

Rail Departures V3 Installation Guide

Rail Departures V3 Installation Guide



Rail Departures V3 Installation Guide

WHAT'S INCLUDED

Rail Departures V3 Board	x1
5V 8A Power supply	x1
Mains power cable with UK plug	x1
USB Micro SD card adaptor	x1

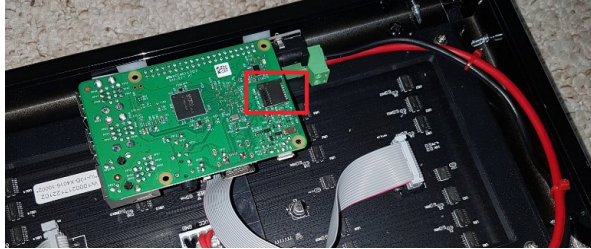
LED PANEL WARRANTY: Any panel with a severe defect will be replaced under warranty within 2 months from the delivery date. This does not include pixels very slightly glowing green. This is minor design error with all these panels and can not fixed. Each departure board has 4,128 pixels that is 12,384 separate LEDs, which are very fragile and can some times die. Each departure board is carefully tested three times for faulty pixels before packaging to ensure a fault free product is shipped. A panel with 3 or more faulty pixels will be replaced under warranty within the 2 month warranty period. Any faulty panels outside of warranty can be sourced from the following suppliers. [P3 LED Panel](#) | [P4 LED Panel](#)

Warning: THIS IS A 5V DEVICE. DO NOT EXCEED THIS VOLTAGE.

Rail Departures V3 Installation Guide

INITIAL SETUP

(Step1) Remove the Micro SD card from the GEN2 controller.



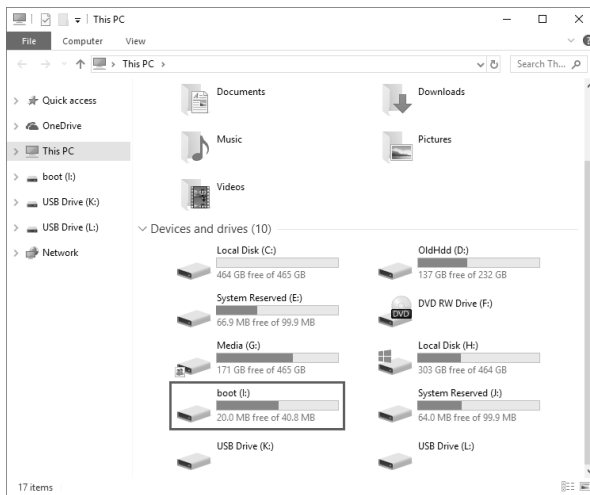
(Step2) Insert the Micro SD card into your pc/laptop via a built in SD card reader(preferred option) or using the supplied USB SD card adaptor.

Note: Ignore/Cancel any notifications asking you to format the disk.

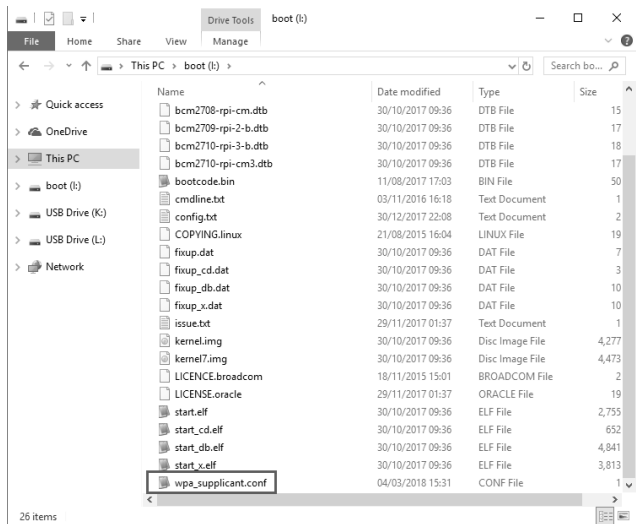
There are 2 options for entering your WiFi credentials.

- (Preferred option) Use the online wpa_supplicant.conf file creator tool([found here](#)) to create the file for you (no editor required). Enter your details and it will create and download the file for you. Simply drag and drop this into your boot drive ,selecting yes to 'do you want to overwrite' and skip to Step6.
- Carry on to Step3.

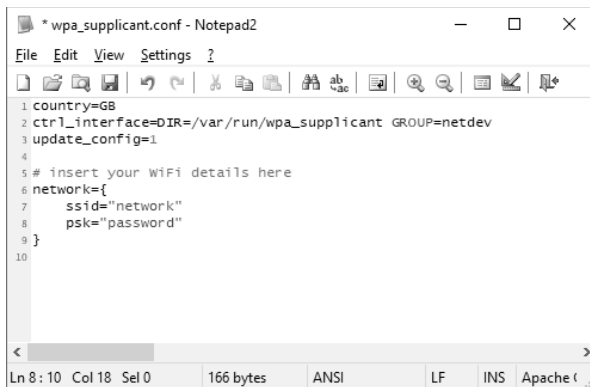
(Step3) Navigate to the boot drive (it will be labelled 'boot')



(Step4) Navigate the boot drive and open the file named 'wpa_supplicant.conf' via a text editor (read below notes)



(Step5) Replace 'network' and 'password' with your own WiFi details and save.



(Step6) Remove the SD card from your pc/laptop and place back into the board's GEN2 controller.

(Step7) Plug the supplied power supply dc jack cable into the GEN2 controller and wait 10seconds for the system to boot.

