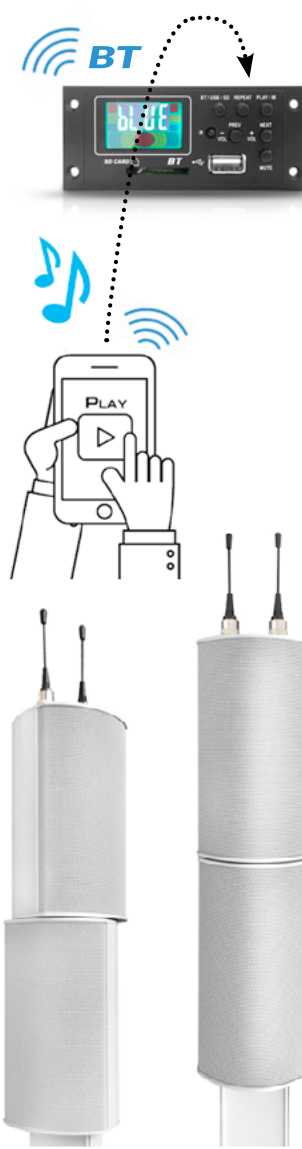


Instruction manual

ZP-40 SLIM/2 X PROCESSION SYSTEM

with class-D power amp and digital radio system



Made in EU

DIGITAL AMPLIFIER

NEODYMIUM SPEAKER

DIGITAL RADIO SYSTEM

MP3 PLAYER /
BT RECEIVER

NICKEL HYDRIDE
BATTERY
TECHNOLOGY

4.9KG LIGHT

ENGLISH

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DOC-241123

IMPORTANT SAFETY INSTRUCTIONS & KEY TO SYMBOLS

1. Read this manual carefully.
2. Keep this manual in a safe place.
3. Observe all warnings.
4. Follow all instructions.
5. **WARNING:** To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.
Do not use this device near water.
6. Clean only with a dry cloth.
7. Do not cover any ventilation openings.
8. Do not install near heat sources such as radiators, air vents, stoves or other equipment (including amplifiers) that radiate heat.
9. Do not override the safety function of the polarity reversal protection or earthing contact plug. A connector with polarity reversal protection has two pins, one wider than the other (USA / Canada only). A safety plug has two pins and a ground terminal. If the supplied plug does not fit into your outlet, it will be outdated and must be replaced by an electrician.
10. Route the power cord so that nobody can step on it or get caught. This particularly applies to plugs, sockets and the point where the cable exits the device.
11. Use only Phoenix Professional Audio GmbH products and specified accessories.
12. Have maintenance performed by qualified service personnel only. The device must always be serviced if it has been damaged in any way, for example, if the power cord or plug is damaged, liquids have been spilled on the product, or objects have fallen into the product, the product has been exposed to rain or moisture, is not working normally, or has been dropped.

EXPLANATION OF GRAPHIC SYMBOLS



**AVIS: RISQUE DE CHOC ELECTRIQUE !
NE PAS OUVRIR !**



The exclamation mark in a triangle is intended to alert the user to the presence of important operating and maintenance instructions in this manual.



The symbol consisting of a lightning bolt with an arrowhead in a triangle is intended to alert the user to the presence of non-isolated, dangerous voltages within the housing that may be strong enough to give off an electric shock.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER. USE QUALIFIED PERSONNEL FOR ALL MAINTENANCE WORK.

GENERAL INFORMATION

The newly developed portable sound system (procession system) ZP-40 SLIM/2 X is a state-of-the-art PA system that completely convinces the user with its powerful speech and music transmission and its internal, electronic and mechanical design. The system can also be used as a stationary sound system in the church.

POWER

The procession system has two separate power channels (2 x 20 W sinus) based on digital CLASS-D amplifiers, which in turn each drive two powerful, ultra-light neodymium 3.5" speaker chassis.

RADIO TECHNOLOGY

As a result of the increased demand for frequencies in the analog frequency spectrum and the increasingly „narrow“ free frequency gaps, Phoenix Professional Audio has decided to develop a new intelligent digital radio solution and to use it in the popular ZP-SLIM procession systems.

In comparison with the analog technology the digital radio transmission system offers more security against radio interference, radio noise etc. By so-called „pairing“ between wireless receiver and wireless transmitter (wireless microphone) a digitally-encoded, closed „radio bridge“ is created, which prevents the „intrusion“ of other, unpaired and unauthorized radio links.

In addition, the digital radio system offers a choice of 16 channels with frequency deviation of 500 Hz in the currently used RF spectrum at any time (500 MHz, 600 MHz or 800 MHz frequency range, depending on the model).

