



DSP 110 BP

Active Speaker

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Table of contents

1	General information.....	5
	1.1 Symbols and signal words.....	5
2	Safety instructions.....	7
3	Features.....	10
4	Installation and starting up.....	11
5	Connections and controls.....	13
6	DSP functions.....	16
7	Technical specifications.....	19
8	Plug and connection assignment.....	24
9	Cleaning.....	27
10	Protecting the environment.....	28






1 General information

This document contains important instructions for the safe operation of the product. Read and follow the safety instructions and all other instructions. Keep the document for future reference. Make sure that it is available to all those using the product. If you sell the product to another user, be sure that they also receive this document.

Our products and documentation are subject to a process of continuous development. They are therefore subject to change. Please refer to the latest version of the documentation, which is ready for download under www.thomann.de.

1.1 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this document.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
WARNING!	This combination of symbol and signal word indicates a possible dangerous situation that can result in death or serious injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – dangers due to batteries.
	Warning – high-voltage.
	Warning – danger zone.

2 Safety instructions

Intended use

This device is designed for sound reinforcement. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety



DANGER!

Risk of injury and choking hazard for children!

Children can suffocate on packaging material and small parts. Children can injure themselves when handling the device. Never allow children to play with the packaging material and the device. Always store packaging material out of the reach of babies and small children. Always dispose of packaging material properly when it is not in use. Never allow children to use the device without supervision. Keep small parts away from children and make sure that the device does not shed any small parts (such knobs) that children could play with.



DANGER!

Danger to life due to electric current!

Within the device there are areas where high voltages may be present. Never remove any covers. There are no user-serviceable parts inside. Do not use the device when covers, safety equipment or optical components are missing or damaged.



DANGER!

Danger to life due to electric current!

A short circuit could lead to a fire hazard and risk of death. Always use proper ready-made insulated triple-core mains cable with a safety plug. Do not modify the mains cable or the plug. In case of isolation damage, disconnect immediately the power supply and arrange repair. If in doubt, seek advice from a qualified electrician.



WARNING!

Incorrect handling of lithium batteries can result in injury!

In the event of a short circuit, overheating or mechanical damage, lithium batteries can cause severe injuries. Handle lithium batteries in a correct and professional manner. Store lithium batteries in a cool and dry place in their original packaging. Keep lithium batteries away from sources of heat. Never open lithium batteries. Only charge rechargeable lithium batteries with a suitable charger. Remove the lithium batteries before disposing of the device. Cover the poles of used lithium batteries with adhesive tape to prevent short circuits. Electrolyte can escape from damaged lithium batteries. Put the damaged lithium battery in air-tight packaging. Collect the electrolyte with absorbent paper. Wear rubber gloves while doing so.



WARNING!

Possible hearing damage due to operating the device at a high volume!

The device can produce volume levels that, when operated at a high volume, may cause temporary or permanent hearing impairment. Over an extended period of time, even levels that seem to be uncritical can cause hearing damage. Avoid operating the device at excessively high volumes over an extended period of time. Decrease the volume level immediately if you experience ringing in your ears or hearing impairment. If this is not possible, keep a greater distance or use adequate ear-muffs.



NOTICE!

Risk of fire due to covered vents and neighbouring heat sources!

If the vents of the device are covered or the device is operated in the immediate vicinity of other heat sources, the device can over-heat and burst into flames. Never cover the device or the vents. Do not install the device in the immediate vicinity of other heat sources. Never operate the device in the immediate vicinity of naked flames.

**NOTICE!****Damage to the device if operated in unsuitable ambient conditions!**

The device can be damaged if it is operated in unsuitable ambient conditions. Only operate the device indoors within the ambient conditions specified in the "Technical specifications" chapter of this user manual. Avoid operating it in environments with direct sunlight, heavy dirt and strong vibrations. Avoid operating it in environments with strong temperature fluctuations. If temperature fluctuations cannot be avoided (for example after transport in low outside temperatures), do not switch on the device immediately. Never subject the device to liquids or moisture. Never move the device to another location while it is in operation. In environments with increased dirt levels (for example due to dust, smoke, nicotine or mist): Have the device cleaned by qualified specialists at regular intervals to prevent damage due to overheating and other malfunctions.

