



FS 0CPP 0002 - DSP Jaco 5.0.2

Release note

Version 1.3

September 26, 2013

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Revisions & Approval

Version	Primary Author(s)	Description of Version	Date Completed
1.0	S. Latour	First version	2013-09-06
1.1	S. Latour	Details added	2013-09-24
1.2	S. Latour	Minor Corrections	2013-09-26
1.3	S. Latour	Added restore factory details	2013-09-26

Requirements Specification Approval History

Approving Party	Version Approved	Signature	Date



Contents

REVISIONS & APPROVAL	2
CONTENTS	3
1 INTRODUCTION	4
1.1 PURPOSE	4
2 IMPROVEMENTS	5
2.1 ROBOT BASE PROTECTION MODIFICATION.....	5
2.2 FINGER RANGE IMPROVED	5
2.3 LATERALITY + DRINKING MODE.....	5
2.4 RETRACT + LOW VOLTAGE.....	5
2.5 PROTECTION ZONE CREATION MODIFICATION	5
2.6 ADDED MISSING INFORMATION IN HEALTH CENTER.	5
2.7 ADDED SUPPORT FOR SENDBASICTRAJECTORY USB COMMAND	5
2.8 SET ANGULAR MODE VIA API	5
2.9 CARTESIAN PROBLEMS BEHAVIOR	6
2.10 FINGER INVERSION BUG IN ANGULAR MODE	6
2.11 GOTO MOVEMENTS/RETRACTS + STICKS BUG.....	6
2.12 IMPROVED STANDARD RETRACT SEQUENCE	6
2.13 USB RESTART / POWER OFF BUG	6
2.14 FIXED OBTENIRREALTIMEPOSITION USB COMMAND	6
2.15 TRANSLATION ACTIVE STATUS/ ROTATIONS / FINGERS NOT DISPLAYED CORRECTLY IN JACOSOFT	6
2.16 REHAB / RESEARCH MODEL NAMES	6
2.17 MICO BASE ACCELERATION SENSOR ORIENTATION	7
3 KNOWN ISSUES AND WORKAROUND	8
3.1 BUG LIST	9
3.2 TRAJECTORY BUFFER IS LIMITED TO 20 POINTS	9
3.3 RESTORE FACTORY DEFAULT NOT AUTOMATIC AT REPROGRAM.....	9
3.4 MODIFICATIONS IN ZONES OF PROTECTIONS.....	9

1 Introduction

1.1 Purpose

This document is used as a release note on JACO's DSP Version 5.0.2

2 Improvements

2.1 Robot Base protection modification

- Protection cylinder around the robot base that prevent the robot to hit itself has been reduce by 1cm.
- A new permanent protection zone surrounding the connector's area has been created to prevent the arm from breaking the connectors / cable assembly plugged into the robot.

2.2 Finger range improved

Finger range has been extended to allow the finger to close more tightly.

2.3 Laterality + drinking mode

When the laterality is changed, the drinking mode inversion is done at the reboot instead of immediately.

2.4 Retract + low voltage

- When in low / High voltage, only retract/ready movements are allowed.
- Low voltage error and warning now all at 16V
- High voltage error and warning now all at 32 V

2.5 Protection zone creation modification

New zones are now only activated after reboot to avoid the arm being stunk in the zone.

2.6 Added missing information in health center.

Some of the data was not showing in the health center. This has been corrected.

2.7 Added support for SendBasicTrajectory USB command

SendBasicTrajectory USB command is now available.

2.8 Set angular mode via API

It is now possible to put the arm in angular mode at any time using the API via the usb port.

2.9 Cartesian problems behavior

When there is a major problem detected in Cartesian and the arm is put in angular mode, the arm switch back to Cartesian as soon as the arm is in ready position.

2.10 Finger inversion bug in angular mode

When in angular mode, the fingers were inverted in previous version. This has been corrected.

2.11 Goto movements/retracts + sticks bug

In the previous version, the arm moved a little after movement when the retract or goto buttons were pressed and stick was moved then released. This has been resolved.

2.12 Improved standard retract sequence

Standard retract movements have been slightly improved.

2.13 USB restart / power off BUG

In the previous version, while using Jacosoft, if the arm was disconnected or powered off/on, Jacosoft communication would become broken and a software restart was needed. This has been fixed.

2.14 Fixed ObtenirRealTimePosition Usb command

A lot of data fields were not initialized. This has been fixed.

2.15 Translation active status/ Rotations / fingers not displayed correctly in Jacosoft

When the arm was in angular position, these status were not updated. This has been fixed.

2.16 Rehab / research model names

Model field in Jacosoft was not really used. New model have been added:

- JACO REHAB V1
- JACO RESEARCH V1
- MICO REHAB V1
- MICO RESEARCH V1

Model name can only be changed at assembly by Kinova. RestoreFactoryDefault will not reset/change the model.

2.17 Mico Base acceleration sensor orientation

The x/y/z acceleration values now correspond to the reference frame orientation. This change only affects Mico.

3 Changes

3.1 Restore Factory Default changes

Restore factory default does not clear/modify the serial number and model number. Serial are now factory set.

4 Known issues and workaround

4.1 Bug list

1. Modes cannot be changed while in retract
2. Adding modes to mappings causes problems
3. Fingers do not work in Angular Position Control (trajectories)
4. Focal Control Box compatibility issues.
5. When the joystick is disabled, the green leds stay on instead of shutting down.
6. Increase/decrease speed functionality is not linear.
7. In rare occasion in the advanced retract, the arm will stop at one point instead of going to ready position. Release and press the button again to complete retract.

4.2 Trajectory buffer is limited to 20 points

- When the buffer is overloaded, the trajectory may crash. Please wait buffer to go under this amount before sending other points to the trajectory list.

4.3 Restore factory default not automatic at reprogram

- 1- When reprogramming the arm, you will need to manually restore factory default in Jacosoft to avoid any configurations mismatch

4.4 Modifications in zones of protections

- 1- If a configuration of an old version is used (pre 5.0.1), the zones of protections will need to be done again, since reference system is lightly different.