BT/SD/USB PLAYER

The standard built-in MP3 player with BT receiver (including IR remote control) has inputs for a USB stick and an SD memory card and will accompany you optimally during use.

The integrated BT receiver supports all common Bluetooth-enabled devices and allows you to wirelessly transfer and play music or ready-made texts from your mobile phone, tablet, etc. to the procession system.

OPERATION

A big advantage of the ZP-40 SLIM/2 X system is the very easy and user-friendly operation. All connections are ergonomically designed and arranged in a very clear and easy-to-understand manner.

BATTERY TECHNOLOGY

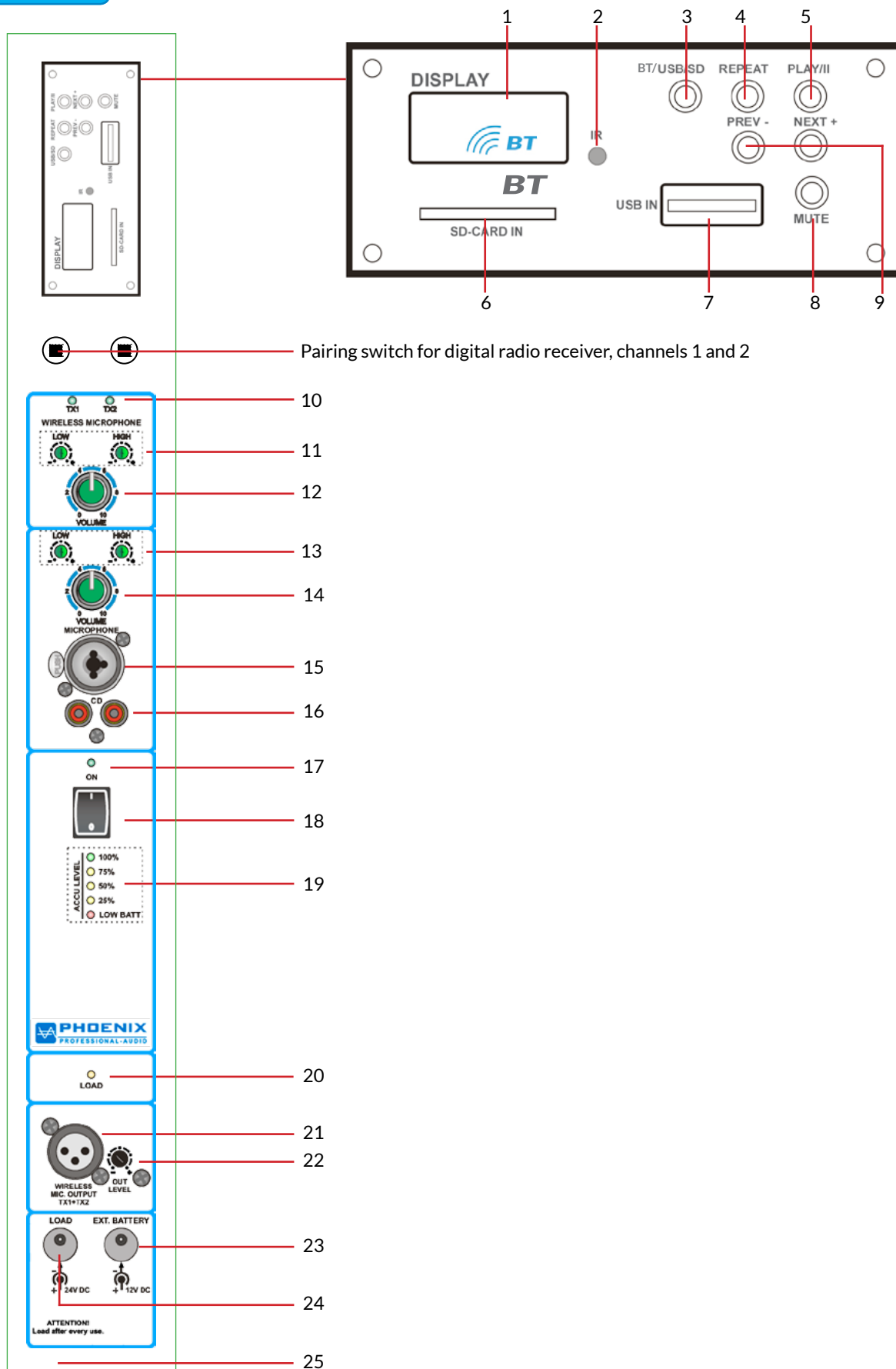
The ZP-40 SLIM/2 X system is equipped with a powerful and very light nickel-metal hydride battery (NiMH). Nickel-metal hydride accumulators (NiMH) are characterized by high energy density, are thermally stable and are not subject to any memory effect.

