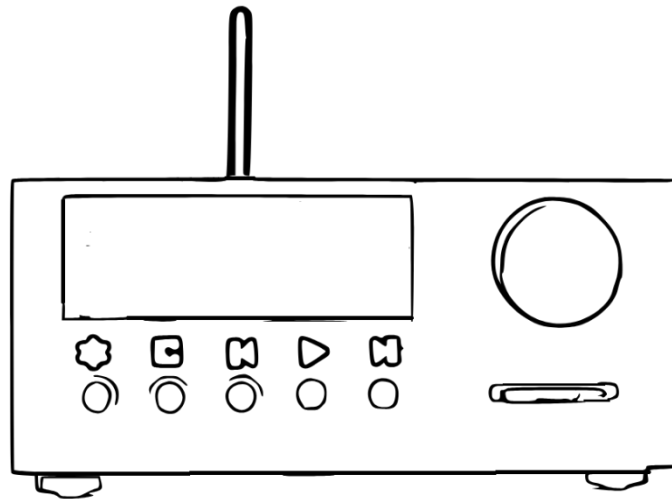


ESP32_MP

Digital Audio Player and Streamer

User Manual Software

Version ENG july 2025
Firmware version 20250724



CD Quality Digital Audio Player and Streamer

Streaming from Internet Radio

Streaming from UPnP media server

Streamin from Bluetooth

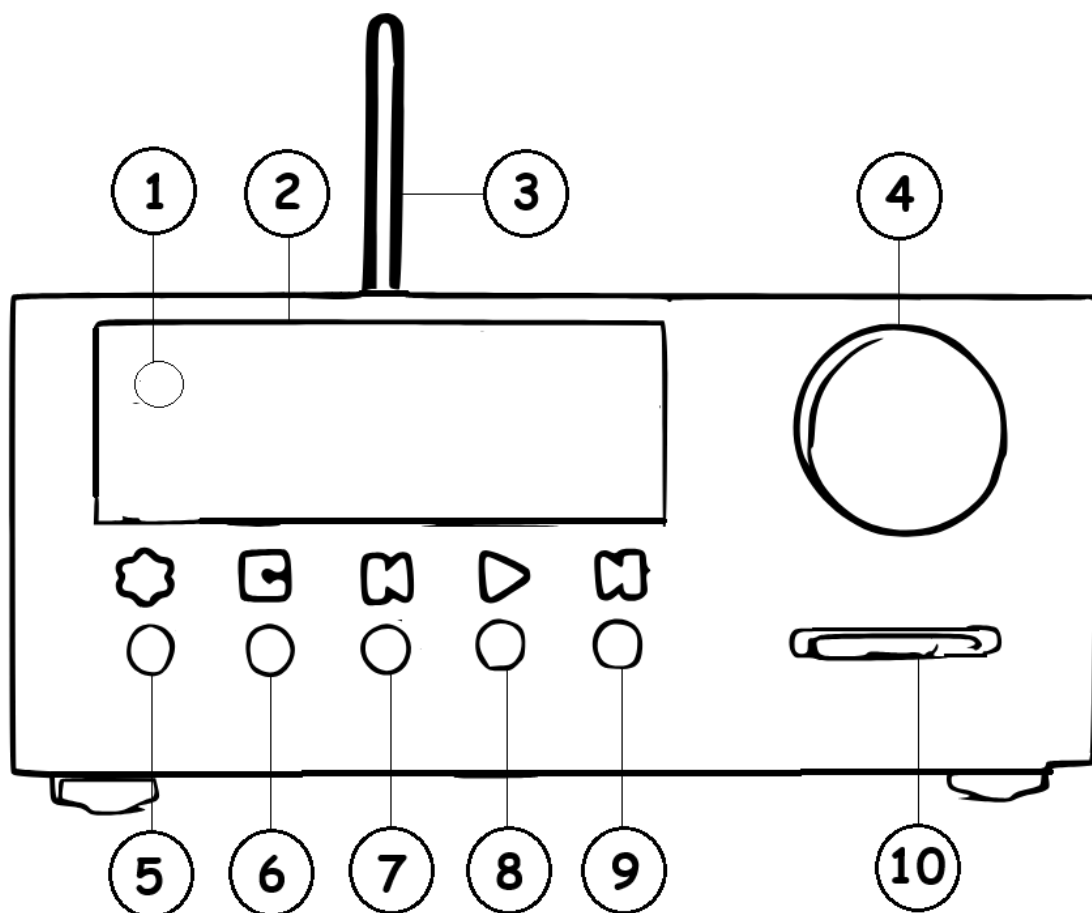
Play from SD Card

Content

1. Components and functions
2. Menu configuration
