

FDS-FC1
Product Manual
Flight Control Interface
8 Axis/32 Switch Inputs/8-Pos Hat

FLIGHTDECK

SOLUTIONS

Proprietary Statement

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General Information

The FDS-FC1 is a flight control input board emulating a standard Windows joystick. The FDS-FC1 has eight (8) axes, thirty two (32) buttons and an eight (8) position hat. All eight (8) axes are 10 bit resolution.

Board Layout



Figure 1

Connectors

There are two connectors on the FDS-FC, one for buttons / hat and one for axis.

Axis Connector:

- +5V
- Ground
- Axis 1 input
- Axis 2 input
- Axis 3 input
- Axis 4 input
- Axis 5 input
- Axis 6 input
- Axis 7 input
- Axis 8 input
- Shield



Button Connector:

Ground	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
2	4	6	8	10	12	14
1	3	5	7	9	11	13
+5V	Row 1	Row 2	Row 3	Row 4	Row 5	Row 6

Axis Layout

The following table shows the assignment of each axis to Microsoft Windows.

Axis	Assignment
1	X Axis
2	Y Axis
3	Z Axis
4	X Rotation
5	Y Rotation
6	Z Rotation
7	Dial
8	Slider

Windows Gaming Controllers

The FDS-FC1 will show up like any other joystick that you may have connected to your system. If 8 axes or 32 inputs buttons are not enough you can connect multiple FDS-FC1 cards to your system, however at the time of writing Microsoft Windows is only able to access sixteen (16) controller. The standard display and calibration applies to the FDS-FC1.

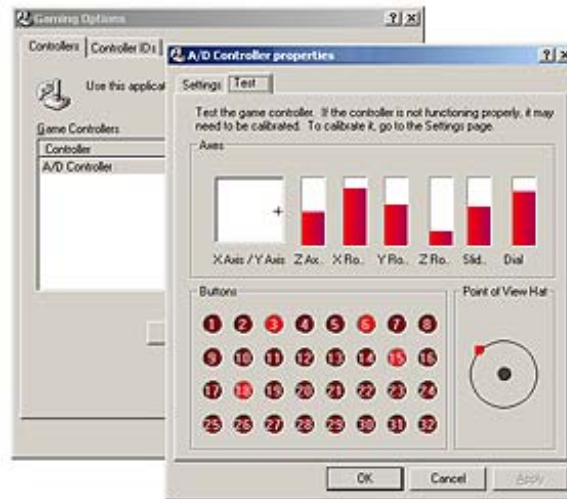


Figure 2

Connections

USB

Connection to computer is done via a standard USB B type connector, located at the edge of the FDS-FC1 card.

Axis

In order for an axis to be enabled and show up to Windows it must be connected before the FDS-FC1 is connected to the USB bus. Any pot with a value of 10K thru 100K can be used; however the recommended pot value is 50K. When connecting the pot, connect pin1 to ground, pin 2 to the axis input and pin 3 to +5v.

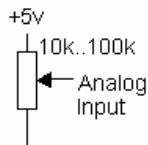


Figure 3

Buttons / HAT

The FDS-FC1 is able to handle 32 button inputs as well as a eight (8) position hat control (up, down, left, right, upper left, upper right, lower left, lower right). When connecting the switches to the input matrix you will need to use a diode to prevent phantom keys from being seen during the scanning of the matrix. Any signal diode will be sufficient (e.g.: 1N4001 or 1N4148).

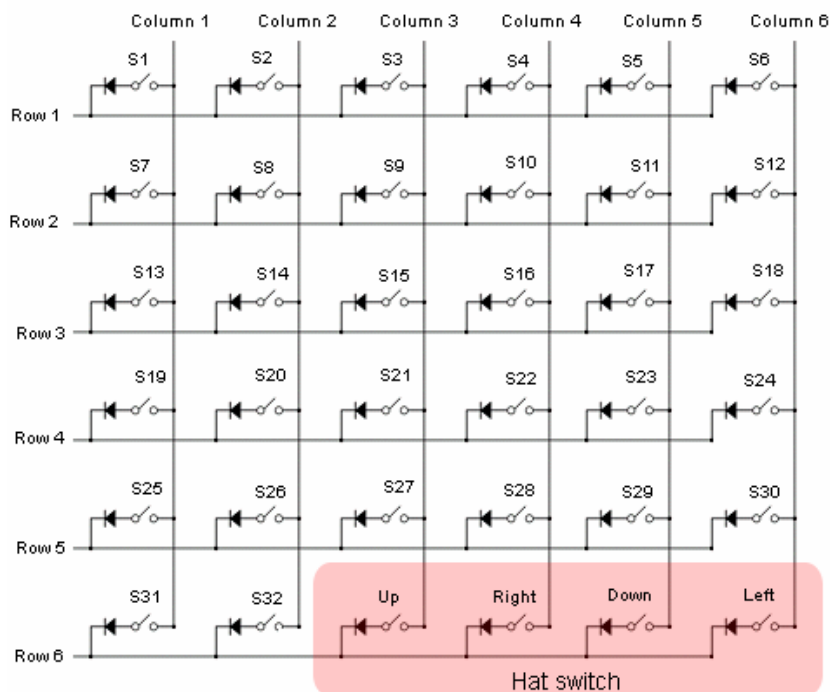


Figure 4