

Application Note AN0105: icon actuators running synchronous

Introduction

This application note describes how to set up a system with multiple icon actuators running synchronous.

① Always use the latest version of Concens Actuator Studio (CAS) and icon actuator with latest firmware.

This application example shows a setup with three icon actuators, which must run synchronized. The following parts are used:



1. 1 pc. icon programming cable
2. 2 pcs. icon patch cable (optional)
3. 3 pcs. conXion DIN or BOX (optional)
4. 3 pcs. icon actuators
5. 1 pc. handset or switches for control

Patch cable and conXion DIN/BOX are used only to make interconnection easier. This can be done with wires as well.

The icon actuators used, are configuration F/MDO with default settings, i.e. all actuators are delivered with the address 8. Step 1 can be skipped if actuators are pre-programmed.

An icon synchronized system consists of two to eight actuators and is built as a master/slave-setup. The master actuator always has address 200 and the slaves have addresses from 201 to 207.

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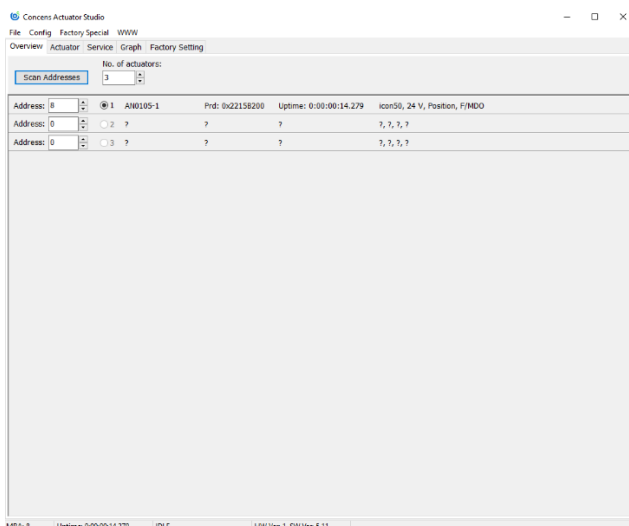
Step 1: Assign address

Connect the actuator, which is supposed to be the master with address 200 and connect the programming cable. Then connect power.



Please note: It is not possible to connect all three actuators to the system now, because they are all delivered with address 8 as default. Connecting several actuators with identical address causes a conflict and results in malfunction of the system.

Now, start the CAS software on the PC. If CAS is running for the first time, the drivers will automatically be downloaded from the internet. Go to the “Overview” tab:



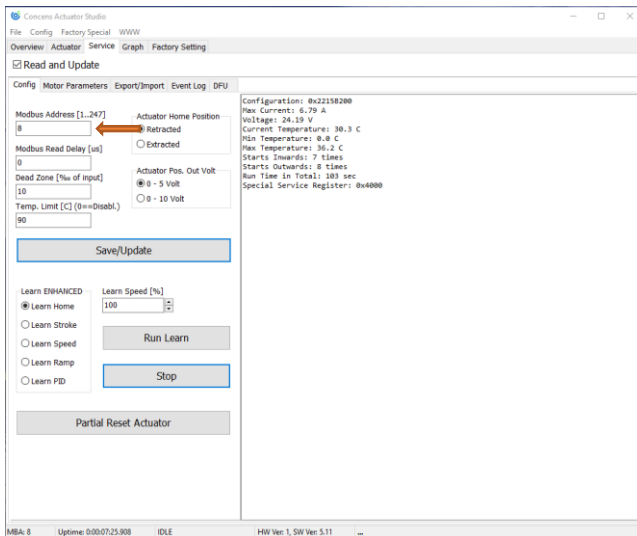
Press the “Scan Addresses”-button:

Scan Addresses

CAS has now found an actuator with address 8. This is the default address.

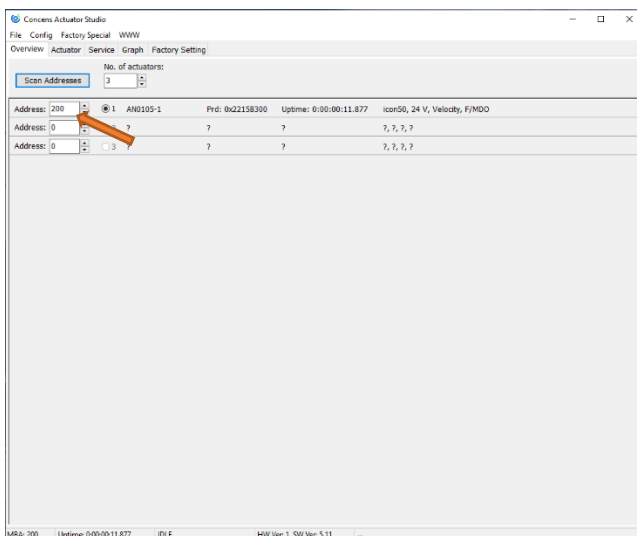
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This first actuator will now be programmed to be the master with address 200. Please go to the “Service” tab and choose “Config”.



