WallboxPlayer Install – AMI W and WQ

www.wallboxplayer.com

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This WallboxPlayer is a device that turns your wallbox into a music player. This manual provides basic instructions on how to install WallboxPlayer. Refer to the users manual on how to operate and use.

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 wallbox. The on-board MP3 player accepts a user-filled microSD card. It has a jack plug for external audio. The board has an optional data microSD slot for supporting functions. 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. Optionally, The board features header connectors for an external display. 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 board is powered through the external 24VAC. The board is 7.5 cm x 9 cm and can be mounted in popular wallboxes, or outside in separate housing.

The 24VAC power from the wallbox is used, either through the jukebox or a separate widely available 24VAC (48VA; 2A) transformer or adapter.

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.

For versions with the 2x3W amplifier, speaker output is via the (optional) onboard amplifier, two small speakers can be connected. These speakers can be within the wallbox or external. The speaker output is via the connector labeled SpL+ SpL-, SpR+ and SpR-. Note the difference between wiring two separate speakers or a 3-wire speaker connection (see further below in this document).

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.
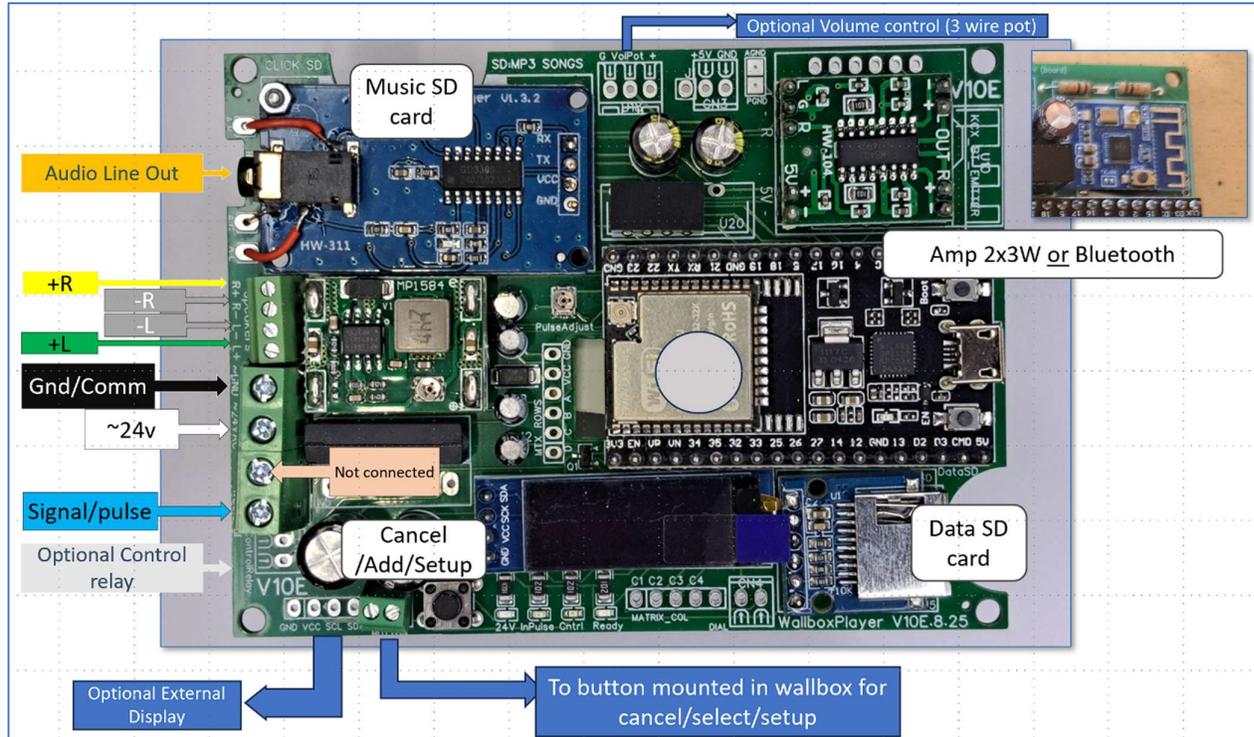
Adjustments are not required. In case of issues the (blue or small smd, depending on board version) potentiometer can be used to tune the sensitivity of the input pulse from the wallbox, detected by the system. It allows for either slower turning motors or 60Hz to work properly.
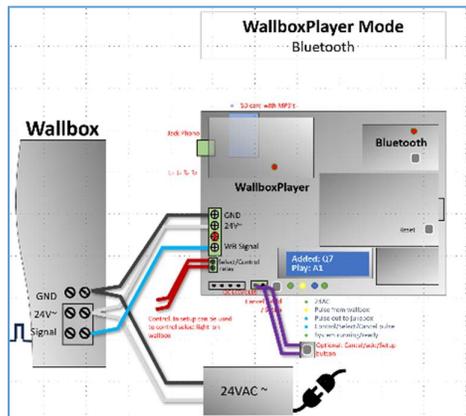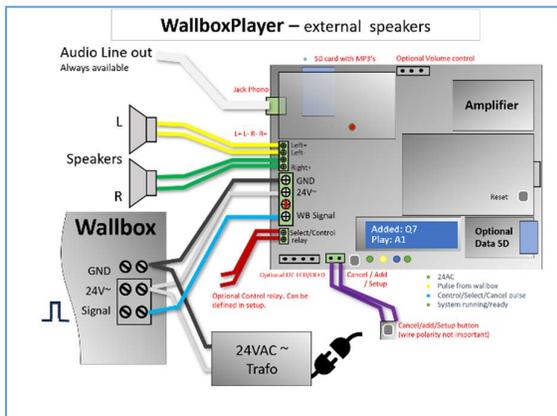
1   BOARD AND CONNECTIONS

