

# MITSUBISHI

Mitsubishi Electric Corporation **Industrial** Robot

BFP-A6079-0115E

# MELFA Technical News

January 2014

**Subject:** Report of RT ToolBox2 Version 3.01B release

**Applicable to:** F series, SQ series, SD series, S series  
(CR750/CRnQ-700/CRnD-700/CRn-500 series robot controller)

Thank you for your continued support of Mitsubishi industrial robot "MELFA".

This Technical news describes the new version 3.01B of the RT ToolBox2. 3D-11C-WINJ(E)/3D-12C-WINJ(E)

## 1.Function improvement

### ● Robot additional axis Easy Setup

The function to read the profile of an electric actuator was added to the "Robot additional axis parameter" screen.

The profile can be downloaded from the Web site of SMC Ltd. and THK Ltd..

When the multi mechanism is used, the number of the multi mechanism is set to AXUNUM.

AX	AXMENO	AXJNO	AXUNT	AXSPOL	AXACC	AXDEC	AXGRTN
1	1	7:L1(J7)	0:deg	0:CCW	0.2000	0.2000	1
2	1	8:L2(J8)	0:deg	0:CCW	0.2000	0.2000	1
3	2	1:J1	0:deg	0:CCW	0.2000	0.2000	1
4	2	2:J2	0:deg	0:CCW	0.2000	0.2000	1
5	3	1:J1	0:deg	0:CCW	0.2000	0.2000	1
6	0:Not used	0:Not used	0:deg				
7	0:Not used	0:Not used	0:deg				
8	0:Not used	0:Not used	0:deg				

Number of multi mechanisms used(AXUNUM) 2

Robot additional axis parameter setting  
Setting axis #5 (AX5)

Robot # (AXMENO) 3 Axis # (AXJNO) 1:J1

Motor/Encoder

Total speed ratio numerator (AXGRTN) 1  
Total speed ratio denominator (AXGRTD) 10  
Unit system (AXUNT) 0:deg  
User defined origin (USERORG) 0.00 [deg]  
Joint limit (MEJAR) 0.00 -> 0.00 [deg]

Rotation direction (AXSPOL) 0:CCW CCW:counterclockwise CW:clockwise

Encoder resolution (AXENCR) 262144 [pulse/rev]

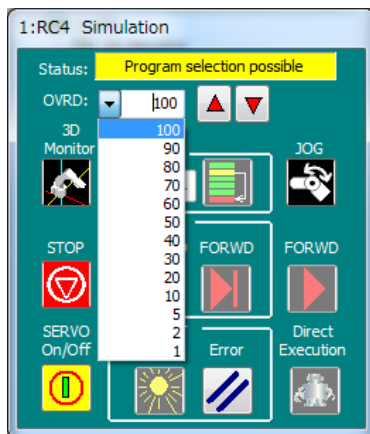
Movement specification

Rotational speed (AXMREV) 2000 [rpm]  
Acceleration time (AXACC) 0.2000 [sec]  
Deceleration time (AXDEC) 0.2000 [sec]  
Maximum speed (AXJMX) 3000 [rpm]  
JOG smoothing time constant (AXJOGTS) 150.00 [ms]

Set Cancel

## ● Improvement of simulation facility

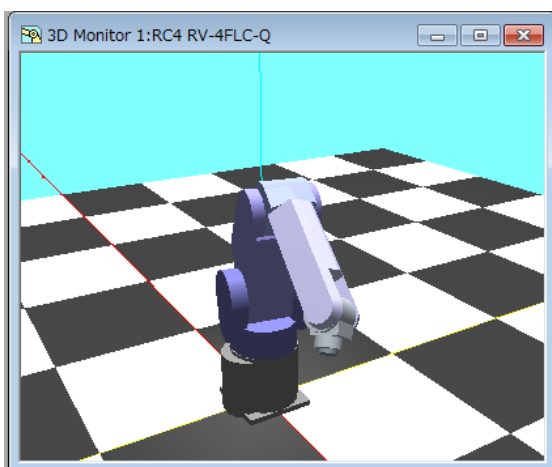
- Added the function to set 5%, 2% and 1% to OVRD.



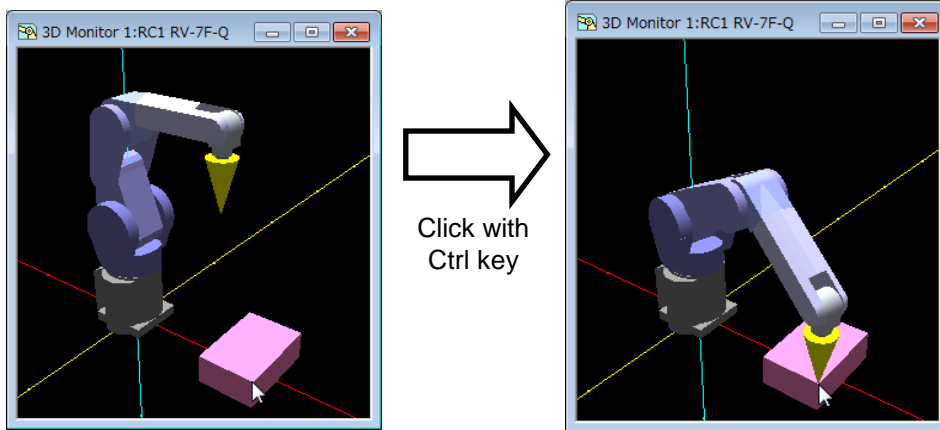
- Added the function of enlargement/reduction with the mouse wheel, and function of enlargement/reduction to the screen center.



