
DCS A-10C VR Home Cockpit

Internal structure and trouble shooting

•1 _____
Internal Structure

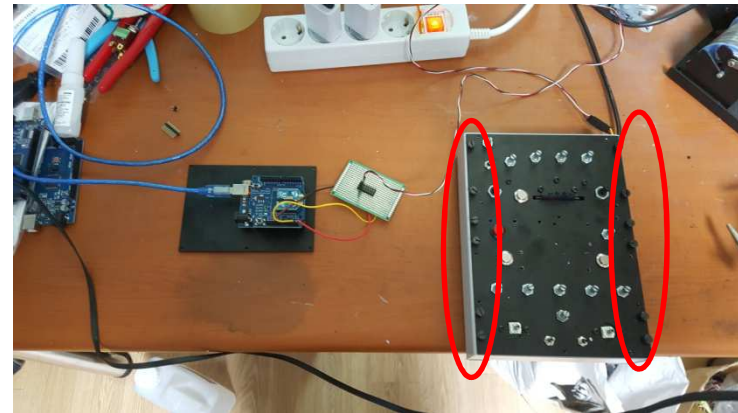
•2 _____
Arduino Board

•3 _____
Switch Connection Example

•4 _____
Things to check if they don't work.

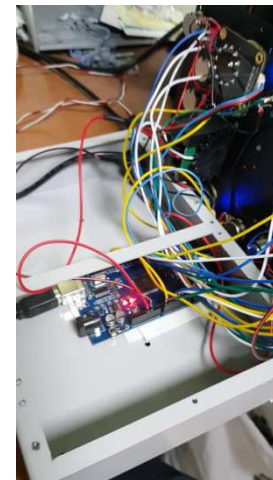
1 Internal structure

Remove the casing of the transmitter and the top and knobs of the module and connect them to the receiver.



Remove the top joint screw to open the cover.
The other screws are screws to secure the switch,
so you don't need to remove them.

The wiring looks very complicated,
but it's just because there are so many switches and
it's very simple.



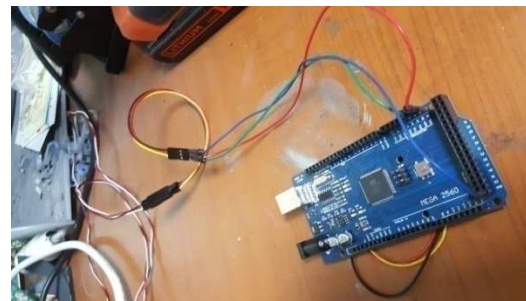
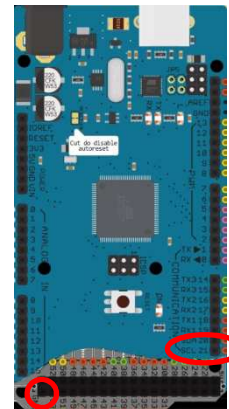
2 Arduino Board

When completely disconnected from the casing, the following boards are available.

The second and third pictures show the communication line connected. There is a soldering connection to the board or a pin connection.

The red line of the communication line connects to SCL, the yellow line connects to SDA, and the black line connects to GND.

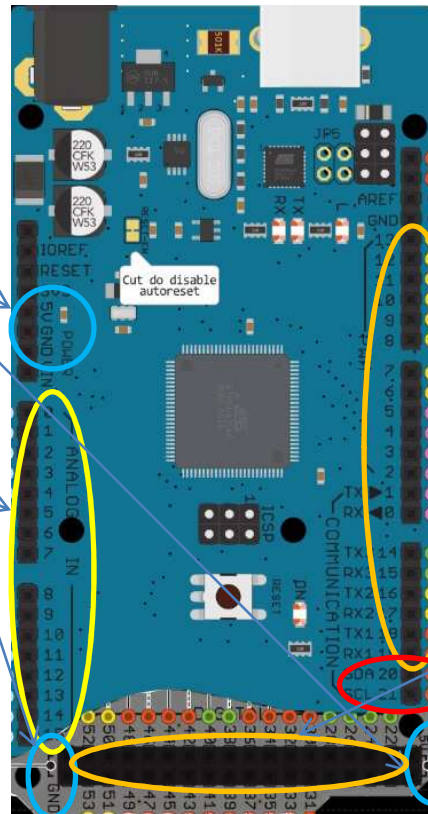
This is the structure of the Arduinobod on the right. The important things here are 5v power, GND, analog pin numbers, and digital pin numbers.