**NOTICE!****Possible staining due to plasticiser in rubber feet!**

The plasticiser contained in the rubber feet of this product may react with the coating of the floor and cause permanent dark stains after some time. If necessary, use a suitable mat or felt slide to prevent direct contact between the device's rubber feet and the floor.

**NOTICE!****Risk of fire due to installation of a wrong fuse!**

Using fuses of a different type than compatible with the device may cause a fire and seriously damage the device. Only use fuses of the same type. Observe the labelling on the device casing and the information in the "Technical data" chapter.

**NOTICE!****Possible damage to lithium-ion batteries through incorrect storage!**

Deep discharge can permanently damage lithium-ion batteries or cause them to lose some of their capacity. Charge the lithium-ion batteries before longer breaks in use and before storage. Ensure that the device is switched off for storage. Store the device at room temperature or cooler in an environment as dry as possible. Recharge the lithium-ion batteries about every three months if they are stored for a longer period of time to avoid permanent damage due to too deep self-discharge. Fully charge the lithium-ion batteries only shortly before use at room temperature.

3 Features

The device is characterized by the following features:

- Active full-range battery speaker
- Maximum output power (RMS / peak):
 - in case of mains operation: 120 W / 360 W
 - in case of battery operation: 90 W / 270 W
- 10-inch woofer
- 1-inch compression driver
- 2 class-D power amplifiers
- 4 DSP sound programmes: music, live, voice, DJ
- 3-band DSP equalizer
- Low-cut filter and delay
- 2 × XLR/6.35-mm jack combo socket for adjustable MIC/Line input
- 1 × cinch socket pair / 1 × 3.5-mm jack socket for stereo input
- 1 × XLR output socket
- Bluetooth
- Optional covers available (item no. 410588, item no. 498873)

4 Installation and starting up

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.



NOTICE!

Possible property damage to adjacent devices due to magnetic fields.

Speakers generate a static magnetic field. This magnetic field can affect other neighbouring units and in unfavourable cases damage them.

Ensure that speakers are always a sufficient distance away from sensitive equipment that may be affected by an external magnetic field.

The device can be mounted on a stand or set up on the floor or a sufficiently sized and stable surface, e.g. a wall mount.



NOTICE!

Potential property damage due to unsuitable stands!

If the device is mounted on an unsuitable stand, there is a risk that the stand will fall over and cause damage.

Only use stands whose maximum bearing capacity is at least as high as the weight of the device. Always ensure that the stand is stable.

