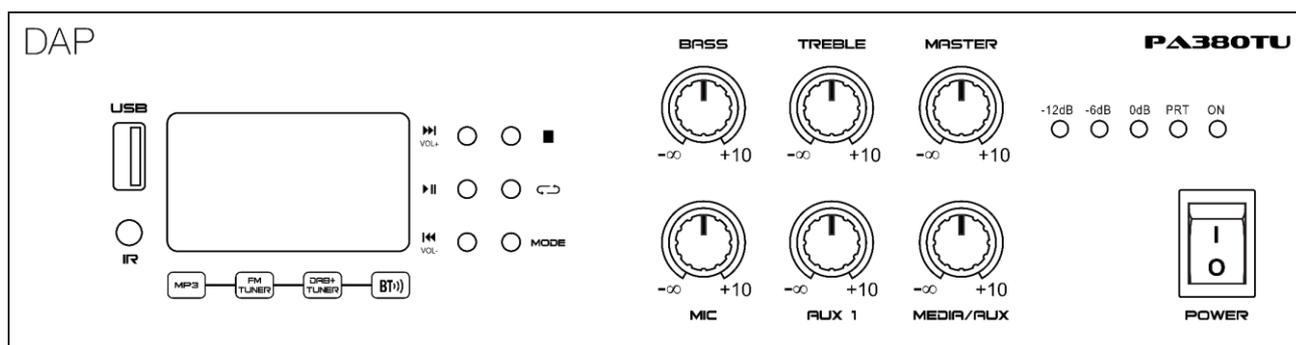# DAP

ENGLISH

PA-380TU 80W 100V Amplifier   V1

Product code: D6170

Preface

Thank you for purchasing this DAP product.

The purpose of this user manual is to provide instructions for the correct and safe use of this product.

Keep the user manual for future reference as it is an integral part of the product. The user manual shall be stored at an easily accessible location.

This user manual contains information concerning:

- Safety instructions
- Installation and operation of the device
- Intended and non-intended use of the device
- Maintenance procedures
- Troubleshooting
- Transport, storage and disposal of the device

Non-observance of the instructions in this user manual may result in serious injuries and damage of property.

DAP

Table of contents

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1. Introduction

1.1. Before Using the Product

	Important **Read and follow the instructions in this user manual before installing, operating or servicing this product.**

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

After unpacking, check the contents of the box. If any parts are missing or damaged, contact your Highlite International dealer.

Your shipment includes:

- DAP PA-380TU 80W 100V Amplifier with a Schuko power cable (1 m)
- IR remote control
- FM antenna
- User manual
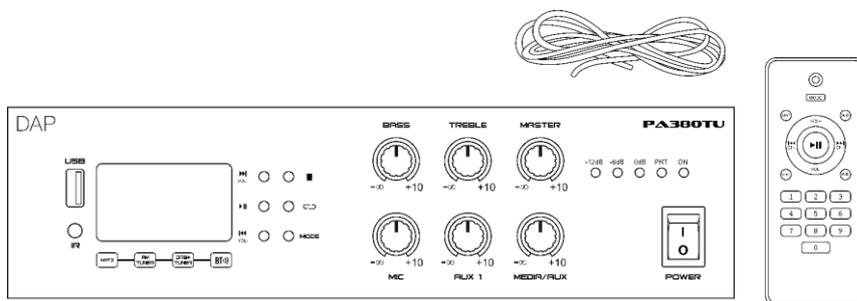
Fig. 01

1.2. Intended Use

This device is intended for professional use as an amplifier with a media player. It is suitable only for indoor installation.

Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

1.3. Text Conventions

Throughout the user manual the following text conventions are used:

- Buttons: All buttons are in bold lettering, for example "Press the **UP/DOWN** buttons"
- References: References to chapters and parts of the device are in bold lettering, for example: "Refer to **2. Safety**", "press the **power switch (03)**"
- 0–255:   Defines a range of values
- Notes: **Note:** (in bold lettering) is followed by useful information or tips

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1.4. Symbols and Signal Words

Safety notes and warnings are indicated throughout the user manual by safety signs.

Always follow the instructions provided in this user manual.

⚠	**DANGER**	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
⚠	**WARNING**	Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.
⚠	**CAUTION**	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
❗	**Attention**	Indicates important information for the correct operation and use of the product.
📖	**Important**	Read and observe the instructions in this document.
⚡	**Electrical hazard**	
🗑		Provides important information about the disposal of this product.

1.5. Symbols on the Information Label

This product is provided with an information label. The information label is located on the bottom plate of the device.

The information label contains the following symbols:

⏚	This device falls under IEC protection class I.
🗑	This device shall not be treated as household waste.
⚡⚠	Caution: Risk of electric shock. Disconnect input power before opening. Warning: This appliance must be earthed.

DAP

2.   Safety

> **Important**
> **Read and follow the instructions in this user manual before installing, operating or servicing this product.**

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual.

2.1.   Warnings and Safety Instructions

> **DANGER**
> **Danger for children**

For adult use only. The device must be installed beyond the reach of children.

● Do not leave various parts of the packaging (plastic bags, polystyrene foam, nails, etc.) within children's reach. Packaging material is a potential source of danger for children.

> **DANGER**
> **Electric shock caused by short-circuit**

This device falls under IEC protection class I.

● Make sure that the device is electrically connected to ground (earth). Connect the device only to a socket-outlet with ground (earth) connection.
● Do not cover the ground (earth) connection.
● Do not let the power cable come into contact with other cables. Handle the power cable and all connections with the mains with caution.
● Do not modify, bend, mechanically strain, put pressure on, pull or heat up the power cable.
● Make sure that the power cable is not crimped or damaged. Examine the power cable periodically for any defects.
● Do not immerse the device in water or other liquids. Do not install the device in a location where flooding may occur.
● Do not use the device during thunderstorms. Disconnect the device from the electrical power supply immediately.

> **WARNING**
> **Electric shock caused by dangerous voltage inside**

There are areas within the device where dangerous touch voltage may be present.

● Do not open the device or remove any covers.
● Do not operate the device if the covers are open.
● Disconnect the device from electrical power supply before service and maintenance, and when the device is not in use.

DAP

> ! **Attention**
> **Power supply**

- Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.
- Make sure that the cross-sectional area of the extension cords and power cables is sufficient for the required power consumption of the device.

> ! **Attention**
> **General safety**

- Do not block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- Do not shake the device. Avoid brute force when installing or operating the device.
- If the device is dropped or struck, disconnect the device from the electrical power supply immediately.
- If the device is exposed to extreme temperature variations (e.g. after transportation), do not switch it on immediately. Let the device reach room temperature before switching it on, otherwise it may be damaged by the formed condensation.
- If the device fails to work properly, discontinue the use immediately.

> ! **Attention**
> **This device shall be used only for the purposes it is designed for.**

This device is designed to be used as an amplifier with a media player. Any incorrect use may lead to hazardous situations and result in injuries and material damage.

This device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage.

> ! **Attention**
> **Do not expose the device to conditions that exceed the rated IP class conditions.**

This device is IP20 rated. IP (Ingress Protection) 20 class provides protection against solid objects greater than 12 mm, such as fingers, and no protection against harmful ingress of water.

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2.2. Requirements for the User

This product may be used by ordinary persons. Maintenance and installation may be carried by ordinary persons. Service shall be carried out only by instructed or skilled persons. Contact your Highlite International dealer for more information.

Instructed persons have been instructed and trained by a skilled person, or are supervised by a skilled person, for specific tasks and work activities associated with the service of this product, so that they can identify risks and take precautions to avoid them.

