EPSON RC+ 4.0.2 SP1 Release Notes
January 20, 2005

Thank you for using EPSON RC+ 4.0.2. This document contains the latest information for this release. Please read before using this software.

Documentation

All RC+ manuals are in PDF format and are installed on the PC hard disk. These manuals are accessible from the RC+ environment Help menu.

Getting Started

Read the Getting Started chapter in the EPSON RC+ User's Guide. This chapter will refer you to the RC520 / RC420 Controller manuals Installation chapter. This contains information for initial connections and start up.

Upgrading from Previous Versions of EPSON RC+

You may install EPSON RC+ 4.0.2 without uninstalling the previous version. This is recommended because the upgrade software will know which options were previously installed and your system configuration will be preserved.

1. If your current system is running on Windows NT 4.0, you must first upgrade to Windows 2000 Professional before upgrading to EPSON RC+ 4.0.2.
   a. Execute MKVER before upgrading to save your system configuration. Select Tools | Maintenance, then click MKVER. Enter a name and save it to floppy.
   b. Upgrade Windows NT 4.0 to Windows 2000.
      1) Boot Windows NT.
      2) Insert the Windows 2000 CD.
      3) When asked if you want to upgrade the current version of Windows, answer Yes.
      4) The Windows 2000 installation will preserve the registry and previous applications.
   c. Install Windows 2000 Service Pack 4. This service pack must be installed before you can install EPSON RC+ 4.0.2.

2. Install EPSON RC+ 4.0.2. During installation, the options that were installed previously should be checked. The previous robot and drive unit configurations will be restored.

   Note: When upgrading Vision Guide systems, you may receive an error during vision driver installation concerning mtxdma drivers. These errors can be ignored.

Installing Service Pack 1

EPSON RC+ 4.0.2 Service Pack 1 is included on the current 4.0.2 installation CD. It is not automatically installed with the 4.0.2 installation program. It must be installed separately. If your system was configured at the factory, the service pack will already be installed.

How to verify if Service Pack 1 is installed

1. Run EPSON RC+.
2. Select Help | About.
3. If the service pack is installed, the version number will be 4.0.2 SP1.

How to install Service Pack 1

To install Service Pack 1:
1. Navigate to the \Service_Packs directory on the installation CD.
2. Run the file **rc402sp1.exe** and follow the on screen instructions.

How to uninstall Service Pack 1

To uninstall Service Pack 1:
1. Open Add / Remove Programs in the Windows Control Panel.
2. Select EPSON RC+ 4.0 and run it.
3. Select Repair.
4. This will re-install 4.0.2 and remove the changes made by the service pack installation.
5. If a previous service pack exists, you can add it now.

Installing on Windows XP for offline development

EPSON RC+ 4.0.2 can be installed on a Windows XP system for offline development only. You can edit and compile your projects. You cannot install the SPEL drivers on a Windows XP system, so programs will not run. Also, if Vision Guide is installed, only VGA mode is supported.

New EZ Modules Models Correct Rotated Tools

In versions of RC+ prior to 4.0.2, tool rotations were incorrectly calculated for EZ Module X4RG, X4RP, and X4RU series robots. To correct this, new EZ Module robot models were created in RC+ using the same numbers as before but with a suffix of the number 2.

Beginning with RC+ 4.0.2:

- If installing a new EZ module robot, use the new series and model number ending in 2.

- If upgrading from a previous version of RC+ for a properly working system (tool rotations were not used), use the same series and model numbers that you are currently using.

- If upgrading from a previous version of RC+ to fix tool rotation problems, use the new series and model numbers ending in 2.

    WARNING: All points will have to be re-taught after switching from a previous EZ Module model to a new one.

RC+ Upgrade

Syntax for memory I/O commands has changed

In RC+ 4.x.x versions, the $ identifier prefix for memory I/O is no longer needed.   If you open a previous v3.x.x project or enter a statement using $ memory I/O, the statements will be converted to the new commands and syntax. The new commands have the same names as the memory I/O commands used in the VB Guide SPELCom control.

The table below shows some examples.

Old memory I/O statement	New memory I/O statement
On $1	MemOn 1
If Sw($1) = On Then	If MemSw(1) = On Then

Syntax for direct point expression has changed

Now when you want to specify a direct point in a motion command, you must use the XY function. Previously, XY was implicit. If you open a previous 3.x.x project or enter a statement using a direct point expression, the statements will be converted to the new syntax.

The table below shows some examples.

Old direct point statement	New direct point statement
Go 100, 200, -25, 0	Go XY(100, 200, -25, 0)
TLSet 1, 10, 10, 0, 0	TLSet 1, XY(10, 10, 0, 0)

VB Guide Upgrade

After upgrading to EPSON RC+ 4.0.2 from 3.x.x versions, you must upgrade your SPELCom and SPELVideo controls in your VB projects that use VB Guide.

Follow these steps:
1. Open your VB project.
2. Select Components from the Project menu.
3. Check the EPSON SPELCom 4.0 ActiveX Control and EPSON SPELVideo 4.0 Active X Control (if required) and click OK.
4. For every form that has a SPELCom or SPELVideo control, delete the control, then replace it with the new control from the tool box.
5. Select Components from the Project menu.
6. Uncheck EPSON SPELCom 3.0 ActiveX Control and SPELVideo 3.0 ActiveX Control.
7. Save changes.
8. Compile your project.

Vision Guide

Mobile calibration with upward camera

When using an upward camera for a mobile calibration reference point, the RobotLocal property must be the same for the upward camera calibration and the mobile camera calibration.

Vision properties are now restored after all tasks stopped

If you use VSet, VTrain, or VTeach at runtime, then after all tasks are stopped, all vision properties are restored, unless you execute VSaveProps to save runtime changes. This restore operation may take several seconds if there are large models.

Known Problems

Jog & Teach point file problem when used in MDI mode
Note: This has been fixed in Service Pack 1

When using the Jog & Teach window in MDI mode (default) with multiple point files for one robot, a problem occurs if the Robot Control Panel dialog is open and closed when the default point file is not selected on Jog & Teach. The point file selection changes to the default point file, but the current points are for the previously selected point file.

To avoid this problem, do one of the following:

- When the Jog & Teach dialog is open in MDI mode, then re-select the desired point file after opening and closing the Robot Control Panel.

- Close Jog & Teach before opening the Robot Control Panel. Then re-open Jog & Teach after closing the Robot Control Panel.

- Use the Jog & Teach window in dialog mode. You can change this from Setup | Preferences | Jogging.

Project created with previous version may not open correctly

In some cases, after opening a project used in a previous version of RC+, the program files do not appear or seem incorrect. This is caused if all of the following conditions are true:

- The project was originally created in SPEL for Windows.

- The project originally had one or more programs in the IPL group of the SPEL for Windows project.

In previous versions of RC+, if the IPL group was detected in the project file, it was ignored. Starting with RC+ 4.0.2, if the IPL group is detected and programs exist in the group, then the IPL group becomes the main group.

To correct this problem, the IPL group must be deleted:
1. Open the original project in RC+ 4.0.2.
2. Select Project | Edit.
3. Ensure that the Enable Program Groups checkbox is checked.
4. Delete the IPL group.
5. Click OK.
6. If you are using Program Groups, then you are finished.
7. Select Project | Edit again.
8. Ensure that the Enable Program Groups checkbox is unchecked.
9. Click OK.