Motion4Sim

2021

QUICK START GUIDE

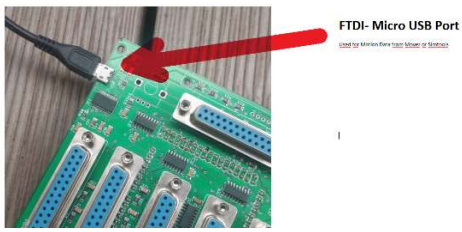
for AASD Series Servomotors

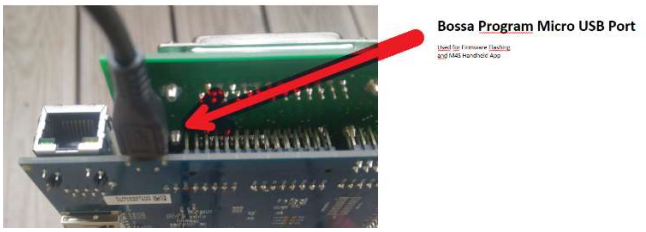
27.7.2021

In these instructions we briefly describe how you can quickly put the controller into operation . For the first test, please use the motors without a connected load. Please be aware of the risk of injury if you use the motors improperly. For Information not described here, please read the manual.

1. **make sure that the servo motors are not supplied with power**

2. **connect all cables needed to the motion4sim board**





   a. **USB Cable to FTDI Port on the breakout pcb board**
   b. **D Sub 25 Cable 1-6 to the Servomotors (or opt. 7)**
   c. **D Sub 25 Cable for handheld device if no display and encoder is installed**
   d. **If display and encoder are installed , connect a online switch to connector and a emergency switch too**
   e. **Or use the handheld app instead of c. or d.**

3. **Plugin the usb cable into computer or other 5v usb source**

4. **Controller boots up**

5. **Do factory reset by turning the encoder to the left and choose kind of rotating- or linear actuator factory reset. enable with pressing encoder button. If the encoder works wrong direction check next point.**

6. **after the factory reset is done (seconds) try turning the encoder and text changes again in display , repower the board!**

7. **wait until is rebootet and press the encoder button**

8. **Check encoder turning direction , you can see the master gain rising or reducing. Also check the behave oft the emergency button.**

mastergain in the down left corner in %

right turn should rise and left turn should reduce master gain. It is possible that some encoders have other direction. This could be changed in the setup menu.

9. **Press encoder button and search by turning left/right the setup menu entry. Press encoder button and turn encoder left/right until found „encoder direction“. If the emergency button is also not correct please change in the setup menu the option „Emergency NC“. Some emergency buttons are only normaly open or normaly closed other have both , in the setup menu you can change the behaviour oft he emergency button. If all settings are made, use the menuentry „back“ to get to the upper menu-level.**

10. **Now set the number of installed actuators in the menu.**
    ->Actuators->Number Actuators(last entry left)

    The assignment of the connections is only important if you want to use the check actuator function. Otherwise the connections can be connected as you like. If you want use the check actuators function. Make sure to connect the actuators in such a way that the connections of the actuators in ascending order from 1 are fully occupied without any gaps. For example 1,2,3,4 or 1,2 or 1,2,3,4,5 and so on.

    Now set all the actuator specific values.

    Act.Style -> to Rotary or Linear
    Encoder PPR,
    Electron.Gear ,

    for rotating actuators:
    Gearbox Ratio 1:,
    Rot.Range,

    for linear actuators:
    Leadsrew Pitch,
    Actuator Length
    Lin. Act. Safety

    Check also in
    menu->Actuator->Actuators->Actuator1..8 submenu->Rotation:
    for cw or ccw rotation direction for each connected actuator.

    most values are preset usefull

11. **If all settings are done turn encoder to the left until you have a menu entry called „back“ , activate by pressing the encoder button. Repeat this until you have the upper menu and the last entry by turning to the left is „save and return“. Press encoder button to save the settings to eeprom.**

12. Only in the first run you should repower the controller , when all settings have saved or execute the reset option in menu.

13.Now power the actuators.

14.After controller reboots press encoder to calibrate.

15.The actuators should now searching for home position. They are searching for a hard stop or running for home switch to trigger. Check that all actuators are turning to the correct direction. If something goes wrong hit the emergency button for stop. Change the settings and repeat. Homing is essential for the controller to work properly.

The display shows :

X: for unconnected motors

P: for homing motors (preparing)

!: for running to park or safety position

R: for Ready

16.If they are ready , the display shows „R“ for each actuator. You can switch off the online switch. If the switch is already at off position you can switch online and the actuator moves to standby position and is ready for recieving data.

17.read the manual carefully

18. thank you for using motion4sim and enjoy