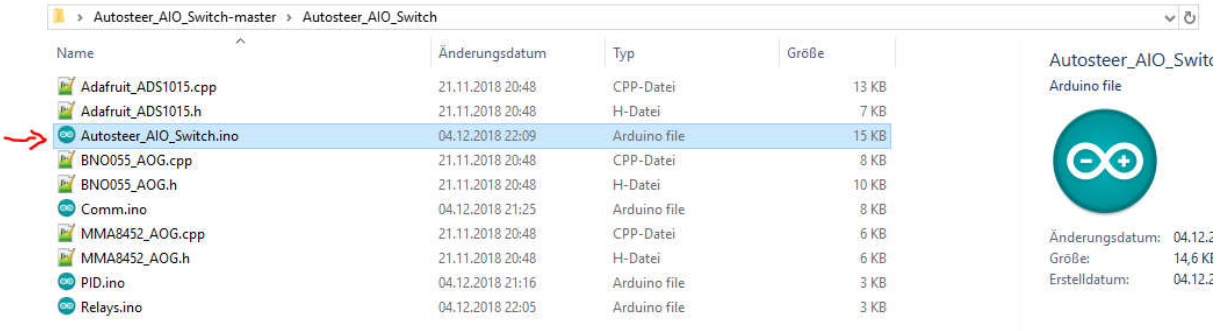
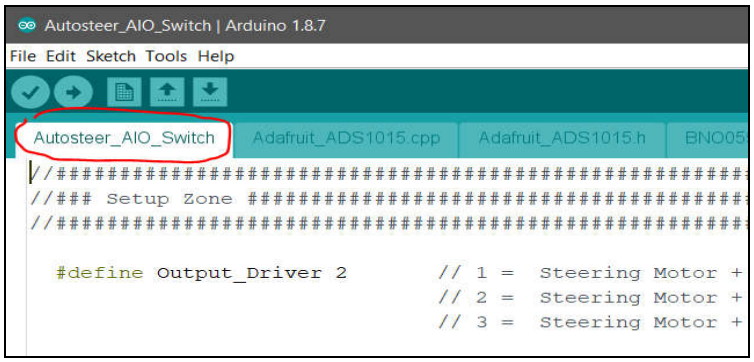
!!! How to prepare the Sketch for Upload: !!!

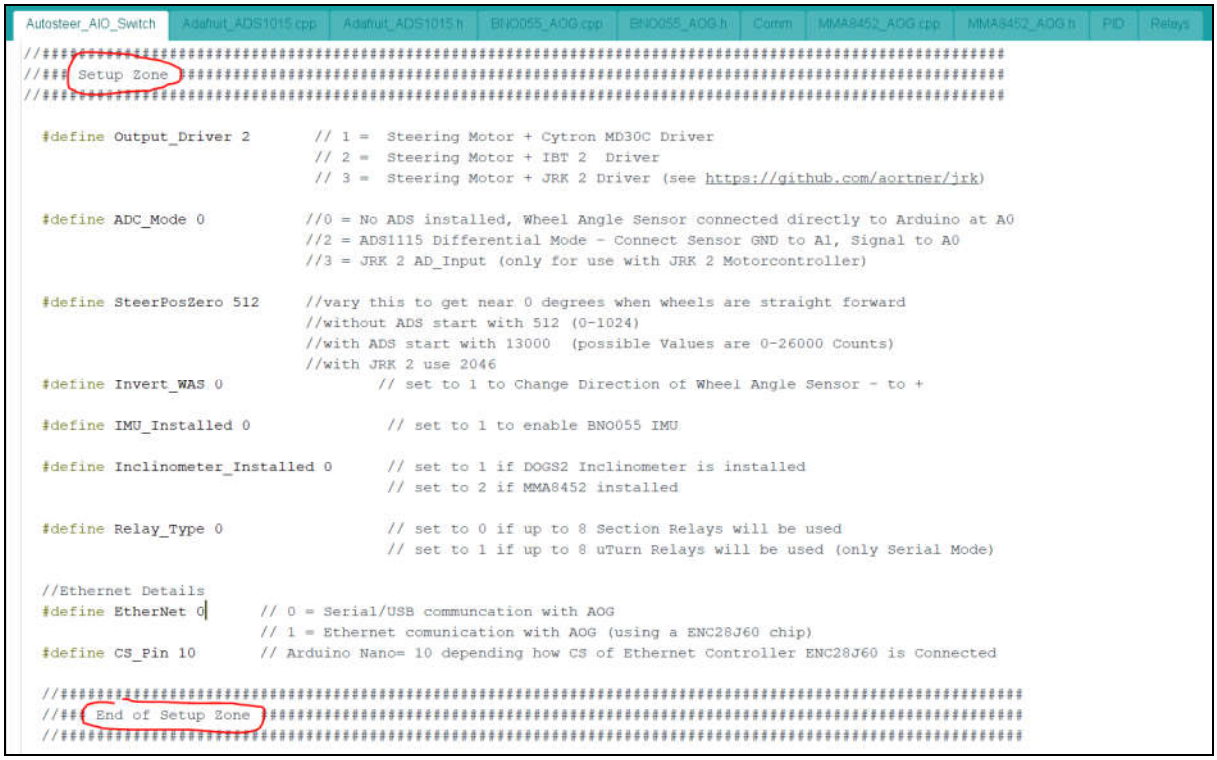
1. Open the file “AutoSteer_AIO_Switch.ino” with the Arduino IDE



