

# SkyRadar-DX installation

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Please install SkyRadar box as close as possible to be aligned with roll/pitch/yaw axis of the airplane. SkyRadar software allows several fixed orientations of the box as long as box sides aligned parallel with roll/pitch/yaw axis.

You can install SkyRadar in following orientations:

1. SkyRadar label looking up and one side of the box parallel to the axis of forward flight.
2. Antenna connectors up and either top or bottom or side of the box parallel to the axis of the forward flight.
3. Antenna connectors down and either top or bottom or side of the box parallel to the axis of the forward flight.
4. Antenna connectors looking towards nose of the airplane.
5. Antenna connectors looking towards the tail of the airplane.

To program SkyRadar for orientation power up SkyRadar in installed orientation, connect SkyRadarDX software to the unit Wi-Fi network, and tap "Configure" button. You will see screen which contain list of possible orientations with text at the top of the screen that shows auto-detected unit position as well as question about additional orientation information. Please select where second axis points too based on the question at the top of the list. SkyRadar will be reprogrammed and restart with corresponding orientation. This orientation programming procedure needs to be done every time you change SkyRadar box orientation inside the airplane.

## Antenna connections

SkyRadar has 4 antenna SMA connectors which clearly labeled on top label, there is 2 inputs for 1090 MHz antenna and 978 MHz antenna which is included in the box for portable applications, 1 input for active 5v GPS antenna , which is also included in the box and one output for Wi-Fi signal which comes with 2.4GHz antenna already attached. Portable 978 and 1090 MHz antennas are marked at the bottom of the antenna with corresponding frequency. You can use practically any active GPS antenna as long as it is designed for 5v operation.

## Power connection

SkyRadar-DX can be powered form voltage ranging from 12 to 28volts. You can use included cigarette lighter adapter to plug it into airplane cigarette lighter socket, or you can cut the cigarette lighter end of cable and connect wire directly to ships power system through 2 Amp fuse. SkyRadar takes about 4 Watts of power while operational.

# SkyRadar-DX AHRS operation

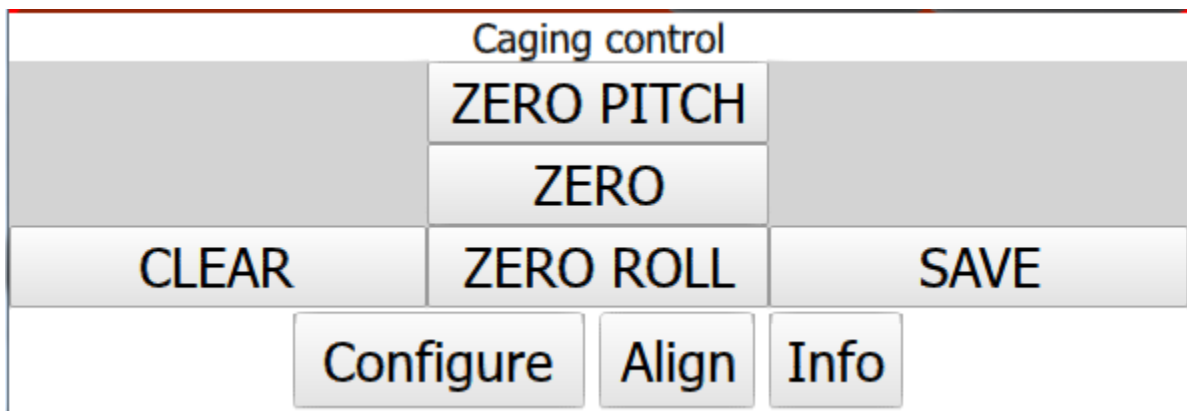
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Please download SkyRadar-DX configuration utility from our website:

<http://www.skyradar.net/skyscope-application/skyradar-dx-application.html>

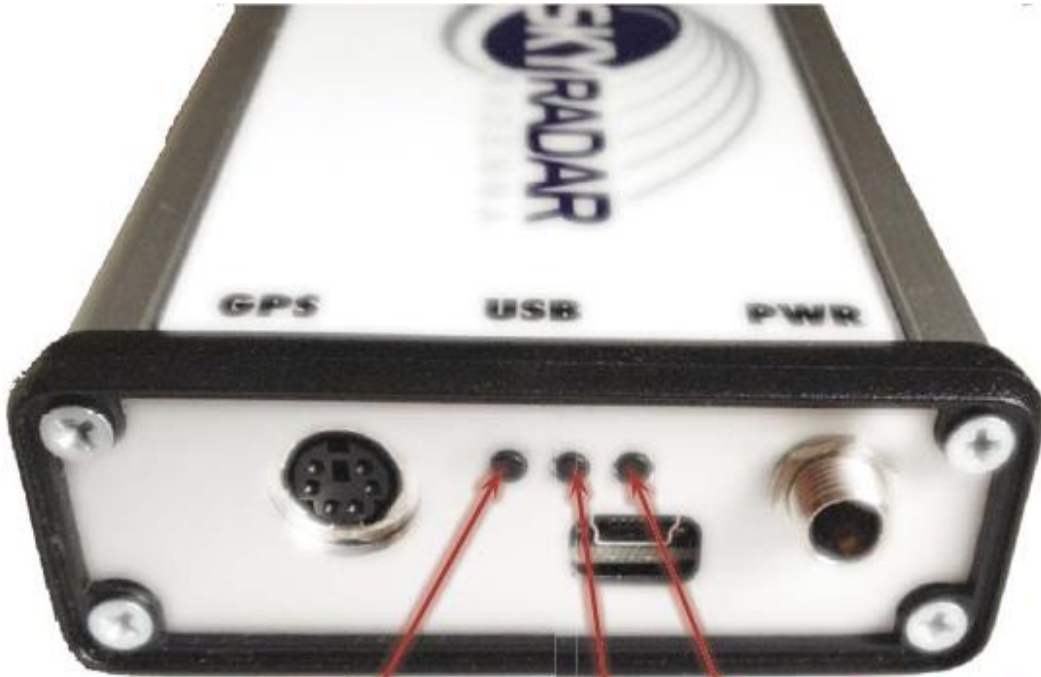
Once powered SkyRadar-DX will create WiFi network with “SkyRadar-xx” SSID, where “xx” will be some random letters/numbers. Please connect your tablet/notebook to this SSID in order to configure and operate SkyRadar-DX.

For best results SkyRadar-DX AHRS unit need to go through calibration while it is stationary. It is better to power SkyRadar-DX before starting engine and let it acquire GPS and go through calibration before or while starting engine. If SkyRadar-DX is not moving calibration procedure takes about 1 second. SkyRadar-DX will not output attitude information until it acquires GPS signal. Once GPS signal is acquired and calibration is done unit should provide current attitude information. You can adjust small deviations for pitch in roll in “Align” menu of the SkyRadar-DX software. To do that press “Align” button on the SkyRadar-DX software you will see alignment panel popup which looks like this:



Press “Zero Pitch” button to assume currently indicated pitch as a level pitch, press “Zero Roll” to assume currently indicated roll as a level roll, and press “Zero” button to assume both current pitch and roll as zero level roll and pitch. You can save correction in the computer/tablet persistent storage so that when you run SkyRadar-DX software on this computer/tablet again it will use stored corrections for roll and pitch. “Clear” button will remove all corrections and will use direct AHRS output for roll and pitch indication.

## SkyRadar-DX LEDs



Power Indicator  
Should be  
blinking once  
per second

GPS Lock  
ON - GPS lock  
OFF - no GPS  
lock

ADS-B Data  
Blinks when  
ADS-B data  
packet is  
received

## PS-2 Connector RS-232 output pinout

PS-2 connector provides serial output of ADS-B and AHRS data at 230400bps 8N1 format. Photo below shows which pins are used for RS-232:

