WallboxPlayer – WiFi

www.wallboxplayer.com

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The WallboxPlayer is a device that turns your wallbox into a music player. This QuickStart manual provides basic instructions on how to install and operate the WallboxPlayer with the WiFi option. For complete instructions and options, refer to the full manual. In case you have any questions, contact me anytime.

WallboxPlayer Features

- **Have your wallbox play your favorite music with or without a jukebox**
- **Song queue and/or random play**
- **Wireless/remote control capabilities**
- **Audio (3.5mm jack) and 2 speaker outputs, optional Spotify**

This addendum describes the WiFi connection features. It is assumed the WallboxPlayer has been installed and setup in a Wallbox. The WallboxPlayer requires a 2nd SD card option and needs to have the short antenna installed for good WiFi reception – the unit is only capable of 2.4GHz.
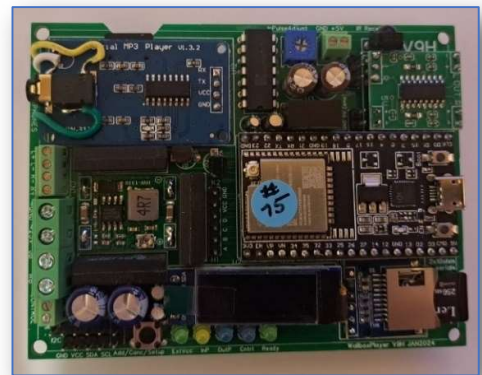
1   General Description

The WallboxPlayer supports a range of wallboxes. Music is stored on a microSD card and can be filled matching the wallbox titles.

The WallboxPlayer board has an on-board MP3 player that accepts a user-filled microSD card. It has a jack plug for headphones or external audio. The board has a second microSD for supporting functions. Spotify is optional (beta). The board has optional WiFi /remote App capabilities. There are buttons for HW reset on the microprocessor and ('Select') to do the setup, cancel or add a play. All settings are done in the setup through software and stored.

LEDs onboard are used to display status:
- ExtVcc [green] Lights when an external 24V is connected (converted to 5V), supplying the board
- Ready   [green] – shows that system is listening/ready to accept inputs (from wallbox or app). When player is transmitting or receiving, the green light will briefly be off.

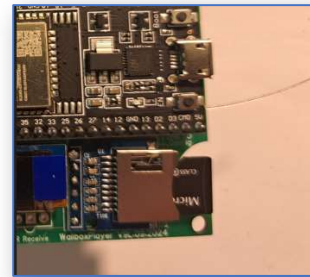## 2   Installation – WiFi settings

2.1   Setting the configuration file

The configuration SD card has a configuration text-file (JSON). Use a text or JSON editor to edit `CONFIG.JSON`. Numbers and text values between brackets can be changed. Please ensure the JSON consistency remains. The `CONFIG.JSON` file should be as follows with your home WiFi settings filled in.

Fill in your settings in the **CONFIG.JSON file** (note the settings are also saved on the WallboxPlayer memory once entered). Below is example, they depend on your wallbox type. Settings in Red are WiFi settings. SD card:

```
{
  "Wallbox_in": 5,
  "Jukebox_out": 1,
  "Autoplay_mode": 0,
  "Volume": 19,
  "Equalizer": 5,
  "Control_relay": 0,
  "Pulse_adjust": 100,
  "Autoplay_number": 200,
  "This_device_name": "WallboxPlayer",
  "This_device_ip": "192.168.1.215",
  "Network": "your-wifiname",
  "Password": "your-wifi-password",
  "//Comment0": "// End of configuration - below is notes, not read",
  "//Comment1": "// Use number [0,1] for y/n settings",
  "//Comment2": "// Wallbox values Set to 1=MP3player to play songs",
  "//Comment3": "// Wallbox/Jukebox values Seeburg 2=3W1 3=3W100 4=3W160 5=3WA 6=SC1 7=DEC_DMT 8=DEC_Direct",
  "//Comment4": "// Wallbox/Jukebox values AMI 9=W40 10=W80 11=W120 12=W200",
  "//Comment5": "// Wallbox/Jukebox values Rockola 13=1504 14=1544 15=1555 16=1558",
  "//Comment6": "// Wallbox/Jukebox values Wurlitzer 17=5207 18=5210 19=5220 20=5225 21=5250",
  "//Comment7": "// Wallbox/Jukebox values 22=Wireless, 23=Spotify",
  "//Comment8": "// AutoPlay 0=no 1=3s 2=60s 3=5min 4=60min",
  "//Comment9": "// Volume [0...24], Equalizer 0=Flat 1=Pop 2=Rock 4=Classic 5=Bass",
  "//Comment10": "// Control_Relay 0=None 1=JBCancel 2=WBCoin 3=WBCredit, 4=WBSelect 5=ON-OFF"
}
```

Notes:

- ✓ Wallbox_in is your wallbox type (see list of compatible devices in the comments).
- ✓ Use This_device_name to set give your unit a name (optional for mDNS).
- ✓ Use This_device_ip to use a STATIC address that can be easily found and accessed on your home network (e.g. 192.168.1.216). If left "", a dynamic address will be selected by your router (look for Espressif devices). Receiver name and IP do not need to be filled in. If the static IP is successfully assigned, this will be shown in the display and this IP can be bookmarked on PC or Smartphone to easily access. If IP is static, Gateway default is x.x.1.1.
- ✓ Use Network for your WiFi SSID and Password for the your WiFi Password. Note the Network must be 2.4GHz.
- ✓ Make sure the JSON structure with quotes is correct and save the file to the SD card.

Reinsert the SD card with the configuration file and start the WallboxPlayer (you can have safety copies for yourself on the SD if you want, only CONFIG.JSON is read).

2.2　Starting the WallboxPlayer

After connections have been made, powering up should show screen startup messages with release version and wallbox type. Following is displayed after startup…
- ❖ Reading configuration on 2ND SD card
- ❖ MP3 player check with number of music files on MP3 song SD
- ❖ Connecting WiFi with SSID (@2.4G)

After this, " Select Song" is shown.

2.3　Other Setup options with onboard button

The onboard 'select' (cancel/add/setup) button to perform setup serves two functions, its primary function is to cancel the currently playing song or add a song when nothing is playing. The secondary function of this

button is used within the setup menu which follows. The setup menu is accessed pressing the 'select' button for 5 seconds. After the instruction, which will displayed for a few seconds, subsequent setting will be shown to be modified. Pressing the button will change the value of the item, waiting will show the next config item.

The setup menu allows to configure the following settings:

Wallbox In: This will configure what input signal is detected by the board, the type of wallbox the board is connected to. Compatible choices: NONE, MP3, Sb_3W1, Sb_3W100, Sb_3W160, Sb_3WA, Sb_SC1, Sb_DEC, Sb_DEC-direct, Ami_W40, Ami_W80, Ami_W120, Ami_W200, Roc_1544, Roc_1555, Roc_1558, Wur_5207, Wur_5210, Wur_5220, Wur_5225, Wur_5250, WiFiControl

AutoPlay: This value sets the time in seconds until a random song is added to the queue. Selecting 0 (=Default) will disable this function. Setting it to 60 will add song after one minute of idle time. Choices: 0, 15, 60, 300, 3600.

Volume: This will determine the output volume of the MP3 player (jack output and speakers). It can be adjusted from 0 to 24. Choices: 0…24.

Equalizer: This will select the available MP3 equalizer setting (jack output and speakers). Choices: FLAT, POP, ROCK, CLASSIC, BASS. Suggested are Pop or Bass.

AutoPlay_number: If selecting this number with the buttons, (1=A1 etc.) will select autoplay and play random songs until selected again. (0, 1 … 159, 160, 200 (default is 0). Suggested is the highest number selectable (100 or 160 or 200).

Control_mode: determines the function of the additional on-board relay: NONE, JBCANCEL, WBCOIN, WBCREDIT, SELECT, ON-OFF (default is ON-OFF).

Tools: This menu choice will allow system updates, reset values, restart and a measure/listen utility mode. "RESTART" will restart the device. Note that MP3 player will keep playing until early in the startup process. Selecting "DEFAULTS" will set values of settings back to factory defaults. Choices: NO, RESTART, DEFAULTS, UPDATEMODE, LISTEN, SPOTIFYSETUP.

3   PLAYING MUSIC

The WallboxPlayer has the following features:
The following features are available
- Songs can be selected on the wallbox, play will start after selection or when a song is playing, song will be added to the queue (the WallboxPlayer will keep track of the queue).
- If a song is playing, the 'select' button will cancel the song (and play next in queue)
- If no song is playing, pressing the 'select' button will add a random song to the queue
- After choosing the AutoPlay number/selection (as set in the setup, e.g. 100, 160, 200), random songs will automatically be added and played (the MP3 player will select any song from the SD card, select the AutoPlay number selection again to switch off the function.

