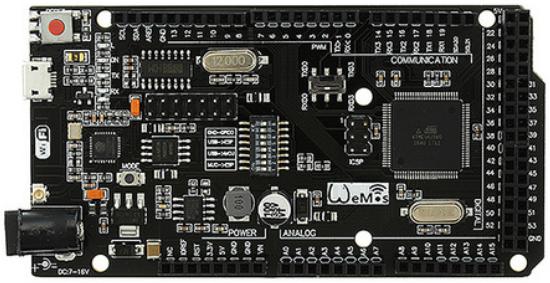
PRIMER PROYECTO ARDUINO MEGA

MEGA + WIFI R3 ATMEGA2560 + ESP8266

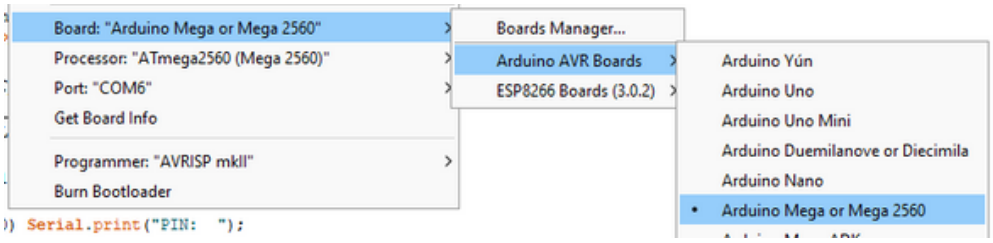


CONEXIÓN PARA EL PROYECTO

Primero debemos cambiar los swtich de la placa tal como se muestra en la gráfica:

	1	2	3	4	5	6	7	8	TXD0/TXD3
USB<->ESP8266	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	TXD0

Ademas debemos seleccionar la placa correspondiente en el IDE de Arduino Herramientas > Placas > Arduino AVR Boards > Arduino Mega or Mega 2560



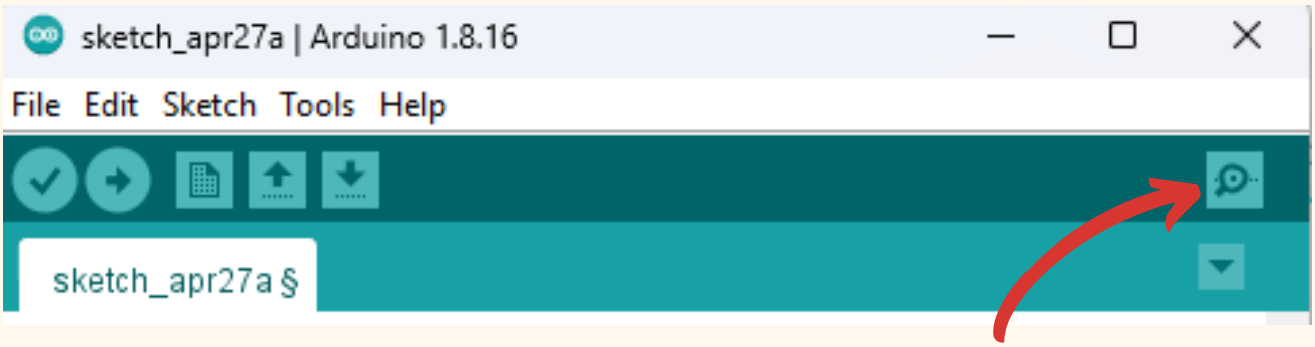
Recuerda que para el correcto uso de este codigo debes realizar las configuraciones previas.

