

*****Default*****

**Programming Pico with Arduino IDE
for Nano-RP2040-Connect
Ultra Sonic sensor with PIO**

**generating trigger
and receiving echo
10/16/22**

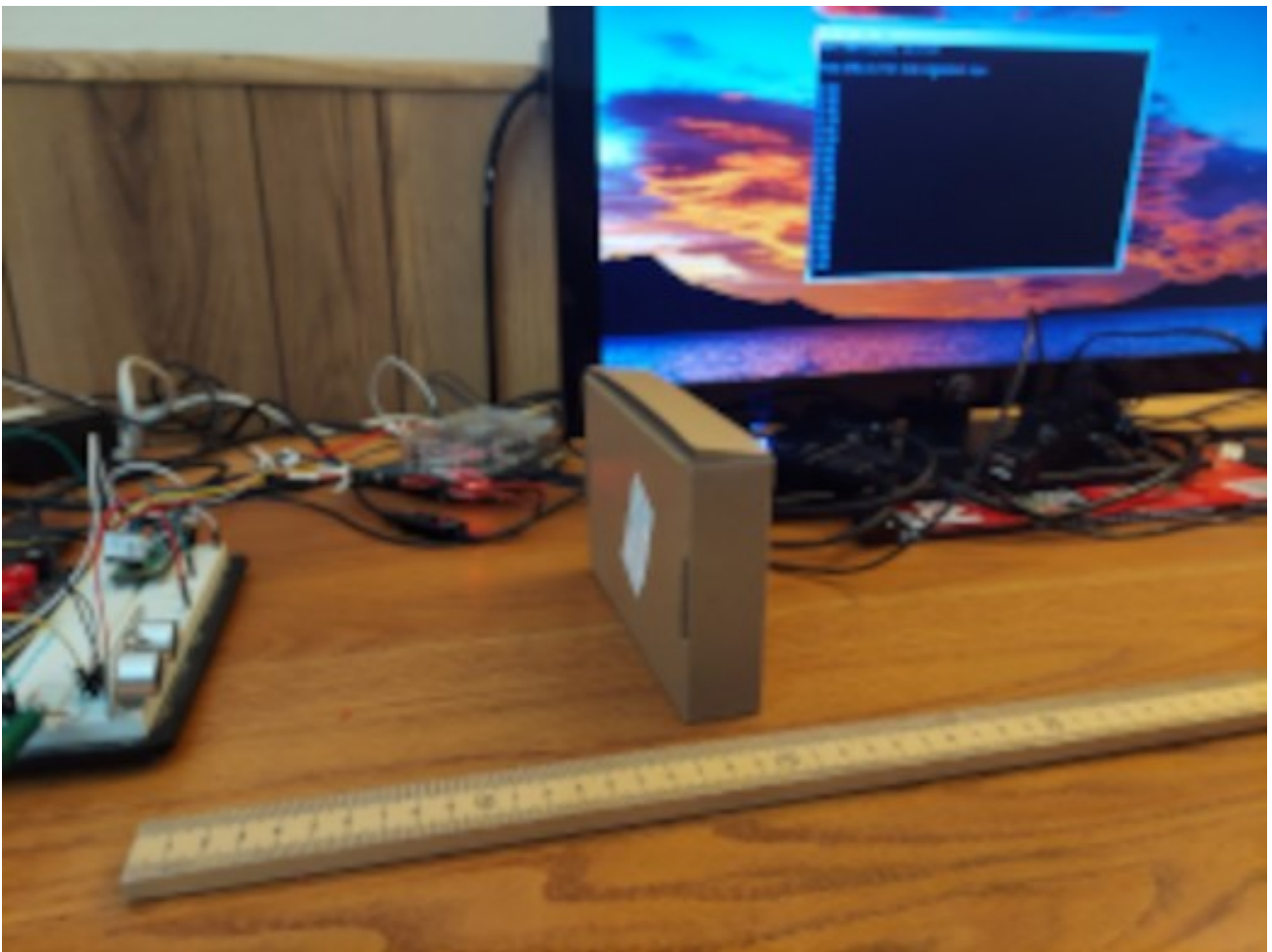