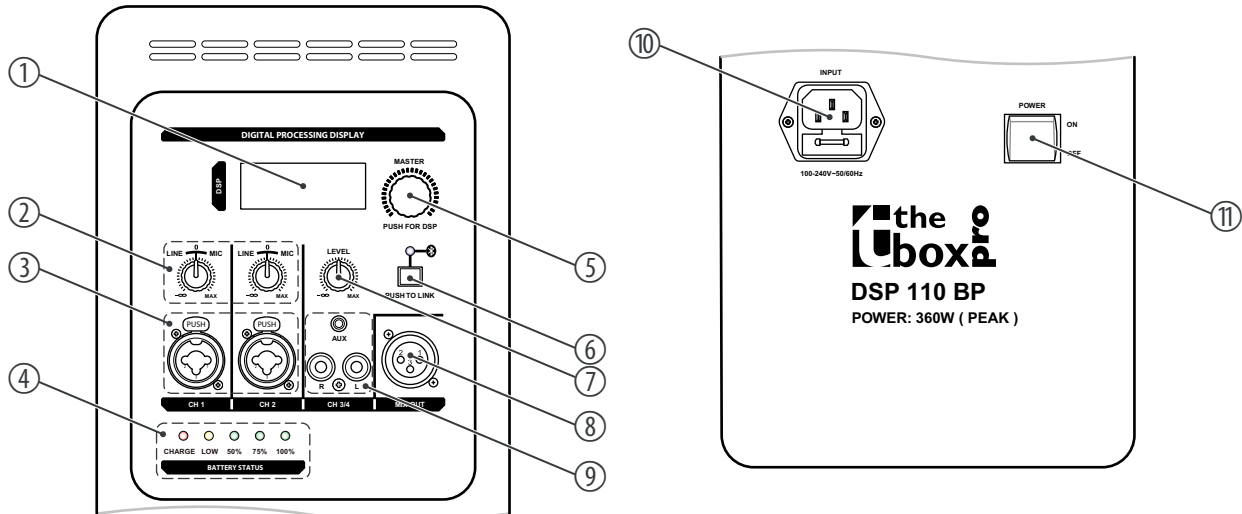


Comply with regulations

When installing and operating, make sure to follow the standards and regulations that apply in your country.

The speaker has a 35-mm stand flange for mounting on stands.

5 Connections and controls



1	[DSP] Backlit display for DSP functions
2	[LINE MIC] Rotary gain control for input 1 or input 2. Turning clockwise above the zero points increases the input gain for connecting microphones. Turning anti-clockwise below the zero point decreases the input gain for connecting instruments or devices with line level outputs. If the display shows 'LIMIT', the input level is set too high. Reduce the input level.
3	[CH1] Microphone/line input 1, designed as XLR / 6.35-mm jack combo socket, balanced [CH2] Microphone/line input 2, designed as XLR / 6.35-mm jack combo socket, balanced
4	[BATTERY STATUS] Indicator LEDs for the battery charge level [100%], [75%], [50%] LED lights up green: Charge level 100%, 75% or 50% [LOW] LED lights up yellow: Charge level low [CHARGE] LED flashes red: Charge level below 25% Recharge the battery.
5	[MASTER / PUSH FOR DSP] Rotary control for the overall volume (-60 dB ... +10 dB). Button to activate the DSP functions.
6	[PUSH TO LINK] Bluetooth connection button (Bluetooth pairing) Press the button to establish a Bluetooth connection with other Bluetooth-enabled devices.
7	[LEVEL] Rotary control for input amplification for input 3/4
8	[MIX OUT] XLR panel socket, 3-pin, for the output of line level signals. The combined signal of all inputs is present here. The signal is tapped before the DSP and before the [MASTER / PUSH FOR DSP] master control.
9	[CH3/4], [AUX], [R], [L] Cinch socket pair (L/R)/3.5-mm jack socket, unbalanced, for connecting stereo input signal sources

10 *[INPUT]* | Rubber panel plug with fuse holder for the power supply and for charging the battery

11 *[POWER ON/OFF]* | Main switch. Turns the device on and off.

6 DSP functions

Navigating the menu

The device shows the overall volume.

1. ➤ Turn the *[MASTER VOL | PUSH FOR DSP]* left or right to adjust the overall volume to between *'-60 dB' ... '+10 dB'*.
2. ➤ Press *[MASTER VOL | PUSH FOR DSP]* to call up the main menu and make the DSP settings.
3. ➤ Turn *[MASTER VOL | PUSH FOR DSP]* left or right to select a menu item.
4. ➤ Press *[MASTER VOL | PUSH FOR DSP]* to call up the selected menu item.
5. ➤ Turn *[MASTER VOL | PUSH FOR DSP]* left or right to select a value.
6. ➤ Press *[MASTER VOL | PUSH FOR DSP]* to call up a value.
7. ➤ To exit the menu and return to the volume control, select the *'EXIT'* menu item and press *[MASTER VOL | PUSH FOR DSP]* to confirm.

Menu overview

Menu level 1	Menu level 2	Function
'MODE'	'MUSIC'	The sound programme for music is activated.
	'LIVE'	The live sound programme is activated.

Menu level 1	Menu level 2	Function
	'SPEECH'	The sound programme for speech is activated.
	'DJ'	The sound programme for DJ applications gets activated.
'LOCATION'	'NORMAL'	The tone control for normal playback is activated.
	'MONITOR'	The tone control for stage monitors is activated.
'HIGH EQ'	'-12dB...+12dB'	Controls the treble (10 kHz).
'MID EQ'	'-12dB...+12dB'	Controls the mids (250 Hz).
'LOW EQ'	'-12dB...+12dB'	Controls the bass (80 Hz).
'SUB'	'OFF'	Low-cut filter off.
	'80HZ'	Frequency suppression below 80 Hz
	'100HZ'	Frequency suppression below 100 Hz
	'120HZ'	Frequency suppression below 120 Hz
	'150HZ'	Frequency suppression below 150 Hz
'DELAY'	'OFF'	Sound delay switched off.
	'0.1mS...16.0mS'	Sets the sound delay in milliseconds (0.1 ms...16.0 ms).

Menu level 1	Menu level 2	Function
'LED MODE'	'OFF'	Indicator LED switched off.
	'ON'	Indicator LED lights up permanently.
	'LIMITER'	Indicator LED lights up when overloaded.
'LCD DIM'	'ON'	Backlight of the display is dimmed.
	'OFF'	Backlight of the display is normal.
'BRIGHT'	'0...10'	Controls the brightness of the display.
'CONTRAST'	'0...10'	Controls the contrast of the display.
'RESET'	'Confirm Reset: No'	Cancels the factory reset. The existing settings are retained.
	'Confirm Reset: Yes'	The device is reset to factory default settings.
'INFO'	'DSP Firmware Vx.x.x'	The current firmware version is displayed.
'EXIT'		Exits the main menu and returns to the volume display.

7 Technical specifications

Configuration		10-inch woofer 1-inch compression driver	
Amplifier class		2 × Class-D power amplifier	
Input connections	MIC/Line	2 × XLR/6.35-mm jack combo socket, balanced	
	Stereo	1 × pair of cinch sockets (L/R), unbalanced	
	AUX	1 × 3.5-mm jack socket, unbalanced	
Input impedance		XLR	1.1 kΩ
		Cinch	1 kΩ
Output connections	MIX output	XLR panel socket, 3-pin	
Output power	Mains operation	RMS: 120 W Peak: 360 W	
	Rechargeable battery operation	RMS: 90 W Peak: 270 W	
Frequency range		80 Hz ... 10 kHz	
Crossover frequency		3 kHz	

Technical specifications

Signal-to-noise ratio	80 dB	
Sound pressure level (SPL), max.	125 dB	
Beam angle (H × V)	90°× 60°	
Bluetooth®	Frequency range	2.400 GHz ... 2.4835 GHz
	Max. transmission power	10 mW
	Standard	Version 5.0
	Name	DSP 110BP
Power consumption	210 W	
Supply voltage	100 - 240 V ~ 50/60 Hz	
Fuse	5 mm × 20 mm, 2 A, 250 V, slow blow	
Battery	Battery type	Lithium-ion
	Voltage	26 V
	Capacity	3,600 mAh
	Charging time in the device	approx. 2.5 h
	Runtime with medium music light output	approx. 4 h

Mounting option		35 mm pole mount flange
Dimensions (W × H × D)		298 mm × 523 mm × 307 mm
Weight		10.5 kg
Ambient conditions	Temperature range	0 °C...40 °C
	Relative humidity	20%...80% (non-condensing)

Further information

Simultaneous inputs	3
Mic preamp	2
Tone control / ch.	No
Master tone control	Yes
Effect	No
Wireless hand/head microphone	No
Wireless option	No
Remote control	No
Line out	Yes
CD player	No
Bluetooth player	Yes
USB play	No
SD card play	No
Tuner	No
Trolley	No

Colour	Black
Cover	Item no. 410588 (available as an option) Item no. 498873 (available as an option)

8 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

Please note these advices, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or 'just' in poor transmission quality!

Balanced and unbalanced transmission

Unbalanced transmission is mainly used in semi-professional environment and in hifi use. Instrument cables with two conductors (one core plus shielding) are typical representatives of the unbalanced transmission. One conductor is ground and shielding while the signal is transmitted through the core.