Skilled persons have training or experience, which enables them to recognize risks and to avoid hazards associated with the service of this product.

Ordinary persons are all persons other than instructed persons and skilled persons. Ordinary persons include not only users of the product but also any other persons that may have access to the device or who may be in the vicinity of the device.

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3. Description of the Device

The PA-380TU is a compact 80 W/100 V amplifier with a media player. It supports multiple (wireless) media sources, such as DAB+ or FM radio. It can be connected to a PC/laptop, smartphone, tablet, CD/DVD player or a TV. The device can be operated manually or with the supplied IR remote control.

3.1. Front View
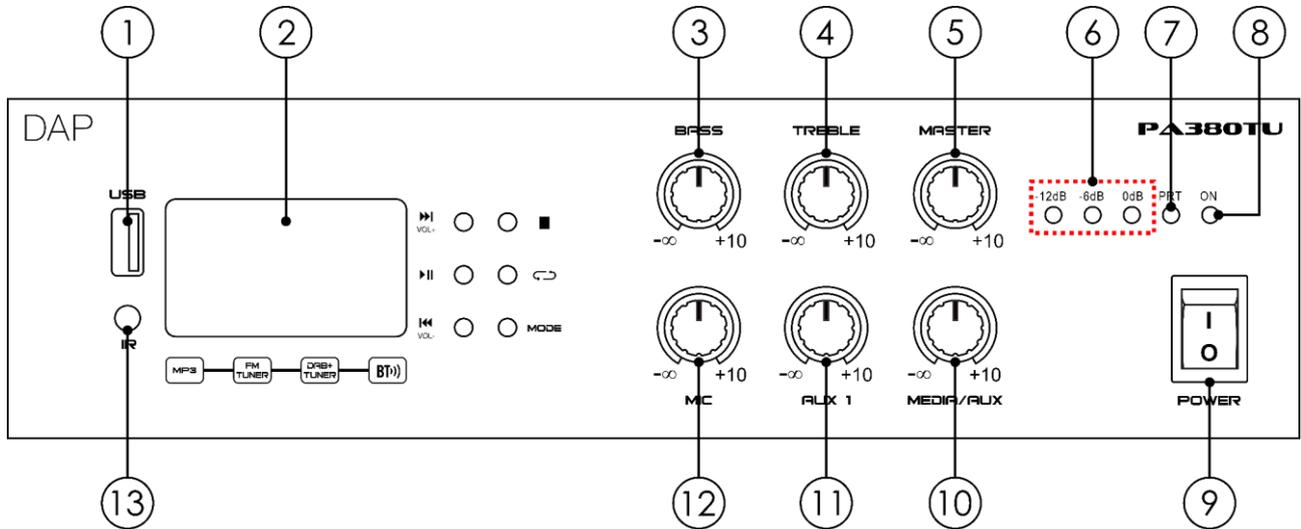
Fig. 02

01) USB input connector
02) OLED display and control buttons
03) Bass level control
04) Treble level control
05) Master volume control
06) VU meter
07) Protection LED indicator (Red)

08) Power LED indicator (Blue)
09) Power switch
10) Media/Aux volume control
11) Aux 1 volume control
12) Microphone volume control
13) Infra-red port

3.2. Back View
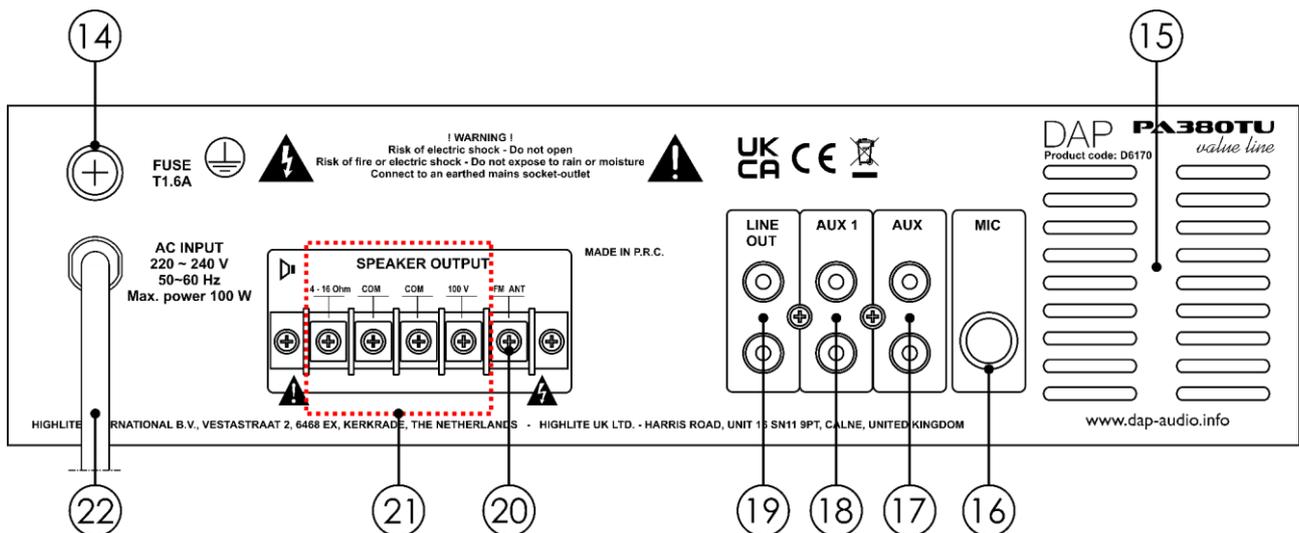
Fig. 03

14) Fuse F2,0 A/250 V
15) Ventilation openings
16) 6,3 mm jack microphone connector IN
17) RCA Aux connectors IN
18) RCA Aux 1 connectors IN

19) RCA analog line-level connectors OUT
20) FM antenna terminal connector IN
21) Speaker terminal connectors OUT
22) Schuko power cable (1 m)

3.3. Product Specifications

Model:	PA-380TU 80W 100V Amplifier
Electrical:	
Input voltage:	220–240 V AC, 50 Hz
Power consumption:	100 W
Fuse:	F2,0 A/250 V
Playback:	
Supported audio files:	WAV, FLAC, MP3
USB flash drive max. capacity:	< 32 GB, FAT32-formatted
Outputs:	
Amplifier technology:	Class AB
RMS output power:	80 W
Output channels:	1
Output mode:	Mono
Inputs:	
Stereo inputs:	3
Mono inputs:	1
Product properties:	
Electronic protection:	Overload, Short circuit, Overheating
Audio Specifications:	
FM frequency:	87,5–108 MHz
DAB+ frequency:	174–230 MHz
Bluetooth:	5.0
Bluetooth range:	15 m
Transformer:	100 V, 4–16 Ω
Physical:	
Dimensions:	260 x 252 x 75 mm (L x W x H)
Weight:	4,1 kg
Operation and control:	
Control panel:	OLED display and buttons
Connections:	
Power connections:	Schuko cable (1 m)
Mono input connections:	TS 6,3 mm unbalanced
Stereo input connections:	2 x RCA
Output connections:	Terminal connector, 1 x RCA line-level
Construction:	
Housing:	Aluminum/metal
Color:	Black
IP rating:	IP20
Amplifier cooling:	Axial fan
Thermal:	
Minimum ambient temperature t_a:	0 °C
Maximum ambient temperature t_a:	40 °C