The intelligent internal monitored charging system with automatic switch-off ensures that the target service life is achieved. The operating time with a fully charged battery is approx. 6 hours.

ZP-40 SLIM/2 X

Instruction manual

FRONT



FRONT PANEL CONTROLS

1.- USB player multifunction display

2.- IR remote control receiver

3.- USB/SD/ BT RECEIVER BT

This button is used to switch between USB operation, SD card operation or BT receiver operation.

In USB SD card operation, a single medium, i.e. a USB stick (USB flash drive pen) or an SD card, is automatically recognized „individually“ by the system and played.

For BT receiver operation, press button no. 3 until a flashing “BLUE” appears on the system display. The search can then be started in the BLUETOOTH menu of the mobile phone or tablet. The device is displayed as „BLUE“.

4.- REPEAT

Briefly pressing the REPEAT button will show “ONE” on the display and the current song will be repeated. By pressing again, „ALL“ appears on the display and all songs on the USB stick are repeated. The function is switched off by holding down the REPEAT button for approx. 3 seconds, the device then switches to normal PLAY MODE.

5.- PLAY/II (PAUSE)

Pressing the PLAY button starts a song. Pressing the button while a song is playing, playback will stop. “PAUSE function”: press the button again and playback will start.

6.- SD CARD SLOT

SD card slot



7.- USB SLOT

USB slot for a USB stick (USB flash drive pen)



FRONT PANEL CONTROLS

8.- MUTE (MUTE)

Pressing the MUTE button pauses playback. However, the program or the current song is not stopped by the system, it continues to run in the system.

9.- PREV & (-V) FUNCTIONS

The PREV & (-V) key has two separate functions:

- 1.- Briefly pressing the "PREV" button will switch to the previous song and play it automatically.
- 2.- By pressing the „PREV & (-V)“ button for about 3 seconds, the volume of the MP3 player is reduced (-Volume), the display shows the current volume number (0 to 30).

9.- NEXT & (+V) FUNCTIONS

The NEXT & (+V) button has two separate functions:

- 1.- Briefly pressing the „NEXT“ button switches to the next song and plays it automatically.
- 2.- By pressing the „NEXT & (+V)“ button for about 3 seconds, the volume of the MP3 player increases (+Volume), the current volume number (0 to 30) appears on the display.

10.- TX1 and TX2 LED DISPLAY

Two digital radio receivers are installed in the procession system ZP-40 SLIM/2 X: the LED TX1 shows the active radio link of the first radio receiver, the second LED TX2 shows the active connection of the second radio receiver.

11.- 2-BAND EQ

Separate LF and HF control for signal equalization or equalization of speech reproduction of radio transmission.

12.- VOLUME CONTROL (FUNC SECTION)

These controls determine the volume of radio reception for TX1 and TX2.

13.- 2-BAND EQ

Separate LF and HF control for signal equalization or equalization of speech reproduction and music transmission for all devices connected to the cinch socket (No.: 16) or the COMBO socket (No.: 15).

14.- VOLUME CONTROL (ADDITIONAL MICROPHONE AND CD SECTION)

These controls determine the volume for input numbers: 15 and 16 (MIC & CD).

15.- MIC INPUT

This balanced COMBO jack is used to connect a wired, dynamic or electret microphone.

IMPORTANT: ⚠

The input is supplied with 12VDC phantom power for condenser microphones.

The additional microphone is not included.

FRONT PANEL CONTROLS

16.- LINE INPUT ON RCA

Line input (0 dB) with volume control No. 14, LF and HF EQ control No. 13 for e.g. CD player feed.

17/18.- POWER ON/OFF SWITCH WITH OPERATION INDICATOR

After pressing this switch, the device is ready for operation. The green LED indicator lights up when the device is switched on (POWER ON).

The ZP-40 SLIM/2 X procession system can also be connected to the charger (charging process active) during operation.

19.- BATTERY OPERATION INDICATOR

LED indicator bar between LOW-BATT, 25%-75%-100% battery capacity.

The red LOW-BATT LED display does not light up when the procession system is switched on (POWER ON) and the battery is sufficiently charged or has enough energy for operation.

The LOW-BATT LED display only lights up „RED“ when the battery is discharged and only residual energy is available for operating the system. The system must then be loaded!