3.1   Songs on the music SD card

The MP3 files are stored on a micro-SD card. Ensure the card is clicked in. The microSD card must be formatted as FAT32 (max 32GB)! The number of (.MP3) files can be as many selections as the wallbox can select. The best place for the MP3 files is in the root folder of the card. When copying files from the PC onto the SD card, Windows can hustle the order that then does not match the file/selections. A foolproof way to get the numbering and order right is as follows:
- Format the SD card
- Copy files from computer to SD with drag and drop, one at a time starting with the first one
- Wait until each file is copied, then copy the next (every time just one at a time)

This way, windows will not change the order as every file can only be added and has a later timestamp than the previous one. There is a second microSD (FAT32) slot for configuration settings and songname information.

Some configurations have a second SD card, see next chapter, this will store song titles that are displayed on the display (and web browser). A file `SONGS.TXT` with titles for each song will then be used. See WallboxPlayer manual.

The WallboxPlayer will also play MP3 songs that go beyond the selectable numbers (160/200). This is great for random play and hearing (random/surprise) songs other than the ones on the labels. For this, the best way is to create an extra folder (after having put the 160/200 songs on the SD) and simply fill it with the songs you want to hear in random play mode.

4 THE WEB APP

4.1 WebApp (WiFi)

Open a web browser on your PC or smartphone to the static address set in the configuration file (above). If the setting is left "", the WallboxPlayer will find a dynamic address.
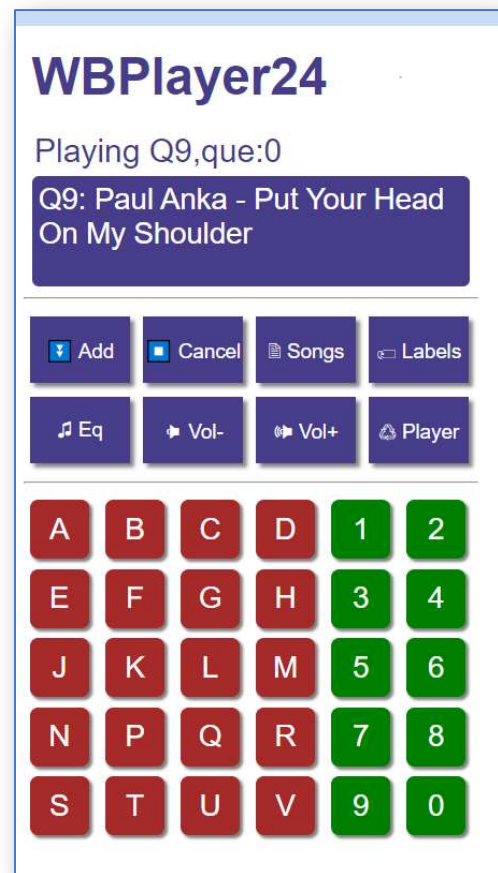
With the WebApp, you can now control the player and with the status of the player, and song being played is shown. Refresh is done regularly.

Display:
- ❖ Line1: the status line, added songs, queue
- ❖ Line2: shows the currently playing song

Buttons:
- ❖ Add: adds a random song to the queue
- ❖ Cancel: cancel current song and if there is a song in the queue (or AutoPlay) play next song
- ❖ On/Off: control extra onboard relay
- ❖ Eq: toggle MP3 player equalizer between 5 different settings (not for Spotify)
- ❖ Vol- and Vol+: Decrease and increase volume
- ❖ Songs: show song list and select
- ❖ Labels: Show song labels, can be edited and printed
- ❖ Player: Optional – switch to Spotify
- ❖ Number and Letter keys: Select a song and add to queue. If AutoPlay number is selected, AutoPlay will start/stop.
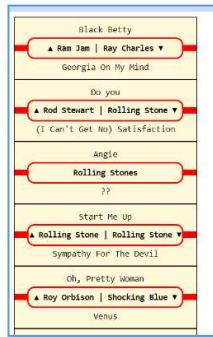
4.2 Songs labels

For configurations have a second SD card, this will store song titles that are displayed on the display (and web browser). Files with titles for each song (from filename) will then be generated. To generate these files, insert the MUSIC SD (with mp3's) in the 2nd SD slot and (re)start the device. Files **SONGS.TXT**, **PRINT.HTML** and **LABELS.HTML** are generated. These can be used to help make song listings and labels (open with computer).

Files can be simply edited/corrected by clicking and editing, before printing. After generating files, insert music SD in the blue player SD slot again. The SONGS.TXT file can be copied to the configuration SD card.

These pages can also be accessed by xxx.xxx.xxx.xxx/songs; /labels and /print.

Please contact me in case of questions or inquiries or items not described here.

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