DAP

3.4. Dimensions
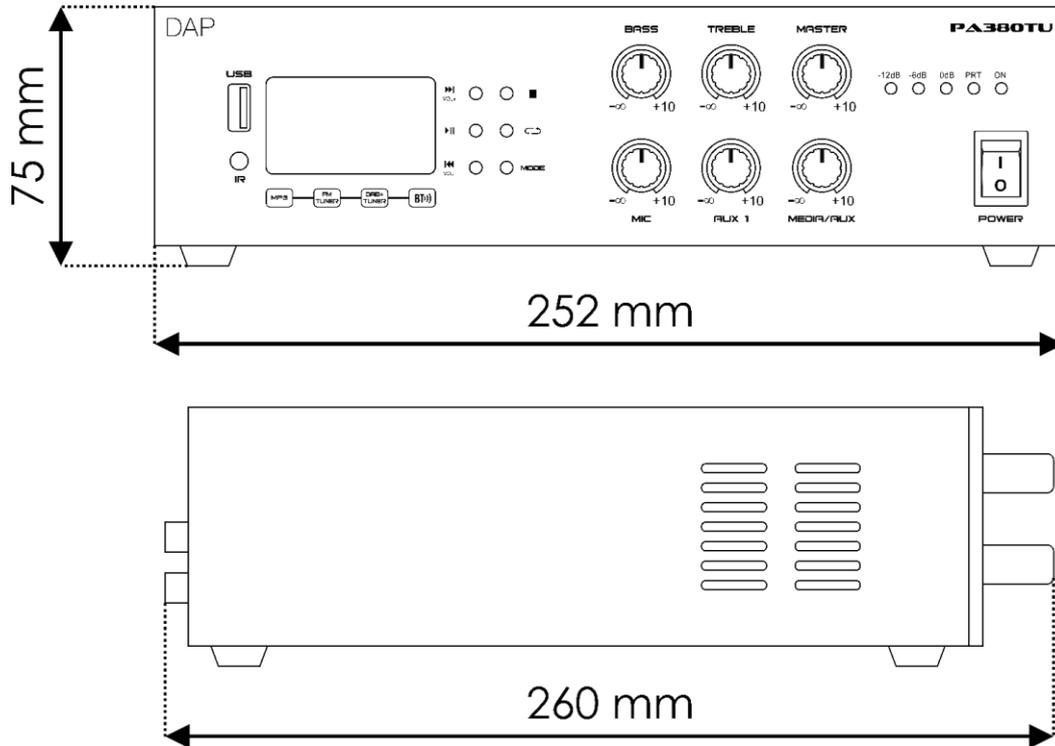
Fig. 04

4. Installation and Setup

4.1. Warnings and Precautions

Attention
Connect all data cables before supplying power.
Disconnect power supply before connecting or disconnecting data cables.

The PA-380TU can be operated manually or with an infrared (IR) remote control.

4.2. Safety Instructions for Installation

Attention
Make sure there is enough space for ventilation around the device.

- Do not block the ventilation openings. Without proper heat dissipation and air circulation, the internal components may overheat. This can result in product damage.
- Do not install near equipment that produces heat, for example amplifiers.

4.3. Installation Site Requirements

- The device must be installed only indoors.
- The device can be placed on a flat surface.
- The maximum ambient temperature t_a = 40 °C must never be exceeded.
- The relative humidity must not exceed 50 % with an ambient temperature of 40 °C.

4.4. Connecting to Power Supply

⚠	**DANGER** **Electric shock caused by short-circuit**

The device accepts AC mains power at 220–240 V and 50 Hz. Do not supply power at any other voltage or frequency to the device.

This device falls under IEC protection class I. Make sure that the device is always electrically connected to the ground (earth).

Before connecting the device to the socket-outlet:
● Make sure that the power supply matches the input voltage specified on the information label on the device.
● Make sure that the socket-outlet has ground (earth) connection.

Connect the device to the socket-outlet with the power plug.

4.5. Start-up

To operate the device:

01) Make sure that the PA-380TU is switched off.
02) Connect the FM antenna to the (FM) terminal on the **FM antenna terminal connector IN (20)**.
   If possible, put the device near a window and unwind the antenna.
03) Connect input and output devices. See **4.5.1. Setup Example** on page 13 and **4.5.2. Connecting Audio Devices** on page 14.
04) Switch on the input devices (e.g. audio mixer, CD player).
05) Switch on the PA-380TU. See **4.5.3. Switching On/Off** on page 14 for more information.
06) Set your preferred language and adjust other settings. See **5.5. Settings Menu** on pages 22–25 for more information.
07) Switch on the speakers.
08) Select operation modes. See **5.4. Operation Modes** on pages 16–22 and **5.13. Remote Control** on pages 26–27 for more information.
09) Adjust the settings:
   ● Turn up the volume controls on the device. See **5.8. Setting Master Volume**, **5.9. Setting Microphone Volume**, **5.10. Setting Aux 1 Volume** and **5.11. Setting Media Player/Aux Volume** on page 25 for more information.
   ● Set the volume of the device. See **5.12. Setting Device Volume** on page 25 for more information.
   ● Set the characteristics of the amplifier. See **5.6. Setting Bass Level** and **5.7. Setting Treble Level** on page 25 for more information.
10) After use, switch off the speakers.
11) Switch off the device. See **4.5.3. Switching On/Off** on page 14 for more information.
12) Switch off the input devices.

DAP

4.5.1. Setup Example

It is allowed to connect conventional or 100 V speakers to the device.

> **Attention**
> **Speaker Loading**

Before connecting the devices to the power supply, make sure that the total load of all connected speakers is below the maximum rating of the amplifier. If the total load is higher, it may cause damage to the amplifier and to the speakers.

To determine if your settings are safe:

01) Add up the wattage settings of all connected speakers.
02) Compare the value with the maximum rating of the amplifier. If necessary, disconnect speaker(s).

Use the **speaker terminal connectors OUT (21)** to connect speakers. When connecting:

● conventional speakers, use the (4–16 Ω) terminal and a (COM) terminal.
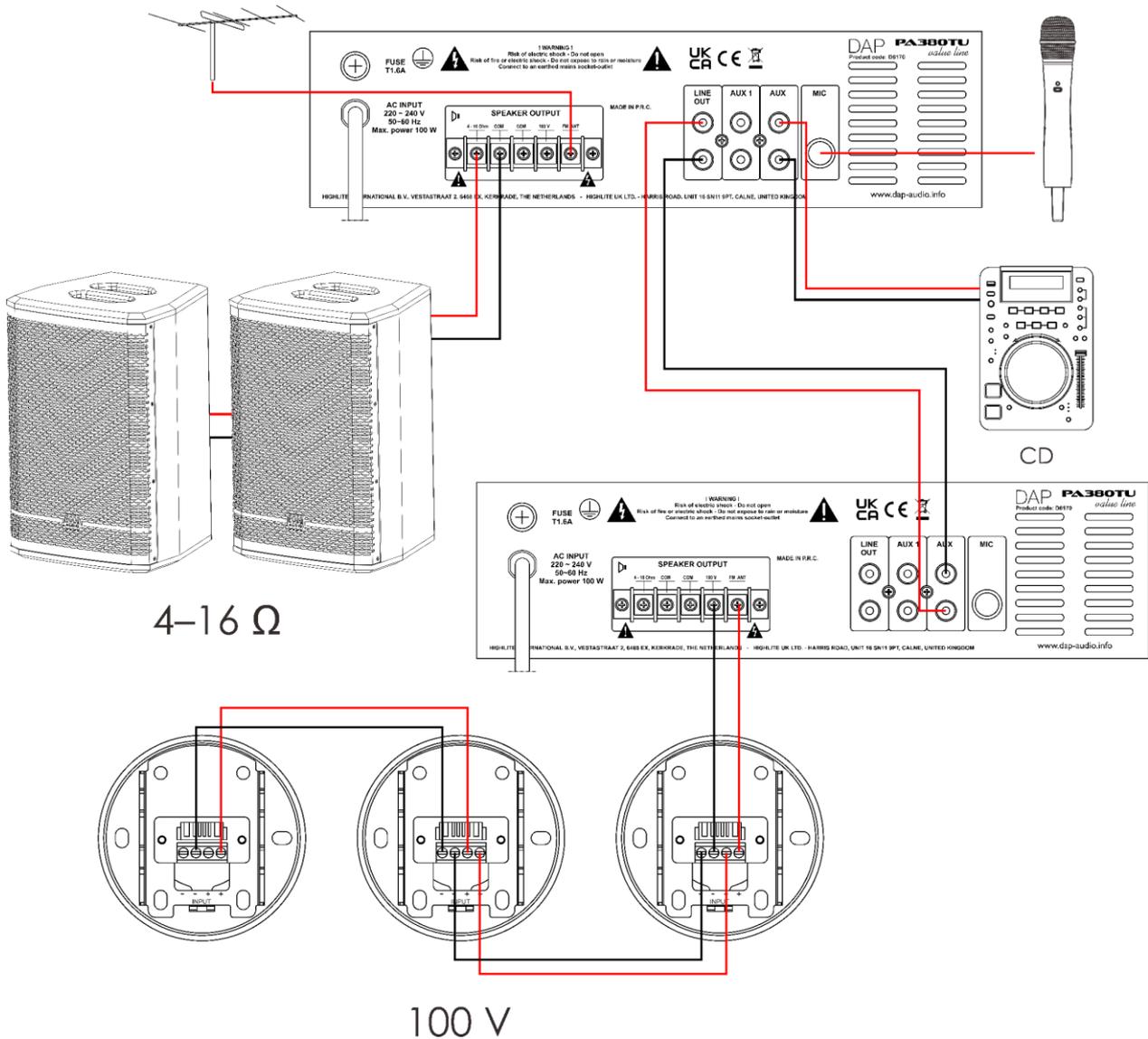● 100 V speakers, use the (100 V) terminal and a (COM) terminal.

Fig. 05

DAP

4.5.2. Connecting Audio Devices

Connect audio devices to the audio outputs and inputs.

- The device has the following audio outputs: **RCA analog line-level connectors OUT (19)** and the **speaker terminal connectors OUT (21)**.
- The device has the following audio inputs: **RCA Aux connectors IN (17)** and **RCA Aux 1 connectors IN (18) and 6,3 mm jack microphone connector IN (16)**.

Note:

To avoid interference, turn the PA-380TU off when connecting devices.

Connect the **RCA analog line-level connectors OUT (19)** to audio devices such as, an additional amplifier, a mixer, a console, etc.

Connect the **speaker terminal connectors OUT (21)** to a conventional (max. 80 W) or a 100 V speaker. See **4.5.1. Setup Example** on page 13 for more information.

Connect the **RCA Aux connectors IN (17)** and **RCA Aux 1 connectors IN (18)** to audio devices such as, a CD player or a tuner.

Connect the **6,3 mm jack microphone connector IN (16)** to a dynamic microphone.

4.5.3. Switching On/Off

The device has a power switch.

- Set the **power switch (09)** to ON position to turn on the device.
- Set the **power switch (09)** to OFF position to turn off the device.

Upon start-up, the display shows the start screen (Fig. 06). If it is the first start-up, the device will search for DAB+ radio stations. It happens only once.

Press the **MODE** button to enter the previously used operation mode (Fig. 07).

```
00:00:00
1-1-2021
Welcome to
Digital Radio
```

```
12:15:35
11-7-2022
NPO Radio 4
Playing
```
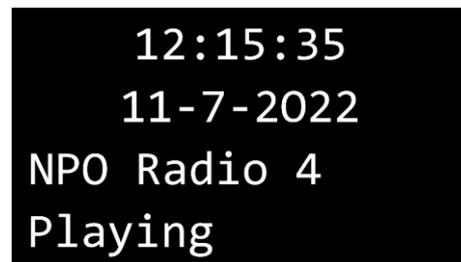
Fig. 06   **Fig. 07**

Note:

If no button is pressed, after the pre-set amount of time of inactivity, the display will turn off. Press any button to turn the display on. See **5.5.8.1. Backlight** on page 24 for more information.

4.5.3.1. Stand-by

You can activate stand-by when you are not using the device.

- Press and hold down the **MODE button (F)** for 2 seconds to activate stand-by. The display shows the current time and date and the control buttons do not function.
- Press the **MODE button (F)** to deactivate stand-by. The display will return to the last used operation mode.

5. Operation

5.1. Safety Instructions for Operation

> ❗ **Attention**
> **This device must be used only for the purposes it is designed for.**

This device is intended for professional use as an amplifier with a media player. It is suitable only for indoor installation. Any other use, not mentioned under intended use, is regarded as non-intended and incorrect use.

> ❗ **Attention**
> **Power supply**

Before connecting the device to the power supply, make sure that the current, voltage and frequency match the input voltage, current and frequency specified on the information label on the device.

5.2. LED Statuses

There are 3 LED indicators: **VU meter (06), protection LED indicator (Red) (07)** and **power LED indicator (Blue) (08)**. The LED indicators have the following functions:

- VU meter: Indicates the level of sound output.
- Protection LED indicator (Red):
    - If the light is off, the output is within the normal range.
    - If the light is on, the output is too high. Decrease the volume on the device/instrument/audio mixer.
- Power LED indicator (Blue): If the light is on, the device is powered.

5.3. Control Panel

A) OLED display
B) FORWARD/VOLUME + button
C) STOP button
D) PLAY/PAUSE button
E) REPEAT button
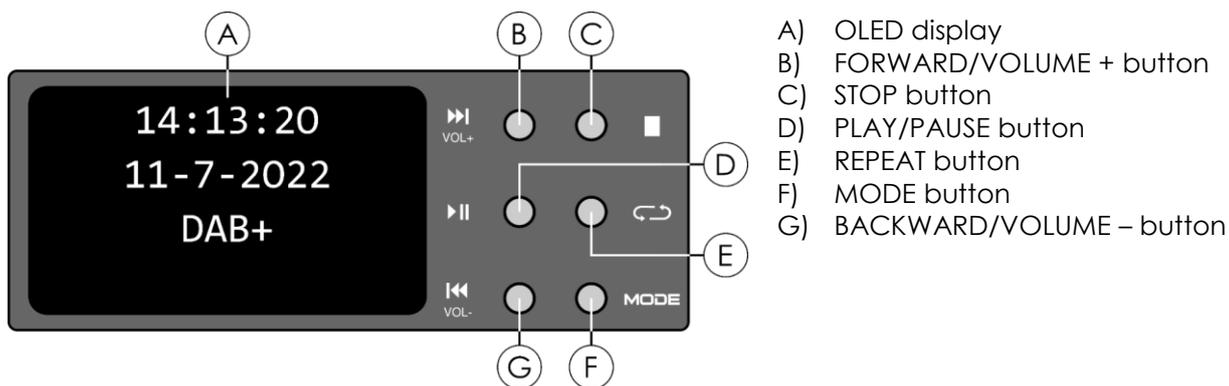F) MODE button
G) BACKWARD/VOLUME – button

Fig. 08

- Use the **FORWARD/VOLUME +** button to navigate through the main menu, to scroll through the available options, to stop auto scan, to manually tune the radio, to select radio stations/music files or to increase the volume.
- Use the **STOP** button to stop playback, to enter the settings menu, to return to a previous screen or to browse through radio station information screens.
- Use the **PLAY/PAUSE** button to start auto scan, to confirm your choices or to enter the submenus.
- Use the **REPEAT** button to set playback mode and to recall/store presets.
- Use the **MODE** button to select operation modes or to return to the main menu.
- Use the **BACKWARD/VOLUME –** button to navigate through the main menu, to scroll through the available options, to stop auto scan, to manually tune the radio, to select radio stations/music files or to decrease the volume.

