

# EPSON RC+ 5.4.0 SP1 Release Notes

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Thank you for using EPSON RC+ 5.4.0. This document contains the latest information for this release. Please read before using this software.

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## 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+ 5.0 User's Guide. This chapter will refer you to the RC170/RC180 Controller manual Installation chapter. This contains information for initial connections and start up.

## Installing Service Pack 1

EPSON RC+ 5.0 Ver.5.4.0 Service Pack 1 is included on the current Ver.5.4.0 installation DVD. It is not automatically installed with the Ver.5.4.0 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+ 5.0.
2. Select Help | About.
3. If the service pack is installed, the version number will be 5.4.0 SP1.

### ***How to install Service Pack 1***

To install Service Pack 1:

1. Navigate to the \EpsonRC50\Service\_Packs directory on the installation DVD.
2. Run the file **erc540sp1.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+ 5.0 and run it to uninstall.
3. Run the EPSON RC+ 5.0 Ver.5.4.0 installer from the installation DVD to re-install it.

## What's Fixed in version 5.4.0 SP1

1. Updated PROFINET IO configuration.
2. Fixed DPI 120 issues.
3. The VB Guide TeachPoint dialog now uses the selected Local. This was marked as being fixed in v5.4.0 but was not.

## **What's New in version 5.4.0**

1. A virtual controller feature has been added. Now you can create one or more virtual controllers and execute SPEL+ programs on any PC.
2. A robot simulation feature has been added. You can view the robot and associated components in 3D, and create recordings and movies.
3. The program editor now supports Redo.
4. Chinese Simplified and Chinese Traditional languages are now supported.

## **What's Fixed in version 5.4.0**

1. The VB Guide TeachPoint dialog now uses the selected Local.
2. The correct tool and arm are used when teaching vision calibration points and you have changed the tool or arm to jog to a position.
3. The vision camera calibration can now use robot locals other than 0.
4. Fixed problem for printing programs where empty lines were shown with a square character at the beginning on Windows XP.
5. Several minor GUI problems have been fixed.

## GUI

### ***Problem with Robot Manager jog button display on some systems***

**Note: This problem is fixed in v5.4.0 SP1**

This problem occurs if using Windows 7, Windows Vista, or if your Windows system is configured to use a non-standard DPI setting (such as 120 DPI, which is typical for high resolution notebooks). When you first open the Robot Manager Jog & Teach page, and the Jog Mode is World (default), then the X and Y jog buttons are sized incorrectly, but still functional. To work around this problem, select any Jog Mode from the Jog Mode dropdown list (even the same Jog Mode as currently being used). This will fix the problem for the remainder of the current RC+ session.

## Simulator

### ***Collision margin for robot hand cannot be set***

You cannot set the Collision Margin for robot hand in this version.

### ***Robot motion time may appear to be incorrect***

On some PCs, when you run a program that moves the robot, the speed may seem incorrect. There are settings you can change to help correct the problem. Select Setup | Controller | Simulator and increase the Performance setting to 16 and the Position Precision to 20. You may need to experiment with other values.

See *Simulator Specifications and Restrictions, Time progress difference by PC condition* in the manual or help for more details.

## VB Guide 5.0

### ***Demo projects now provided for VS2008 and VS2010***

The VB Guide 5.0 demo projects can be found in the \EpsonRC50\VBGuide folder. There are separate demos installed in separate folders for use with Visual Studio 2008 and Visual Studio 2010.

### ***Using with Visual Studio 2010 and .NET Framework 4.0***

If you create an application using Visual Studio 2010 and the target framework version is 4.0, then you need modify the project to allow SpelNetLib.dll to be used. SpelNetLib.dll was created with .NET Framework 3.5. By default, applications that target .NET Framework 4.0 cannot load assemblies from previous .NET Framework versions. You must add and modify the app.config file for the solution and set the useLegacyV2RuntimeActivationPolicy property.

