



BOSCH

PRM-UST | PRM-USTB

en

User manual

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1 Important product information

1.1 Safety information

1. Read and keep these safety instructions. Follow all instructions and heed all warnings.
2. Download the latest version of the applicable installation manual from www.boschsecurity.com for installation instructions.



Information

Refer to the Installation Manual for instructions.

3. Follow all installation instructions and observe the following alert signs:



Notice! Containing additional information. Usually, not observing a notice does not result in damage to the equipment or personal injuries.



Caution! The equipment or the property can be damaged, or persons can be injured if the alert is not observed.



Warning! Risk of electric shock.

4. System installation and servicing by qualified personnel only, in accordance with applicable local codes. No user-serviceable parts inside.
5. System installation for emergency sound (except for call stations and call station extensions) in a Restricted Access Area only. Children may not get access to the system.
6. For rack-mounting of system devices, make sure that the equipment rack is of suitable quality to support the weight of the devices. Use caution when moving a rack to avoid injury from tip over.
7. The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.



Warning! To reduce the risk of fire and electric shock, do not expose this apparatus to rain or moisture.

8. Mains powered equipment shall be connected to a mains power outlet socket with a protective earthing connection. An external, readily operable, mains plug or all-pole mains switch shall be installed.
9. Only replace the mains fuse of an apparatus with a fuse of the same type.
10. The protective ground connection of an apparatus shall be connected to protective ground before the apparatus is connected to a power supply.
11. Amplifier outputs marked with  may carry audio output voltages up to 120 V_{RMS}. Touching uninsulated terminals or wiring may result in an unpleasant sensation. Amplifier outputs marked with  or  may carry audio output voltages above 120 V_{RMS}. It requires a skilled person to strip and connect the loudspeaker wires in such a way that the naked conductors are inaccessible.
12. The system may receive power from multiple mains power outlet sockets and backup batteries.



Warning! To prevent a shock hazard disconnect all power sources prior to system installation.

13. Only use recommended batteries and observe polarity. Risk of explosion if an incorrect type of battery is used.

14. Fiber optical converters use invisible laser radiation. To prevent injury, avoid eye exposure to the beam.
15. Devices for vertical (wall) mounting supporting a user interface for operation shall only be mounted below 2 m height.
16. Devices installed above 2 m height may cause injury when falling down. Preventive measures must be taken.
17. To prevent hearing damage do not listen at high volume levels for long periods.
18. An apparatus may use a lithium coin battery. Keep away from children. If ingested, high risk of chemical burn hazard. Seek medical attention immediately.

1.2

Disposal instructions



Old electrical and electronic appliances.

Electrical or electronic devices that are no longer serviceable must be collected separately and sent for environmentally compatible recycling (in accordance with the European Waste Electrical and Electronic Equipment Directive).

To dispose of old electrical or electronic devices, you should use the return and collection systems put in place in the country concerned.

1.3

Class B Notice for FCC and ICES 003

applies to U.S.A. and Canadian models only



FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.
3. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

2 About this manual

The purpose of this user manual is to provide all required information needed for the installation and configuration of the Bosch music source products PRM-UST and PRM-USTB.

2.1 Intended audience

This user manual is intended for professionals familiar with audio systems.

2.2 Copyright notice

Unless otherwise indicated, this publication is the copyright of Bosch Security Systems B.V. All rights are reserved.

2.3 Trademarks

Throughout this document trademark names may have been used. Rather than put a trademark symbol in every occurrence of a trademark name, Bosch Security Systems states that the names are used only in an editorial fashion and to the benefit of the trademark owner with no intention of infringement of the trademark.

2.4 Notice of liability

While every effort has been taken to ensure the accuracy of this document, neither Bosch Security Systems nor any of its official representatives shall have any liability to any person or entity with respect to any liability, loss or damage caused or alleged to be caused directly or indirectly by the information contained in this document.

Bosch Security Systems reserves the right to make changes to features and specifications at any time without prior notification in the interest of ongoing product development and improvement.