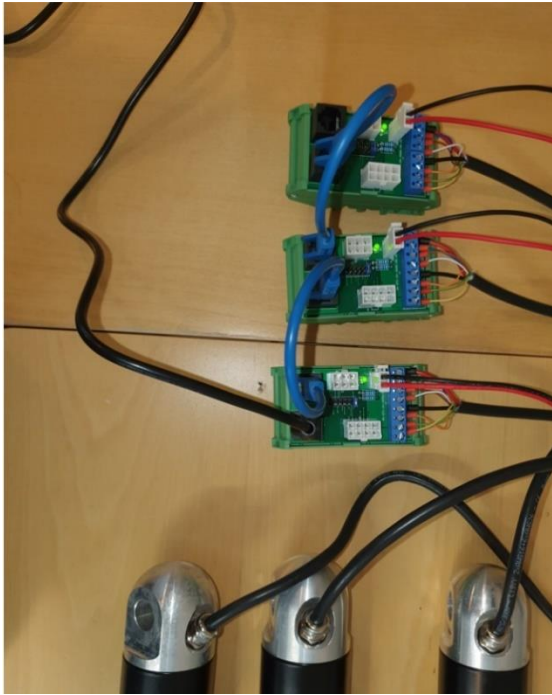
Now change the address from 8 to 200 by writing 200 in the “Modbus Adress” field. Press “Save/Update”.

Go back to the “Overview” tab and verify that the address is now 200 for master.



The same procedure is used to program the second and the third actuator to address number 201 and 202 respectively.

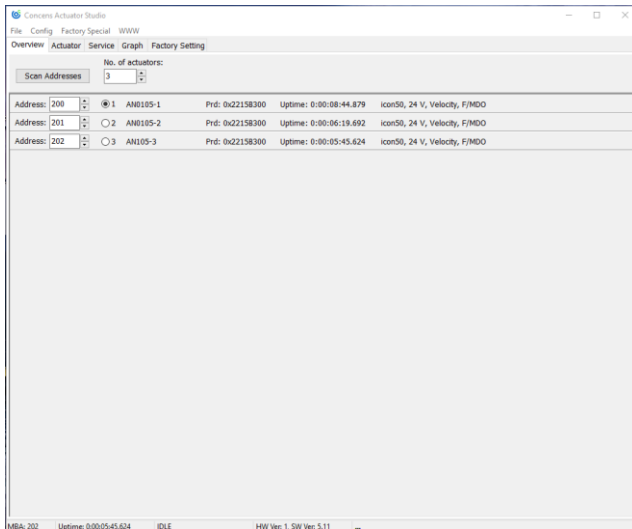
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Now connect all actuators as a system using the conXion DIN/BOX and the patch cables.

If the actuators come with eight pole Molex connectors, use the plugs instead of the screw terminals.

Go to the “Overview” tab and press “Scan Addresses”.



The list will now show all three actuators.

All addresses are now set, and the system is ready to be programmed for synchronous operation.

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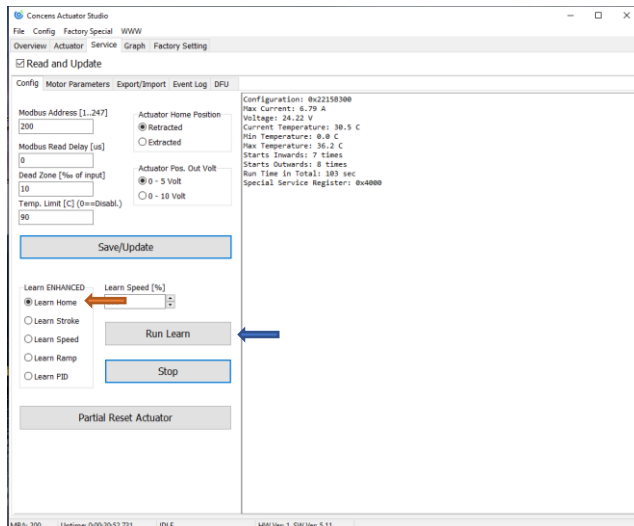
Step 2: Pairing of icon actuators

In an icon synchronized system, the master communicates with the slaves. The master must know the other actuators in the system.

First step is to align all actuators and find the HOME position for each of them.

Go to the “Service” tab and select “Config”.

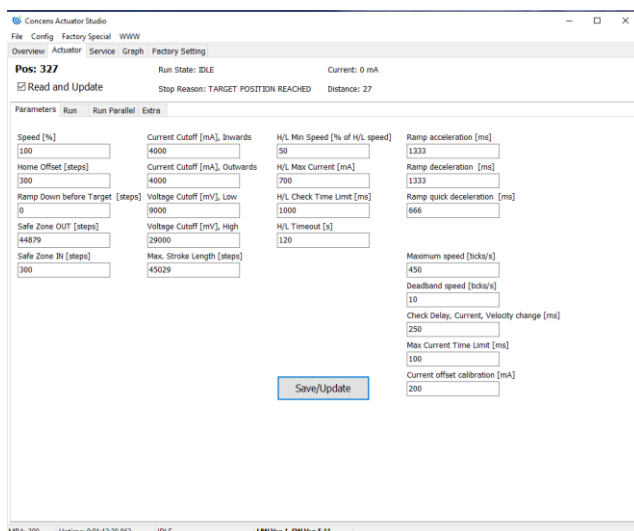
Enable the “Learn Home” function and press “Run Learn”.



