

# RCX3 series RCX340

P.544

## [Multi-axis robot controller]



RCX340

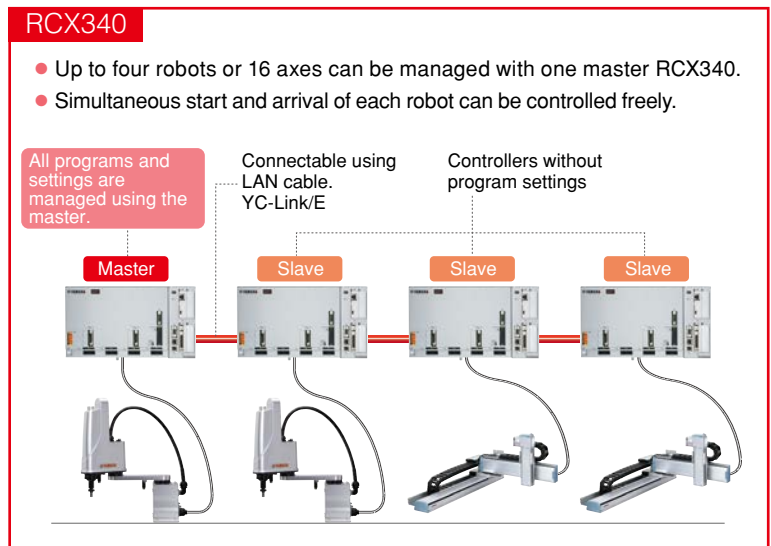
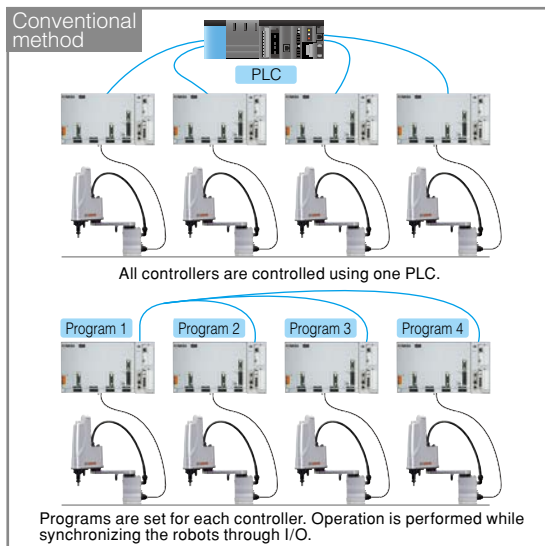
<b>Operation method</b>	Program Remote command Online command
<b>Number of points</b>	30000 points
<b>Input power</b>	Single phase : AC200V to 230V +/-10% maximum
<b>Origin search method</b>	Absolute Incremental Semi-absolute

## Advanced functionality allowing construction of high-level equipment

Multiple robots can be operated synchronously through the high-speed communication. Use of linking among controllers makes it possible to store programs into only one controller. Use of a newly developed algorithm achieves shortening of the positioning time and improvement of the tracking accuracy.

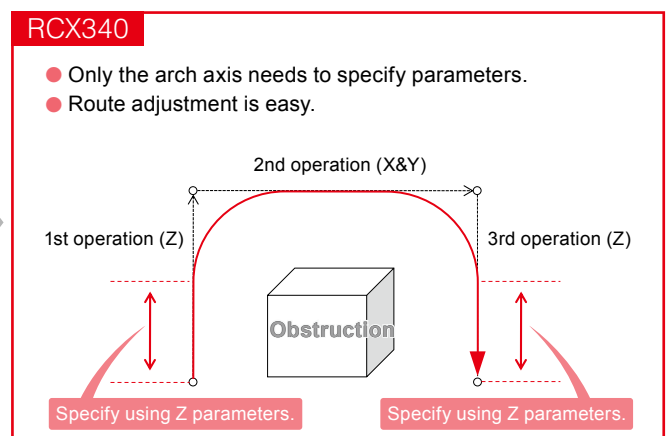
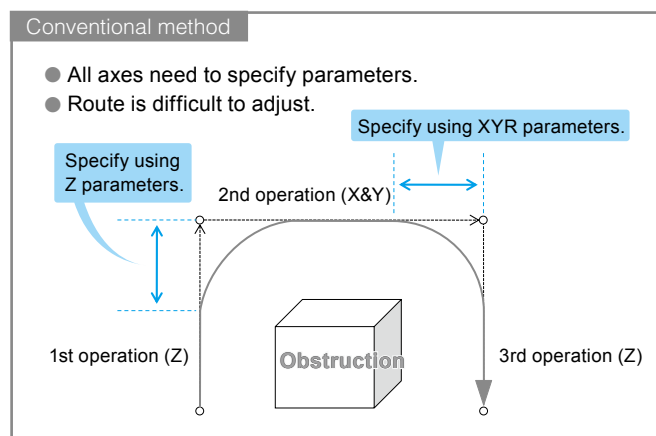
### The control of multiple robots can be managed using one master controller