3. WiFi configuration
4. internet Radio
5. Radio Station configuration
6. UPnP Player
7. SD Player
8. Bluetooth
9. Remote control
10. Display
11. Characteristics

1. Components and function

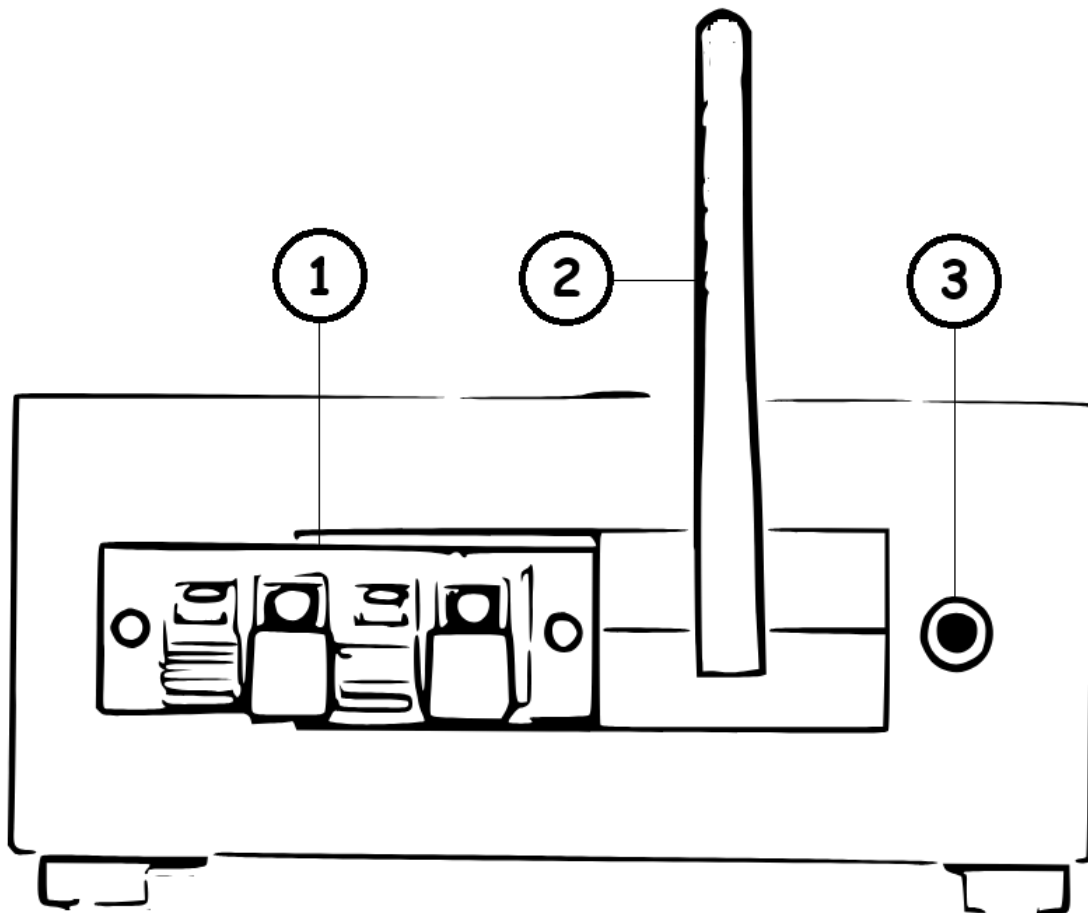
The media player features a display for information, a series of buttons, and a multifunction knob that also functions as a button. Description of the features available on the front of the player.