*****Default*****

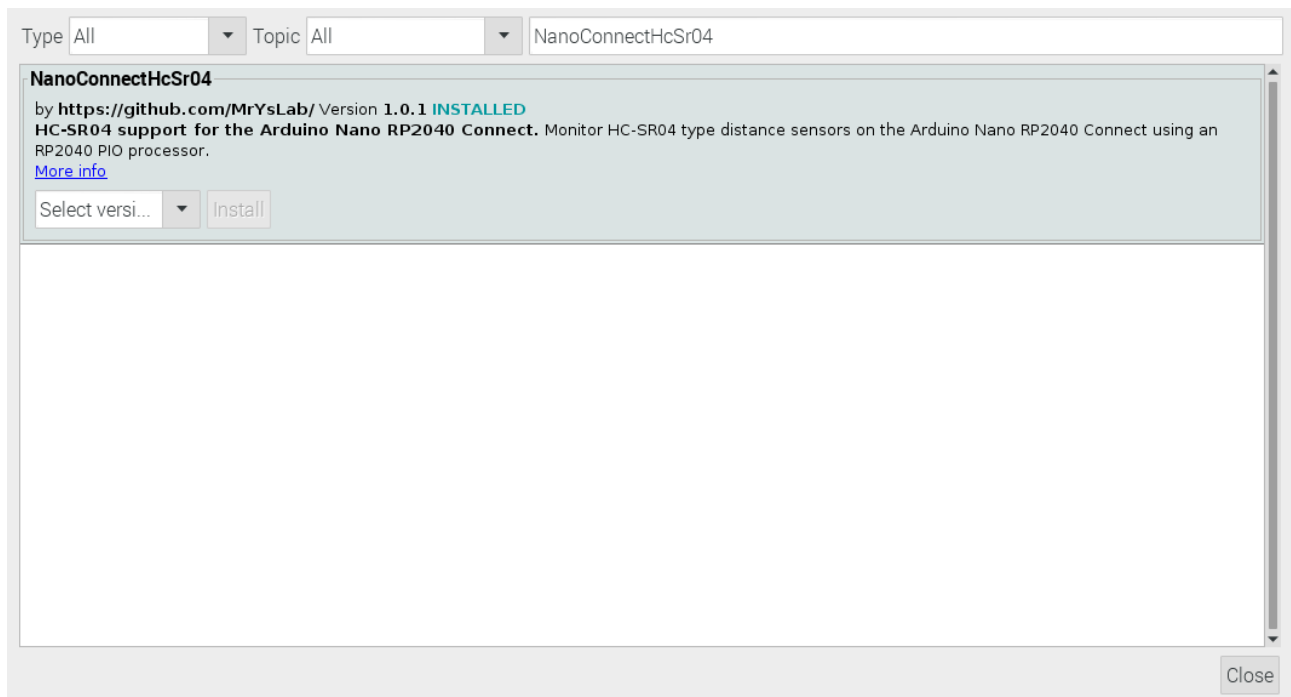
I used 5 volts from the pico to power the HCSR05. This required using 2 10K ohm resistors on the echo signal.

This was the origin of this project.

