

**Subject:** Report of RT ToolBox3 Ver.1.62Q release

**Applicable to:** FR series, F series, SQ series, SD series, S series  
(CR800/CR750/CR700/CR500 series robot controller)

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

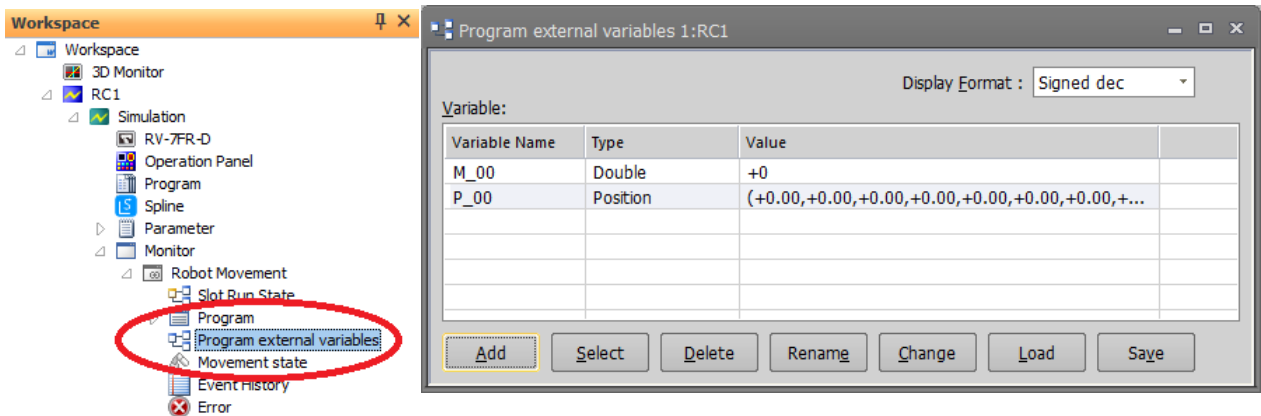
This Technical news describes the new version 1.62Q of the RT ToolBox3.  
3F-14C-WINJ(E)／3F-15C-WINJ(E)／3F-16D-WINJ(E)

In order to use the functions described in this technical news, you need to download the latest version from MITSUBISHI ELECTRIC FA site, and upgrading the RT ToolBox3.

## 1. Function improvement

-“Program external variables” monitor is added.

The monitor of the program external variables which use between several robot programs is add as another screen of Program monitor.



Workspace

- Workspace
  - 3D Monitor
  - RC1
    - Simulation
      - RV-7FR-D
      - Operation Panel
      - Program
      - Spline
      - Parameter
      - Monitor
        - Robot Movement
          - Slot Run State
          - Program
          - Program external variables**
          - Movement state
          - Event History
          - Error

Program external variables 1:RC1

Display Format : Signed dec

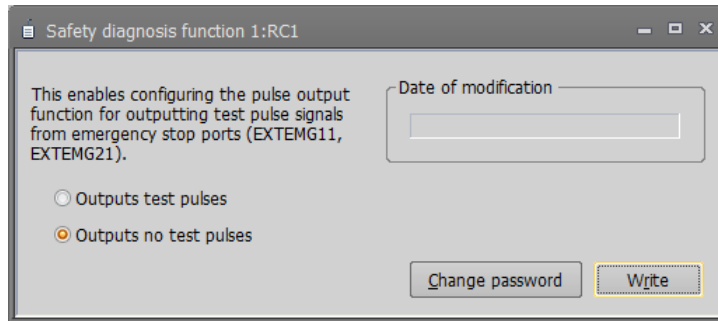
Variable:

Variable Name	Type	Value
M_00	Double	+0
P_00	Position	(+0.00,+0.00,+0.00,+0.00,+0.00,+0.00,+0.00,+...

Buttons: Add, Select, Delete, Rename, Change, Load, Save

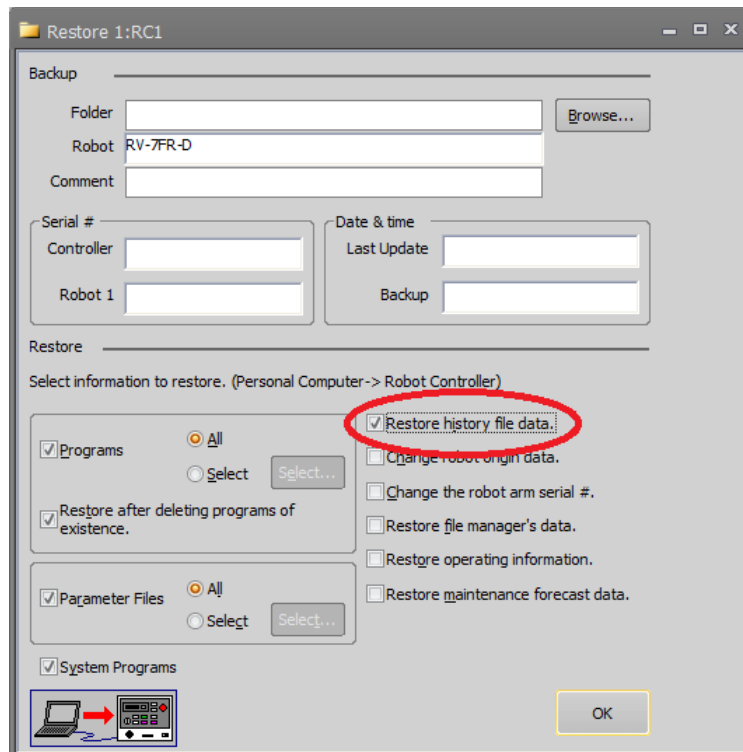
-“Safety diagnosis function” is added in “Safety Parameter”.

The screen is for turning on the safety diagnosis function.



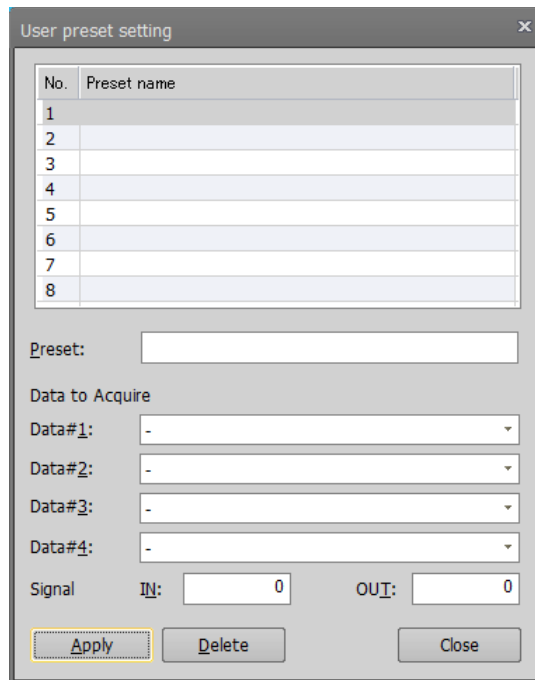
-[Restore history file data.] item is added in “Restore”.

The history files can be changed whether or not to restore when restoring all files.



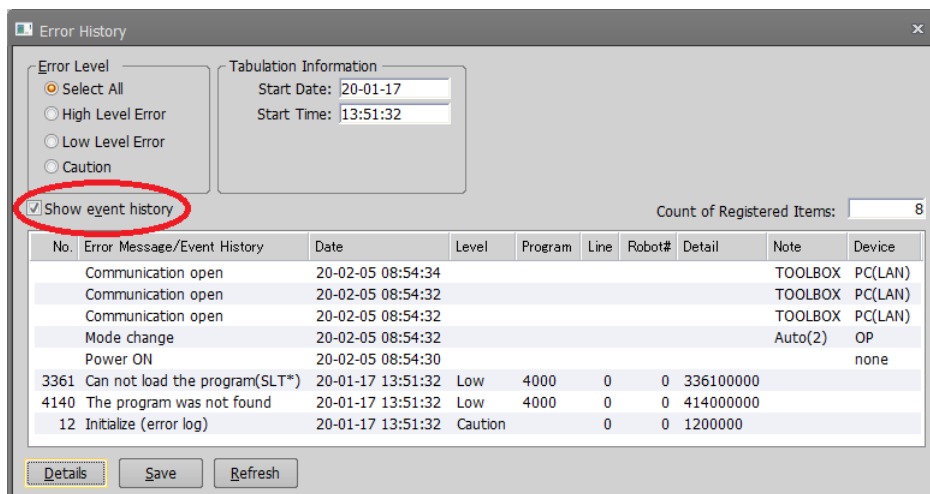
-Preset function is added on [Select the request data] of the Real time monitor in "Oscillograph".

The data required for the robot controller can be set freely by the user.