5.4. Operation Modes

The device can be operated in the following operation modes:

- FM: See **5.4.1. FM Mode**
- DAB+:   See **5.4.2. DAB+ Mode**
- Bluetooth: See **5.4.3. Bluetooth Mode**
- USB: See **5.4.4. USB Mode**
- Microphone

For more information about how to connect the devices, refer to **4.5.2. Connecting Audio Devices** on page 14.

To use a dynamic microphone, connect it to the **6,3 mm jack microphone connector IN (16)**.

5.4.1. FM Mode

In this menu you can search for FM radio stations, browse through them and listen to them. If needed, you can manually tune the radio stations and save presets. The display shows:

```
00:00:00
1-1-2021
FM
```

5.4.1.1. Auto Scan

In this menu you can search for available FM radio stations.

Press and hold down the **PLAY/PAUSE button (D)** for 2 seconds to start an auto scan. The display shows:

```
12:15:35
11-7-2022
93.90MHz        P1
Auto Scanning...
```
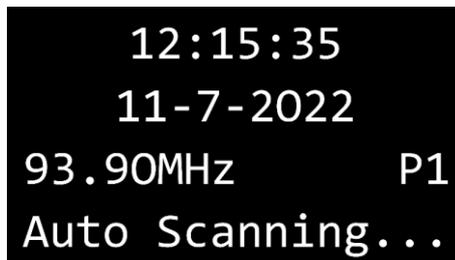
The device scans for all available FM radio stations and automatically saves them as presets. The device can store up to 30 FM presets. When a scan is complete, the device activates the first (P1) of the saved presets:

```
12:15:35
11-7-2022
103.80MHz       P1
[No Radiotext]
```
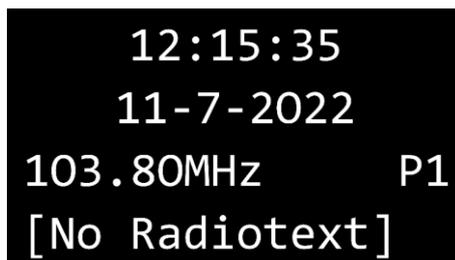
5.4.1.2. Browsing Through Radio Stations

In this menu you can browse through the saved FM presets.

01) Press the **REPEAT button (E)**. The display shows:
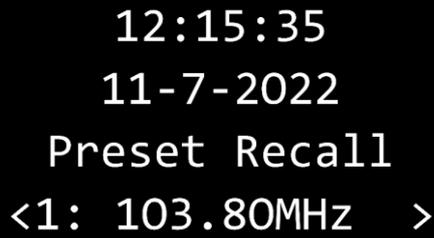
```
      12:15:35
      11-7-2022
    Preset Recall
  <1: 103.80MHz   >
```

02) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the saved FM presets.
03) Press the **PLAY/PAUSE button (D)** to confirm. The device will activate the selected FM preset.

5.4.1.3. Manual Tuning and Saving Presets

If the sound quality of an FM preset is not good enough, you can tune it manually and save changes.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to manually tune the signal, in increments of 0,05 MHz.
02) Press and hold down the **REPEAT button (E)** for 2 seconds. The display shows:
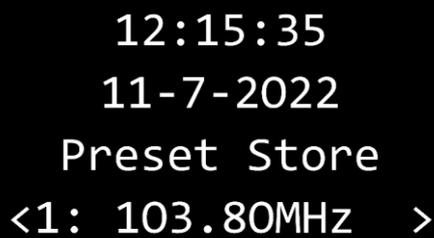
```
      12:15:35
      11-7-2022
    Preset Store
  <1: 103.80MHz   >
```

03) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 30 preset slots.
04) Press the **PLAY/PAUSE button (D)** to confirm. The changes are saved and the display shows:
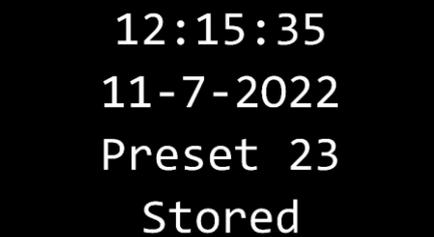
```
      12:15:35
      11-7-2022
    Preset 23
      Stored
```

5.4.1.4. Viewing Radio Station Information

You can view the information about the currently active radio station.

Repeatedly press the **STOP button (C)** to browse through different information screens, such as time, date, name of the radio station, music genre, frequency and signal type.

Note:

The contents of each screen depend on the currently active radio station. Some radio stations do not display any information.

5.4.2. DAB+ Mode

In this menu you can search for DAB+ radio stations, browse through them and listen to them. If needed, you can save selected radio stations as presets, to be able to access them easily.

The display shows:

```
00:00:00
1-1-2021
DAB+
```

### 5.4.2.1. Auto Scan

In this menu you can search for available DAB+ radio stations.

Press and hold down the **PLAY/PAUSE button (D)** for 2 seconds to start an auto scan. The display shows:

```
12:15:35
11-7-2022
Scanning...    15
■■■■■□□□□□□□□□
```

The device scans for all available DAB+ radio stations and it shows (in real-time) the number of found DAB+ radio stations. When a scan is complete, the device activates the first of the found radio stations:

```
12:15:35
11-7-2022
NPO 3FM KX Radio
Nirvana-Drain Yo
```

5.4.2.2. Browsing Through Radio Stations

In this menu you can browse through the found DAB+ radio stations.

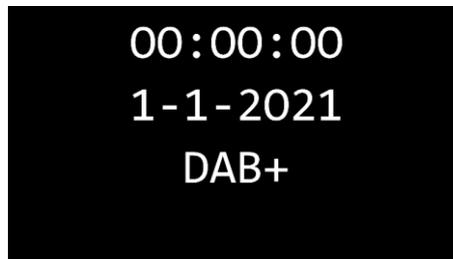01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the found DAB+ radio stations. The display shows:

```
12:15:35
11-7-2022
Station List
<NPO S&J         >
```

02) Press the **PLAY/PAUSE button (D)** to confirm. The device will activate the selected DAB+ radio station.