IMPORTANT:

If the red LED display activates, you have around 30 seconds to connect the procession system to the charger. The system is switched off by the monitoring system and the deep discharge protection is active.

The ZP-40 SLIM/2 X procession system can also be connected to the charger (charging process active) and charged during operation.

Please carry out the charging process until the yellow LED display no. 20 [LOAD] offs.

20.- LOAD OPERATION INDICATOR

The yellow LED indicator lights up when the automatic charging system is activated and only until the battery is fully charged.

Please carry out the loading process as follows:

- 1- Plug the charger's coupling socket into input no. 21.
- 2- Supply the supplied charger with mains voltage 230VAC/50Hz /OUT 24VDC.

The charging process is activated automatically and the yellow LED indicator lights up. This process can take up to 14 hours.

The charging process is automatically interrupted when the battery is fully charged.
Personal monitoring of the charging process by the user is not necessary.

IMPORTANT: ⚠

3- If the [LOAD] display has gone out, please first disconnect the charger from the mains voltage and then disconnect the charger from the procession system or the plug from socket no. 24 [24VDC].

If the procession system has not been used for more than three months, the battery should be serviced or recharged.

FRONT PANEL CONTROLS

21./22.- WIRELESS MIC. OUTPUT TX1/TX2 and OUT LEVEL

Balanced output of the two radio audio signals TX1+TX2 with separate „OUT LEVEL“ output signal strength control on XLR socket.

Useful information

The output can be used as an audio connection to an already existing sound system, i.e. the wireless microphones can be connected to your church loudspeaker system using the ZP-40 SLIM/2 X (output no. 21).

IMPORTANT: Please set the volume control no. 12 to „0“ so that the internal speakers are switched off. The volume adjustment or signal strength of the output is carried out with controller no. 22.

23.- SERVICE ENTRANCE

Not assigned.

24.- 24VDC INPUT (mains operation and charging input)

The built-in 24VDC socket serves as a 24VDC power supply for so-called mains operation with battery monitoring and at the same time as an input for the charging process.

Please note Chapter 20 „20.- LOAD OPERATION DISPLAY“.

25.-STAND FLANGE/SHOULDER STRAP MOUNT

On the lower part of the procession system there is a flange with a diameter of 35 mm for the tripod / stand mount. Thus, the ZP-40 SLIM/2 X procession system can also be used as a stationary system in your church or outside for open air church services.

IMPORTANT:

The lower flange also serves as a mount for the supplied shoulder strap or the optional cross strap.

MP3 PLAYER REMOTE CONTROL

1.-MODE

Selector switch. This is used to switch between USB operation, SD card or BT operation.

2.- ON/OFF SWITCH

After pressing this switch, the MP3 player can be switched **ON** and **OFF**.

3.- PLAY & II (Pause) FUNCTIONS

Pressing the **PLAY** button starts a song. Pressing the button while a song is playing will stop playback. „**PAUSE**“ function: press the button again and playback will start again.

4.- EQ

The integrated MP3 player has 6 fixed **audio DSP, EQ presets**. Repeatedly pressing the EQ button toggles between the six presets. The display shows the current audio DSP preset. MP3 player display: **E1 to E6**.

5.- KEYBOARD 0-9

Block keyboard for quick selection of music tracks.

6.- RPT - REPEAT (repeat)

Briefly pressing the **REPEAT** button will show „**ONE**“ on the display and the current song will be repeated. By pressing again, „**ALL**“ appears on the display and all songs on the USB stick are repeated. The function is switched off by holding down the **REPEAT** button for approx. 3 seconds. The device then switches to normal **PLAY MODE**.

7.-VOL-

Pressing the „**VOL-**“ button decreases the volume of the MP3 player (-volume), the current volume number (0 to 30) appears on the display.

7.1.- VOL+

Pressing the „**VOL+**“ button increases the volume of the MP3 player (+volume), the current volume number (0 to 30) appears on the display.

