection - XLR 4-pin (P)

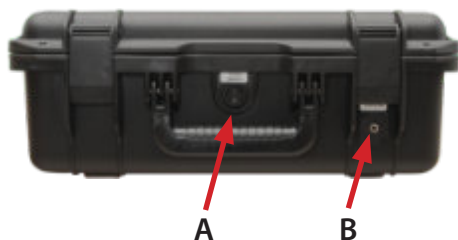


## Connections BSS Case Extreme

The following connections on the BSS-Case Extreme are arranged in a user-friendly way. Different connection sockets can be installed in the BSS Case Extreme Professional.

### Front side

- On/Off switch (A)
- Headphone connection 3.5mm stereo jack (B)



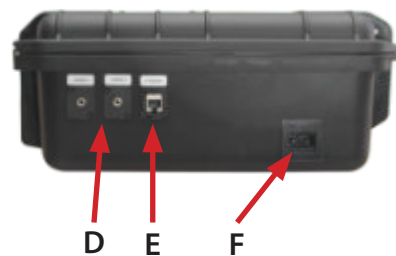
### Right side

- Fan (C)



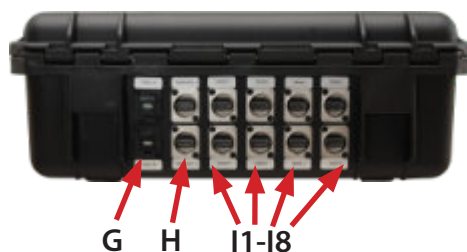
### Left side

- Audio connections 2x3.5mm jack stereo unbalanced (D)
- Ethernet connection socket RJ45 (E)
- Mains connection 230V Version: C14 (F)



### Reverse side

- 2x USB-C (G)
- 2x HDMI out (H)
- 8x HDMI in (I1-I8)

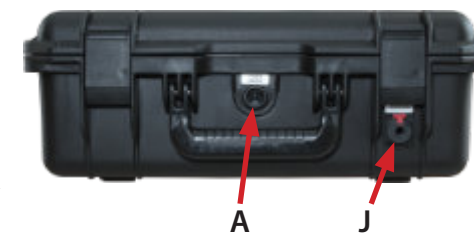


## Connections BSS Case Extreme Professional

The connections on the BSS Case Extreme Professional correspond to those of the BSS Case Extreme with the following changes.

### Front side

- On/Off switch (A)
- Headphone connection 6.35mm lockable stereo jack socket (J)



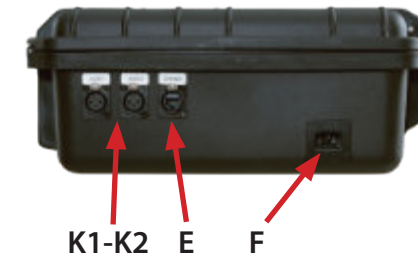
### Right side

- Fan (C)



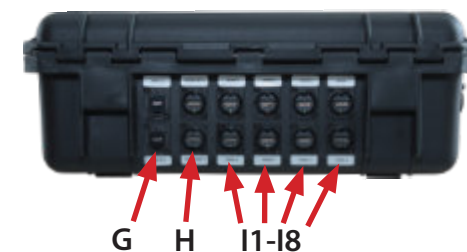
### Left side

- Audio connectors (2x female XLR-3-pin stereo unbalanced) (K1-K2)
- Ethernet connection socket RJ45 (E)
- Mains connection 230V Version: C14 (F)



### Reverse side

- 2x USB-C (G)
- 2x HDMI out (H)
- 8x HDMI in (I1-I8)

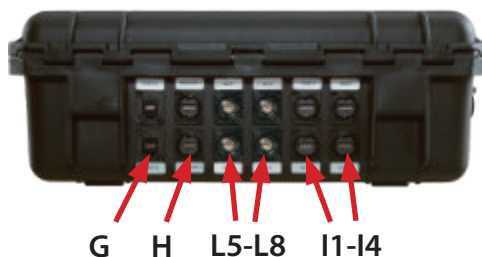


## Connections BSS Case Extreme Professional SDI

The connections on the BSS Case Extreme Professional correspond to those of the BSS Case Professional with the following changes.