The RCX340 controller allows high-speed communication among the controllers. As the operation command can be sent to the controller of each slave from the master controller, the programs or points can be managed only using the host master controller. Additionally, as this controller supports multi tasks flexibly, data exchanging with the PLC can be simplified. Simultaneous start and simultaneous arrival of each robot can be controlled freely. Complicated and precision robot system using many axes can be constructed at a low cost.



### Arch motion can be specified more intuitively

As the arch motion route designation method is changed and the designation method is simplified, the arch motion can be specified more intuitively.



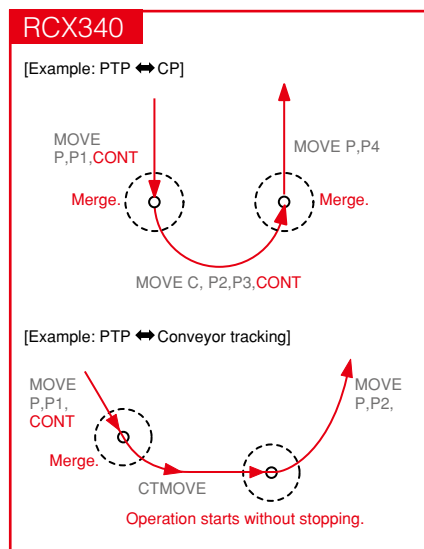
### RCX340

## Smooth movement is achieved by greatly improving motion functions

As a new servo motion engine is incorporated, various operations can be merged. Use of a newly developed algorithm achieves shortening of the positioning time and improvement of the tracking accuracy.

### Expansion of CONT option function

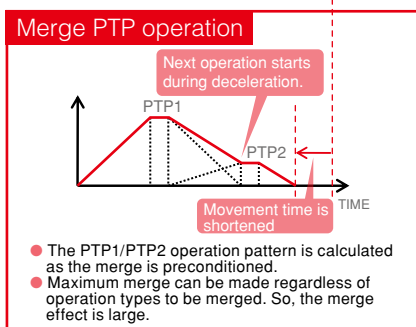
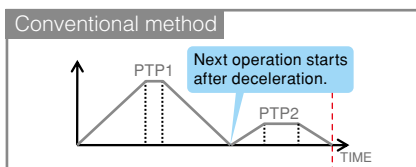
Different type operations, such as PTP, interpolation operation, and conveyor tracking, etc. are merged to improve the speed.



### Improvement of operation speed <sup>Note</sup>

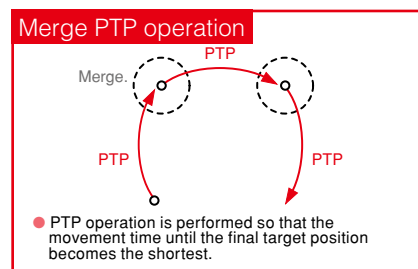
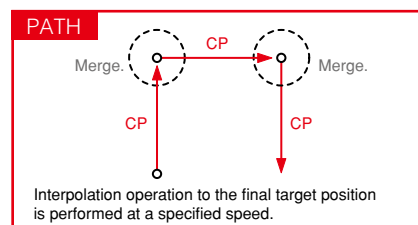
All operations can be merged as much as possible using the merge PTP.

As even operations with different acceleration or deceleration time are merged at maximum level with priority put on the operation time, the movement time is shortened greatly.



### Proper use according to application <sup>Note</sup>

When performing the continuous operation, an optimal operation can be selected according to the application, like traditional PATH is used for constant-speed operation, such as sealing and merge PTP is used for operation with priority put on the movement time.