Connectors on the WallboxPlayer board:

Optional Volume control (3 wire pot)

Music SD card

Audio Line Out

Amp 2x3W or Bluetooth

+R

-R

-L

+L

Gnd/Comm

~24v

Not connected

Signal/pulse

Optional Control relay

Cancel /Add/Setup

Data SD card

Optional External Display

To button mounted in wallbox for cancel/select/setup

Overview of wiring to wallbox (jack, Bluetooth or 2x3W amp):
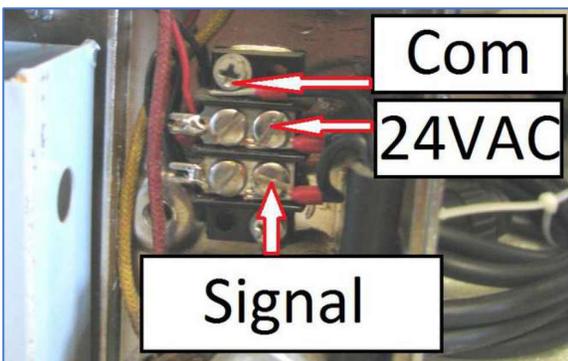

After connections have been made, powering up should show screen startup messages with release version. After a few seconds the system will show the green status light and be available for selections and will display 'Select song'. If the control relay is set up to enable the lightbulb, the blue led will also be on. 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. If uncoupled, the Bluetooth LED will blink slowly. When connected it will blink every 5 seconds.
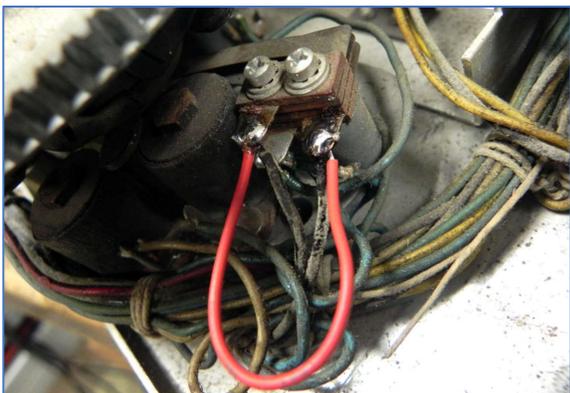
2   INSTALLATION:

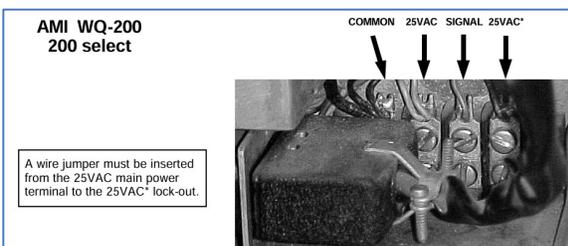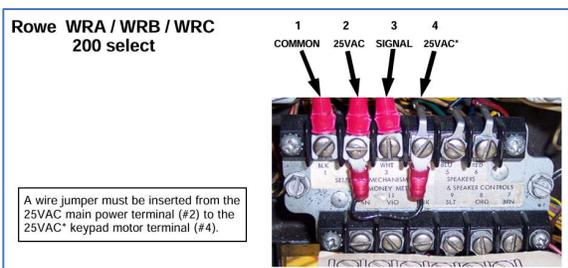### 2.1   24V/Signal connections of AMI wallboxes:

AMI W40, W80, W120:

AMI W120 Freeplay:

AMI WQ200 (200 selections):

ROWE-AMI WRA-WRC (200 selections):

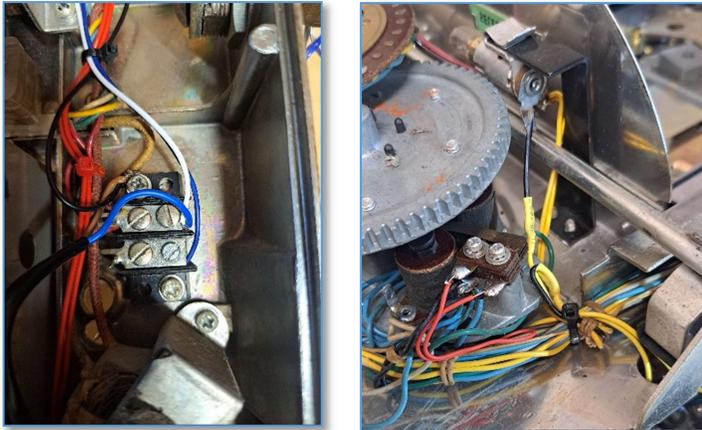## 2.2   Prepare to mount the board

The best place is replacing the coin unit with the black coin unit housing (remove pins that are not needed).