### Reverse side

- 2x USB-C (G)
- 2x HDMI out (H)
- SDI in - BNC 75Ω (L5-L8)
- HDMI in (I1-I4)

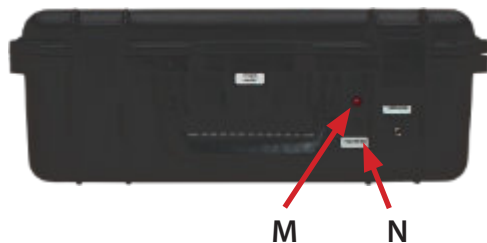


## Connections BSS case options: USB / battery connection

The connections on the BSS Case Extreme Professional with the USB / battery connection option are the same as on the BSS Case Extreme / Professional with the following changes.

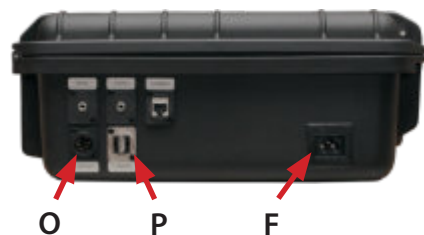
### Front side

- LED display battery operation (M)
- Overload fuse (N)



### Left side

- Battery connection - XLR 4-pin (O)
- USB A (P)
- Mains connection 230V Version: C6 (F)

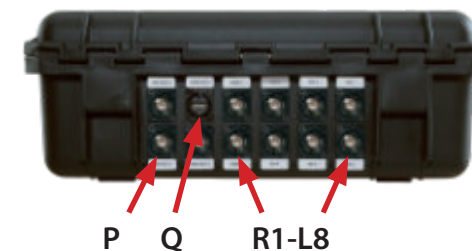


## Connections BSS Case Extreme SDI

The connections on the BSS Case Extreme Professional correspond to those of the BSS Case Professional with the following changes.

### Reverse side

- 3x SDI-OUT (P)
- 1x HDMI out (Q)
- SDI in - BNC 75Ω (R1-R8)



### Left side

- Audio connectors (2x female XLR-3-pin stereo unbalanced) (K1-K2)
- Ethernet connection socket RJ45 (E)
- Mains connection 230V Version: C14 (F)
- 2x USB-C socket (S1-S2)



## Installation of the Lilliput A11-10,1" Monitor

### Only relevant for BSS-Case version "Pure"

Required tools: Allen key size 3

The cables for installing the Lilliput A11-10.1" screen are labeled and must be plugged in according to the label on the screen. See the operating instruction of the monitor.

*Note: The cable lengths and wiring are designed exclusively for this monitor and may only be used with it. Contact our service team if you want to install a different monitor.*

Before plugging in, check the lengths of the cables. These must be positioned properly when plugged in, without being under tension.

Avoid kinks and tight bends.

Check that no cables are pinched or kinked or are placed under tension when the cover is closed

- Cable label "HDMI in" - plug into the monitor to "HDMI in"
- Cable label "HDMI out" - plug into the monitor to "HDMI out"
- Headphone connection - plug the angled plug on the monitor into the "Earphone Jack" socket, make sure that the angled plug points to the right when plugging in.
- Plug 12V DC, plug this into the 12V input of the monitor.
- Before attaching the monitor, check that all cables are properly seated.



(Image 8) Place the monitor on a soft cloth

### Screw the monitor on

*Tip: To avoid scratches, place a soft cloth on the cover plate of the BSS case, then you can place the monitor there. (Image 8)*

Have the pan head screws M4x12 ready. Insert these from the outside in through the corresponding holes in the cover of the case. Place the mounting plate on the four screws. Position the monitor with its fastening threads congruently on the corresponding screws in the case lid.



(Image 9) Position the monitor bracket

*Tip: Only hold the monitor by the frame to avoid fingerprints on the display.*

Find the first of the four fastening threads with slight movements. To do this, hold the corresponding screw against it from the outside with the Allen key.

