

FUYLTower WiFi upgrade - Instructions

Overview

This document provides instructions for FUYL Tower users wishing to upgrade to WiFi. It is intended for those clients with FUYL Towers equipped with Raspberry Pi 2 processing boards. Details of how to confirm this are included below.

This upgrade is **not** required for FUYL Towers delivered after October 1st 2016, as these units come equipped with Raspberry Pi 3 processing units, which include WiFi out of the box.

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DO I NEED THIS UPGRADE?

This upgrade is only intended for those FUYL Towers equipped with Raspberry Pi 2 processing boards. FUYL Towers delivered after October 1st 2016 will not require the upgrade, as these units come equipped with Raspberry Pi 3 processing units, which includes WiFi out of the box. To determine which processor you have installed:

1. Power up the FUYL Tower.
2. Open the FUYL Tower middle access panel using the larger of the two keys provided.
3. Flashing LEDs should be visible on the right hand edge of the processor board:
 - a. You have a Raspberry Pi 2 (and need this upgrade) if these red and green LEDs are mounted closest to the keypad (towards the front of the cabinet)
 - b. You have a Raspberry Pi 3 (and **DO NOT** need this upgrade) if the LEDs are mounted on the edge of the board towards the back of the cabinet.

WHAT DO I NEED?

To perform the upgrade, you will need the following:

- A USB WiFi modem which complies with your local telecommunications regulations (see SELECTING A WIFI ADAPTER below)
- A FUYL Tower with ROM version V1.07 or later (see CONFIRM HARDWARE VERSION below)
- Computer with browser
- Ethernet cable – connects computer to the LAN or (for a direct connection) directly to the FUYL Tower.
- Passwords for:
 - LCD Admin menu access
 - Management Portal access
 - WiFi authentication
- Two keys for control panel access and Admin menu activation

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SELECTING A WIFI ADAPTER

PC Locs/LocknCharge have tested the FUYL Tower with a number of USB WiFi adapters based upon the RealTek RTL8188CUS chipset, and have had no issues with these. We would therefore recommend installing adapters based upon this component.

There are numerous WiFi adapters available which appear to conform to the required 802.11n specification – however, some will not be suitable due to issues of software driver compatibility and power supply requirements. Reports *suggest* that the following models are compatible, but this has not been confirmed with in-house testing – if a Customer should decide to install these (or any other) devices, they are strongly advised to test them first! PC Locs/LocknCharge will not take responsibility for them not working.

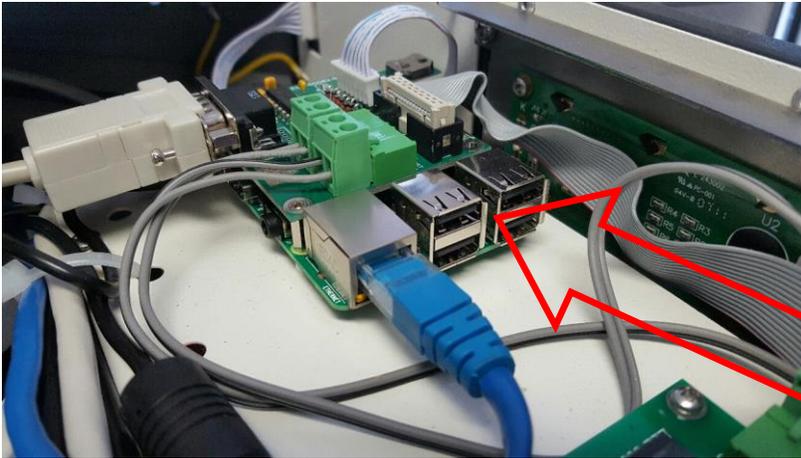
- | | |
|---|--------------------|
| • Adafruit miniature WiFi module, Raspberry Pi | Realtek RTL8192CU |
| • AirLink101 AWL5099 Wireless N150 Ultra Mini USB Adapter | Realtek RTL8188CUS |
| • Asus USB-N13 rev B1 | Realtek RTL8192CU |
| • Belkin F7D2102 N300 Micro Wireless USB adapter | Realtek RTL8192CU |
| • Belkin F5D8053 ver.6001 Wireless N Adapter | Realtek RTL8188SU |

The FUYL Tower provides a USB 2.0 interface, so there is little advantage to be gained by installing USB 3.0 adapters.

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INSTALL HARDWARE

1. Power down the FUYL Tower
2. Open the middle access panel using the larger of the two keys provided
3. Plug in the USB WiFi modem to either of the uppermost USB ports (there are four in total)



4. Connect your laptop or computer to the FUYL Tower over Ethernet cable. If your FUYL Tower is part of a Local Area Network, it may already be plugged into a wall socket. If not, open the middle control panel with the large key provided, and connect an Ethernet cable from the controller unit's Ethernet socket to your computer.
5. Power up the FUYL Tower

CONFIGURE WIFI

Connecting to the FUYLTower Management Portal (**FTMP**) is done through a web browser, such as Internet Explorer, Firefox, Chrome or Safari.

DETERMINE FUYLTOWER NETWORK ADDRESS

Obtaining the network address (IP address) of the FUYLTower is done through the **admin keypad override mode**, accessed from the control panel of the FUYLTower. For detailed instructions, refer to the FUYLTower User Manual.

1. Use the admin control access key (the smaller of the keys) to access the Admin menu.
2. When asked, enter the 8 digit authorisation code (default: 23350743)
3. When the menu options appear, press keypad numeral 6. The IP address should be displayed.