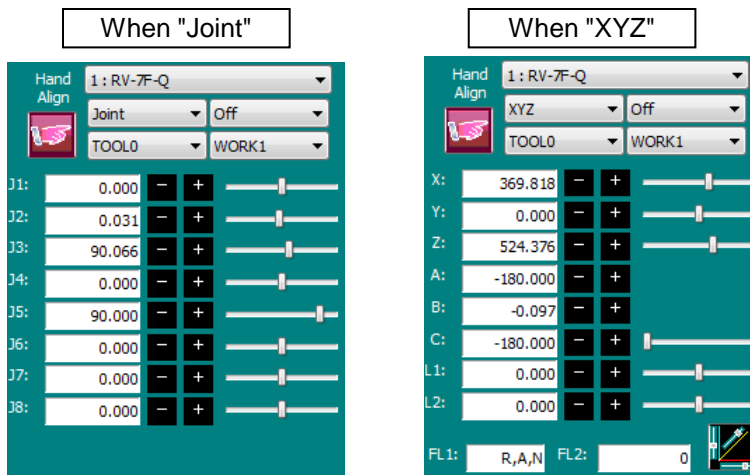
- Added the function of the display on the floor and the function of the background color setting.



- Added the function of Click robot movement.

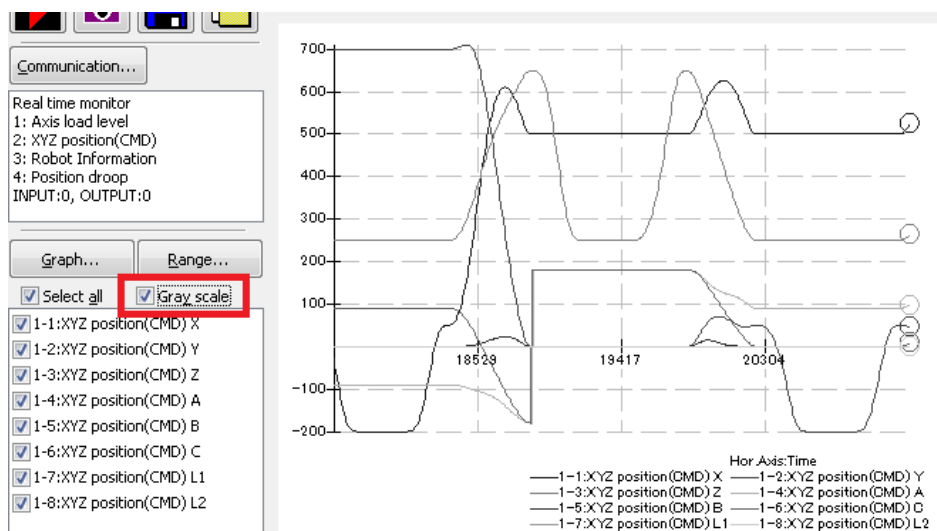


- Added the function of robot operation by slider bar.

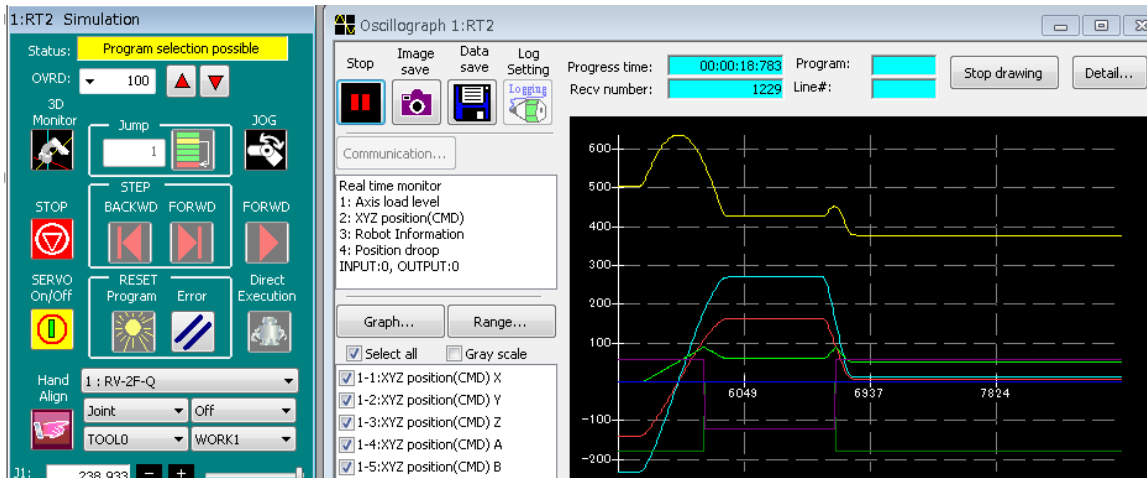


## ● Improvement of Oscillograph screen

- Added the function of “gray scale” in the “Oscillograph” screen.



- When the simulator starts, a real-time monitor can be used only for the first project.



## 2. Trouble correction

### ● The Speed(FB) in real-time monitor of oscillograph

Speed FB in a real-time monitor corrected the trouble displayed by 100 multiplied values.