Unbalanced transmission is susceptible to electromagnetic interference, especially at low levels, such as microphone signals and when using long cables.

In a professional environment, therefore, the balanced transmission is preferred, because this enables an undisturbed transmission of signals over long distances. In addition to the conductors 'Ground' and 'Signal', in a balanced transmission a second core is added. This also transfers the signal, but phase-shifted by 180°.

Since the interference affects both cores equally, by subtracting the phase-shifted signals, the interfering signal is completely neutralized. The result is a pure signal without any noise interference.

1/4" TS phone plug (mono, unbalanced)



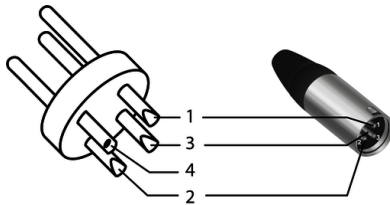
1	Signal
2	Ground, shielding

1/4" TRS phone plug (mono, balanced)



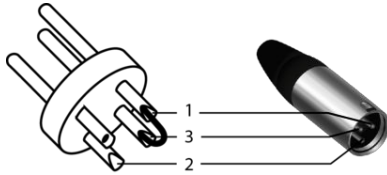
1	Signal (in phase, +)
2	Signal (out of phase, -)
3	Ground

XLR plug (balanced)



1	Ground, shielding
2	Signal (in phase, +)
3	Signal (out of phase, -)
4	Shielding on plug housing (option)

XLR plug (unbalanced)



1	Ground, shielding
2	Signal
3	Bridged to pin 1

9 Cleaning

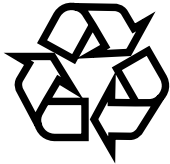
Device components

Clean the device components that are accessible from the outside regularly. The cleaning frequency depends on the operating environment: damp, smoky or particularly dirty environments can cause greater accumulation of dirt on the device components.

- Clean with a dry soft cloth.
- Stubborn dirt can be removed with a slightly dampened cloth.
- Never use solvents or alcohol for cleaning.

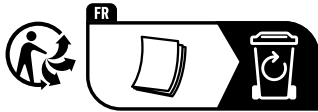
10 Protecting the environment

Disposal of the packing material



Environmentally friendly materials have been chosen for the packaging. These materials can be sent for normal recycling. Ensure that plastic bags, packaging, etc. are disposed of in the proper manner.

Do not dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the instructions and markings on the packaging.



Observe the disposal note regarding documentation in France.

Disposal of batteries

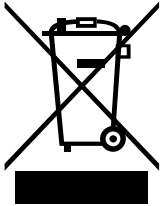


Batteries must not be thrown away or burnt, but must instead be disposed of in line with the local regulations on the disposal of hazardous waste. Use the available collection sites.

Only dispose of lithium batteries when they are empty. Remove lithium batteries from the device before disposal if this is possible without destroying it. Protect used lithium batteries against short circuit, for example by taping the poles. Dispose the built-in lithium batteries together with the device. Check for an appropriate collection facility.

Dispose of the batteries and rechargeable batteries at relevant collection points or through your local waste facility.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) as amended.

Do not dispose of your old device with your normal household waste; instead, deliver it for controlled disposal by an approved waste disposal firm or through your local waste facility. If in doubt, consult your local waste management facility. You can also return the device to a retailer if they offer to take the device back for free or if they are legally obliged to do so. When disposing of the device, comply with the rules and regulations that apply in your country. You can also return your old device to Thomann GmbH at no charge. Check the current conditions on www.thomann.de.

Proper disposal protects the environment as well as the health of your fellow human beings. This is because the proper handling of old devices negates the potential negative effects of hazardous substances, and because it conserves resources by recycling them.

Also note that waste avoidance is a valuable contribution to environmental protection. Repairing a device or passing it on to another user is an ecologically valuable alternative to disposal.

If your old device contains personal data, delete those data before disposing of it.