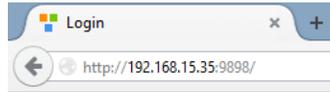


Note: If no IP address is visible on the screen, the DHCP server may not have issued an IP address - wait for few minutes and try again.

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ACCESS THE PORTAL

1. Open the web browser and type the address into the URL bar at the top of the screen. Use the IP address that was displayed on the FUYLTower LCD, and add :9898 at the end eg: <http://192.68.15.35:9898/>:



2. The login page should be displayed
3. Log in using your Administrator password. The default credentials are as follows:

Username: **admin**

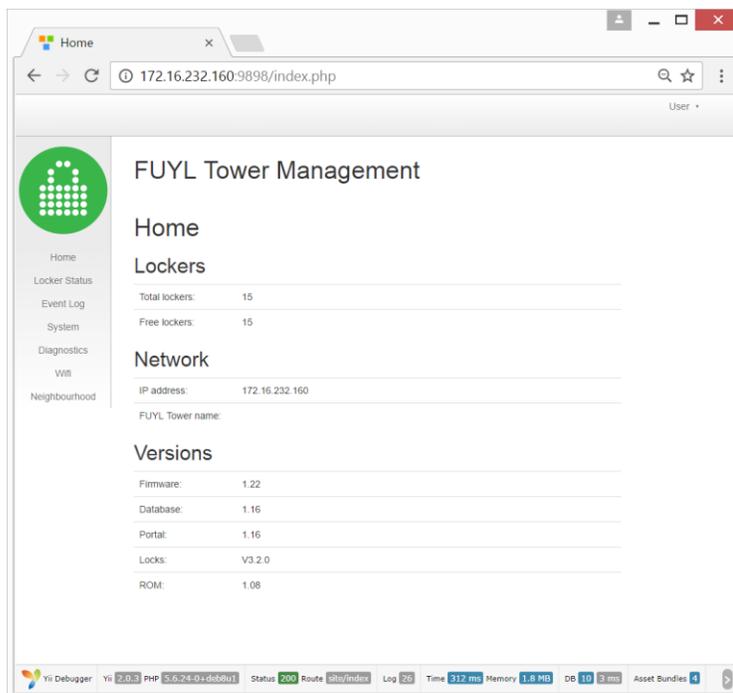
Password: **uberbasket**

CONFIRM FIRMWARE VERSION

This upgrade is only relevant for FUYL Towers with Raspberry Pi 2 processors running V1.07 firmware. If your FUYL Tower has a Raspberry Pi 3 processor, it will already be WiFi capable.

On the Management Portal home page, confirm that the ROM version displayed is V1.07. If an earlier version is installed, you will need to install a more recent version by requesting a new SD card.

This Home page below indicates ROM V1.08 is installed:



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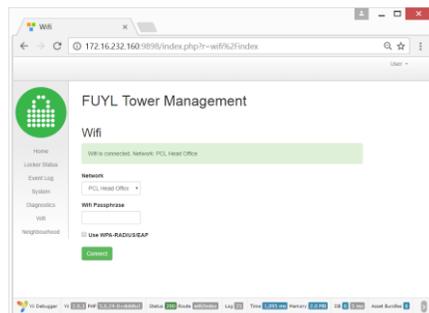
CONFIGURE WIFI

If WiFi is to be used in place of the wired LAN connection then a WiFi adaptor will need to be connected to one of the USB ports on the top of the controller behind the LCD display. The wired LAN should still remain connected for initial setup.

1. Select the WiFi menu page



2. Select the network from the available list
3. Enter the WiFi Passphrase
4. Click the CONNECT button.
5. If the network and passphrase are valid then the page will indicate that the WiFi is connected.



6. Logout
7. Disconnect the wired LAN cable (otherwise the FUYL Tower will continue to use the Ethernet port)
8. Power-cycle the tower to allow the WiFi to activate

NOTE: Once the FUYL Tower has restarted, you will be able to connect to the tower in the same manner as before using a WiFi enabled device – however, please note that DHCP will have allocated a new internet address.

9. Test the interface:
 - a. Obtain the new WiFi internet address by repeating steps in ACCESS MANAGEMENT PORTAL (above)
 - b. From a WiFi enabled computer, access the Management Portal using the new WiFi IP address.

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TROUBLESHOOTING

<p>When I try to display the IP address of the FUYLTower, it remains blank.</p>	<p>The FUYLTower may not be connected to a network.</p> <p>The DHCP server may take some time to issue an address to the tower. Try again in a few minutes</p> <p>The FUYL Tower is powered off.</p> <p>The WiFi adapter may be damaged, or not installed correctly. Open the control panel door of the FUYLTower and check for network activity lights on the USB adapter.</p>
<p>Can't connect to the FUYL Tower from a WiFi enabled device</p>	<p>The Ethernet cable may still be connected – if this is connected to the LAN, it will be have priority over the WiFi port. Ensure the Ethernet cable is unplugged.</p> <p>Try unplugging the network cable at both your computer and the FUYLTower, wait 30 seconds and then replug.</p>
<p>It worked before, but now I can't access the Management Portal</p>	<p>Your DHCP server will sometimes be configured to refresh IP addresses, and may have allocated a new address to your FUYL Tower. Using the Admin menu (option 6), confirm that your tower has the correct IP address, then try to connect using this.</p> <p>Your WiFi access point may require a reset.</p> <p>Interference from strong radio sources close to the FUYL Tower may cause disruptive interference.</p> <p>Power cycle the FUYL Tower</p>