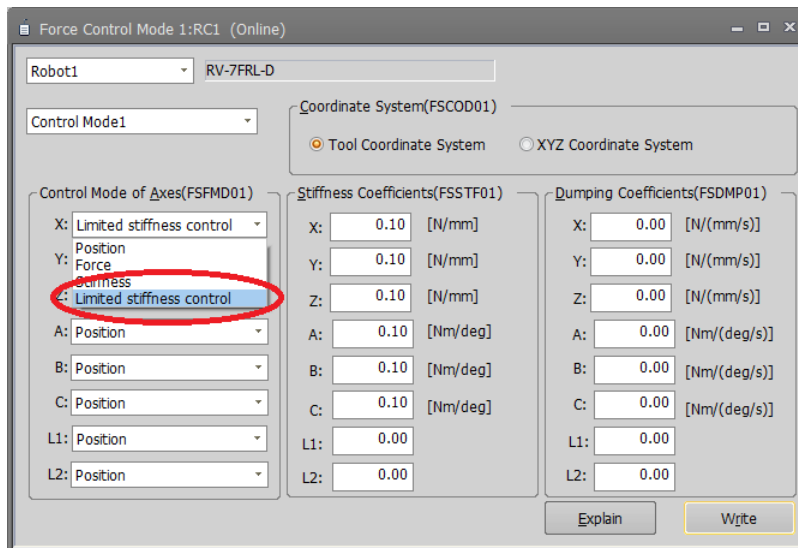


-The Errors and Events history is shown on the same screen in "Error History".

Recovery time can be reduced by displaying both information at the same time.

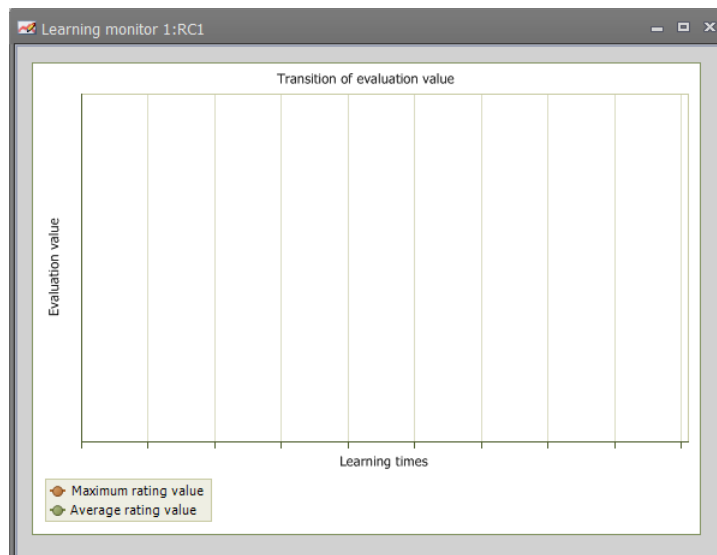


-[Limited stiffness control] is added on [Control Mode of Axes] in “Force Control Mode”.



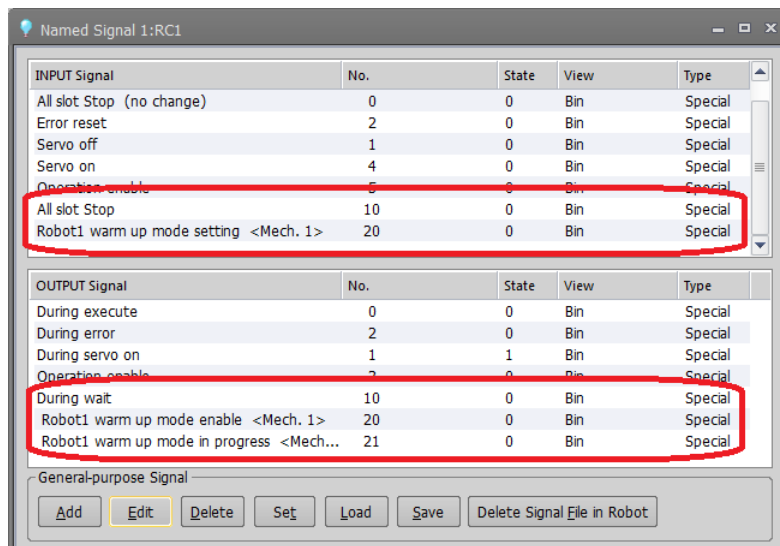
-“Learning monitor” of “Force extension” is also shown in the RH Horizontal type.

“Learning monitor” can be used when using Customized Learning of the Force sensor.



-[STOP2] and Warm-up Operation parameters are added in “Named Signal”.

“Named Signal” screen is supported to [STOP2], [M1-3WUPENA] and [M1-3WUPMD] signals.



-The new type of CR800-Q robot CPU unit (Q172DSRCPU) can be upgraded.

When using “Robot Firmware Update” to Q172DSRCPU unit from now on, please use RT ToolBox3 of this version or later.

## 2.Specification change

-[via GOT(direct coupled) transparent mode] is added in “CRnQ\_R Communication Detail Setting screen”.