2.5 Document history

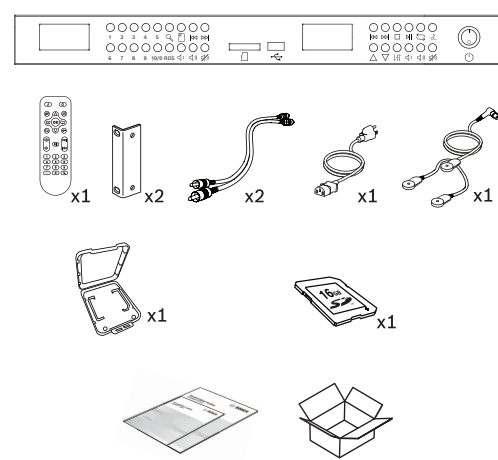
Release date	Documentation version	Reason
XX.2021	1 st version	Content creation

3 Product introduction

Bosch’s PRM-UST and PRM-USTB are professional multisource music players intended to be used as background music sources for public address and commercial audio applications. Both products have USB interface, SD card input for playing stored music files, and tuner for FM frequency band broadcast. Additionally, PRM-USTB facilitates music streaming through Bluetooth.

3.1 Parts included

The box contains the following parts:



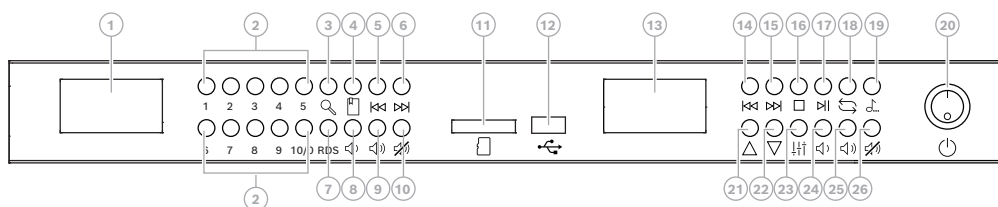
Quantity	Component
1	Music Source PRM-UST or PRM-USTB
1	Mains power cord
1	Set of 19" mounting brackets with screws
1	Remote control (battery not included)
2	2-pair audio RCA cable
1	Antenna cord including connector
1	SD memory card (16 GB)
1	Quick installation guide
1	Safety information

3.2 Installation

The product can be placed on a desk or mounted in a 19" rack.

3.3 Indicators and connections

3.3.1 Front panel

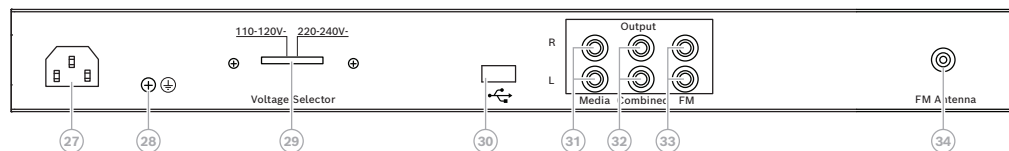


Number	Description
1	Display (FM radio): LCD panel shows information related to FM radio
2	Digits 0-10 for preset (favorite) radio station selection or for playing a specific frequency
3	Scan the FM radio stations Display shows the frequency for the stations while scanning is in progress
4	Store a specific frequency channel as preset (favorite), in combination with the digit keys
5	Short press: previous radio channel Long press: decrease frequency for fine tuning
6	Short press: next radio channel Long press: increase frequency for fine tuning
7	RDS information
8	Decrease radio volume
9	Increase radio volume
10	Mute FM radio output
11	SD card socket
12	USB socket Use front and rear panel USB sockets at a time
13	Display (media): LCD panel shows relevant information for media inputs USB, SD and Bluetooth
14	Short press: previous track Long press: fast backward
15	Short press: next track Long press: fast forward
16	Stop
17	Play or pause
18	Repeat a track or a list
19	Media source selection from USB, SD or Bluetooth

Number	Description
20	Power on/off
21	Short press: previous folder Long press: decrease adjustment for tone control items (EQ, bass/treble, balance and loudness)
22	Short press: next folder Long press: increase adjustment for tone control items (EQ, bass/treble, balance and loudness)
23	Tone control (EQ, bass/treble, balance and loudness)
24	Decrease media volume
25	Increase media volume
26	Mute media output