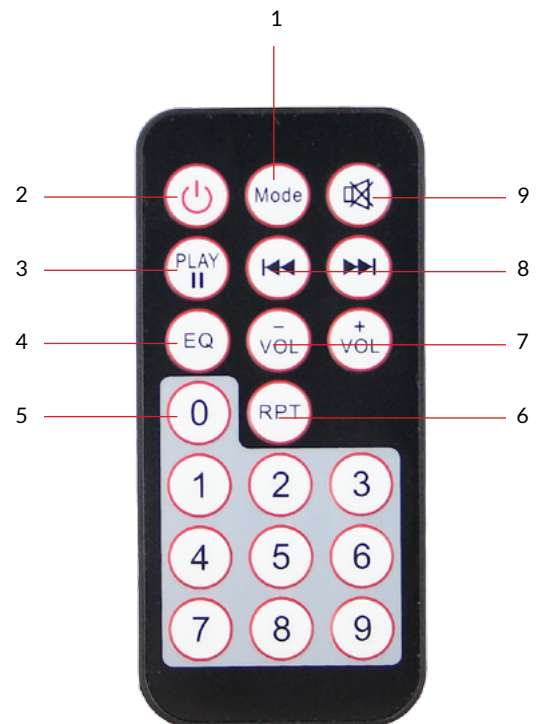
8.- I<< >>I

Briefly pressing the „>>I“ button switches to the next song and it will be played automatically. Briefly pressing the „I<<“ button switches to the previous song and it will be played automatically.

9.- MUTE (MUTE)

Pressing the **MUTE** button pauses playback. However, the program or the current song is not stopped by the system, it continues to run in the system.

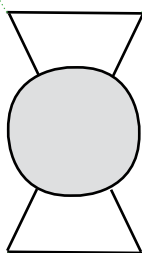
Pressing the button again activates playback of the song.



PICTOGRAMS / SYMBOLIC REPRESENTATION OF THE ADJUSTMENT

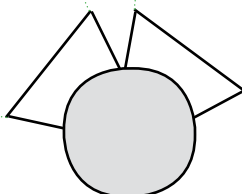
1

Front and rear sound reinforcement,
elongated procession



2

Front sound reinforcement
with wide beam angle



HORIZONTAL ALIGNMENT OF THE SPEAKERS

The upper speaker segment in the ZP-40 SLIM/2 X procession system can be rotated in the horizontal plane and is used to optimally align the sound radiation of the speakers to the desired area to be covered with sound.

The upper segment can be continuously rotated up to 180 degrees and offers the best speaker alignment for FRONT/REAR sound reinforcement of the procession or as a „wide beam angle“ or adjustable beam angle for front sound reinforcement.

ZP-BP BODYPACK RADIO MICROPHONE CONTROLS



1.- ON/OFF ROTARY SWITCH with sensitivity adjustment and PAIRING function

The bodypack can be switched on (online operation ON) and off with controller no. 1, and the corresponding microphone sensitivity (+/-) „Sensitivity“ can also be set.

2.- MICROPHONE IN JACK

3.5 mm jack socket for the supplied microphones (lavalier or headset microphone).

3.- SYSTEM ANTENNA

4.- SYSTEM DISPLAY

The device display shows the current operating frequency and the battery status.

5.- SET BUTTON (HI/LO) ⚠

A new transmit/receive frequency can be selected by pressing button no. 5.

The bodypack transmitter (ZP-BP) has 16 selectable frequency channels, so that if a fault occurs, you can switch to another free frequency channel with the no. 5 button.

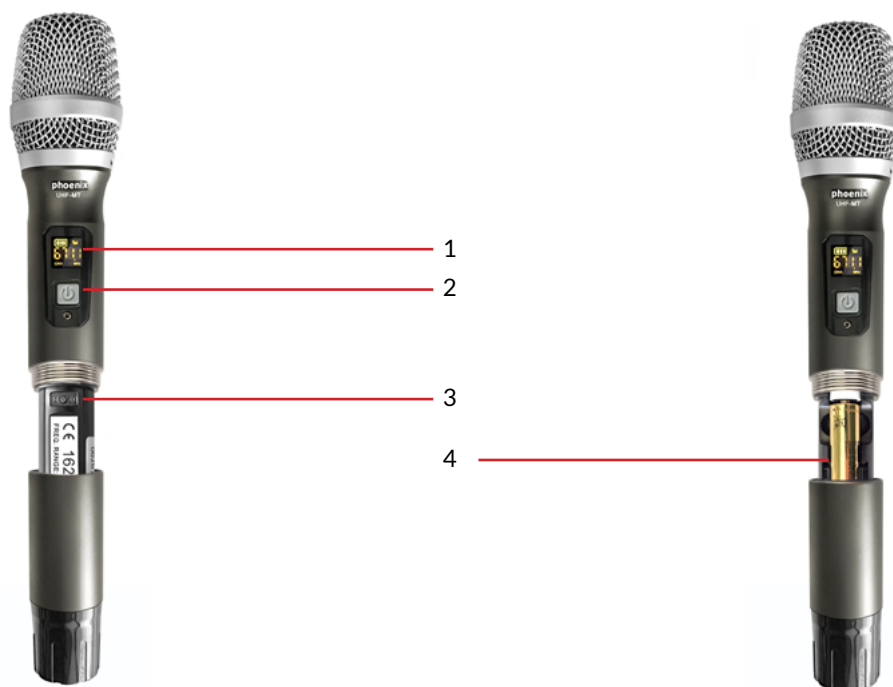
The information about the new active frequency channel of the transmitter is automatically transmitted to all coupled (PAIRING) radio receivers.