- 1 IR sensor
- 2 Display
- 3 Antenna
- 4 Knob set volume / select track (press to confirm) / On-Off
- 5 Settings
- 6 Input Select
- 7 Track forwards
- 8 Play / Pause
- 9 Track backwards
- 10 SD Card slot

To turn the device on, briefly press the knob; to turn it off, press and hold the knob. During standby mode, the unit can be programmed to display the date and time on the display. In standby mode, power consumption is higher, and Wi-Fi and internet access are required for automatic clock synchronization. If you choose not to display the clock in standby, power consumption will be lower, and internet access will only be required when listening to internet radio.

Description of the features available on the back of the player.



- 1 Speaker connector
- 2 Antenna
- 3 Power connector

Connect the speakers to the left and right speaker jacks (speaker output) on the back of the unit. To do this, press the spring clips and insert the loose wire ends into the designated openings. Connect the external antenna for WiFi access. Connect the external power supply or power plug, depending on the hardware version you have assembled.

2. Menu configuration

Read Favor. radio

Your favorite radio stations are saved in the ESP32's internal memory, and they can be read and added to the playlist. The next command (Read radio in SD) lets you load the list of stations saved in SD into the playlist. If this was your last setting, you will find it every time you start the player.

Read radio in SD

Select the radio playlist on the SD card. In the SD card, you can create a folder called RadioPlaylist containing Text files. Each file contains the list of stations divided by genre or content. For example, you can create (internal RadioPlaylist folder) a file called Country.txt that contains only country radio stations. The lines in this file are in format: "station name" followed by comma followed by "URL" example:

Radio Country,<https://stream.laut.fm/country>

Country NY,<http://ns2.kmeathosting.com:8000/wtrb>
Music Country,<http://s1.logical.systems:9000/>
Country Music FM,<https://stream.laut.fm/countrymusicfm>

Read audio in SD

Loads the songs present in SD (mp3, FLAC...) into the play list (this is done automatically every time you select SD Player).

Scan UPnP Server

It scans the network for all media players and then allows you to select the one that will be the default each time you start the device.

No repeat

The selected song will repeat only once.

Repeat single

The selected song repeats continuously.

Repeat all

Plays all songs in sequence.

Repeat random

Play all songs in shuffle mode.

NB Repeat modes are only valid in SD Player and UPnP Player mode.

Amp OnOff

Enable or Disable amplifier power.

Configure WiFi

Set up your WiFi access credentials.

Clock OnOff

Set your device to display the date and time during standby mode.

Info

Displays the firmware version and network name.

The firmware version corresponds to the date it was uploaded.

NB Some functions are only active when you are in the relevant mode.