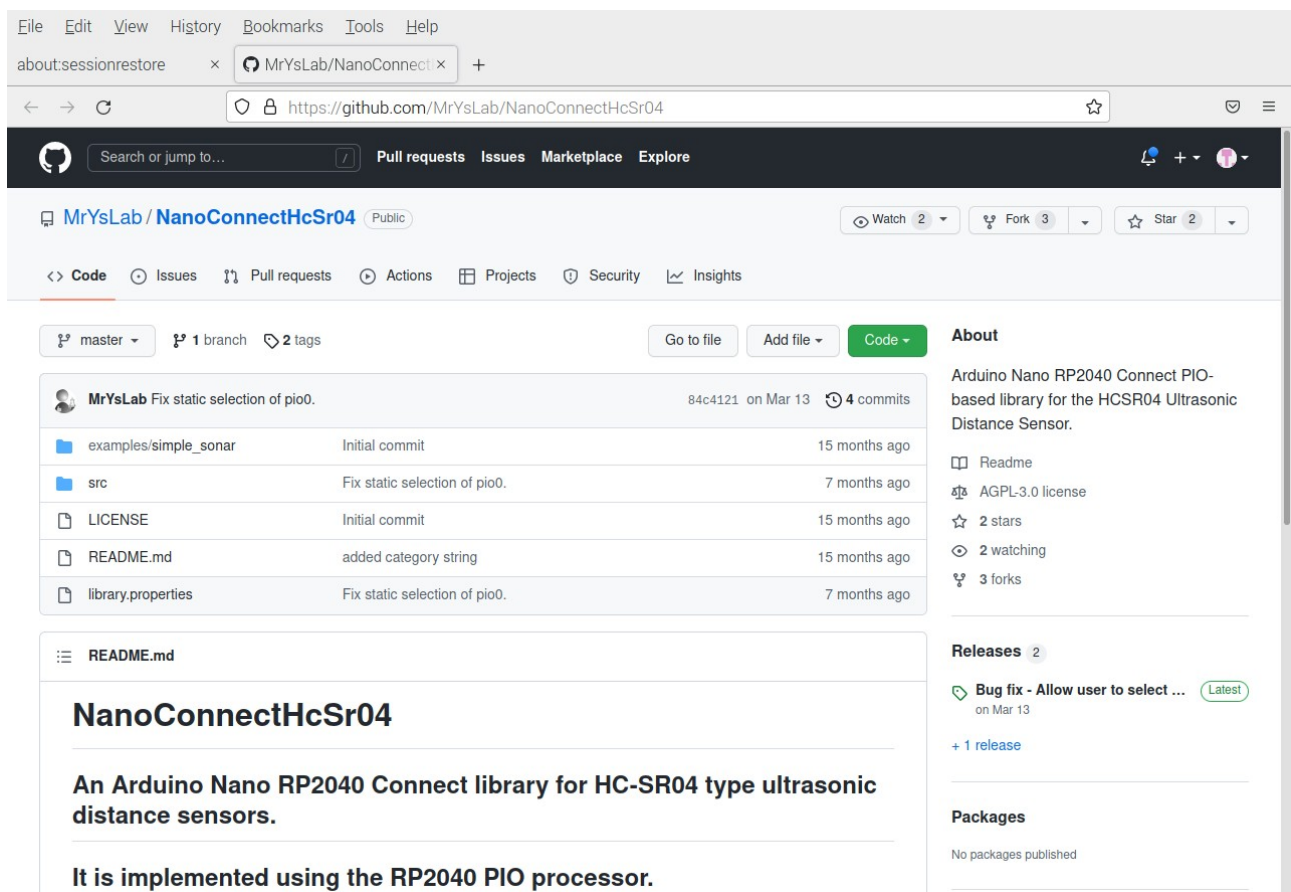
<https://github.com/develone/my-projects-docs/blob/master/HCSR04/ultrasonic-sonar-distance-sensors.pdf>

This is sensor sending data over the USB to a serial terminal.