2 Arduino Board

Terminal for power connection

Analog data pin



The types of switches include analog and digital switches.

Analog switch – potentiometer, selector ...

Digital switch - On off switch, toggle switch, rotor switch....

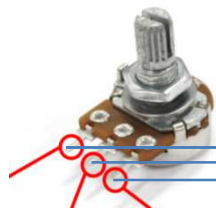
The analog switch consists of three terminals (5v,data, GND), which are powered on and outputs voltage values.

The digital switch outputs only two values on or off if there are two terminals (GND,data) or more terminals (GND,data1,data2...).

Digital Data pin

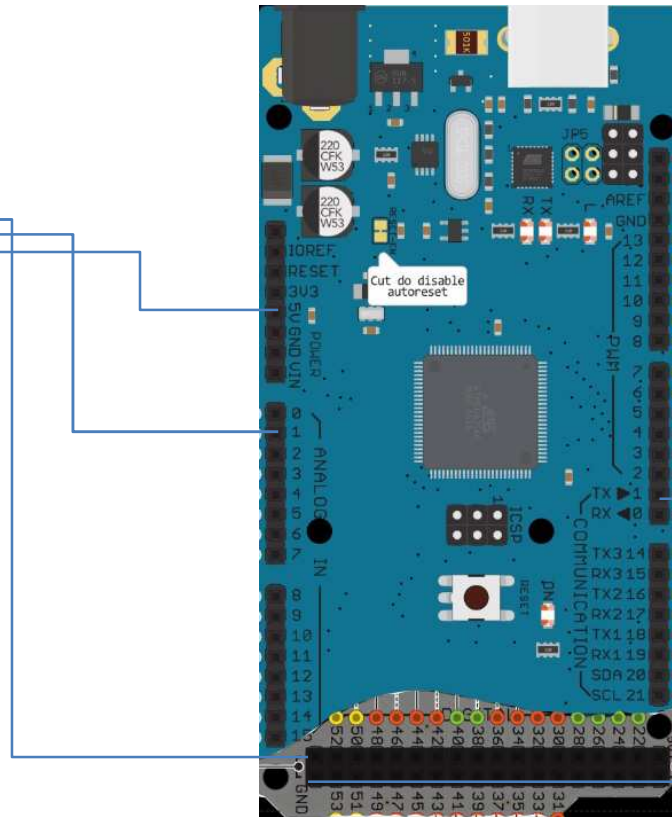
Communication pin

3 Switch Connection Example

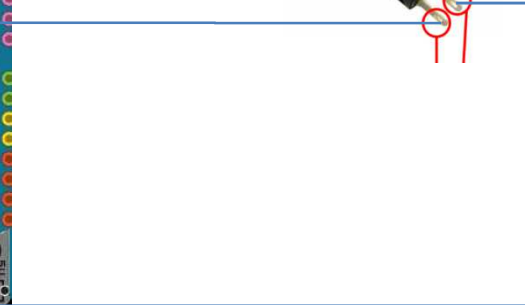


An example of an analog switch connected to an analog number pin 1.

The pin numbers that need to be connected to each switch are shown on the page below for the attachment and terminal information for all switches used in the A10C cockpit.



Here's an example of a digital switch connected to a digital pin 1.



4 Things to check if they don't work.

In most cases, the reason why it doesn't work is because of problems with communication cables and power connections. The way to know the power is to see the LED on the Arduino board turn on.