DAP
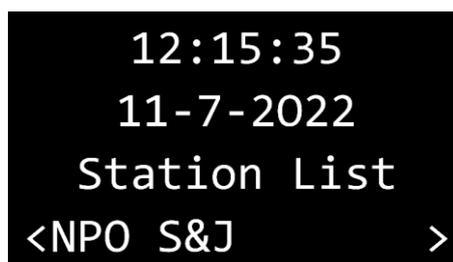
5.4.2.3. Saving Presets

If you want to listen to only a few DAB+ radio stations, you can save them as presets, for easy access. The device can store up to 30 DAB+ presets.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the found DAB+ radio stations. The display shows:

```
     12:15:35
    11-7-2022
   Station List
<NPO S&J        >
```

02) Press the **PLAY/PAUSE button (D)** to confirm. The device will activate the selected DAB+ radio station.
03) Press and hold down the **REPEAT button (E)** for 2 seconds. The display shows:

```
     12:15:35
    11-7-2022
   Preset Store
<23: (Empty)    >
```
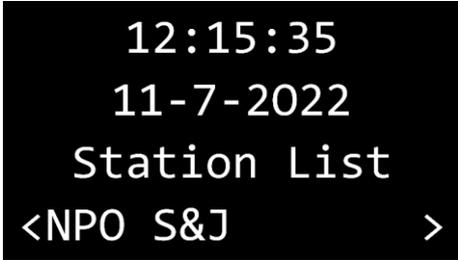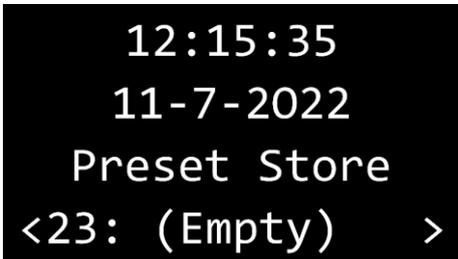
04) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 30 preset slots.
05) Press the **PLAY/PAUSE button (D)** to confirm. The changes are saved and the display shows:

```
     12:15:35
    11-7-2022
    Preset 23
     Stored
```

5.4.2.4. Browsing Through Presets

In this menu you can listen to the previously saved DAB+ presets.

01) Press the **REPEAT button (E)**. The display shows:
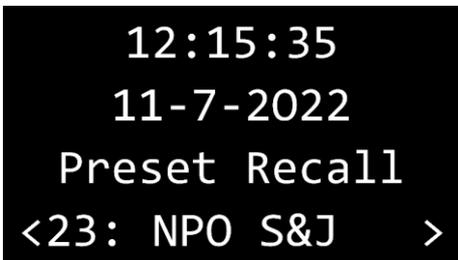
```
     12:15:35
    11-7-2022
   Preset Recall
<23: NPO S&J    >
```

02) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the saved DAB+ presets.
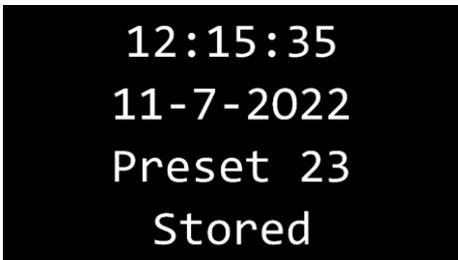03) Press the **PLAY/PAUSE button (D)** to confirm. The device will activate the selected DAB+ preset.

DAP

5.4.2.5. Viewing Radio Station Information

You can view the information about the currently active radio station.

Repeatedly press the **STOP button (C)** to browse through different information screens, such as time, date, radio station name, signal strength, music genre, country of origin, signal error report, frequency and data transfer speed.

Note:

The contents of each screen depend on the currently active radio station. Some radio stations do not display any information.

5.4.3. Bluetooth Mode

In this menu you can stream Bluetooth signals from your mobile devices (smartphones, tablets, notebooks, etc.). The display shows:

```
00:00:00
1-1-2021
Bluetooth
Not Connected
```
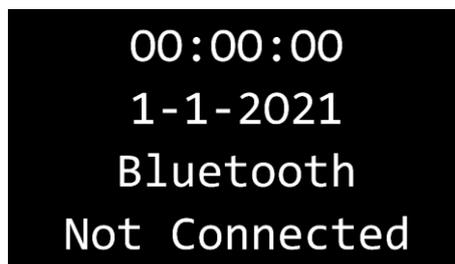
For this operation mode to work, you need to pair your mobile device and the PA-380TU via Bluetooth.

> **Attention**
> **Bluetooth can be used only for receiving of wireless audio signals.**

Bluetooth can only be used as a means to receive wireless audio signals. It is not possible to pair the device with other devices via Bluetooth.

To use the device in the Bluetooth mode:

01) Start Bluetooth on your mobile device.
02) On your mobile device, scan for the available Bluetooth devices. The ID of the PA-380TU is "BLUETOOTH".
03) On your mobile device, connect with the PA-380TU. The display shows:

```
00:00:00
1-1-2021
Bluetooth
Connected
```
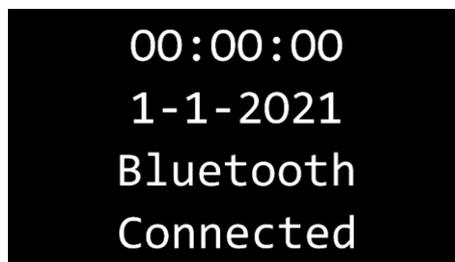
04) On your mobile device, search for and play any music/video file or visit streaming services. The PA-380TU will receive signals from your mobile device.

Note:

When your mobile device receives an incoming call, playback will stop automatically. When the conversation is finished, you need to resume playback manually.

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5.4.4. USB Mode

In this menu you can play music files from a USB flash drive. The display shows:

```
12:15:35
11-7-2022
USB
Reading...
```

Insert a USB flash drive into the **USB input connector (01)**. The device will automatically read the WAV, FLAC or MP3 files from the USB flash drive.

Note:

The USB flash drive should be FAT32-formatted and its maximum capacity should not exceed 32 GB.

When the inserted USB flash drive has the correct specifications and contains correct files, the display shows:
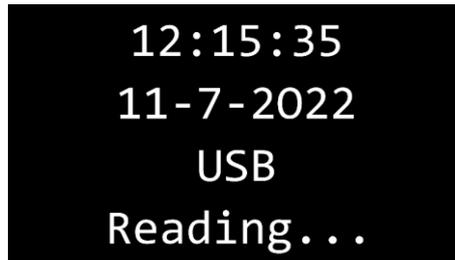
```
12:15:35
11-7-2022
ALL    USB
T244/660    1:03
```

5.4.4.1. Playback

Use the **PLAY/PAUSE button (D)** to start or pause playback.

- Press the **PLAY/PAUSE button (D)** to play the currently selected file.
- Press the **PLAY/PAUSE button (D)** again to pause the playback.

5.4.4.2. Select Previous/Next File

Use the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select files backward/forward.

5.4.4.3. Viewing Playback Status

You can view playback status.

Repeatedly press the **STOP button (C)** to browse through different information screens, such as time, date, currently selected file, total number of files and playback time.

5.4.4.4. Playback Modes

You can decide how music files will be played.

Repeatedly press the **REPEAT button (E)** to select one of the 4 playback modes.

- ONE: The device plays only one file.
- FLD: The device plays only one folder.
- RAN: The device plays random files.
- ALL: The device plays all files.

5.5.   Settings Menu

This menu contains all settings and device information.

Press and hold down the **STOP button (C)** for 2 seconds to enter the menu. The display shows:
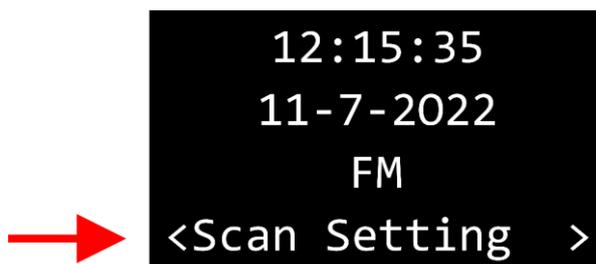
The settings menu is visible in the bottom line of the display.

The table below shows the different settings for each operation mode.

Settings	FM Mode	DAB+ Mode	Bluetooth Mode	USB Mode
Audio setting	Yes	No	No	No
Scan setting	Yes	No	No	No
Full Scan	No	Yes	No	No
Manual Tune	No	Yes	No	No
DRC	No	Yes	No	No
Prune	No	Yes	No	No
TA	No	Yes	No	No
System	Yes	Yes	Yes	Yes

- Use the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select settings.
- Use the **PLAY/PAUSE button (D)** to enter submenus and to confirm your choices.