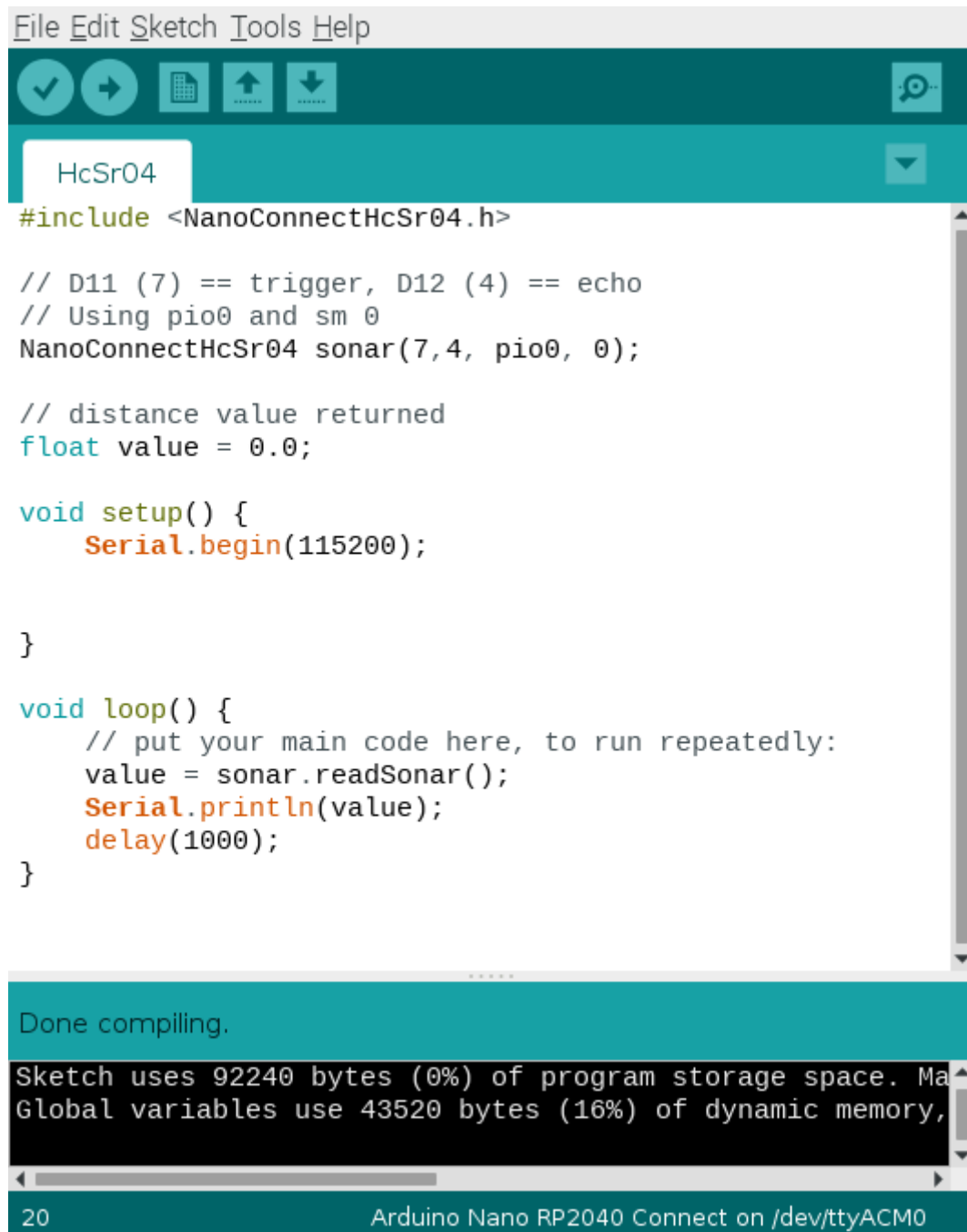
Github



<https://github.com/MrYsLab/NanoConnectHcSr4/blob/master/src/NanoConnectHcSr04.pio.h>

<https://github.com/MrYsLab/NanoConnectHcSr04/blob/master/src/NanoConnectHcSr04.cpp>