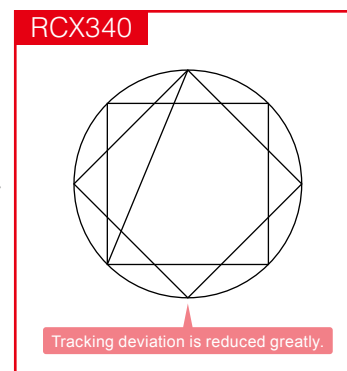
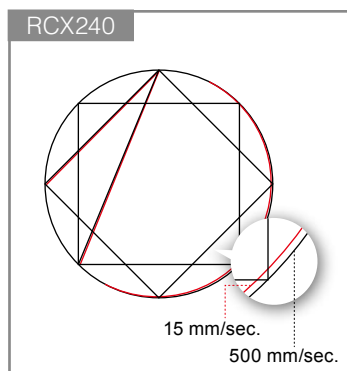
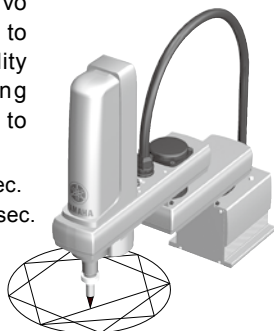


Note. It is necessary to upgrade the firmware to its latest version.

## Improvement of tracking accuracy

Use of visualization with servo analyze function and high responsiveness with new servo function makes it possible to increase the follow-up ability and improve the tracking accuracy when compared to the conventional models.

15 mm/sec.  
500 mm/sec.



## Improved basic performance

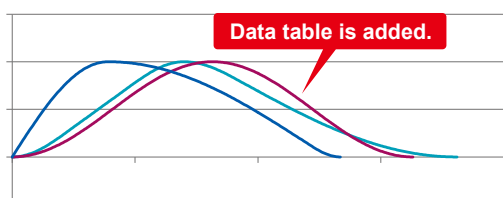
Functions, such as robot language, multi-task, sequence function, communication, and field bus are improved and made easier to use.

### Motion optimization

The optimization of the motion to meet the operation pattern is further strengthened to bring out the robot performance at its maximum level. Higher quality robot operations, such as shortening of the operation time and suppression of vibrations during stopping are achieved.

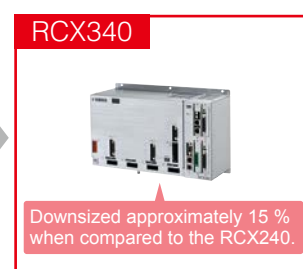
### Optimal acceleration/deceleration motion

Acceleration/deceleration motion is generated that can perform the high-speed operation while suppressing vibrations.



### Compact design

The outside dimensions are approximately 355 mm (W) × 195 mm (H) × 130 mm (D). The volume ratio is reduced to approximately 85 % and the body size is made compact when compared to the conventional 4-axis controllers so as to make the installation inside the control panel easy.

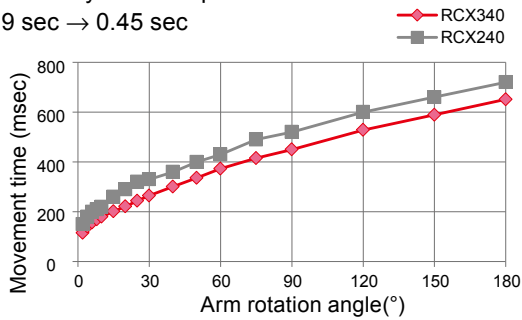


## Improvement of cycle time

The speed-up of the YK-XG series is achieved.

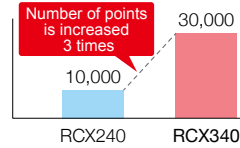
### Example: YK400XG

- Standard cycle time operation  
0.49 sec → 0.45 sec



## User memory capacity increase

- Number of points is greatly increased.
- Total capacity of program and point



## Built-in regenerative unit

As the regenerative unit (equivalent to RGU3) is built-in, no additional regenerative unit is needed when connecting to the existing robot.

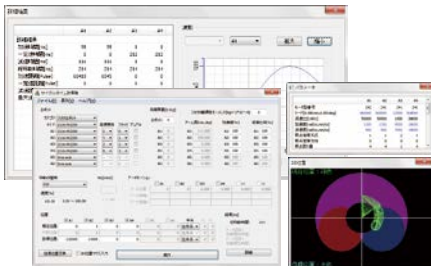
## Support tool with visibility and operability improved New support software RCX-Studio Pro

The program debug function is strengthened to support the multi-task. Use of convenient operability and program input support function makes it possible to perform the quick setup.

- YAMAHA robot becomes easier to use, faster setup, efficient maintenance

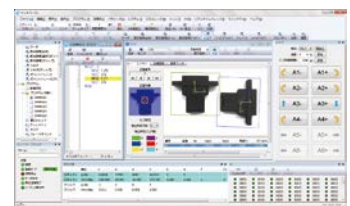
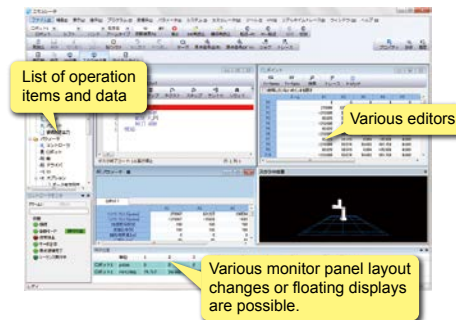
### Evaluation

- Emulator function provided
- Cycle time calculator



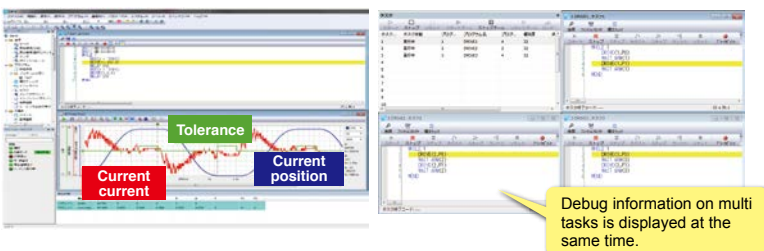
### Design

- Easy-to-use operating controls
- Inter-operation with other manufacturer's line simulators
- iVY2 editor provided



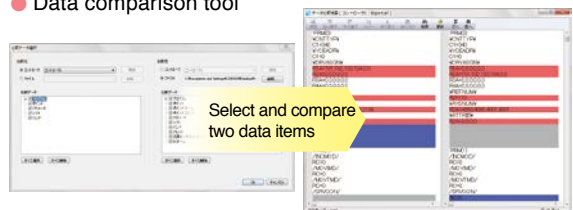
### After installation

- Realtime trace
- Application debugging function



### Maintenance

- Data comparison tool



### Programing box PBX

This programming box is applicable to three languages, "Japanese", "English", and "Chinese". Use of a color display makes it possible to improve the visibility. Work to add or edit functions becomes easy, allowing even personnel without programming skill to operate this programming box. A function to save the controller data into the USB memory is incorporated.



**RCX340**

**Enhanced expandability**

RS-232C and Ethernet ports are provided as standard equipment. A wide variety of high-speed and large capacity field networks, such as CC-Link, DeviceNet™, EtherNet/IP™, and EtherCAT are supported as options. Connections with general-purpose servo amplifier or other company's VISION are easy. So, the RCX340 is called "connectable controller".

<p>Communication between controllers</p> <p><b>YC-Link/E</b></p>	<p><b>Up to four RCX340 controllers (up to 16 controllable axes) can be connected.</b></p>	
	<p>More flexible robot configuration</p> <p>Easy programming</p>	<p>Centralized control of multiple robots</p> <p>Cost reduction</p>

**Applicable to various field buses/centralized control of robots through connections of up to four controllers**

RS-232C and Ethernet ports are provided as standard equipment. Additionally, fulfilling field buses, such as CC-Link, EtherNet/IP™, DeviceNet™, PROFIBUS, PROFINET <sup>Note 1</sup>, and EtherCAT can be supported to connect and control a wide variety of devices. For 5 or more axes, use of YC-Link/E makes it possible to connect up to four RCX340 controllers so as to perform the centralized control of multiple robots.

Additionally, when using YC-Link/E <sup>Note 2</sup>, multiple robots can be handled as if they are operated using one controller. This ensures very easy robot programming and management.

Therefore, this robot controller contributes to reduction of unseen costs, such as labor cost necessary for the setup work.

Note 1. Supports PROFINET Ver. 2.2

Note 2. When ordering YC-Link/E, please specify what robot is connected to what number controller.

