



FS 0CPP 0002 - DSP Jaco 5.0.3

Release note

Version 1.0

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Revisions & Approval

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Contents

REVISIONS & APPROVAL	2
CONTENTS	3
1 INTRODUCTION	4
1.1 PURPOSE	4
2 IMPROVEMENTS / MODIFICATIONS.....	5
2.1 MAXIMUM CARTESIAN VELOCITY INCREASED	5
2.2 HIGH / LOW VOLTAGE LIMITATIONS CHANGE	5
3 NEW FEATURES	6
3.1 ADMITTANCE CONTROL [MICO ONLY].....	6
3.2 FAULTY READY + BLINK RED LEDS	6
3.3 IMPLEMENTATION OF ADVANCED DISPLAY STATUS FOR THE OLED DISPLAY MODULE.....	6
4 BUG FIX.....	7
4.1 FIRST RETRACT WHEN USING THE ARM WITHOUT HAND (RESEARCH).....	7
4.2 INTERMEDIARY READY POSITION AFTER FORCING ANGULAR MODE (RESEARCH)	7
4.3 FINGER NOT WORKING IN ANGULAR POSITION TRAJECTORIES.....	7
4.4 MODES CANNOT BE CHANGED WHILE IN RETRACT	7
4.5 FOCAL CONTROL BOX FUNCTIONALITY.	7
4.6 JOYSTICK AND UNIVERSAL INTERFACE LED STAY ON WHEN “JOYSTICK DISABLE” IS ACTIVE.....	7
5 KNOWN ISSUES AND WORKAROUND	8
5.1 BUG LIST	8
5.2 TRAJECTORY BUFFER IS LIMITED TO 20 POINTS	8
5.3 RESTORE FACTORY DEFAULT NOT AUTOMATIC AT REPROGRAM.....	8
5.4 MODIFICATIONS IN ZONES OF PROTECTIONS.....	8

1 Introduction

1.1 Purpose

This document is used as a release note on JACO's DSP Version 5.0.3

2 Improvements / modifications

2.1 Maximum Cartesian velocity increased

The maximum Cartesian velocity (regular movements) has been increase from 15 to 20 cm/s.

Notes

- Jacosoft does not allow to set the limit higher than 15 for the moment.
- Changing speed using joystick button will double or divide the current speed by 2. If a precise speed is required, use Jacosoft.

2.2 High / Low voltage limitations change

Voltage warnings and error levels need to be changed.

- Low voltage warning: 18V
- High voltage warning 30V
- Low voltage error: 16V
- High voltage error: 32V

3 New Features

3.1 Admittance control [MICO ONLY]

First implementation.

3.2 Faulty ready + blink red leds

When the arms gets into an impossible position, it will put itself in an angular retract mode called “Fault ready” allowing the user to do and angular retract and go back to a valid position. This mode is a fail safe mode that should only occur in extreme case to avoid the client getting stuck with a not moving arm. Since this movement is not preprogrammed and needs the user to be cautious, the red leds will blink to indicate that it is in this mode.

3.3 Implementation of advanced display status for the Oled Display Module

Advanced feature will allow more information to be displayed on the future Display modules (needs an update version of the display module)

4 Bug Fix

4.1 First retract when using the arm without hand (research)

There was some problems with the first retract when using an arm without its hand. This has been solved.

4.2 Intermediary ready position after forcing angular mode (research)

When forcing the arm in angular mode, the algorithm that allows retract movement to use an intermediary position was not working all the time. Intermediary position allows the robot to retract from anywhere without hitting itself. This bug has been resolved.

4.3 Finger not working in angular position trajectories

Fingers now work in angular position trajectories

4.4 Modes cannot be changed while in retract

It is now possible to change mode when the arm is in retract position

4.5 Focal control box functionality.

Focal control box is now supported.

4.6 Joystick and Universal Interface led stay on when “joystick disable” is active

Leds are now turned off when the “joystick disabled” functionality is active.

5 Known issues and workaround

5.1 Bug list

1. Increase/decrease speed functionality is not linear.
2. Uart error increasing slowly [Mico only]

5.2 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.

5.3 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

5.4 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.

5.5 Trajectory + API bug: ready sequence followed by trajectory Description (Research)

Using the api, when a ready virtual joystick command is sent then a trajectory is sent, the first point of the trajectory is erased

Workaround

This is due because the trajectory is sent too soon after the joystick. Insert a 10ms delay after virtual joystick control before sending a trajectory.