OpenFlightSimConsole base

Gerge

VIEW IN BROWSER

updated 21. 1. 2023 | published 21. 1. 2023

Summary

This is an open source Airbus-style centre pedestal for flight simulator

Gadgets > Video Games

Tags: a320 airbus airplane arduinojoystick dcs flightcontroller flightsim flightsimulator joystick

This pedestal was designed to closely resemble the A320 cockpit, but some compromises had to be made so it is not entirely accurate.
This is a work in progress and a lot of documentation is still missing/ unorganized, please use the comments if you need clarification.

This design includes the overall construction of the pedestal and the underlying electronics. The individual modules will be posted as separate designs when the documentation is ready. There may also be extra modules later.

Electronics:

The whole thing is using an Arduino Uno running UnoJoy. The code is provided, but please refer to the UnoJoy github page for details on how to use it. Using a Pi Pico is also possible as it supports HID (could not figure out how yet), but at the moment the Uno works fine and is more mainstream.

There are “underpanel controls” with 2 switches and a button. The button is used to put the Uno in DFU mode (unojoy reprogramming without crawling in the back) and one switch determines throttle characteristics. At the moment the other switch is not used, but is there for future addons. Feel free to modify the code if these features are not to your liking.

Fritzing diagram of connections is also included.

Calibration:

The axes need to be calibrated after installation of the modules. Enable calibrationmode like so and flash to the arduino:

#define debugmode #ifdef debugmode #define calibrationmode //run this feature once to setup

Open the serial monitor (baud 9600) and follow the instructions of the arduino to move each axis.

-if you mess up just reset the Uno and start over

-if there is a reversed axis error swap the +- leads on that potentiometer

when calibration is done it will print the status of each axis so you can check

Next disable the debug and calibration then flash the uno (your calibration is saved in eeprom).

//#define debugmode #ifdef debugmode //#define calibrationmode //run this feature once to setup

use unojoy to turn it into a joystick

Pedestal:

The main structure is made from 18mm plywood. A drawing is included of the parts.

Laser cut Plates:

The DXF files are included for this specific layout, but you can create your own custom plates as the FreeCAD sketches are included as well. The designs are made for 5mm plywood plates, if you want to use something else please note that the modules may need some redesigning.

Modules:

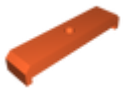
The modules are designed to be independent of one another, this allows you to mix and match them to your liking. Feel free to remix the designs (CAD files will be included) or create and post your own unique module.

Throttle quadrant

FLAPS lever

Speed-break lever

Model files



collective_bracket.stl

clamp throttle levers to move in unison

collective_bracket.fcstd

underpanel_controls.stl

90deg_bracket.fcstd

underpanel_controls.fcstd

90deg_bracket-body.stl

side_plate.dxf

top_plate.dxf

flaps_plate.dxf

throttle_plate.dxf

lasercut_baseplates.fcstd

Other files

openflightsim_unojoy.ino

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