The SET HI/LO button is also used for digital coupling (PAIRING) of the radio systems. In this regard, please refer to the „SYSTEM PAIRING“ chapter!

5.- BATTERY COMPARTMENT ⚠

Battery compartment for two Mignon AA, 1.5 V batteries. Please always pay attention to the correct polarization!

ZP-MC HAND-HELD TRANSMITTER RADIO MICROPHONE CONTROLS



1.- SYSTEM DISPLAY

The device display shows the current operating frequency and the battery status.

2.- ON and OFF switch with PAIRING function

The ON/OFF button is also used for digital coupling (PAIRING) of the radio systems. In this regard, please refer to the „SYSTEM PAIRING“ chapter!

3.- SET BUTTON (HI/LO) ⚠

A new transmit/receive frequency can be selected by pressing button no. 5.

The hand-held transmitter (ZP-MC) has 16 selectable frequency channels, so that if a fault occurs, you can switch to another free frequency channel with button no. 3.

The information about the new active frequency channel of the transmitter is automatically transmitted to all coupled (PAIRING) radio receivers.

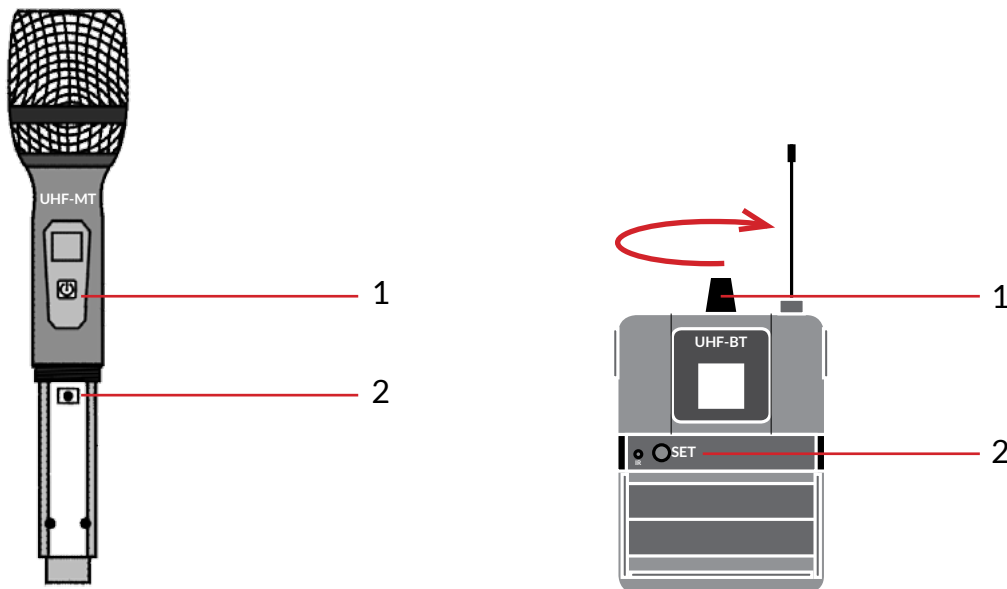
The SET HI/LO button is also used for digital coupling (PAIRING) of the radio systems. In this regard, please refer to the „SYSTEM PAIRING“ chapter!

4.- BATTERY COMPARTMENT ⚠

Battery compartment for two Mignon AA, 1.5 V batteries. Please always pay attention to the correct polarization!

SYSTEM PAIRING

The hand-held transmitter (ZP-MC) or the bodypack (ZP-BP) is already paired with the procession system in the ZP-40 SLIM/2 X set when delivered and is therefore immediately ready for use.



- 1.- Operating ON/OFF SWITCH
- 2.- Channel selector switch (HI/LO), SET

The microphone coupling (PAIRING) is particularly useful for e.g. long processions or wherever a radio microphone is to be coupled with several receivers (procession systems).

IMPORTANT: Only one transmitter can be paired with a receiver located in the procession system. That means that e.g. in all ZP-40 SLIM/2 X systems up to two transmitters (hand-held transmitter and/or bodypack) wireless microphones can be operated simultaneously after coupling.