modulo_ArduinoMEGA.ino

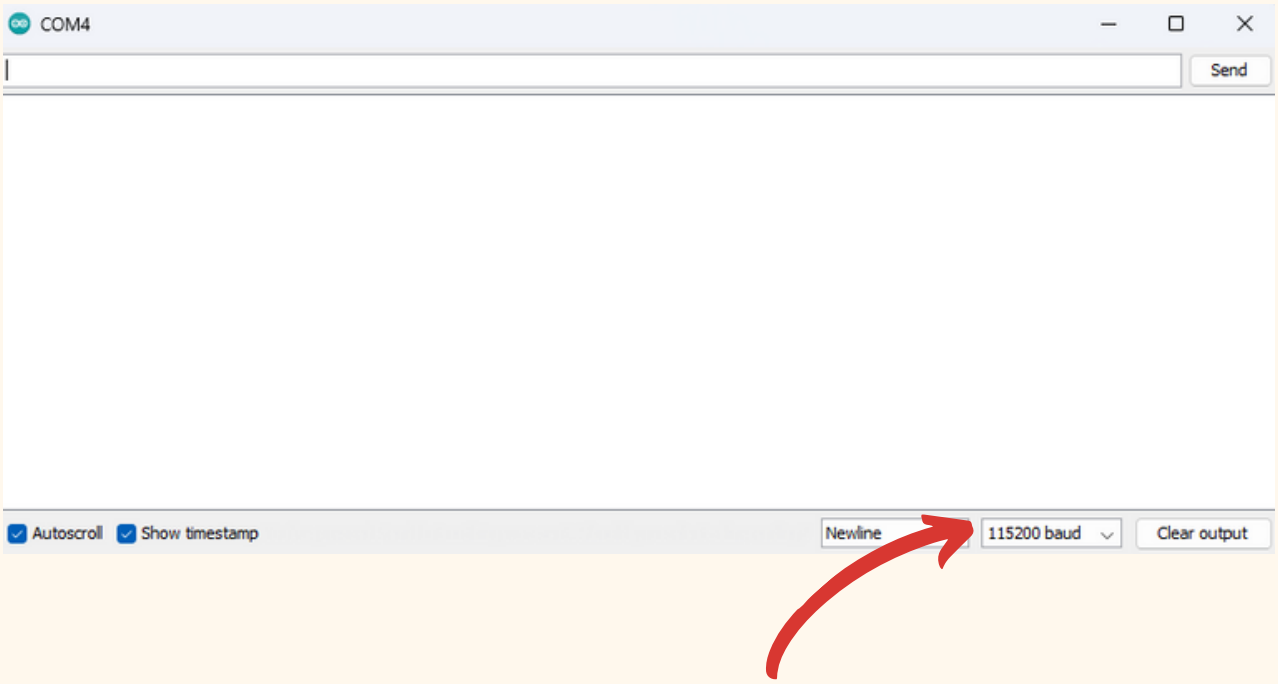
```
#include <MemoryFree.h>
#include <EEPROM.h>

#define FIRST_PIN 0   //Primer pin de la placa a comprobar
#define LAST_PIN 53   //Ultimo pin de la placa a comprobar
#define PIN_LED  13   //Salida LED

void PinTest1(byte pin)
{
  if(pin < 10) Serial.print("PIN:  ");
  else Serial.print("PIN: ");
  Serial.print(pin);
  pinMode(pin, OUTPUT);
  digitalWrite(pin, 0);
  Serial.print("    LOW: ");
  if(!digitalRead(pin)) Serial.print("OK  ");
  else Serial.print("FAIL");
  digitalWrite(pin, 1);
  Serial.print("  HIGH: ");
  if(digitalRead(pin)) Serial.print("OK  ");
  else Serial.print("FAIL");
  pinMode(pin, INPUT);
  Serial.print("  PULL UP: ");
  if(digitalRead(pin)) Serial.print("OK  ");
  else Serial.print("FAIL");
  digitalWrite(pin, 0);
}
```

Código disponible en la carpeta

Ahora compilamos y subimos el codigo, y procedemos a revisar el monitor serial.