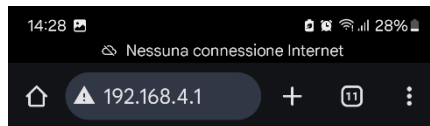
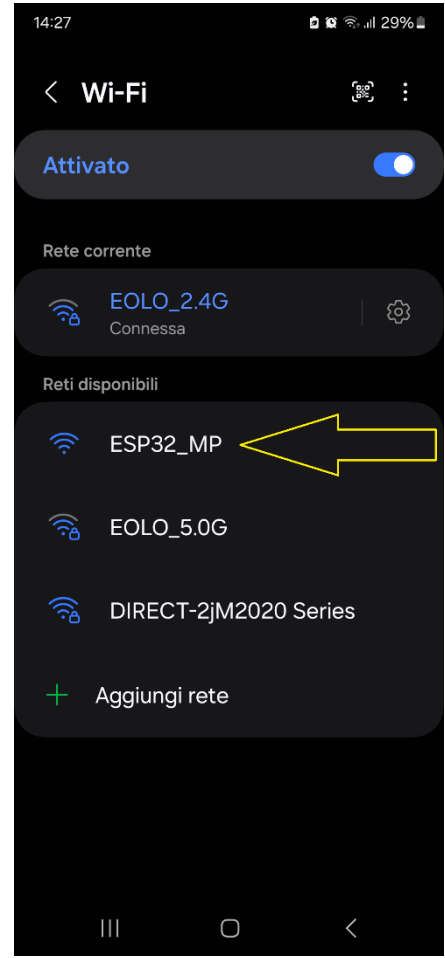
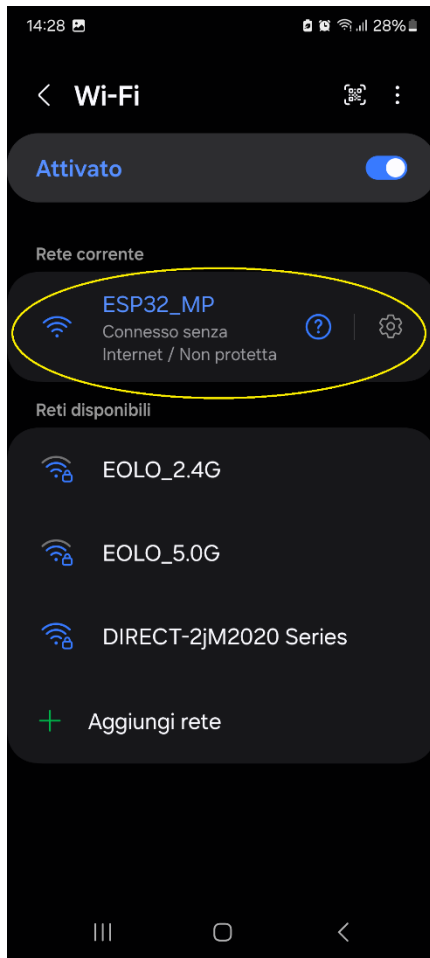
3. WiFi configuration

The device can operate in SD Player and Bluetooth streamer modes without requiring WiFi access. To use the UPnP Player functionality, you must connect to a WiFi network with a discoverable UPnP server. For Internet Radio functionality, you must be connected to a WiFi network with Internet access.

Use the buttons on the main unit to access the menu, rotate the dial to Configure WiFi, and then confirm by pressing the dial.

The ESP32 module will configure a local network (access point) to which you should connect with a mobile device. Once connected to the network named ESP32_MP, launch your browser and enter the URL 192.168.4.1. The Web Server for connection management will open. Click Configure WiFi and follow the instructions on the display.

Once the configuration is complete, the device will automatically reboot.



WiFiManager

ESP32_MP

Configure WiFi

Info

Exit

Update

No AP set

4. Internet Radio

Press the source selection button on the main unit or remote control until iRadio appears on the display. The software will automatically load the default songs saved in the internal memory into the playlist. Playback will automatically start from the last selected station. Use the Next and Previous buttons to select the next or previous song. By clicking the knob or OK on the remote control, you can open and scroll through the song list for easier selection..

5. Radio station configuration

In Internet Radio mode, open a browser and type http://ESP32_MP. This will open the Web Server for managing radio stations saved in the device's internal memory. From this screen, you can read the list of stored radio stations and control playback. You can use the drop-down menu to select a station and press play to play it. The list contains a maximum of 20 stations. To add a new station, you must first delete a station from the list with the Delete Station button. To add a new station, click Search Station. This will open the Radiolise service, which allows you to search for and listen to radio stations in search of your favorite. After selecting the station you are interested in, click on the menu (three dots) to open the station information. Copy the Name value into the Station Name field of the Web Server and copy the Stream URL value into the Station URL field. Then click Add Station to add the new radio station to the list..

ESP32-MP

Info

Status: connected

Info: station list updated

Station Play

Select station

Radio105

Load list Station

Vol

Vol

Prev

Play

Next

Station Manage

Add station

Station name:

Station URL:

+ Add Station

Delete Station

Search Station

Station Manage

Add station

Station name:

101 SMOOTH JAZZ

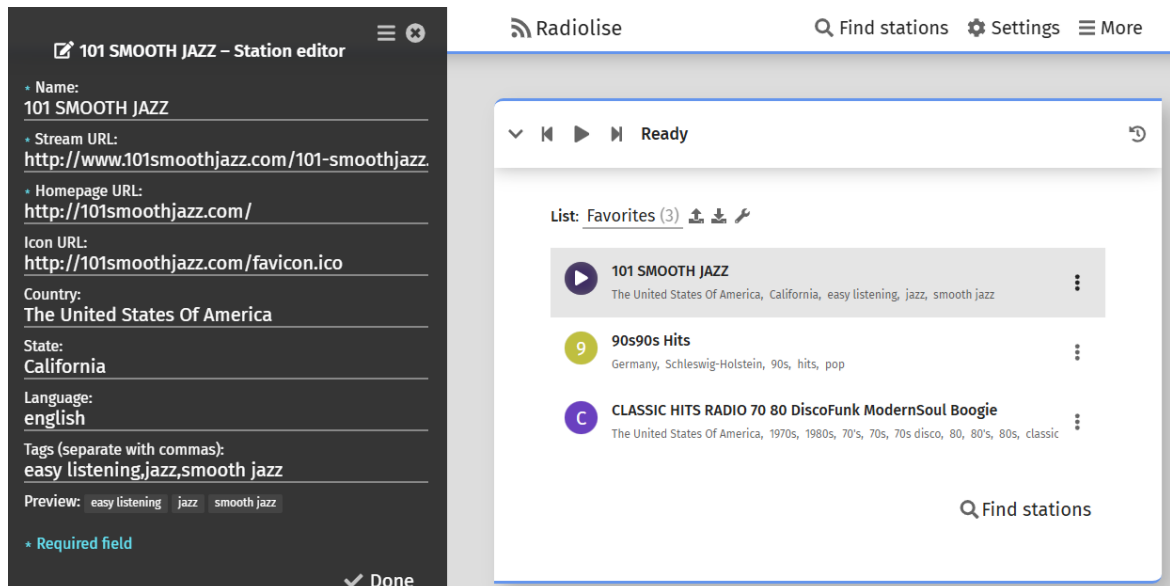
Station URL:

<http://www.101smoothjazz.com/101-smoothjazz.m3u>

+ Add Station

Delete Station

Search Station



6. UPnP Player

If you haven't already done so, you'll need to scan your WiFi network for UPnP servers. Select Scan UPnP Server from the menu and wait for the operation to complete. If music servers are available, rotate the knob to select the one you want, then confirm by clicking the knob. The server will be saved and used by default each time you start up.

Press the source selection button on the main unit or remote control until UPnP appears on the display. The software will automatically load the songs available on the UPnP server into the playlist. Playback will automatically begin from the last selected station. Use the Next and Previous buttons to select the next or previous song. By clicking the knob and OK on the remote control, you can open and scroll through the song list for quicker selection..

7. SD Player

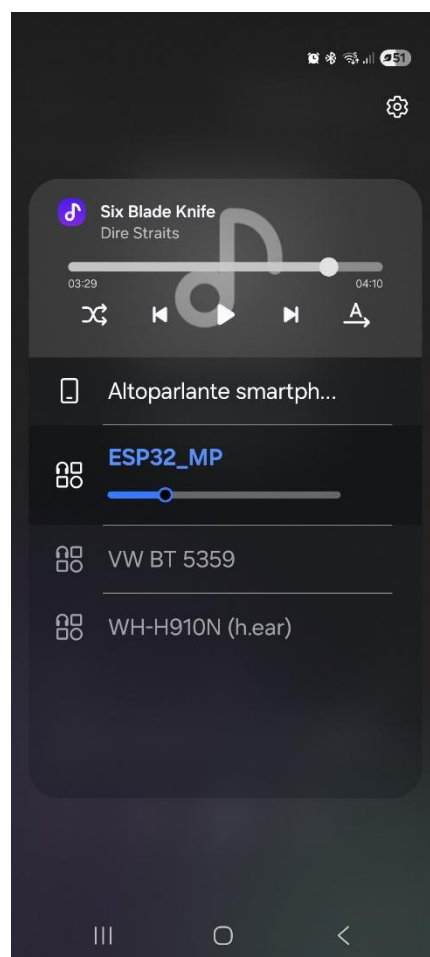
Press the source selection button on the main unit or remote control until SD Player appears on the display. The software will automatically load the list of songs on the SD card into the playlist. Use the Next and Previous buttons to select the next or previous song. By clicking the knob and OK on the remote control, you can open and scroll through the song list for quicker selection.