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5.5.1. Audio Setting

In this submenu you can adjust the FM audio settings.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 2 options:
   ● FORCED MONO: The device will use one channel to convert a signal to sound.
   ● STEREO ALLOWED: The device will use multiple channels to convert multiple signals to sound.
02) Press the **PLAY/PAUSE button (D)** to confirm.

5.5.2. Scan Setting

In this submenu you can adjust the FM search settings.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 2 options:
   ● STRONG STATIONS ONLY: The device searches and saves only the strongest FM radio stations.
   ● ALL STATIONS: The device searches and saves all available FM radio stations.
02) Press the **PLAY/PAUSE button (D)** to confirm.

5.5.3. Full Scan

In this submenu the device automatically searches for DAB+ radio stations.

Press the **PLAY/PAUSE button (D)** to start auto scan.

5.5.4. Manual Tune

In this submenu you can manually search for DAB+ radio stations.

If the signal quality of a DAB+ radio station is too low, that radio station will not be found in an auto scan. If you know the exact Band III DAB+ channel (5A–13F) assigned to that radio station, you can find it manually.

To select the DAB+ channel of a radio station:

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the Band III digital radio channels (5A–13F).
02) Press the **PLAY/PAUSE button (D)** to confirm.

Note:

If necessary, try to improve the signal quality (put the device in a different place, move the antenna closer to the window, etc.) until the signal quality is good enough.

5.5.5. DRC

In this submenu you can set Dynamic Range Compression (DRC). This function decreases the volume of loud sounds and increases the volume of quiet sounds.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 3 options:
   ● DRC OFF
   ● DRC HIGH
   ● DRC LOW
02) Press the **PLAY/PAUSE button (D)** to confirm.

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5.5.6. Prune

In this submenu you can remove DAB+ radio stations that do not transmit anymore or changed frequency.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select YES or NO.
02) Press the **PLAY/PAUSE button (D)** to confirm.

5.5.7. TA

In this submenu you can switch traffic announcement (TA) messages on or off.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select ON or OFF.
02) Press the **PLAY/PAUSE button (D)** to confirm.

5.5.8. System

In this menu you can adjust the system settings. This menu is visible in all operation modes. You can adjust the display settings, set language, restore default factory settings or view the firmware version.

Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 4 submenus:

- BACKLIGHT: See **5.5.8.1. Backlight**
- LANGUAGE: See **5.5.8.2. Language**
- FACTORY RESET: See **5.5.8.3. Factory Reset**
- SW VERSION: See **5.5.8.4. Software Version**

- Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select submenus and browse through options.
- Press the **PLAY/PAUSE button (D)** to enter submenus and confirm your choices.

5.5.8.1. Backlight

In this submenu you can adjust the display settings.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 3 submenus:
    - TIMEOUT: You can determine after how many seconds of inactivity the backlight of the OLED display will turn off. Choose ON (display continuously on) or 10/20/30/45/60/90/120/180 seconds.
    - ON LEVEL: Display brightness. Choose LOW, MEDIUM or HIGH.
    - DIM LEVEL: Letter brightness when the backlight is off. Choose LOW, MEDIUM or HIGH.
02) Press the **PLAY/PAUSE button (D)** to enter submenus.

5.5.8.2. Language

In this menu you can set the menu language.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select one of the 9 options:
    - ENGLISH
    - DEUTSCH   (German)
    - ITALIANO   (Italian)
    - FRANÇAIS   (French)
    - NEDERLANDS   (Dutch)
    - ESPAÑOL   (Spanish)
    - NORSK   (Norwegian)
    - SVENSKA   (Swedish)
    - PORTUGUÊS   (Portuguese)
02) Press the **PLAY/PAUSE button (D)** to confirm.

5.5.8.3. Factory Reset

In this submenu you can restore the default factory settings.

01) Press the **FORWARD/VOLUME + button (B)** and the **BACKWARD/VOLUME – button (G)** to select YES or NO.
02) Press the **PLAY/PAUSE button (D)** to confirm.

5.5.8.4. Software Version

In this submenu you can view the currently installed software version.

The current software version is: V2.0.55.DAB5010.32501.

5.6.   Setting Bass Level

Turn the **bass level control (03)** to the left/right to decrease/increase the setting. The adjustment range is from –∞ to +10 dB.

5.7.   Setting Treble Level

Turn the **treble level control (04)** to the left/right to decrease/increase the setting. The adjustment range is from –∞ to +10 dB.

5.8.   Setting Master Volume

Turn the **master volume control (05)** to the left/right to decrease/increase the master volume.
The adjustment range is from –∞ to +10 dB. This setting affects the overall volume of all outputs.

5.9.   Setting Microphone Volume

Turn the **microphone volume control (12)** to the left/right to decrease/increase the setting. The adjustment range is from –∞ to +10 dB.

5.10.   Setting Aux 1 Volume

Turn the **aux 1 volume control (11)** to the left/right to decrease/increase the setting. The adjustment range is from –∞ to +10 dB.

5.11.   Setting Media Player/Aux Volume

Turn the **media/aux volume control (10)** to the left/right to decrease/increase the setting. The adjustment range is from –∞ to +10 dB.

5.12.   Setting Device Volume

It is possible to set the volume of the device in all 4 operation modes.

01) Operate the device in one of the available operation modes. See **5.4.1. FM Mode**, **5.4.2. DAB+ Mode**, **5.4.3. Bluetooth Mode** or **5.4.4. USB Mode** on pages 16–21 for more information.
02) Press and hold down the **FORWARD/VOLUME + button (B)** or the **BACKWARD/VOLUME – button (G)** to increase/decrease the volume. The display shows:

DAP
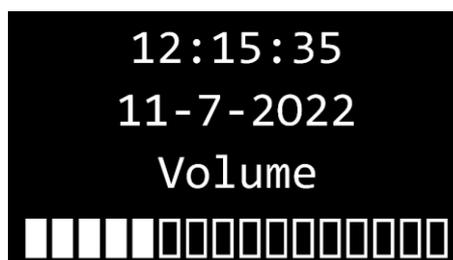
5.13. Remote Control

The device can be controlled with an IR remote control. The remote control is included in the delivery.

⚠	**DANGER** **Do not ingest batteries, chemical burn hazard**

The remote control accepts 2 x AAA batteries. If the batteries are swallowed, they can cause severe internal burns in just 2 hours which can lead to death.

5.13.1. Installation of the Batteries

The supplied remote control is delivered without batteries. It accepts 2 x AAA 1,5 V (alkaline) batteries. To install the batteries:

01) Press on the battery compartment cover and move it down to open (Fig. 09).
02) Insert 2 x AAA 1,5 V batteries into the battery housing (Fig. 10).
03) Close the battery compartment cover (Fig. 11).