If the switch does not work even when the power is on, there is a problem connecting the communication line.

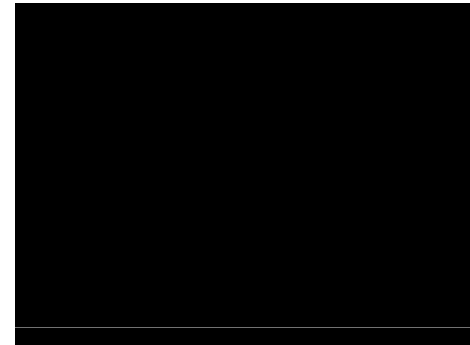
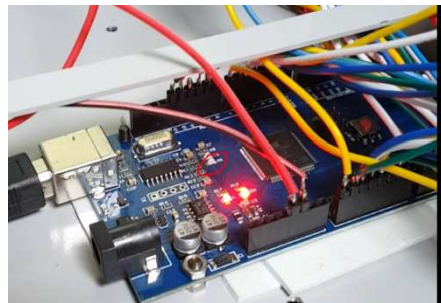
If all consoles don't work

1. Check that the receiver is functioning properly.
 - If the computer recognizes the com port number and there is no problem communicating with the computer, it works properly. (Please check the video for instructions on how to install the receiver.)
2. Connect only one module to one transmitter and conduct an operation test. If any one of them works, there is no problem with the transmitter.
3. If some modules don't work, please replace the communication cable with another one.
4. If there is a module that is still not working after all the tests have been done, there is a problem with the communication cable contact to the board. If any of the three wires are not connected properly due to a big impact during transportation, it will not work. Open the cover, check if the power is turned on, and check if there is no problem with the communication line.

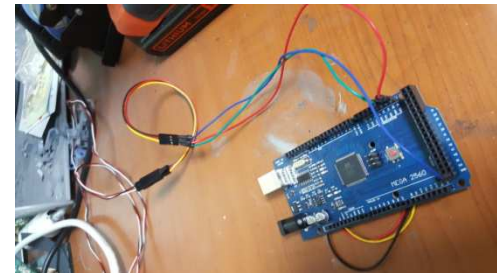
To verify that there are no problems connecting to the transmitter

If the Arduino board has no problem connecting to the transmitter, you will see the RX LED lamp flickering when the switch is operated. If it does not flash when operating the switch, the switch is either faulty or disconnected from the transmitter.

If the RX LED does not flash when the switch is operated, please check the communication wiring. The Arduino SCL should be connected to the red line, the SDA to the yellow line and the black to the GND.



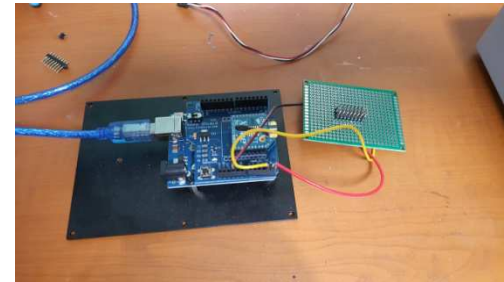
If necessary, you can connect directly to the SCL, SDA, and GND terminals using jumper wires and plug them into the transmitter.



Some consoles don't work

1. Make sure the transmitter is working.

-Connect with the operational module and proceed with the test.
-If all connections are connected to other modules that are accurate and working, but do not work with this transmitter, then there is a problem with the transmitter. If there is a problem, there is a problem with the wiring connection or the power supply. Open the cover and check. A transmitter with no abnormalities has the same wiring as the picture when the cover is opened.



All communication connections can be made between the same colored lines.

2. If there is no problem with the transmitter

-Test only one module from the console. If there is a module that is not working, replace the communication line and check it. If it does not work the same with other operated transmitters, check the internal communication line because there is a problem with the power or internal communication line.

When testing a module, it works regardless of the type of transmitter. If all one console is to work, all modules must be connected to the same type of transmitter regardless of the type of transmitter.

