



WallboxPlayer Install – United UWB1

www.wallboxplayer.com

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This 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. For complete instructions and options, refer to the full manual. In case you have any questions, contact me anytime.

1 General Description

The WallboxPlayer supports a range of pulse-controlled jukeboxes. Tuning and customization is possible. Power to the player is provided from the wallbox, reducing the need for an extra power supply. Music is stored on a microSD card and can be filled matching the wallbox titles.

The WallboxPlayer board has connectors for most of the connections to be made to jukebox, wallbox, and speakers. The on-board MP3 player 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. 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. LEDs indicate pulses coming in or going out. The board features header connectors for an external 16x2 I2C LCD display, a DEC wallbox. All settings are done in the setup through software and stored. It has one trimmer to tune the sensitivity/speed of the incoming pulse signal. The on-board processor can be programmed through a micro-USB connector (or updated over-the-air). Stand-alone, the board is powered through the external 24VAC and converts this to 5V through the on-board voltage converter. The board is 7.5 cm x 9 cm and can be mounted in a wallbox, or outside in a separate housing.

The device has been designed for and tested on a variety of. Other wallboxes are implemented on basis of documentation/simulators and will be added to the compatibility list when verified.

The 24VAC power from the wallbox is used, either through the jukebox or a separate widely available 24VAC (48VA; 2A) transformer or adapter. Use a fuse in primary and/or secondary power lines to avoid short circuit issues. The WallboxPlayer can also be powered by the 24VAC transformer installed in a jukebox.

The MP3 SD card slot can be found on the top left under the MP3 player. The contacts should be on your side and visible before inserting. 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 16GB). The number of (.MP3/.WAV) files can be as many as the wallbox can select, with some extra music files that will be played in AutoPlay mode. Music files can be saved in the root, numbered in an /MP3/ folder, or in an Album-mode. See the manual for details on how to best put your music files onto the music SD card.





Speaker output is via the (optional) onboard amplifier, two speakers (max 2*3W) can be connected. These speakers can be within the wallbox or external. Speaker output is via the connector labeled SpL+ SpL-, SpR+ and SpR-. Note the difference between wiring two separate speakers or a 3-lead speaker connection (see further below in this doc)!

LEDs onboard are used to display status:

- ExtVcc [green] Lights when an external 24V is connected (converted to 5V), supplying the board
- InP [yellow] – lights up when a wallbox pulse is detected
- Cntrl [blue] – indicates enabling ‘make selection’ lightbulb.
- Ready [green] – shows that system is listening/ready to accept inputs (from wallbox or app).

The MP3 player mounted on the board has a red light that lights when the player is ready and blinks when playing a song. The microprocessor mounted on the board has an onboard red light that is on when the system is ready.

Adjustments are not required. In case of issues the blue potentiometer can be used to tune the sensitivity of the input pulse from the wallbox, detected by the system. It allows for either slower turning motors or 60Hz to work properly. See note and setting for 60Hz in setup section.

2 Installation

Setup, tools, and materials required for the installation:

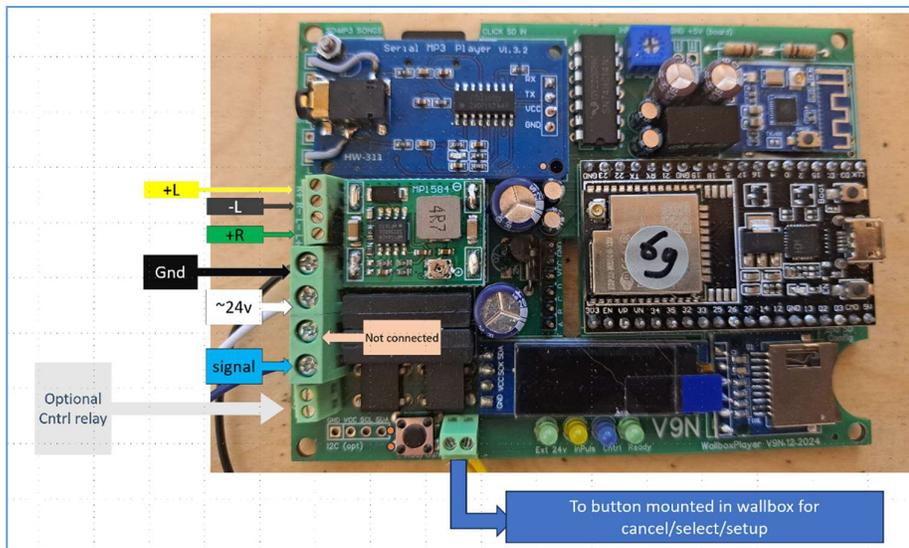
- Screwdriver set, soldering iron (to extend cables if required), screws and isolation materials
- WallboxPlayer board
- Mounting materials for WallboxPlayer
- Optional enclosure case if not installed in wallbox
- Audio device or speakers
- Cables with fork /spade connector
- Jack plug for connection with amplifier / cables to internal or external speakers
- 24V AC power supply or power through jukebox (optional 1500mA fuse)
- Shrink tubing (optional) to make or extend cable connections

As a WallboxPlayer, connected to the wallbox only, make connections to the board as shown. Depending on the installation, connect to the wallbox as shown below.

