

Sonar

A sonar sensor can be used to measure altitude for use with BARO and SONAR altitude hold modes.

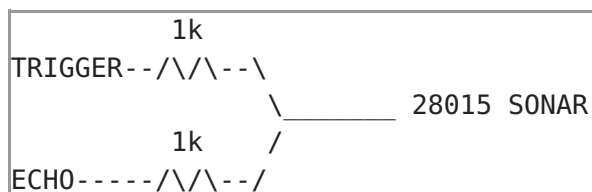
The sonar sensor is used instead of the pressure sensor (barometer) at low altitudes (less than about 3.5 meters above the ground).

The sonar sensor is only used when the aircraft inclination angle (attitude) is small (less than 22.5 degrees).

Hardware

Currently the main supported sensor is the HCSR04 sensor.

The Parallax 28015 single-wire sonar can also be used by connecting 1k resistors to the Trigger and Echo pins, and the other end of the resistors shorted together and to the Sonar module.



Connections

Naze/Flip32+

Mode	Trigger	Echo	Inline 1k resistors
Parallel PWM/ADC current sensor PB8 / Motor 5 PB9 / Motor 6 NO (5v tolerant)			
PPM/Serial RX	PB0 / RC7	PB1 / RC8	YES (3.3v input)

Constraints

Current meter cannot be used in conjunction with Parallel PWM and Sonar.

CC3D

Trigger	Echo	Inline 1k resistors
PB5 / RC4	PB0 / RC5	YES (3.3v input)

Constraints

Sonar cannot be used in conjunction with SoftSerial or Parallel PWM.

SPRacingF3

Trigger	Echo	Inline 1k resistors
PB0 / RC7	PB1 / RC8	YES (3.3v input)

Constraints

Sonar cannot be used in conjunction with SoftSerial2 or Parallel PWM.