**Loading Firmware on ESP32 using Arduino IDE**

First, a directory must be created as following. Note the main.cpp file in the platformIO src folder must be renamed to the folders name with the “ino” extension. In the case below, the main.cpp file is renamed to WB8HMorseTutor\_VE3OOI.ino.

This has been done for you on my github (<https://github.com/drajnauth/ESP32-Morse-Tutor> ). There is a folder called “Arduino\_IDE” which contains the directory shown below

Graphical user interface, text, application, email

Description automatically generated

Next ensure you have the ESP Board installed in the Arduino IDE. Configure it as follows. If your supplier uses a different ESP32 board as the ones shipped cicra 2021-2022, then you may need to alter below.

Graphical user interface, text, application, email

Description automatically generated

You will need to ensure you have that appropriate set of libraries loaded. The screenshot below lists all libraries used (display from Platform IO)

Text

Description automatically generated

Libraries for Ardunio IDE:

1. WiFi (I think this is part of ESP32 board install)
2. SD
   1. <https://www.arduino.cc/reference/en/libraries/sd/>
3. EEPROM
   1. <https://docs.arduino.cc/learn/built-in-libraries/eeprom>
4. Wire
   1. <https://www.arduino.cc/reference/en/language/functions/communication/wire/>
5. PubSubClient
   1. <https://www.arduino.cc/reference/en/libraries/pubsubclient/>
   2. <http://www.steves-internet-guide.com/using-arduino-pubsub-mqtt-client/>
6. GFX Library
   1. <https://www.arduino.cc/reference/en/libraries/adafruit-gfx-library/>
7. ILI9331
   1. <https://www.arduino.cc/reference/en/libraries/adafruit-ili9341/>
8. BusIO
   1. <https://www.arduino.cc/reference/en/libraries/adafruit-busio/>

See Bruce Halls’ website: <http://w8bh.net/>. He has some direction how to load “some” of these libraries on STM version of the tutor.