PAIRING ⚠

- 1.- Make sure that all transmitters (radio microphones) are switched off.
- 2.- Switch ON the procession system!
- 3.- Press and hold button no. 2.
- 4.- To do this, press button no.1 (or turn switch no.1 to ON) until the display in the microphone/ the bodypack transmitter starts flashing.
- 5.- Release the two buttons no. 1 and no. 2 on the hand transmitter or button no. 2 on the bodypack - the display continues to flash!
- 6.- In the „Wireless Microphones“ area (see page no. 3) in the upper area of the ZP-40 SLIM/2 X there are two holes for UHF receivers 1 and 2 respectively.
- 7.- Use a pointed object to turn the switch behind the hole on the desired receiver off and on again.
- 8.- Briefly press button no. 2 of the microphone. The status display stays on and the pairing was successful.

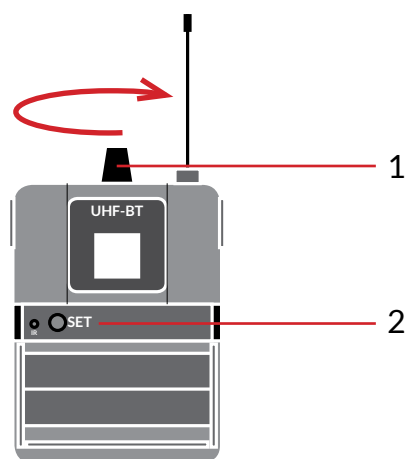
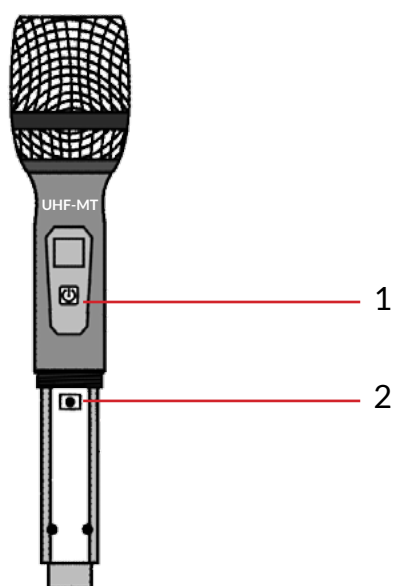
After that, the communication between the newly coupled radio microphone and the procession system is given.

CHANNEL SELECTOR

The handheld transmitter (ZP-MC) and the bodypack transmitter (ZP-BP) have 16 selectable frequency channels, so that if a fault occurs, you can switch to another free frequency channel with button no. 2. The information about the new active frequency channel of the transmitter is automatically transmitted to all coupled radio receivers (PAIRING).

1.- Operating ON/OFF SWITCH

2.- Channel selector switch (HI/LO), SET



FREQUENCY CHANNELS

Frequency band 500 MHz

1. 571,100 MHz
2. 571,700 MHz
3. 572,300 MHz
4. 572,900 MHz
5. 573,500 MHz
6. 574,100 MHz
7. 574,700 MHz
8. 575,300 MHz
9. 575,900 MHz
10. 576,500 MHz
11. 577,100 MHz
12. 577,700 MHz
13. 578,300 MHz
14. 578,900 MHz
15. 579,500 MHz
16. 580,100 MHz

Frequency band 600 MHz

1. 671,100 MHz
2. 671,700 MHz
3. 672,300 MHz
4. 672,900 MHz
5. 673,500 MHz
6. 674,100 MHz
7. 674,700 MHz
8. 675,300 MHz
9. 675,900 MHz
10. 676,500 MHz
11. 677,100 MHz
12. 677,700 MHz
13. 678,300 MHz
14. 678,900 MHz
15. 679,500 MHz
16. 680,100 MHz

Frequency band 800MHz

1. 823,300 MHz
2. 823,600 MHz
3. 823,900 MHz
4. 824,200 MHz
5. 824,500 MHz
6. 824,800 MHz
7. 825,100 MHz
8. 825,400 MHz
9. 825,700 MHz
10. 863,000 MHz
11. 863,300 MHz
12. 863,600 MHz
13. 863,900 MHz
14. 864,200 MHz
15. 864,500 MHz
16. 864,800 MHz

SYSTEM MODELS with ILLUSTRATION

As a result of the increased demand for frequencies in the analog frequency spectrum and the increasingly „narrow“ free frequency gaps, Phoenix Professional Audio has decided to develop a new intelligent digital radio solution and to use it in the popular ZP-SLIM procession systems.