Tighten all four screws from the outside, keeping them loose at first until they are all screwed on. Carefully retighten the screws. Max. tightening torque 0.4 Nm (!) (Image 10)

After you have installed the ATEM Mini according to the instructions, test the picture and sound of the monitor. Refer to the monitor's operating instructions for more information.



(Image 10) Screw on the monitor



## Installing the ATEM Mini / Extreme

*Safety note: Before doing any work on the BSS case, pull the mains plug out of the socket!*

*Do not touch the built-in electronic components when the installation slot is open. Even when the mains plug is unplugged, these can remain live for a long time and cause an electric shock.*

*Risk of tipping: When installing the ATEM Mini Extreme yourself, there is an acute risk of tipping over after opening the lid in its end position. Only after installing the ATEM Mini does the case reach the balanced center of gravity.*

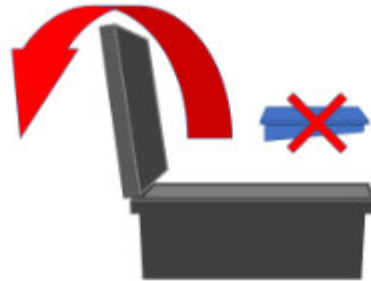
*Therefore, when opening the cover, hold the case in a horizontal position with the help of a second person until the ATEM Mini Extreme has been installed.*

The installation of the ATEM Mini requires technical understanding and some manual skill. Please contact our service team if you need assistance with the installation.

Required tools: Phillips screwdriver, size PH1

### Plug in the cables

First remove all transport locks and protective covers from the



(Image 11) Danger of tipping over if ATEM Extreme is not installed



(Image 12) Plug the cable into the ATEM

installation recess. Use the screwdriver to remove the two C-clamps (6x M3x8 ATEM Mini Case / 8x M3x8 ATEM Extreme Case ) that are mounted to the left and right of the recess.

The ATEM Mini / Extreme is swiveled into the recess provided from above and fastened with the enclosed C-rails. First plug in all the cables to the ATEM Mini / Extreme (Image 12). These are all labeled in the same way as printed on the ATEM Mini / Extreme. Hold the ATEM Mini / Extreme with one hand and plug in the cables from left to right, starting with the microphone connectors.

*Note: Never pull the cables with force, as this could damage them.*

The ATEM Mini / Extreme is inserted by swiveling the back into the recess (image 13).

Due to the large number of cables that are used at the same time, it may be necessary to insert them one by one, twisting them slightly. Make sure that the cables have enough space to find their place under the cover without much counter-pressure.

*Note: Work carefully and never force the ATEM Mini into the recess! If you feel too much back pressure or if the cover plate deforms under the pressure of the cables, carefully remove the ATEM Mini / Extreme and sort the cables again until the ATEM Mini / Extreme can be inserted into the recess without too much counter pressure. You may*



(Image 13) Swing in the ATEM Mini



(Image 14) Screw ATEM Mini with C-clamps

have to repeat this process several times until the ATEM finds its pressure-free seat.

With the ATEM Extreme, the counter-pressure when used is correspondingly higher due to the almost double number of cables. However, please also note the above-mentioned conditions for assembly.

Place the two ATEM C-clamps on the ATEM Mini / Extreme and screw them together using a Phillips screwdriver, size PH1, with the screws M3x8mm (6 pcs. ATEM Mini; 8 pcs. ATEM Extreme;), max. tightening torque 0, 2Nm (! apply only slightly) (picture 14)

## Start up

### Turning on/off

Before switching on, open the case and open the lid completely. The BSS case has an internal power supply unit (max. 5A). For the power supply, plug in the supplied power cable on the left side of the case.



(Image 15) On, off switch on the front

The on / off switch is located on the front of the case (Image 14). When it is switched on, the ATEM Mini is switched on at the same time. The field monitor must be started by using the separate on / off switch on the top.

*Note: Always turn off using the on / off switch before closing the case and then pulling the power plug! Otherwise there is a risk of overheating / destruction of the built-in devices when the BSS case is closed while switched on.*

The device is switched off by manually switching off the field monitor at its on / off switch on the top of the housing. Then turn off the switch on the BSS case.

Before closing the case, make sure that all built-in devices are switched off. Close the case lid and remove the power cord.