Do this for all actuators; address 200, 201 and 202.

All actuators are now aligned and in the HOME position.

As all icon actuators are shipped with all the parameters set from the factory, it is not necessary to perform the LEARN STROKE procedure.

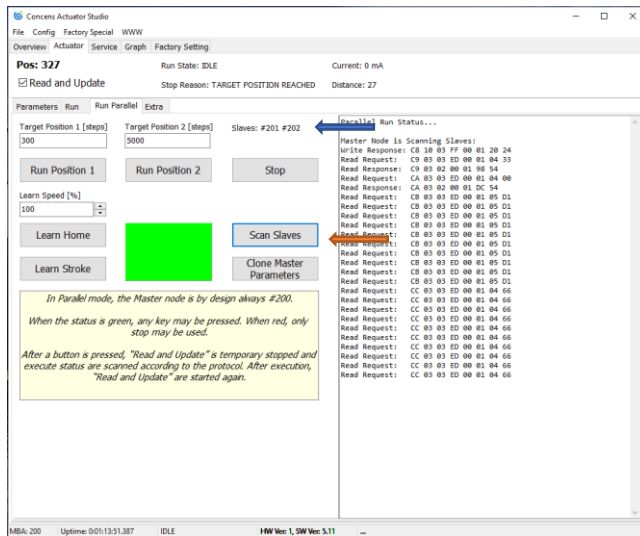


Go to the “Actuator” tab and select “Parameters”.

Check that all parameters on the master actuator are correct.

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Go to the “Actuator” tab and select “Run Parallel”.



Press **Scan Slaves** on the master and CAS will find the slaves.

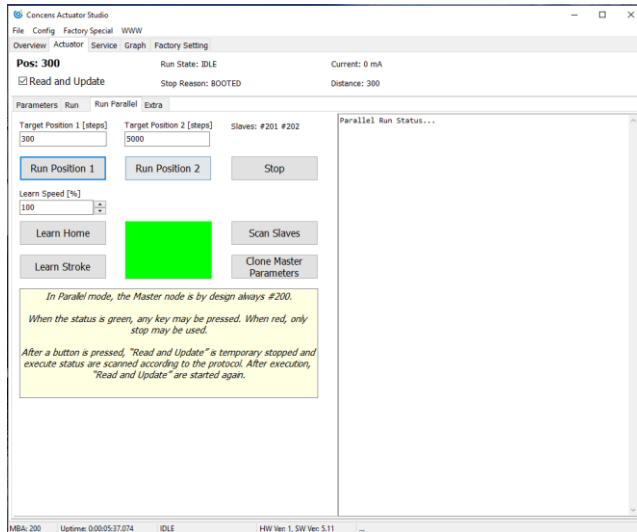
Press **Clone Master Parameters**. This will copy the parameters from the master to the slaves, which ensures that all actuators have identical parameters. This is important for the synchronized setup to work correct.

When this has been done, check that all parameters are correct.

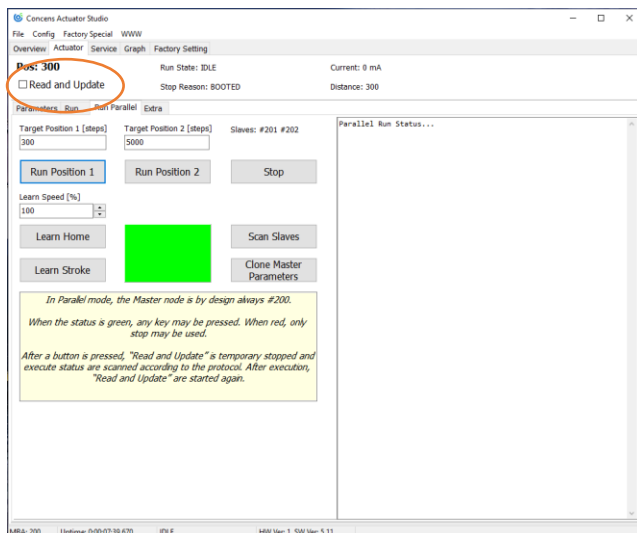
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Concluding remarks

Please note: When working with CAS and a synchronized actuator setup, it is important only to use the “Run Parallel” tab as other tabs may interfere with the operation of the synchronized system.



Please be sure to untick the “Read and Update” feature when using handset or other switches for control. If this is not done, CAS may interfere with the operation of the synchronized system.



Please contact support@concens.com for further information.

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03.01.2024 – MTS/RL