2. Switch to tab AutoSteer_AIO_Switch



3. Scroll down to Setup Zone



4. Edit the Settings according to your configuration

4.1 First set your Output Driver:

```
#define Output_Driver 1       // 1 =  Steering Motor + Cytron MD30C Driver
                              // 2 =  Steering Motor + IBT 2  Driver
                              // 3 =  Steering Motor + JRK 2 Driver (see https://github.com/aortner/jrk)
```

Enter the matching number according to the description at the right side

4.2 Select how you connect your Wheel Angle Sensor

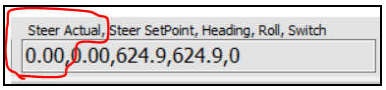
```
#define ADC_Mode 0            //0 = No ADS installed, Wheel Angle Sensor connected directly to Arduino at A0
                              //2 = ADS1115 Differential Mode - Connect Sensor GND to A1, Signal to A0
                              //3 = JRK 2 AD_Input (only for use with JRK 2 Motorcontroller)
```

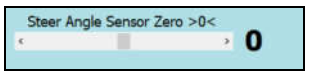
Enter the matching number according to the description at the right side

4.3 SteerPosZero

```
#define SteerPosZero 512      //vary this to get near 0 degrees when wheels are straight forward
                              //with Arduino ADC start with 512 (0-1024)
                              //with ADS start with 13000  (possible Values are 0-26000 Counts)
                              //with JRK 2 use 2046
```

Enter the center point of your Wheel Angle Sensor with the start value of your ADC!

If you can't reach zero degree at AOG ->here: 

If Zero is unreachable with this 

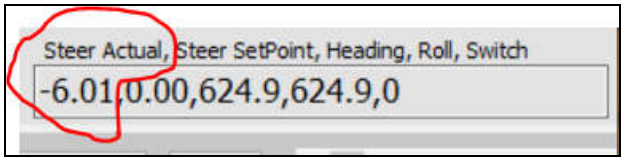
Slider,

go back here and increase/decrease the SteerPosZero value until you get zero degree steering angle, while the wheels shows straight ahead.

4.4 Invert Wheel Angle Sensor

```
#define Invert_WAS 0                  // set to 1 to Change Direction of Wheel Angle Sensor - to +
```

Make sure if you turn your wheels to the left, the Wheel Angle at AGopenGPS goes negative like



4.5 IMU = Compass

```
#define IMU_Installed 0                    // set to 1 to enable BNO055 IMU
```

For now, only the BNO055 could be selected or not with 1 or 0

4.6 Inclinometer = Roll of the vehicle

```
#define Inclinometer_Installed 0  // set to 1 if DOGS2 Inclinometer is installed
                                  // set to 2 if MMA8452 installed
```

Enter either 0 for not installed , 1 for the DOGS2 Inclinometer or 2 for the MMA8452 Inlinometer

4.7 Relay type

```
#define Relay_Type 0                  // set to 0 if up to 8 Section Relays will be used
                                      // set to 1 if up to 8 uTurn Relays will be used (only Serial Mode)
```

Decide if you want to do “Section Control” with the connected Relays or “uTurn Mode” (=Headland Management while turning over) , if there are no relays installed left it unchanged.