## Cooling

### Integrated fan

The BSS case has a built-in fan to cool the built-in components. It is located on the right-hand side of the case and must never be blocked. Make sure that no objects penetrate through the ventilation grille and block the fan. Make sure there is enough free space (at least 15 cm) around the outlet opening of the fan.

### Vents

There are ventilation slots on the cover plate to the right and left of the ATEM Mini (Image 15). Under no circumstances may these be covered, masked or otherwise reduced or blocked in their cross-section. Otherwise there is a risk of overheating / destruction of the built-in components.



(Image 16) BSS case ventilation slots

*Note: Do not expose the BSS case to direct sunlight, otherwise there is a risk of the components overheating.*

## Connecting Components

All ATEM Mini / Extreme ports are easily accessible on the outside of the case. In the basic version of the case, these correspond to the connections on the ATEM Mini and can be used in the same way. Please note the information in the section on operation with HDMI cables in the chapter.

For more information, see the ATEM Mini user manual on its manufacturer's website under the Support section.

### Headphone jack

In addition to the interfaces of the ATEM Mini, there is a 3.5mm (Image 17) or a lockable 6.35mm headphone connection (Image 18) (Professional version) on the front of the BSS case (Basic version). The volume can be adjusted via the field monitor's software menu. Further information can be found in the user manual of the field monitor.



(Image 17) 3.5mm headphone jack



(Image 18) 1/4" headphone jack

### USB charging port (option)

With the optional USB charging connection, USB accessories can be supplied with up to 2A charging current.

So that a device only receives the charging current it needs for optimal charging, after the cables have been connected, the corresponding parameters are first exchanged between the device and the charging controller. If the device is purely passive, i.e. a pure consumer that cannot send any parameters, the charge controller throttles its current to the USB 1.0 standard of 100mA. Therefore, various devices cannot be

charged at all or only very slowly at the USB charging socket. This can also affect USB hubs, i.e. USB distributors, which register with the charging controller with their own (sometimes lower) charging parameters.



(Image 19) BSS case USB charging socket

Since even USB connection cables can have chips in the meantime, the following recommendations apply for optimal charging on the BSS case for the ATEM Mini:

- Only connect devices directly (do not use USB hubs)
- Only use original cables from the manufacturer
- Do not connect any passive devices (illuminated mini Christmas trees etc.)

### Battery connection (option)

**Never connect 230V mains voltage to the battery connection. There is danger to life!**

**Do not connect any other low voltages than the permissible 12V-14.4V DC voltage to the battery connection.**

The battery connection on the BSS case is used to supply the built-in components and those connected to the optional charging connection. All 12-



(Image 20) BSS case battery connector

14.4V batteries/accumulators that allow a permissible continuous load of at least 5A are suitable as a voltage source.

*Do not connect batteries that do not meet these requirements. There is a risk of overheating, short circuit and fire.*

Optionally, you can operate the case with the car adapter cable ART-000325 via a 12V on-board power socket or the cigarette lighter. When connecting to an on-board voltage socket, make sure that it provides 12V/5A. Attention, on-board voltage sockets in trucks are often operated with 24V!

*Voltages greater than 14.4V can damage or destroy the control electronics in the BSS case.*

The on/off switch on the front of the housing switches both mains and battery voltage. As long as mains voltage is present, the electronics give priority to this. As long as there is no mains voltage, in the event of a power failure or when the mains plug is removed, the electronics automatically switch to battery power. As soon as the case is powered by battery voltage, the red LED on the front of the case lights up.



(Image 21) LED & fuse for the battery supply on the front

### Overload safety fuse - over-voltage protection

If 5A or more are constantly consumed by the connected devices, the overload protection on the front can trigger. In this case, disconnect unnecessary loads (e.g. from the USB charging port) from the power supply. Change the fuse. A spare fuse is located in the fuse holder on the top panel (ATEM Mini) or behind the foldable screen (ATEM Extreme) next to the right magnet holder.

The fuse also triggers in the event of a connected over-voltage ( $\geq 17.3V$ ) to protect the connected devices. In this case, before reinserting the fuse, check the voltage source for the correct voltage value (12-14.4V). Please note that the open-circuit voltage (without consumers connected) of batteries or accumulators can be higher and this may trigger the fuse.