Warning: Window's users!
Do not use Wordpad for editing this file.
Use a proper text editor.
Recommended: [Notepad2](#), VSCode, Atom, SublimeText.

Warning: Mac users!
If you use Textedit make sure to use "plain text format"
Also "disable smart quotes" in "Textedit > Preferences"

Note: Remove GEN2 controller board packaging support tape.

Note: The display will always be completely blank for the first 15seconds when the system boots from cold.

Rail Departures V3 Installation Guide

CONFIGURATION TOOL (WEB APPLICATION)

The web configuration can be found [here](#).

(Step1) Register your account. You will need your boards serial. This can be found on the boards boot screen (when first turned on).

```
Firmware | REV-CIS3-05007
Device Info | 00000000-ERROR_NO_IP
Status | Initializing Firmware
```

(Step2) Log In.

Login

Registration form

(Step3) Edit the configuration and click "UPDATE BOARD"(at the bottom) to submit your changes to the board.

Notes:

- Changes are not instant. You will need to wait for your board to make its next request(every 10sec) before the changes will be applied.

Device Info & Stats:

Firmware:	REV-CIS2-02019
KUID:	
Last request:	05-12-2016 12:49:32
Current uptime:	0 days 03:04:33
Total uptime:	3 days 06:21:08
Current server requests:	275
Total server requests:	7352
Current request errors:	9
Total fatal errors:	1
Board pending update:	False

Rail Departures V3 Installation Guide

FAQ

- Problem:** Board does not boot (no lit leds on controller / blank display).
Solution: Check the power supply is connected correctly.
- Problem:** Board keeps resetting.
Solution: Check the power supply is connected correctly. If using an extension cable check cable is of good quality and under 2 meters.
- Problem:** Board display does not display text but controller pcb leds are lit.
Solution: Make sure controller pcb ribbon cable seated well on display connector.
- Problem:** Board displays ERROR_NO_IP / CANT_CONNECT_TO_NETWORK
Solution:
- Check you have entered your correct WiFi credentials (ie SSID / PASSWORD).
 - Check your internet connection is working correctly.
 - Check your WiFi supports 2.4ghz / Board is connecting to this network.
 - Make sure 'wpa_supplicant.conf' is not named 'wpa_supplicant.conf.txt'
 - Use this [tool](#) to create your 'wpa_supplicant.conf' file, as it may be corrupt.
 - If tethering to an iPhone remove any apostrophes from your name.
- Problem:** Board does not connect to a NETGEAR router.
Solution: Temporary disable the 5Ghz SSID broadcast under Advanced Tab/Advanced Settings/Wireless Settings. And set the channel number between 1 to 6.
- Problem:** Cant create a web configuration account.
Solution: The board must have been connected to your network before you can create a account. The serial number is the first 8 digits on the second row on your boards boot up screen, not the product serial number on the device it self.
- Problem:** Board displays JSON_PARSE_ERROR
Solution: This is most likely a server issue and will resolve by it self.

Email contact@ukdepartureboards.co.uk if you require more information / additional help.

Rail Departures V3 Installation Guide

ACKNOWLEDGEMENTS

API Feeds:

<http://www.realtimetrains.co.uk/>

<http://www.nationalrail.co.uk/46391.aspx>

<https://api.tfl.gov.uk/>

Software Libraries

<https://github.com/hzeller/rpi-rgb-led-matrix>

Special Thanks:

Kris Baillie

Firmware / web config testing / Station name renaming.

Andy Carter

Firmware / web config testing / Station name renaming.

Danny Cox

Firmware / web config testing / Promo video / media.

Ross Muggeridge

Firmware / web config testing / TFL data expert.

Rail Departures V3 Installation Guide

DISCLAIMER

LIMITATION OF LIABILITY

IN NO EVENT WILL RUSSELL PIRIE BE LIABLE, WHETHER IN CONTRACT, TORT, OR OTHERWISE, FOR ANY INCIDENTAL, SPECIAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, OR LOST PROFITS, SAVINGS, OR REVENUES TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

THIS BOARD IS INTENDED FOR USE FOR DEMONSTRATION, OR EVALUATION PURPOSES ONLY AND IS NOT CONSIDERED BY RAIL DEPARTURES TO BE A FINISHED END-PRODUCT FIT FOR GENERAL CONSUMER USE. PERSONS HANDLING THE PRODUCT(S) MUST HAVE ELECTRONICS TRAINING AND OBSERVE GOOD ENGINEERING PRACTICE STANDARDS. AS SUCH, THE GOODS BEING PROVIDED ARE NOT INTENDED TO BE COMPLETE IN TERMS OF REQUIRED DESIGN-, MARKETING-, AND/OR MANUFACTURING-RELATED PROTECTIVE CONSIDERATIONS, INCLUDING PRODUCT SAFETY AND ENVIRONMENTAL MEASURES TYPICALLY FOUND IN END PRODUCTS THAT INCORPORATE SUCH SEMICONDUCTOR COMPONENTS OR CIRCUIT BOARDS. THIS BOARD DOES NOT FALL WITHIN THE SCOPE OF THE EUROPEAN UNION DIRECTIVES REGARDING ELECTROMAGNETIC COMPATIBILITY, RESTRICTED SUBSTANCES (ROHS), RECYCLING (WEEE), FCC, CE OR UL, AND THEREFORE MAY NOT MEET THE TECHNICAL REQUIREMENTS OF THESE DIRECTIVES OR OTHER RELATED DIRECTIVES.