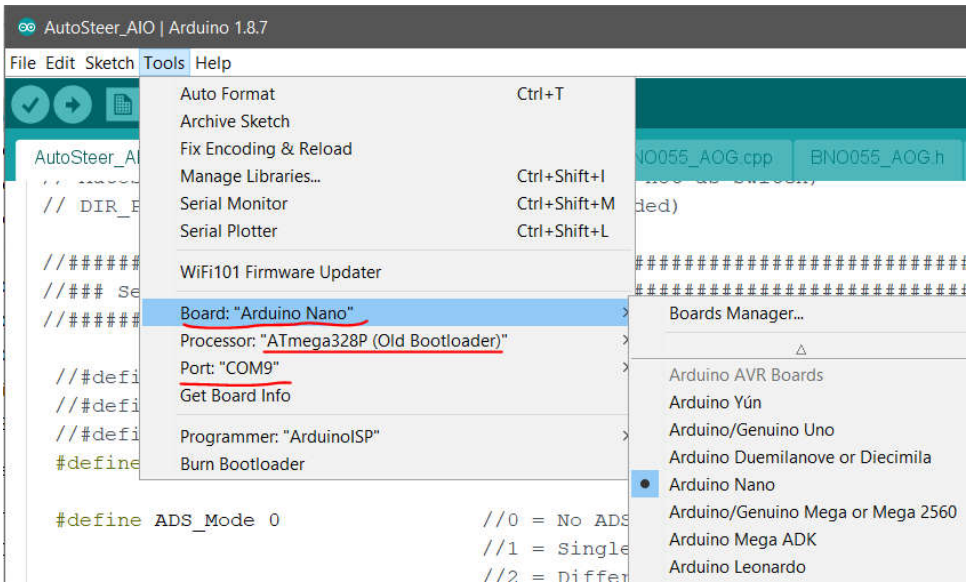
4.8 Ethernet or USB - Communication with AOG

```
//Ethernet Details
#define EtherNet 0        // 0 = Serial/USB communcation with AOG
                          // 1 = Ethernet comunication with AOG (using a ENC28J60 chip)
#define CS_Pin 10         // Arduino Nano= 10 depending how CS of Ethernet Controller ENC28J60 is Connected
```

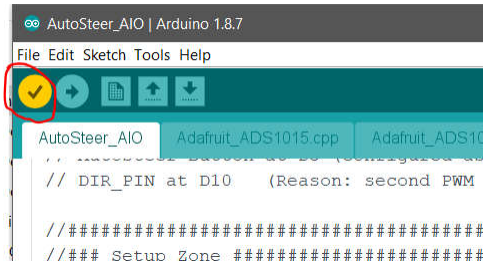
Select your apropriate connection to AOG either 0 = Serial/USB or 1 = Ethernet

5. Finally compile and upload your Sketch

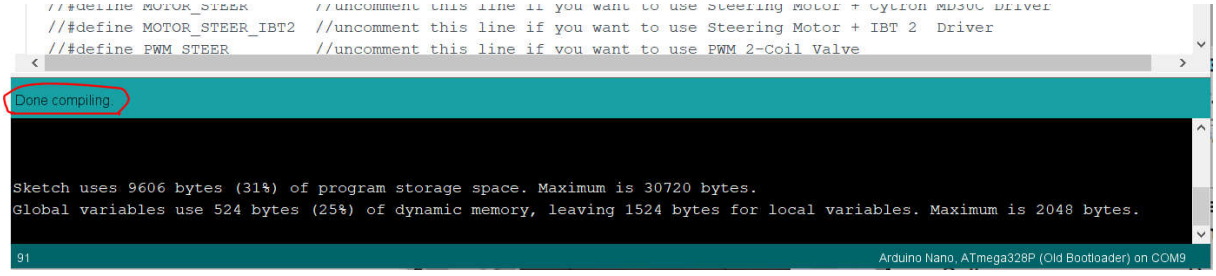
5.1 Make sure you have selected your appropriate Arduino Board at the Tools Menu and also the used Com Port of the Arduino:



5.2 Next step is to Compile the Sketch with a click on the Compile Button:



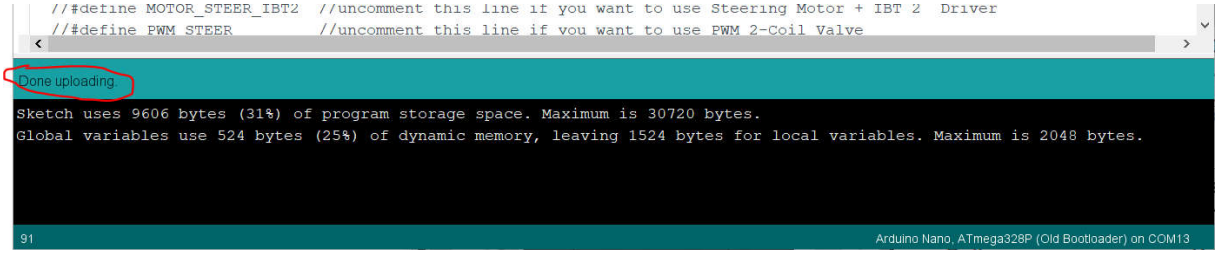
At the lower side of the Arduino IDE you get the result, it should look like “Done compiling”:



If there appears orange failures, recheck your modifications precisely!

5.3 Upload your compiled Sketch to your Arduino Board with the upload Button:

You should get an answer like “Done uploading”



Otherwise check your Serial Port where the Arduino is connected trough!

Congratulations , now your Arduino Board should work as expected and you can do the further Setup at AGopenGPS inside the Auto Steer Configuration Page

!! Good luck !!