### Backup fuse

Glass tube fuse 5x20mm; 5.0A; trigger characteristic: **FAST**

### Reverse polarity protection

The built-in Case on-board electronics have reverse polarity protection. In rare cases, it can be the case with vehicle on-board voltage sockets that these lead to ground (-) on the pin contact instead of +12V. If, after connecting the case to an on-board voltage socket, no function of the devices is apparent, please check this possibility as well.

Using the adapter cable ART-000326 with its open cable end, various customer-specific plugs can be assembled for connection to a 12V DC voltage source. Please note that all plugs or connecting elements used must be approved by the manufacturer for at least 5A continuous current.

Pay attention to the type of attachment described by the manufacturer in order to minimize contact resistance and ensure a safe current flow. Wire color at the open end: brown = +12V ; blue = ground

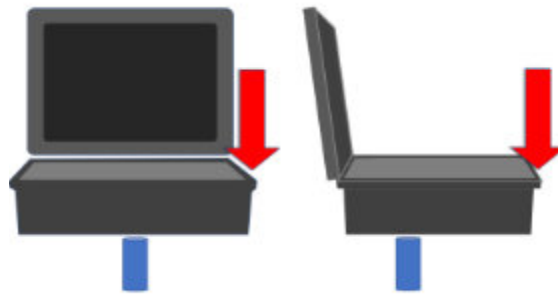
### 3/8" mount (ATEM Mini option)

The case can be attached to tripods, tubes and the like via the 3/8 inch attachment on the bottom of the housing. It is attached using a 3/8 inch UNC thread, which is a common type of attachment in photo and video technology.

The minimum screw-in depth is 15mm, the

maximum tightening torque (with lock nut) is 15Nm.

The maximum load values of the case when assembled can be taken from the following sketch. These are 75N from the vertical at the front and side edges.



(Image 22) Max. load:  $F = 75N$

### Monitor settings

#### ATEM Mini Economic

ATEM Mini's monitor is turned on and off using the main switch on the case. All necessary menu settings can be set using buttons on the right side of the monitor base. For advanced settings, please refer to the monitor's operating instructions included in the scope of delivery.

#### ATEM Mini Basic /- Professional

The field monitor in the case for the ATEM Mini Basic or Professional has its own power switch on the top right of the monitor. This must also be actuated after switching on the main switch.

### ATEM Mini Extreme

ATEM Mini's monitor is turned on and off using the main switch on the case. All necessary menu settings can be set using buttons on the right side of the monitor base. For advanced settings, please refer to the monitor's operating instructions included in the scope of delivery.



(Image 23) Monitor detached from the magnetic holder

The inclination of the monitor can be ergonomically adjusted to the right viewing angle by opening it. (Image 23) To do this, hold the monitor in the middle of the upper frame and loosen it from the two holding magnets with a slight tug.

*Before closing the case lid, return the monitor to its original position. Both magnets must be securely contacted.*

### Advice for use

#### HDMI

Since the introduction of this standard, HDMI cables have been available in different versions, currently up to version 2.1. These differ technically, among other things, in the maximum transferrable data rate, the image resolution and frequency, the sound transmission and the color space formats.

All HDMI cables used in the BSS Case for ATEM Mini are at least HDMI specification 2.0 compliant. This corresponds to a maximum image res-

olution of 4k 60Hz. Since the ATEM Mini can process a maximum of 1080p 60Hz signals, there are enough reserves.

HDMI is a digital data transmission. In contrast to analog signal transmissions, in which the signal gradually loses level over the length of the transmission path, this is either available in full quality or fails completely. Therefore, please note the following information for trouble-free operation.

## What to do if no signal arrives at ATEM Mini?

### ATEM Mini - differences in HDMI inputs

The HDMI input 1 on ATEM Mini is what is known as a "low-latency" input. Use this for all HDMI connections with cable lengths over 5m or for signals that may not be correctly received at inputs 2-4.