3.3.2

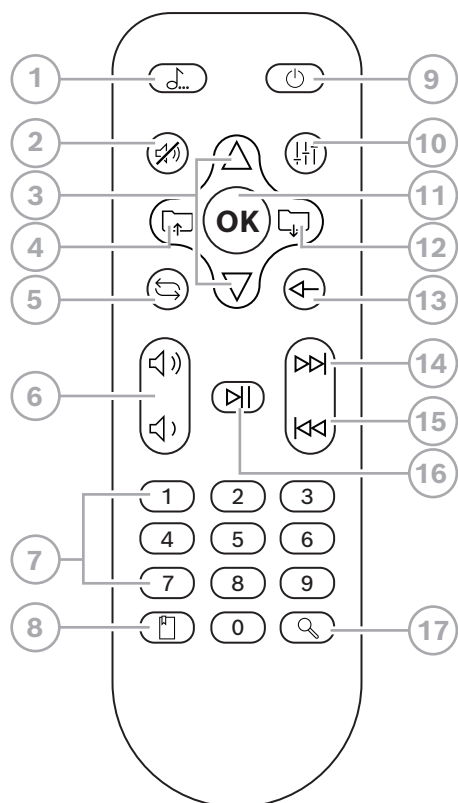
Rear panel



Number	Description
27	Mains input socket with fuse folder
28	Grounding screw
29	Voltage selector switch
30	USB socket Note: The USB front and rear panel sockets cannot be used at the same time
31	Media output: USB, SD or Bluetooth (stereo output)
32	Combined output: tuner, USB, SD or Bluetooth (stereo output) Note: Due to priority output function, when the media (USB, SD, Bluetooth) is active, the tuner audio output will be automatically muted
33	Tuner output socket (stereo output)
34	To connect the FM antenna (75 Ohm)

3.3.3

Remote control



Number	Description
1	Select the music source: Tuner -> USB -> SD-> BT -> Tuner
2	Mute all music sources
3	Decrease or increase tone control items (EQ, bass, treble, balance and loudness)
4	Folder up
5	Repeat a track or a list
6	Increase and decrease volume of the selected music source
7	0-10: Digits for radio frequency preset radio station selection or playing a specific frequency
8	Stores a specific frequency channel as favorite, in combination with the digit keys, to specify the frequency of the channels
9	Display on/off for the selected music source
10	Tone control
11	Confirm selection
12	Folder down
13	Back to previous menu
14	Short press: next track Long press: fast forward
15	Short press: previous track

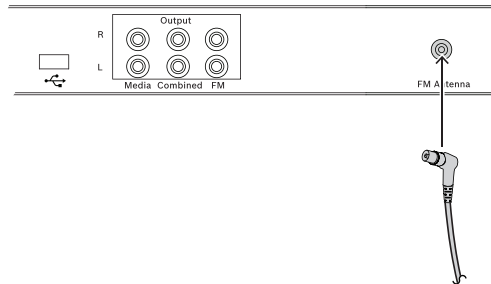
Number	Description
	Long press: fast backward
16	Play or pause
17	Scan the FM radio stations Display shows the frequency for the stations while scanning is in progress

4 Product function

4.1 FM Tuner

The FM tuner supports the frequency band of 87.5 to 108.0 MHz.