For VB and C#:

1. In Solution Explorer, check if app.config exists. If it does, go to step 4.
2. From the Project menu, select Add New Item.
3. Select Application Configuration File and click Add. The app.config XML file will appear.
4. In the app.config file, add the following XML code inside the configuration property.

```
<configuration>
  <startup useLegacyV2RuntimeActivationPolicy="true">
    <supportedRuntime version="v4.0"/>
  </startup>
</configuration>
```

For VC++:

1. Create a config file for the application that uses the same name as the exe file with ".config" appended. For example, if you exe file name is myapp.exe, then the config file would be named myapp.exe.config.
2. In the config file, add the configuration code:

```
<configuration>
  <startup useLegacyV2RuntimeActivationPolicy="true">
    <supportedRuntime version="v4.0"/>
  </startup>
</configuration>
```

3. Copy the config file to both the debug and release folders. You can use a post build event that performs this automatically. For an example, see the VB Guide 5.0 VC++ demo project.

## Vision Guide 5.0

### ***ImageFile Property***

The EPSON Smart Camera supports one image file stored in each camera project. When an ImageFile is specified for a sequence, it is copied to the camera when the sequence is selected from the Vision Guide GUI.

You can use the SaveImage property to save an unlimited number of images on the PC.

### ***Using one camera from two controllers***

The EPSON Smart Camera supports two vision projects. Each vision project can be used by one controller, so two controllers can use the same camera. Project 1 is used by default. To use project 2, change the camera project number from RC+ Project | Properties | Vision.

## **Offline Mode**

When you open the Vision Guide window, RC+ attempts to communicate with the Smart Cameras configured in Setup | Vision. If communication cannot be initiated, a message box is displayed stating that one or more Smart Cameras cannot be connected and asking if you would like to open Vision Guide in offline mode. Answer Yes to enter Offline Mode. In Offline Mode, you can edit Sequences, Objects, and Calibrations. To enter Online Mode, close the Vision Guide window, then open it again.

## **Importing from EPSON RC+ 3.x and 4.x with Vision Guide**

You can import projects that were created in EPSON RC+ 3.x and 4.x that used the Vision Guide option.

To import a project:

4. In EPSON RC+ 5.0, select Project | Import.
5. Select PC and click Next.
6. Select EPSON RC+ 3.x / 4.x for the Project Type.
7. Select the drive and project to import and continue with the wizard.

Please review the following information regarding imported EPSON RC+ 4.x projects:

- Vision calibrations are imported, but the associated calibration data is not imported. You will need to run your calibrations after import.
- the RobotU vision result is changed. In EPSON RC+ 4.x, RobotU was reported with 0 degrees aligned with the robot world Y axis. Now RobotU is reported with 0 degrees aligned with the robot world X axis.
- Maximum NumberToFind is changed. In Vision Guide 5.0, the maximum NumberToFind for any multi-result object is 100. During import, NumberToFind is reduced to 100 if necessary.
- Calibration properties cannot be set at runtime.
- VCalPoints and VCal are not supported. Vision calibrations cannot be executed at runtime.
- Vision model properties cannot be set at runtime.
- VTeach is not supported. Vision models cannot be taught at runtime.
- OCR and Code Reader objects are currently not supported in Vision Guide 5.0. During import, OCR objects are converted to Correlation objects, and Code Reader objects are converted to Blob objects.

### ***Camera connected to another PC warning message***

Normally, if one PC tries to connect to a Smart Camera that is already connected to another PC or controller, you will see a message box stating this.

However, sometimes if the Ethernet cable is disconnected or if the RC+ process is terminated while connected to a Smart Camera, then on the next connection attempt, you may receive the message described above. In this case, reset the camera from Setup | Vision, or power cycle the camera. Then rebuild the current project using Project | Rebuild. Smart Camera firmware v1.0.0.4 reduces the occurrence of this problem.