This sketch uses NanoConnectHcSr04 library



```
File Edit Sketch Tools Help
HcSr04
#include <NanoConnectHcSr04.h>

// D11 (7) == trigger, D12 (4) == echo
// Using pio0 and sm 0
NanoConnectHcSr04 sonar(7,4, pio0, 0);

// distance value returned
float value = 0.0;

void setup() {
    Serial.begin(115200);
}

void loop() {
    // put your main code here, to run repeatedly:
    value = sonar.readSonar();
    Serial.println(value);
    delay(1000);
}

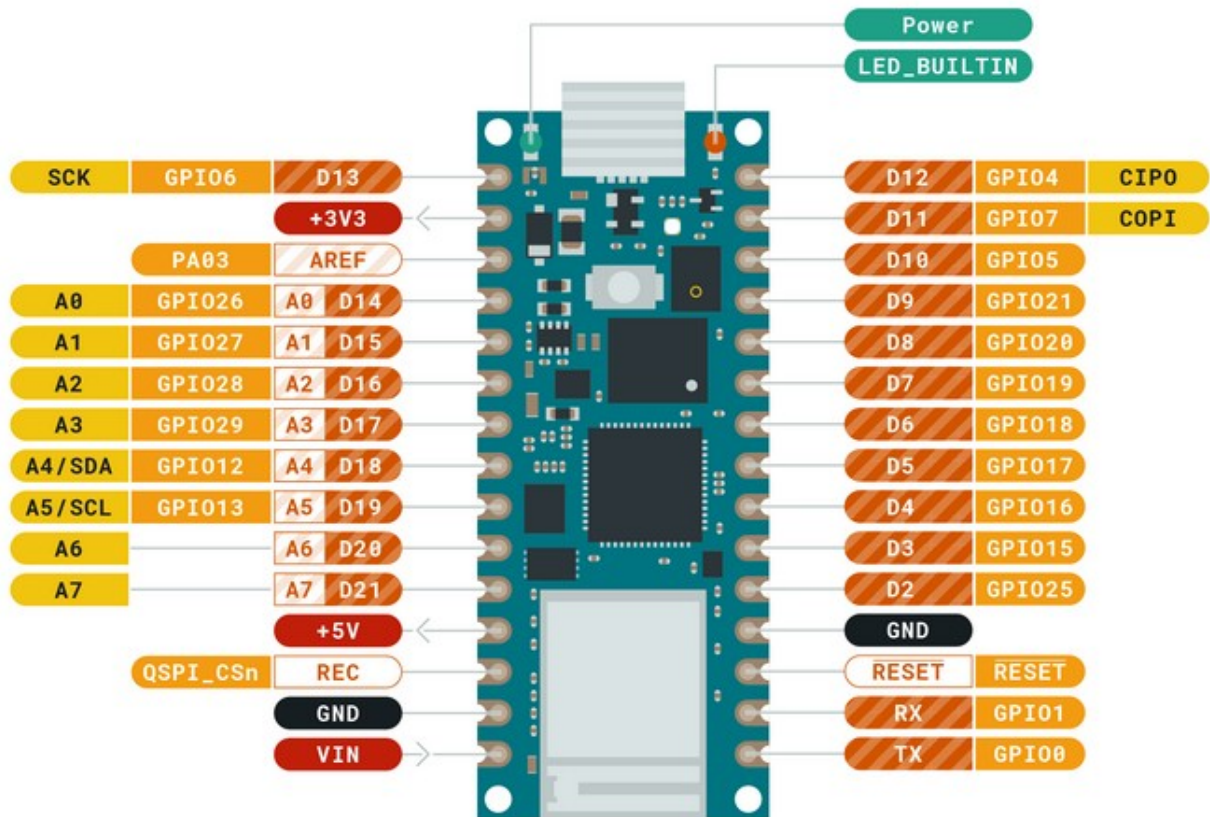
Done compiling.
Sketch uses 92240 bytes (0%) of program storage space. Max is 1023936 bytes.
Global variables use 43520 bytes (16%) of dynamic memory, max is 262144 bytes.

20 Arduino Nano RP2040 Connect on /dev/ttyACM0
```

For the pico gpio 7 is pin 10 gpio 4 is pin 6



ARDUINO NANO RP2040 CONNECT



Ground	Internal Pin	Digital Pin	Microcontroller's Port
Power	SWD Pin	Analog Pin	
LED	Other Pin	Default	

ARDUINO.CC



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```
File Edit Tabs Help
38.77
37.90
38.77
38.75
38.30
38.75
38.30
38.30
38.75
38.75
38.77
38.75
38.75
38.75
38.31
38.74
38.31
38.33
38.75
38.77
38.75
38.31
38.74
CTRL-A Z for help | 115200 8N1 | NOR | Minicom 2.8 | VT102 | Offline | ttyACM0
```

Serial Port configuration

```
File Edit Tabs Help
19.10
19.54
19.54
19.5+-----+
19.5| A -   Serial Device       : /dev/ttyACM0
19.1| B - Lockfile Location    : /var/lock
19.5| C -   Callin Program      :
19.5| D -   Callout Program     :
19.5| E -   Bps/Par/Bits        : 115200 8N1
19.1| F - Hardware Flow Control : No
19.5| G - Software Flow Control : No
19.5| H -   RS485 Enable        : No
19.5| I -   RS485 Rts On Send   : No
19.5| J -   RS485 Rts After Send : No
19.5| K -   RS485 Rx During Tx  : No
19.5| L -   RS485 Terminate Bus : No
19.5| M - RS485 Delay Rts Before: 0
19.5| N - RS485 Delay Rts After : 0
19.5|
19.5|   Change which setting? █
19.5+-----+
19.54
19.54
```