Reliable signal transmission with HDMI depends on several factors:

### Specification and quality of HDMI cables

- Use only HDMI cables with specification 2.0 or better. These are also commercially available under the name "HDMI Premium High Speed".
- Use cables that are as short as possible.
- With cable lengths >5m, the shielding and the cable structure are very important. Only use multiple (triple) shielded, high-quality cables.
- Wherever possible, avoid cable lengths of 10m or more. Alternatively, use active signal converters on SDI, CAT5, fiber optics or similar transmission variants that allow longer cable routes due to their specification. HDMI cables with a signal repeater can also work, but should be tested with the signal source and receiver (ATEM Mini).

### Signal source

The signal source is also crucial. Depending on the device, one cable may work fine on one source, but the same cable on the same ATEM

Mini HDMI input on another source may not. This depends on the signal level provided by the source device, how high its attenuation is in combination with the cable, etc.

Our experience shows that with high-quality, well-shielded cables, even sources that no longer deliver a signal with poor-quality cables will work perfectly with the ATEM Mini. However, a test is necessary in advance in any case.

### Compatible parameters

Normally, active HDMI devices agree on compatible parameters in a data exchange before they start transmitting. In the case of the ATEM Mini, this means a maximum resolution of 1080p 60Hz, 8-bit color depth, and RGB or 4:2:2 color subsampling.

However, individual devices such as (professional) video cameras or (SDI) signal converters can or do output a fixed, pre-parameterized signal. If this is not compatible with the specifications of the ATEM Mini (e.g. 4k, 10-bit, REC 2020, etc.), there will be no signal or image flickering on this input regardless of the cables used (a stable connection will not be established ) out of!

Therefore, please set the output parameters of your signal source to match the specifications of ATEM Mini's HDMI inputs.

### Signal receiver

Not every receiver of an HDMI signal has the same input sensitivity. One device can establish a secure signal connection with the appropriate source-cable combination, another not. In our case, however, when operating with the ATEM-Mini, this question is obsolete. Here we have to live with what Blackmagic Design has developed and installed on components.

## Conclusion

In all our tests with corresponding cables from different manufacturers, in different cable lengths (0.3 m - 10 m), on different sources, with different ATEM Mini and with the corresponding HDMI test device (signal generator), we came to the following result reached:

With high-quality cables (2.0 and good 3-way shielding) and the correct, compatible transmission parameters, all tested sources deliver signals via the BSS case to the ATEM-Mini without any problems. We only noticed a signal failure on the ATEM Mini with a (cheaper) cable with a length of 10 m. It didn't matter whether the cables were plugged directly into the BSS case or into the ATEM Mini. Alternatively, with a high-quality 10 m HDMI cable, the signal flow with all tested sources was possible without any problems.

## Our recommendation:

Based on our consistently positive experience, we recommend using HDMI quality cables from PURELINK (e.g. PI 1000 series or better). These are available in different lengths.

## Audio connections

Depending on the version, the BSS Case for ATEM Mini contains two audio inputs, which are designed either as 3.5 mm stereo jack sockets (Basic) or as 3-pin XLR sockets (Professional). These inputs are unbalanced stereo inputs, analogous to the inputs on ATEM Mini. This can be used, for example, to import the audio signal from a PC or smartphone. The professional case includes two audio adapters (3.5 mm stereo jack to 3-pin XLR connector).

## Unbalanced stereo inputs

The input sensitivity of the two audio inputs can also be switched to "Mic" (microphone) in the ATEM software (ATEM Software Control Panel). Nevertheless, these inputs are not suitable for the direct connection of a symmetrically wired microphone. In such a case, a (stereo) sig-

nal converter (balanced to unbalanced) must be connected upstream. Other methods, such as using audio cables with appropriate jumpers between the pins, can work in individual cases, but often result in ground loops or other audio artifacts that do not lead to the desired result.

Feeding the signal from the unbalanced outputs of an upstream mixer is certainly one of the easiest ways to connect microphones to the ATEM Mini. Our experience shows that, depending on the internal circuitry of the console, it may still be necessary to use a (two-channel) line transformer to decouple ground loops.