In comparison with the analog technology the digital radio transmission system offers more security against radio interference, radio noise etc. By so-called „pairing“ between wireless receiver and wireless transmitter (wireless microphone) a digitally-encoded, closed „radio bridge“ is created, which prevents the „intrusion“ of other, unpaired and unauthorized radio links.

In addition, the digital radio system offers a choice of 16 channels with frequency deviation of 500 Hz in the currently used RF spectrum at any time (**500 MHz, 600 MHz or 800 MHz frequency range, depending on the model**).

Meaning of the device designation based on the models „ZP-40 SLIM/2 X 500-2MC“ or „ZP-40 SLIM/2 X 500-MCBP“ or „ZP-40 SLIM/2 X 500-2BP“:

ZP-40 SLIM/

Device name

2 X

Two digital radio receivers

500

Frequency range (MHz)

2MC

Two digital handheld microphones

MCBP

One digital handheld microphone and one digital bodypack

2BP

Two digital body packs

ZP-40 SLIM/2X-XXX-2MC



ZP-40 SLIM/2X-XXX-MCBP



ZP-40 SLIM/2X-XXX-2BP



OPTIONAL ACCESSORIES

- Microphone neck mount (hanging mount) **ZP-UMH**



- Microphone neck mount (boom mount) **ZP-BMH**



Abb.: Seitenansicht. Lieferung ohne Mikrofon.

- Stand **ZP-ST**



- Bag for transport and storage **ZP-TA**



Abb.:
Tasche. Lieferung
ohne Tonanlage

and more.

Please contact us if you need additional accessories for the ZP-40 SLIM/2 X procession system.

TECHNICAL DETAILS

ZP-40 SLIM/2 X system

Dimensions	140 cm long
Antenna	screwable external antenna
Audio outputs	1 x LINE to XLR (radio signal only)
Audio inputs	1 x USB player / 1 x SD player / BT receiver / 1 x LINE to jack / 1 x LINE to cinch / 2 x radio receiv. / 1 x XLR MIC with phantom power
Output power	2 x 20W sinus (40W)
Battery technology	Nickel-Metal Hydride (NiMH)
Operating time	approx. 6 hours
Type of reception	500 MHz, 600 MHz or 800 MHz
Equalization	1 x LF/HF filter radio receiver / 1 x LF/HF filter in the system
Remote control	IR system for MP3 player module
Frequency response	100 Hz to 18 kHz [+/- 2 dB]
Radio technology	2 x UHF receiver [on board] / 2 x UHF wireless microphones [transmitter]
Weight	4.9 kg with batteries
Bracket	shoulder strap
Charge	about 10 hours [automatic]
Loudspeaker	4 x 3.5" full-range, neodymium, rotatable
Volume control	1 x for the radio system / 1 x for the procession system
Material	ALU powder-coated
MP3 player	module with USB / BT receiver / SD card
Range [radio]	70 mtr.
Range [system]	100 meters
Sound pressure	98 dBA value@1W/1Mtr.
Power supply	24VDC external power pack
Tripod flange	yes, with 35 mm bore
Amplifier	2-channel digital class-D

ZP-MC hand-held microphone

Dimensions	52 x 250mm
Transmission power	10 mW
Battery technology	2 x AA (1.5 V)
Type of reception	500 MHz, 600 MHz or 800 MHz
Encoding	n/4-DQPSK
Latency	< 3ms
Frequency response	40 Hz to 18 kHz [+/- 3 dB]
Radio technology	digital radio
Weight	0.3 kg without batteries
Signal-to-noise ratio	>96 dB
Temperature range	+5/+40 degrees

ZP-BP bodypack transmitter

Dimensions	68 x 177 x 30mm
Transmission power	10 mW
Battery technology	2 x AA (1.5 V)
Type of reception	500 MHz, 600 MHz or 800 MHz
Encoding	n/4-DQPSK
Latency	< 3ms
Frequency response	40 Hz to 18 kHz [+/- 3 dB]
Radio technology	digital radio
Weight	0.3 kg without batteries
Signal-to-noise ratio	>96 dB
Temperature range	+5/+40 degrees

Disclaimer

The author points out that the representations, explanations, calculations and the same contained in the directive are merely exemplary in nature. They reflect the current state of knowledge and the current legal situation, but make no claim to completeness. In view of the complexity of construction projects, the development of individual solutions relevant to the respective project is indispensable. Any liability for the descriptions, applications, indications and transmissions of the guideline or individual details or parts of it shall be hereby expressly excluded.

Important notes

The following applies to all pages of this description:
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The pictures are similar, color deviations reserved.