

# ESP8266 WEATHER STATION UPDATES



## 1) SETTING UP ARDUINO IDE

The following link was used: <https://learn.adafruit.com/adafruit-feather-huzzah-esp8266/using-arduino-ide>

- Install CP2104 Drivers
- Install Arduino IDE
- Install ESP8266 Board Package
- Setup **Adafruit Feather Huzzah ESP8266** support.
- BLINK TEST CODE

```
void setup() {  
  pinMode(0, OUTPUT);  
}  
  
void loop() {  
  digitalWrite(0, HIGH);  
  delay(500);  
  digitalWrite(0, LOW);  
  delay(500);  
}
```

## 2) DOWNLOADING ARDUINO IDE LIBRARIES

The Libraries needed for the system are well outlined on this link, ensure that all are downloaded: <https://learn.adafruit.com/wifi-weather-station-with-tft-display/software>

They are:

1. Adafruit GFX Library
2. Adafruit ILI9341 Library

3. Adafruit STMPE610
4. Mini Grafx by Daniel Eichhorn
5. simpleDSTadjust by neptune2
6. ESP8266 Weather Station Library by ThingPulse
7. JSON Streaming Parser by Daniel Eichhorn (not Bartosz)
8. WiFiManager for ESP8266 by tzapu

### 3) CODE

- Arduino sketch

The Arduino code will not have any changes but before uploading you'll have to edit the files below, namely `settings.h` and `TouchControllerWS.cpp`

1. To get to this file you'll navigate to this directory where the ESP8266 Weather Station Library by ThingPulse library is stored:

**C:\Users\richa\OneDrive\Documents\Arduino\libraries\esp8266-weather-station-color-master**

- `Settings.h`

You will Update If there are any changes the following segments:

```
#define WIFI_SSID "kit&rich-Internet" //Update to Your WI-FI SSID
#define WIFI_PASS "Abig26fuck" //Update to Your WI-FI PASSWORD
```

```
// Sign up here to get an API key:
// https://home.openweathermap.org/users/sign\_up
```

```
String OPEN_WEATHER_MAP_APP_ID = "ascowijcawjr390r2834q"; //Update API key
String OPEN_WEATHER_MAP_LOCATION = "New York,US"; //Update your location
```

The UTC\_OFFSET, UTC is known as Universal Time. UTC is 4 hours ahead of New York, New York time. So, when it is 11:00 am in New York it will be 3:00 pm UTC

```
#define UTC_OFFSET -4
struct dstRule StartRule = {"EDT", Second, Sun, Mar, 2, 3600}; // Eastern
Daylight Time = UTC/GMT +2 hours
struct dstRule EndRule = {"EST", First, Sun, Nov, 1, 0}; // Eastern
Standard Time = UTC/GMT +1 hour
```

- `TouchControllerWS.cpp`

For this you Just have to **copy and paste** the whole `TouchControllerWS.cpp` from the zip file and use it to replace the one in the

library(**C:\Users\richa\OneDrive\Documents\Arduino\libraries\esp8266-weather-station-color-master**) as the one in the library has a few bugs.

- ❖ After updating the **settings.h** and **TouchControllerWS.cpp** now you can upload the code to the esp.

#### 4) References

<https://learn.adafruit.com/wifi-weather-station-with-tft-display/software>