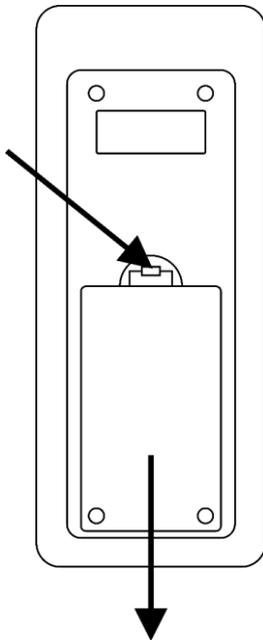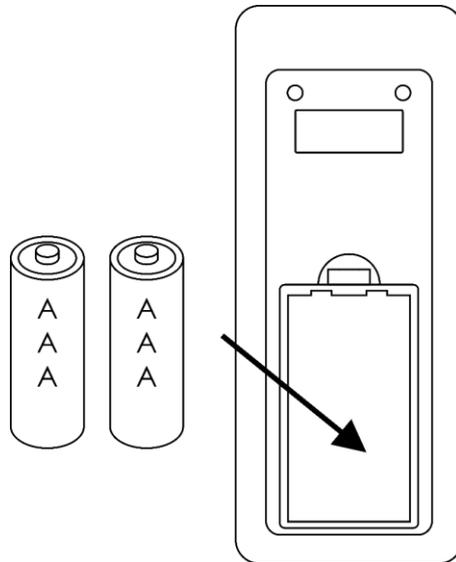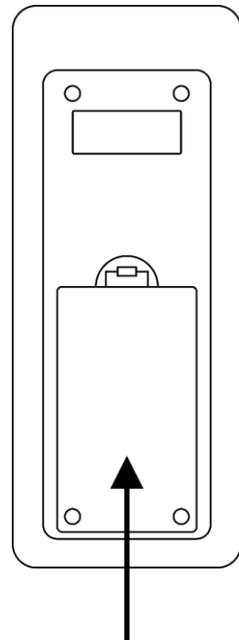**Fig. 09**   **Fig. 10**   **Fig. 11**

Note:

Make sure that you install the batteries with correct polarity orientation.

5.13.2. Remote Control Functions

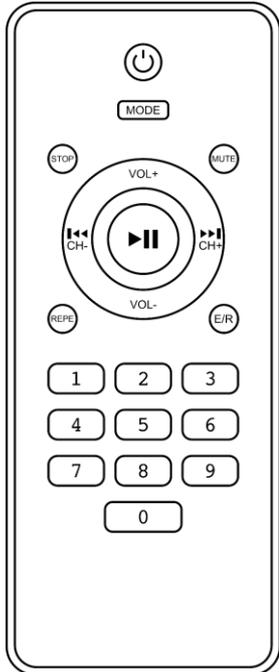| Button	Description	Function
⏻ On/Off	On/Off	Turns stand-by mode on/off
MODE	Toggle mode	Toggle control modes
0 — 9		• Press to select presets (FM/DAB+) • Press and hold down for 2 seconds to save presets (FM/DAB+)
STOP	Stop	• Press to stop playback (Bluetooth/USB) • Press and hold down for 2 seconds to enter the settings menu (all modes) • Press to return to a previous screen (all modes) • Press to browse through information screens (all modes)
MUTE	Mute	Turns mute on/off (all modes)
⏮ CH-	Channel/file –	• Press to navigate through the main menu (all modes) • Press to scroll through the available options (all modes)
⏭ CH+	Channel/file +	• Press to stop auto scan (FM) • Press to manually tune the radio (FM/DAB+) • Press to select radio stations/music files (all modes)
▶❚❚	Play/Pause	• Press to start auto scan (FM/DAB+) • Press to confirm choices (all modes) • Press to enter submenus (all modes)
VOL-	Volume –	Decrease/increase the volume
VOL+	Volume +	
REPE	Repeat	• Press to set playback mode (USB) • Press to recall presets (FM/DAB+) • Press and hold down for 2 seconds to store presets (FM/DAB+)
E/R	E/R	No function

Fig. 12

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6.   Troubleshooting

This troubleshooting guide contains solutions to problems which can be carried out by an ordinary person. The device does not contain user-serviceable parts. Unauthorized modifications to the device will render the warranty void. Such modifications may result in injuries and material damage. Refer servicing to instructed or skilled persons. Contact your Highlite International dealer in case the solution is not described in the table.

Problem	Probable cause(s)	Solution
The device does not function at all	No power to the device	● Check if power is switched on and cables are plugged in
	Main fuse is blown	● Replace the fuse. See **7.3.1. Replacing the Fuse** on page 29
No sound	The volume is set to minimum	● Increase the volume
Some radio stations do not work	Stations are not broadcasting at this time of the day (time zone)	
	The maximum number of listeners is reached	
	The URL is out of date	● Tune in again (URLs are updated daily)
DAB+ or FM does not work or the signal is weak		● Reset the device's parameters to the default factory settings. See **5.5.8.3. Factory Reset** on page 25 ● Extend the antenna ● Move the device closer to a window ● Check if there are electrical devices that cause interference
Playback stutters (buffering)	Bandwidth is too low or busy	● Test reception with another station
The device does not respond to the remote control	The remote control is out of the range of the sensor of the infra-red port	● Walk closer to the device or change the angle at which you point the remote control to the device. See **5.13. Remote Control** on page 26
	The batteries in the remote control are depleted	● Change the batteries of the remote control

7.   Maintenance

7.1.   Safety Instructions for Maintenance

⚠	**DANGER** **Electric shock caused by dangerous voltage inside**

Disconnect power supply before servicing or cleaning.

7.2.   Preventive Maintenance

❗	**Attention** **Before use, examine the device visually for any defects.**

Make sure that:

● All screws used for installing the device or parts of the device are tightly fastened and are not corroded.
● There are no deformations on housings, fixations and installation points.
● The power cables are not damaged and do not show any material fatigue.

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7.2.1. Basic Cleaning Instructions

To clean the device, follow the steps below:

01) Disconnect the device from the electrical power supply.
02) Allow the device to cool down for 5 minutes.
03) Clean the device with a soft, lint-free cloth.

Attention

- Do not immerse the device in liquid.
- Do not use alcohol or solvents.

7.3. Corrective Maintenance

The device does not contain user-serviceable parts. Do not open the device and do not modify the device.

Refer repairs and servicing to instructed or skilled persons. Contact your Highlite International dealer for more information.

7.3.1. Replacing the Fuse

DANGER
Electric shock caused by short-circuit

- Do not bypass the thermostatic switch or fuses.
- For replacement use fuses of the same type and rating only.

Power surges, short-circuit or incorrect electrical power supply may cause a fuse to burn out. If the fuse burns out, the device will not function anymore. If this happens, follow the steps below:

01) Disconnect the device from the electrical power supply.
02) Allow the device to cool down for at least 15 minutes.
03) Loosen the fuse cover with a screwdriver and remove the fuse holder.
04) If the fuse is brown or unclear, it is burned out. Remove the old fuse.
05) Insert a new fuse in the fuse holder. Make sure that the type and the rating of the replacement fuse are the same as the ones specified on the information label of the product.
06) Replace the fuse holder in the opening and tighten the fuse cover.

8. Deinstallation, Transportation and Storage

- Disconnect power supply before deinstallation.
- Use the original packaging to transport the device, if possible.
- Clean the device before storing. Follow the cleaning instructions in chapter **7.2.1. Basic Cleaning Instructions** on page 29.
- Store the device in the original packaging, if possible.

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9. Disposal

Correct disposal of this product

Waste Electrical and Electronic Equipment

This symbol on the product, its packaging or documents indicates that the product shall not be treated as household waste. Dispose of this product by handing it to the respective collection point for recycling of electrical and electronic equipment. This is to avoid environmental damage or personal injury due to uncontrolled waste disposal. For more detailed information about recycling of this product contact the local authorities or the authorized dealer.

10. Approval

CE

UK
CA

Hereby, Highlite International declares that the device PA-380TU, product code D6170, is in compliance with Directive 2014/53/EU (RED – Radio Equipment Directive).

The full text of the EU declaration of conformity is available at the respective product page on the website of Highlite International (www.highlite.com).

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