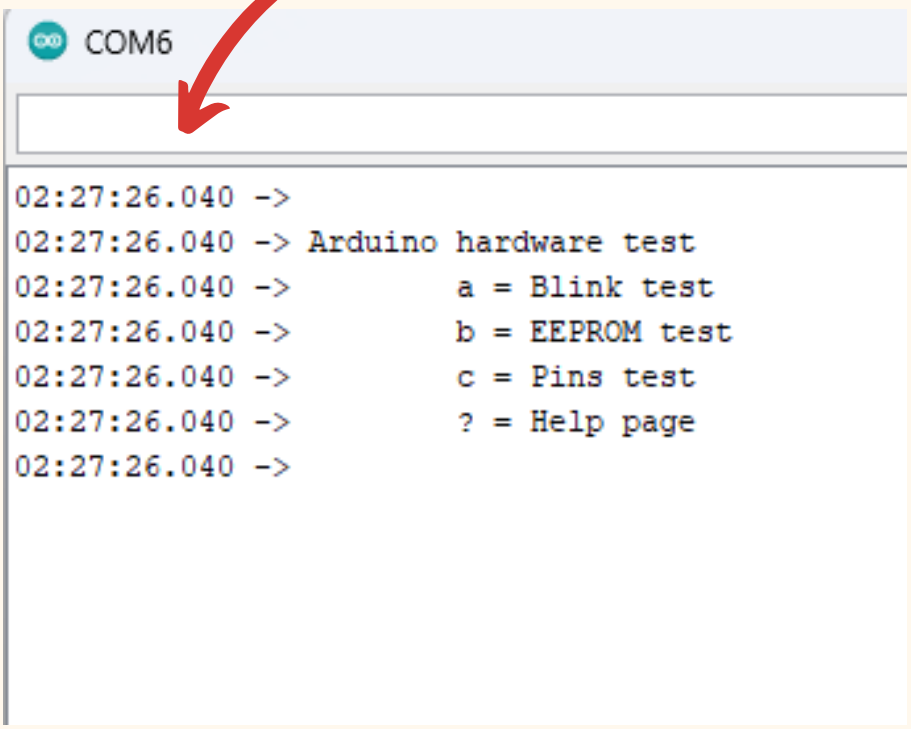
Monitor serial



Debemos cambiar la tasa de baudios a 115200

Y aquí obtendremos toda la información referente a la placa, además si interactuamos con el monitor serial podemos hacer pruebas tal como se muestra en la imagen.

Escribir letra aquí



Cada letra activará un test.

A -> Activará el led de manera intermitente.

B -> Nos dará información del chip de la placa.

```
02:37:31.950 -> EEPROM test:
02:37:31.950 ->          SRAM free size: 7873 bytes
02:37:31.950 ->          EEPROM size: 4096 bytes
02:37:31.950 ->
```

C -> Entregará el estado de cada uno de los pines de la placa.

```
02:38:10.512 -> Test of short circuit on GND or VCC and between pins:
02:38:10.512 ->         PIN:  0    LOW: FAIL  HIGH: OK    PULL UP: OK       OK
02:38:10.512 ->         PIN:  1    LOW: OK    HIGH: FAIL  PULL UP: FAIL     OK
02:38:10.512 ->         PIN:  2    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.559 ->         PIN:  3    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.559 ->         PIN:  4    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.559 ->         PIN:  5    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.559 ->         PIN:  6    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.559 ->         PIN:  7    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.559 ->         PIN:  8    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.559 ->         PIN:  9    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.605 ->         PIN: 10    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.605 ->         PIN: 11    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.605 ->         PIN: 12    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.605 ->         PIN: 13    LOW: OK    HIGH: OK    PULL UP: FAIL     OK
02:38:10.605 ->         PIN: 14    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.605 ->         PIN: 15    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.652 ->         PIN: 16    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.652 ->         PIN: 17    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.652 ->         PIN: 18    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.652 ->         PIN: 19    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.652 ->         PIN: 20    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.652 ->         PIN: 21    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.652 ->         PIN: 22    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.699 ->         PIN: 23    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.699 ->         PIN: 24    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.699 ->         PIN: 25    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.699 ->         PIN: 26    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.699 ->         PIN: 27    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.699 ->         PIN: 28    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.699 ->         PIN: 29    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.746 ->         PIN: 30    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.746 ->         PIN: 31    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.746 ->         PIN: 32    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.746 ->         PIN: 33    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.746 ->         PIN: 34    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.746 ->         PIN: 35    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.746 ->         PIN: 36    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.793 ->         PIN: 37    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.793 ->         PIN: 38    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.793 ->         PIN: 39    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.793 ->         PIN: 40    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.793 ->         PIN: 41    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.793 ->         PIN: 42    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.793 ->         PIN: 43    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.839 ->         PIN: 44    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.839 ->         PIN: 45    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.839 ->         PIN: 46    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.839 ->         PIN: 47    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.839 ->         PIN: 48    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.839 ->         PIN: 49    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.839 ->         PIN: 50    LOW: OK    HIGH: OK    PULL UP: OK       OK
02:38:10.885 ->         PIN: 51    LOW: OK    HIGH: OK    PULL UP: OK       OK
```

? -> Nos entregará una página de ayuda.