- Connect the antenna



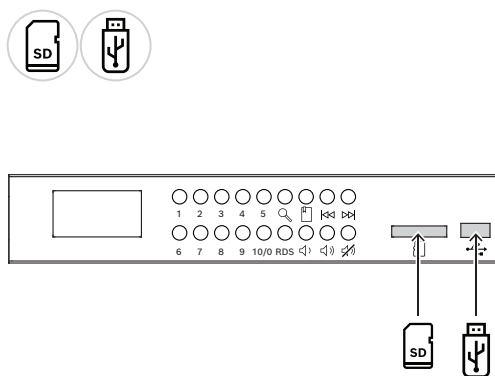
Operation

- To scan the radio channels, press the button from the device or remote. Long press and to fine tune the frequencies. The display panel shows the frequency. During power on, the last played FM channel starts playing.
- Press to select the previous channel or to select the next channel.
- To store a channel as preset (favorite):
 1. Enter four digits for the frequency input. For example, if you enter 1023, the display will show 102.3MHz.
 2. Enter one or two digits for the specified station.
No further key operation takes place within the next 3 seconds. Then the unit will store the current frequency to the specified radio station.
- 1. Press RDS (Radio Data System) to enable the functions of the radio data system:
 - PS: programmed service name;
 - PTY: programmed type;
 - CT: clock time and date.
- 2. Press for two seconds to exit the RDS function.

4.2 USB or SD

The USB or SD interface supports MP3 audio files stored on a USB flash memory device or an SD card up to 32 GB of exFAT or FAT32 file system.

- Insert an SD card or an USB flash memory device



Operation

- Select the source, USB device or SD, with the key of the device or from the remote.
- Press to play the track.
 - If ID3 tags of the MP3 file are available, the following additional information will scroll on the display:
File - < name >, Track - < name >, Artist - < name >, Album - < name >
 - The LCD lower line will show, from left to right:
Track number (maximum 2000 tracks), mm:ss (track duration), audio data compression rate.
- Press to switch between play or pause.
 - In pause mode, the pause symbol () and the track playing time elapsed will be shown.
- Press to select the previous track or to select the next.
- Press to stop.
- To play a list of tracks, organize the files in the folder. Browse the folder and press play.
- To repeat a track or list of songs, press . This button toggles as follows:
 - 1st press: Current track will always be repeated (display shows: ONE)
 - 2nd press: All tracks will be repeated, in sequence (display shows: ALL)
 - 3rd press: All tracks will be repeated randomly (display shows: RND, ∞)
 - 4th press: All tracks will play in sequence, but not be repeated (display shows: SEQ, ∞).
- For tone control, press . Refer to numbers 21 and 22 of *Front panel, page 8* for adjustment.
This button toggles as follows:
 - 1st press: EQ, and to be previous or next.

- 2nd press: Brass, adjust the treble with ⏮ and ⏭.
- 3rd press: Treble, adjust the bass with ⏮ and ⏭.
- 4th press: Balance, adjust the balance with ⏮ and ⏭.
- 5th press: Loudness, adjust the loudness with ⏮ and ⏭.
- 6th press: EQ, use ⏮ and ⏭ to choose between Rock, Jazz, Flat, Classic.

The selected option appears on the display.

4.3

Bluetooth

PRM-USTB has a Bluetooth receiver that can be connected to a Bluetooth-enabled music source like a mobile phone, tablet, or computer.

Pair a device

1. Select the source of the PRM-USTB as Bluetooth.
If the device is already paired, the display will show **Paired**.
2. Enable Bluetooth on your device (mobile phone, tablet, or computer).
3. Select **Bosch PRM-USTB** from the list of discovered products.
The display on the PRM-USTB shows **Pairing**.
4. If the pairing is successful, the PRM-USTB display shows **Paired**.

Operation

Almost all operations work simultaneously from the PRM-USTB or from the paired device.

- Press ⏭ to play the track.
- Press ⏭ to switch between play or pause.
- Press ⏮ to select the previous track or ⏭ to select the next.
- Press □ to stop.
- For tone control, press . Refer to numbers 21 and 22 of *Front panel, page 8* for adjustment.
This button toggles as follows:
 - 1st press: EQ, ⏮ and ⏭ to be previous or next.
 - 2nd press: Brass, adjust the treble with ⏮ and ⏭.
 - 3rd press: Treble, adjust the bass with ⏮ and ⏭.
 - 4th press: Balance, adjust the balance with ⏮ and ⏭.
 - 5th press: Loudness, adjust the loudness with ⏮ and ⏭.
 - 6th press: EQ, use ⏮ and ⏭ to choose between Rock, Jazz, Flat, Classic.

The selected option appears on the display.