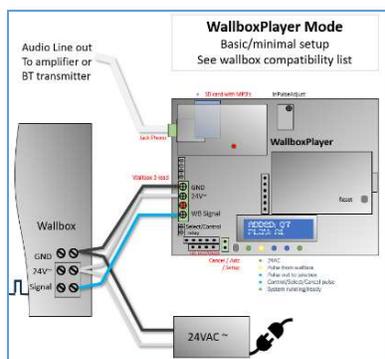


After connections have been made, powering up should show screen startup messages with release version, jukebox and wallbox type (including number of selections), and number of plays/selections. After a few seconds the system will show the green status light and be available for selections and will display 'Select Song'.

When during startup, the MP3 files cannot be read, the status LED will blink twice, and the red MP3 player LED will not be on.



Overview of wiring to wallbox:



The onboard 'select' 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 by pressing the 'select' button for 5 seconds. After the instruction, which will be 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 configuration item.

The setup menu allows you to configure the following settings:

Tools: This menu choice will allow system updates, reset values, restart and a measure/listen utility mode. "RESTART" will restart the device. Note that the 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. "No" will proceed to the next setup choice.

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, and other players.



Jukebox Out: for WallboxPlayer mode and audio output, this must be **MP3**. For other selections, it will send out a pulse to a connected jukebox. If output is Spotify (beta), and settings are correctly entered in the config, songs will be played on the linked Spotify account/device.

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 one of the available equalizers (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.) selects AutoPlay and play random songs until selected again. (**0, 1 ... 159, 160, 200 (default is 0/off)**). Suggested is the highest number selectable (**100 or 160 or 200**).

Speed_Adjust_Hz: to tune the timing setting for **United UWB1**. 50 for 50Hz. Setting can be changed for faster motors or higher frequency (60Hz).

Control_mode: determines the function of the additional on-board relay: **NONE, JBCANCEL, WBCOIN, WBCREDIT, SELECT, ON-OFF (default is ON-OFF)**. The "Select mode" can be used to enable the "Make selection" lightbulb in the wallbox, **WBCOIN** is to generate a coin drop after a selection is made.

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

3 INSTALLATION:

The best place is replacing the coin unit and putting the unit on Freeplay. There will be three wires to the wallbox (black = ground; white = 24V; blue = wallbox signal). The wallbox needs to be powered by 24V on correct wallbox connector slugs.

3.1 Prepare to mount the board

- Remove coin unit and remove any old cables that may have been cut

3.2 Preparing the wallbox

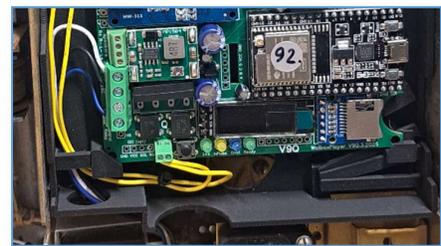
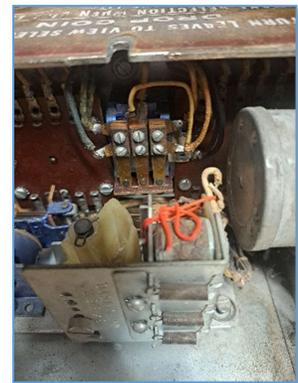
- Enable Freeplay (bind credit subtractor so that there is always credit).

3.3 Mounting the board and button

- Mount the WallboxPlayer with Coin-slide housing. Move in place so that coins come out in correct place.

3.4 Making connections

- Connect the 2 power leads (BLK and WHT) and the signal lead (BLU) from wallbox to WallboxPlayer (large middle screw connector, only 3 of 4p will be used, see diagram)
- Note: If 24VAC and GND are reversed, the display may mention this at startup and no pulses will be detected. Try reversing black and white.
- Connect 3.5mm audio jack or MP3 to your audio device or use Bluetooth.
- Connect the button for cancel/add to the board (green 2p connector)





3.5 Connecting the 24VAC transformer and powering up

- Connect the 24VAC (2A) transformer to wallbox connector (the first two screws from the left). The pulse wire (blue) is the third screw connector.
- After powering up, the WallboxPlayer will also power up and the display will show relevant information on status and number of songs etc. After starting up, “Select Song” will show.
- Press the “Select/Cancel/Setup button on the board to test if song will start. Press again to cancel.
- Make selection on the Wallbox with the buttons, If the wires are correctly connected, the yellow lamp will flash during rotor movement and pulses are counted/measured. If this is not the case, reverse the black and white cables (0-GND and 24V) on the green terminal. Song will start and number played will be shown.



3.6 Pairing optional Bluetooth

- When paired and connected, the red BT board LED blinks twice at ~5 sec interval.
- When idle and unpaired, the red led flashes slowly (~1sec interval)
- Short press the button for unpairing.
- To pair with a Bluetooth device, ensure it is not paired (with other device), put the Bluetooth speaker in pairing mode and press (2sec) the pair button, the red LED will blink slowly (at ~2sec interval) and start pairing
- For more information look at the KCX BT module documentation.



4 OPERATION:

- See the WallboxPlayer operation manual for how to select songs, fill the SD card and perform setup changes.

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

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