Once all tests have been completed and all modules have been checked for operation,

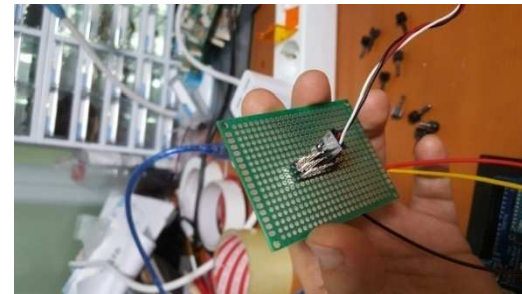
-Test by adding connections one by one.

Note that power to the transmitter and module must be switched back on and off each time a communication connection is added. If the entire module does not work when adding a specific module, there is a problem with the communication connection. Check the communication line again.

An incorrect connection of one module can affect the whole console because the transmitter is down.

A mistake most people make

-As shown in the picture, there are many cases where you can't connect to the connector correctly and you miss one line.

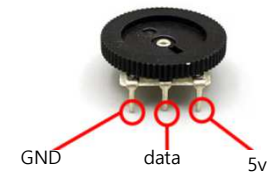
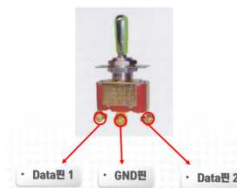
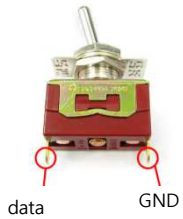
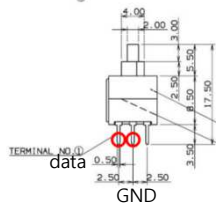
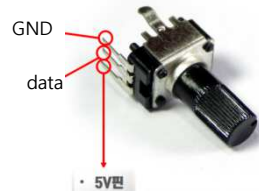
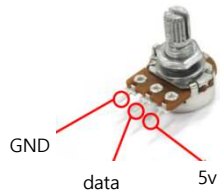
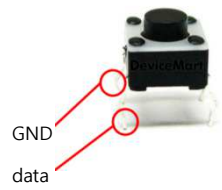


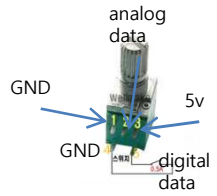
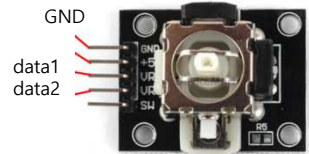
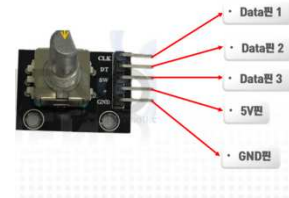
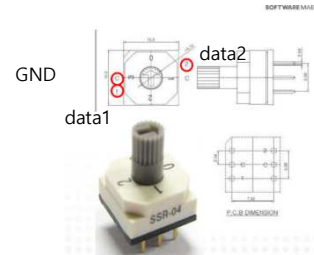
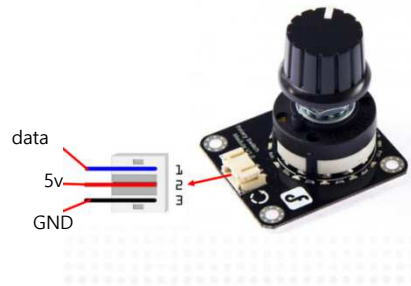
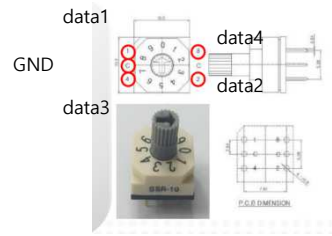
- As shown in the second picture, you have to plug it in completely deep, but if you connect it loosely, it can't communicate.



Switch terminal information

It doesn't matter if gnd and data are changed for a switch with two terminals.





Thank you.