5 Troubleshooting

Problem	Possible cause	Possible solution
The unit does not work.	Power (plug) disconnected, the unit is switched off or the mains fuse is broken.	Insert power cord and switch on the unit. Check the mains fuse.
USB or SD storage device not detected.	Device does not comply with USB mass storage.	Use a device complying with the class of USB mass storage (some portable audio players included in the class of image devices are not supported. Also, some flash card readers cannot be detected)
	USB hub in use.	Some USB hubs will not operate properly. Try a different USB hub, or connect the storage device directly to the USB port. Also, if multiple devices for USB storage are connected through a USB hub, only one of the devices will be recognized.
	Format not supported.	Use only FAT, FAT32 and exFAT file structure.
	The connection with the unit has been terminated because an electrical current stronger than allowable was applied to the unit's USB socket.	Wait several minutes. The rating (allowable current) for this unit is 500 mA or less per USB port. Use USB storage devices that meet these standards. If you have a USB storage device connected through a buspowered USB hub, connect the USB storage device directly to this unit port. If shorted a long time the USB port will become defective.
	Partitioning of SD card is wrong. Apart from SD, SDHC and class of SD cards, it is also possible that the card has a different partition table than expected.	Reformat the USB or SD card with a PC that has been known to give good results.
MP3 tracks do not play.	Format not supported.	MP3s are supported up to 320 kbps.

Problem	Possible cause	Possible solution
No audio output.	The audio output cable has come loose or has not been properly plugged in.	Plug in audio cable properly.
	The audio output control is not working properly.	Check the output control setting on the rear panel.
	The audio output connectors or plugs are dirty.	Wipe away dust or dirt and reinsert the plug.
	The selected source is currently in pause or mute mode.	Press the play button or the mute button.
The audio output is distorted or full of noise.	The audio output cable has not been properly plugged in.	Connect the audio cable to one of the three stereo RCA output connectors.
	Connectors or plugs are dirty.	Wipe away dust or dirt and reinsert the plug.

6

Technical data

Electrical

Mains power supply	
Voltage range	110~120 VAC +/-10 %, 50~60 Hz 220~240 VAC +/-10 %, 50~60 Hz
Power supply fuse	0.63 A / 250 V
Power consumption	15 W max.
FM tuner	
Total harmonic distortion (1 kHz)	<= 0.5 %
FM frequency range	87.5 ~108 MHz
Frequency response	50 Hz ~12 kHz +/-1 dB
Channel separation (1 kHz)	>= 50 dB
Signal-to-noise ratio	>= 25 dB
FM input sensitivity	26 dBu
Antenna impedance	75 Ohm
Audio output level	1.5 V rms +/-1 dB at 10 kOhm load
USB or SD source	
Frequency response	50 Hz ~ 20 kHz +/-1 dB
Signal-to-noise ratio	>= 80 dB
Total harmonic distortion (1 kHz)	<= 0.5 %
Channel separation	>= 50 dB
Audio output level	1.5 V rms +/-1 dB at 10 K ohm load
USB output current limit	500 mA
Maximum memory size of USB and SD card	32 GB
Supported file structure	FAT, FAT32 and exFAT

Mechanical

Unit dimensions (H x W x D)	
With brackets:	44 x 82 x 250 mm (1.73 x 18.97 x 9.84 in)
Without brackets:	42 x 430 x 250 mm (1.65 x 16.93 x 9.84 in)
Unit mounting	Stand-alone, 19" rack (19" wide, 1 U high)
Unit color	Black RAL 9005
Unit weight	Approx. 3.6 kg
Remote control dimensions (H x W x D)	20 x 52 x 156 mm (0.80 x 2.05 x 6.14 in)
Remote control weight: (without batteries)	120 g

Environmental

Operating temperature	0 °C - 45 °C
Storage temperature	-40 °C - 70 °C
Relative humidity (non-condensing)	< 90%

Remark:

1. Adapter shall be installed near the equipment and shall be easily accessible.
 2. The plug considered as disconnect device of adapter.
 3. The product shall be connected to a USB interface of version USB2.0 or higher.
- Hereby, Bosch Security Systems B.V declares that this product is in compliance with essential requirements and other relevant provisions of Directive 2014/53/EU. This product is allowed to be used in all EU member states.

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