8. Bluetooth

Press the source selection button on the main unit or remote control until Bluetooth appears on the display. The device will wait for a connection from a mobile device such as a smartphone.

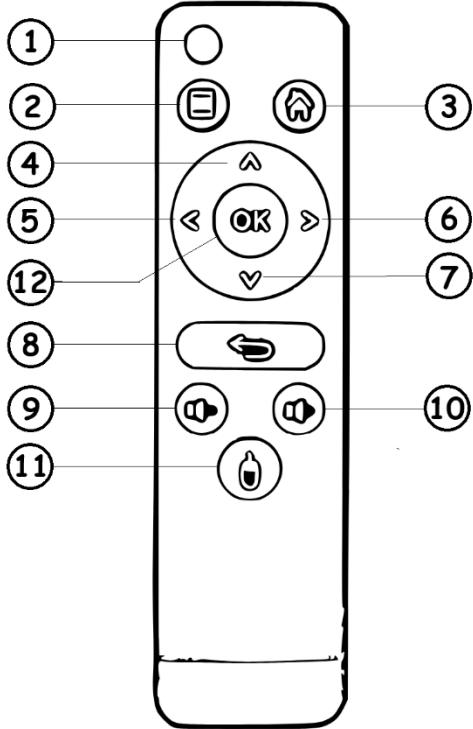


On your mobile device, in the settings, select connections and then Bluetooth. In the list of devices listed, click on ESP32_MP to connect. In the music application you're using or in the system settings, you can now use the ESP32_MP player as a media output. The display will show the artist of the song and, if applicable, the song title. From the device, you can control both the song and the playback volume.



9. Remote control

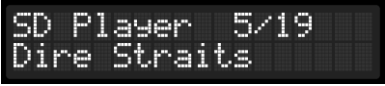


All functions (except menu management) can be controlled via remote control. The functions are described in the following figure..

	<p>Remote control function</p> <p>1 ON/OFF 2 Display view mode 3 – 4 – 5 Track backwards / Backwars select 6 Track forwards / Forwards select 7 – 8 Select source 9 Decrement volume 10 Increment volume 11 Play / Pause 12 Open select track / Confirm</p>













Repeatedly pressing the display mode button changes the information displayed, as described in the next chapter.

10. Display

The display provides real-time information about the operating and playback modes. Repeatedly pressing the Display Mode button on the display changes the information displayed:

	Display of operating mode and artist / radio station name
	Display artist / radio station name and song title
	Display operating mode and playing time

Display simbols

	Now Playing
	Pause playback
	Bluetooth started
	No repetition
	Repeat the current song
	Shuffle Playback
	Play in sequence
	WebServer started and client connected
	WiFi connection OK
	Unstable WiFi connection
	No WiFi connection
	enabled selection

11. Characteristics

Technical characteristics ESP32_MP

Power supply	AC voltage 100 – 240 V
AC input frequency	CA 50/60 Hz
Power consuption	10 - 80 Watt depends on the configuration
Power consuption in standby (NO clock)	0,5 Watts
Power consuption in standby (with clock)	1 Watts
Network connection (WLAN)	
Supported networks	WiFi IEEE 802.11a/b/g/n
Supported frequency range	WiFi 2.412 - 2.472 GHz
Player	
Supported formats	MP3, FLAC, WAV, AAC (up to 48 kHz, 16 bit)
Maximum bit rate	1440 kbit/s (FLAC, WAV) From 32 kBit/s to 320 kBit/S (MP3, AAC)
Tags supported	yes
Maximum number of radio stations	20
Maximum number of songs in SD and UPnP	250
BLUETOOTH	
BLUETOOTH version	V4.2
Power class	Classe 1
Reach	About 10 meters (depending of the environment)
BLUETOOTH profile	A2DP (Advaced Audio Distribution Profile, AVRCP (Audio/Video Remote Control Profile)
Amplifier	
	Output power from 2 x 15 Watt to 2 x 30 Watt (depending of the hardware version)