- Remove coin unit
- Remove any old cables that may have been cut
- Mount the select/cancel/setup button in a (drilled) hole on the back or bottom
- Mount the WallboxPlayer unit (with coin slide housing) in the wallbox.
- Connect the 2 power leads (BLK and WHT) and the signal lead (BLU) from wallbox to WallboxPlayer). On the wallbox from top to bottom: GND, 24V, PULSE, GND. See picture below.
- Connect the three wires on the other side to the WallboxPlayer (black = ground; white = 24V; blue = wallbox signal). (Large middle screw connector, only 3 of 4p will be used.
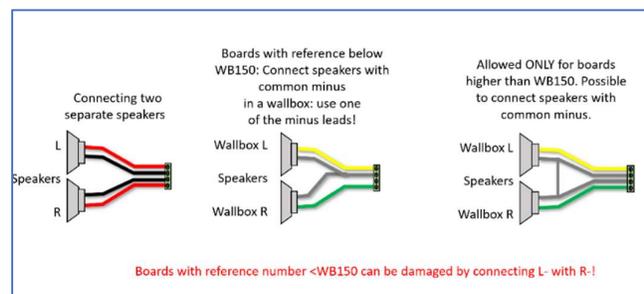
- Enable Freeplay with a short wire underneath the selection plate (see below)
- Connect the external select/cancel/setup button (pin header on the board next to the button) - this will allow cancel and adding random songs. See picture below.
- If available on the board (option), connect the control relay to enable the Wallbox "Make selection" lightbulb. Yellow wires (bottom 2p small screw connector). This optional control relay can be used to enable the lamp that lights up to select a song once the player is ready. See picture below.
- The wallbox now needs to be powered by 24V on the black and white connector slugs by the transformer connected to GND and 24V.

- Connect the 24VAC (2A) transformer to connector BLK (=gnd) and WHT (the top two screws – see pic) on top of leads already in place.
- 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 or external, to test if song will start. Press again to cancel.
- Make selection on the Wallbox with the buttons. If blue signal lead is correctly connected, the yellow lamp will flash during rotor movement and pulses are counted. Song will start and number played will be shown.
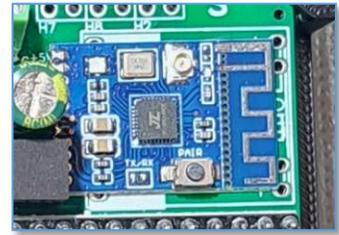
2.3 Speaker connections

- Make audio connections with wires (YEL, GRY, GRN) to the wallbox speakers (top small 4p screw connector) – for internal consolette speakers see **the important** note below.

- **Important: Connecting the speakers** in a wallbox (or a set of 2 speakers). Use the correct picture (with green /yellow /grey leads) depending on WB number (lower or higher than 150)! Boards with reference number <WB150 can be damaged by connecting L- with R-!

2.4   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 small button for unpairing. See picture.
- To pair with a Bluetooth device, ensure it is not paired (with other device) now, 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.

2.5   Setup

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 settings 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. Selecting "DEFAULTS" will set values of settings back to factory defaults. Choices: NO, RESTART, DEFAULTS, UPDATEMODE, LISTEN, …
- **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, and more
- **Jukebox Out:** if selectable, for WallboxPlayer mode and audio output, this must be MP3. For other selections, it will send out a pulse to a connected jukebox.
- **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 or BOOST options (+20%). Suggested are Pop or Bass.
- **AutoPlay_number**: By selecting this number with the buttons, (1=first page top left etc.), autoplay is started and play random songs until selected again. (0, 1 … 159, 160, 200 (default is 0).
- **Control_mode**: This determines the function of the additional on-board relay: NONE, JBCANCEL, WBCOIN, WBCREDIT, SELECT, ON-OFF (default is ON-OFF). The "Select mode" (option) can be used to enable the "Make selection" lightbulb in the wallbox.
- **AutoPlay_startup:** 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. Choices: 0, 15, 60, 300, 3600.

3   OPERATION:

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

Troubleshooting

If the number selected by the MP3 player is higher than selected with the buttons, not enough pulses are received. Check if the rotor contacts are clean. You can try to adjust the small potentiometer on the board and turn more to the left or right, but this should not be needed.

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