## Our recommendation:

- Wherever possible, use hi-fi level, unbalanced stereo signals to feed ATEM Mini's audio inputs.
- Use an upstream mixer with unbalanced outputs to connect microphones. It may be necessary to use a Y-cable with a 3.5 mm stereo jack (for the basic case) or one with a 3-pin XLR male connector (for the professional case).
- Depending on the internal circuitry of the mixer, ground loops can still occur. In this case, please use an appropriate line transformer (galvanic isolation) between the mixer output and the ATEM Mini audio input.
- Alternatively, signal converters (balanced – unbalanced) can be used to directly feed in individual symmetrical audio sources. These external converters are available from specialist retailers.

## Audio workaround

Many cameras can process symmetrical signals directly (usually recognizable at the XLR input). The signal is then made available to the ATEM Mini via the HDMI input. This solution also has the advantage that video and audio from the camera are synchronized. In this video input, the au-

dio signal can be placed firmly in the stream with the "ON" button on the ATEM Mini, even when switching sources.

For more information on ATEM Mini's audio specifications, please visit the manufacturer's forum at:  
<https://forum.blackmagicdesign.com>

## Technical specifications

### Conditions for proper use

Temperature range	+5° – +40° C	
Relative humidity	20 – 90%	No condensation
Storage temperature	-20° – +60° C	
Do not use at altitudes over 2000m above sea level		
Do not operate in a dusty environment		

### Electrical connected load

Supply voltage	~230V/5A	ATEM Mini Case
Power	60 W	ATEM Mini Case
Supply voltage	~230V/6,67A	ATEM Extreme Case
Power	80 W	ATEM Extreme Case

### Electrical connection values battery voltage

Supply voltage	= 12 - 14,4V/5A
Power	60 W

### Maximum screw tightening torques

Description	Screw size	Maximum torque
ATEM-Cover	DIN 7380 M4x12	0,3 Nm
Screen screw connection	DIN 7380 M4x12	0,4 Nm
ATEM C-clamps	ISO 7380 M3x8	0,2 Nm



## Troubleshooting

Occurred error	First action	Further action
The built-in components do not work.	Check if the power plug is plugged in properly.	Turn on the on/off switch on the BSS case again.
	Check whether mains voltage is present.	Plug into a different outlet/circuit.
With battery operation - the built-in components do not work	Check for battery voltage. (is the LED on the front lit?)	Remove all connected consumers (e.g. at the USB port) and turn the on/off switch on again.
The screen doesn't work. (ATEM Mini only)	Turn on the screen by pressing the power button (top right) for >5 seconds.	Check that the 12V DC power connector on the screen (bottom left) is properly plugged in.
The fan is not running	Switch off the BSS case, disconnect it from the power supply and check whether a foreign object is blocking the fan (visual inspection).	Carefully remove the foreign body from the outside. Otherwise contact our service.
A connected device is not recognized on the ATEM Mini / Extreme.	Ensure that the appropriate interface on the device is enabled and compatible with the required ATEM input values.	For HDMI input signals: Change the HDMI input on the BSS case and/or swap the HDMI connection cable.

## Maintenance and service

Every time you start up, check that the fan of the BSS case is running. Regularly check the power cord for any damage. Keep the case clean. The surfaces can be cleaned with a damp cloth. Note: Plastic cleaners and especially disinfectants can attack the surface of the BSS case. Therefore, first test cleaning agents and disinfectants specifically approved for plastic on an inconspicuous area for changes to the material. You can find information on cleaning the built-in components in their operating and commissioning instructions or on the manufacturer's website.

### Service address

In the event of service or spare parts requests, please contact the address below. In any case, have the 10-digit serial number of the BSS case ready. You can find this on the type label on the underside of the case.  
BSS Streaming Service

Mühlstraße 80  
D-73655 Plüderhausen  
Germany  
info@bss-streamingservice.de  
Tel: +49 (0)176/81228565  
Fax: +49 (0)7181/884765

### Disposal

Electronic components do not belong in household waste, but should be disposed of separately.







BSS Streaming Service  
Mühlstraße 80  
D-73655 Plüderhausen  
Germany



[www.bss-streamingservice.de/en/](http://www.bss-streamingservice.de/en/)

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