



Jacosoft 3.2.9

Release note

Version 1.1

March 13, 2014

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Revisions & Approval

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1 Introduction

1.1 Purpose

This document is used as a release note on the application Jacosoft version 3.2.9

2 Improvements / modifications

2.1 Rehab

2.1.1 New mapping interface

The mapping window has been change. Now, it's only offers choices that can be mapped. As an example, it will not show the functionality Open 3 fingers on a button click because it makes no sense.

Also, you can modify many modes before sending the mapping charts to the robotic arm. That avoids a reboot every time you change a mode.

New functionalities can mapped on a controller:

2.1.1.1 AdvanceGOTO_X

Move the robotic arm in the sequence recorded with the AdvanceGOTO_Add_X function.

2.1.1.2 AdvanceGOTO_Clear_X

Delete all the points of the AdvanceGOTO_X

2.1.1.3 AdvanceGOTO_Add_X

Used to add a position to an AdvanceGOTO_X.

2.1.1.4 Automatic orientation

There is an automatic orientation functionality for each possible axis. Each of them orient the end effector toward that axis.

2.1.1.5 Click functionality on a stick event

It is now possible to perform any functionality with the stick. This includes "click" functionalities like "Switch Mode A" or "Record Position 1" for example. The functionalities "*Record Position*", "*AdvanceGOTO_Add*" and "*AdvanceGOTO_Clear*" must be held for one second with the stick. It is strongly suggested to activate "Diagonal disabled" with these modes.

2.1.1.6 Return at actual mode

When changing from list A to list B, the selected mode was always the first one (B0 or A0). From now on, the selected mode will be the last mode selected in that list. For instance, if a user is in mode A2 and switches to B, the first time it will be in B0. The user alternate in list B to B3. He switches back in the list A. The mode will be A2. If he returns in list B, it will be in B3.

2.2 Research

2.2.1 Trajectory TAB

The trajectory TAB has been completely changed. It now allows modification all the point in the trajectory. It also possible to get and add a point in a trajectory in 1 action via the Get / Add button. Note that the enable / disable checkbox for the fingers has been changed, now you need to check it if you want to use the fingers.

Also, the max point in a trajectory has change from 20 to 2000.

2.3 General

2.3.1 Installation package

You don't have to manually delete files anymore when you uninstall the application.

2.3.2 When reprogramming a DSP version, a restore factory default is now done automatically

This prevents some mistakes. It is thus important to save the user profile before to reprogram the DSP.

2.3.3 It is possible to have a “click” and a “hold down” on the same button. The time delay to detect one or the other has been increased

When only a hold down is mapped on a button, it takes a 0.15 seconds before the hold down is detected. When a click and a hold down are mapped on a same button, the threshold is 0.4s. Below 0.4s, a click is detected and above 0.4s, a hold down is detected. That means that if a user holds a button, it will take 0.4s before the functionality is activated.

3 New Features

3.1 Rehab

3.1.1 Spasm filter

We have added a new functionality called the spasm filter. The spasm filter reduces or eliminates involuntary commands sent to the robot. This allows to be more precise, especially if the control is not proportional. When the user sends a command to move, the velocity will gradually increase. When the user wants to stop (by releasing the stick) the robot will stop immediately. Five levels of the filter can be used:

- 0 – The spasm filter is not activated
- 1 – Very low filter
- 2 – Low filter
- 3 – Medium filter
- 4 – High filter

It is also possible to configure the functionalities “Decrease spasm level” and “Increase spasm level” on a button or a stick through the mapping system.

3.2 Research

No change

3.3 General

No change

4 Bug Fix

4.1 Rehab

4.1.1 Drinking mode

In this version, when the drinking mode is modified, you don't have to reboot the robotic arm.

4.2 Research

4.2.1 Disable fingers was not always working

In a trajectory, disable fingers was not always working. This has been resolved.

4.3 General

4.3.1 Health center position type

The health center window was not always showing the right type of position. It has been solved.

4.3.2 USB connexion

The USB connexion management has been improved.

4.3.3 Force overcharge

The force overcharge alert is now working.

4.3.4 Ghost joystick in Jacosoft

Sometime the joystick was shown as connected in Jacosoft event after it was disconnected. This has been solved.

5 Known issues and workaround

5.1 Rehab

See General.

5.2 Research

See General.

5.3 General

5.3.1 USB Connection

With the MICO robotic arm, it is possible that sometimes the USB connection fails. Most of the time, it is only for a short time and in some rare cases, you need to reboot the robotic arm.

5.3.2 The DSP programming does not go from 4.2.9 to 5.05

When a DSP version equal or prior to 4.2.9 is programmed, we can't program a 5.05 version. Doing so will fail and the DSP will be in boot loader. To program the robot, we must first program version 5.03.0012, reboot and then 5.05.0033.