

EPSON RC+ 7.0.4 Release Notes

June 24, 2013

Thank you for using EPSON RC+ 7.0.4. 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 EPSON RC+ 7.0 environment Help menu.

Getting Started

Read the Getting Started chapter in the EPSON RC+ 7.0 User's Guide. This chapter will refer you to the RC700/RC90 Controller manual Installation chapter. This contains information for initial connections and start up.

What's New in version 7.0.4

1. Added support for H4 Series SCARA robots.
2. Added GetRealTorque method for the RC+ API. See the help or RC+ API 7.0 manual for details.

What's Fixed in version 7.0.4

General

1. Fixed shutdown or restart of Windows from the shutdown dialog.
2. Fixed View Controller Status for remote signals.
3. Fixed the Auto Start preference. When checked, RC+ was not started after Windows started, unless RC+ 5.x or 6.x was also installed.
4. Fixed a problem encrypted files. Before, they could not be opened unless RC+ 5.x or 6.x was also installed.
5. Fixed a problem for project synchronization. After connecting to a controller, if there were new files on the PC side and new files in the controller, the project synchronization dialog was not being displayed.
6. InputBox and MsgBox are now closed if all tasks are stopped.

Vision Guide

7. Fixed changing model origin from within Show Model.
8. Fixed PC Vision VGet for ExposureDelay, StrobeDelay, and StrobeTime.
9. Fixed PC Vision problem for Edge when used with Frame. If FrameResult was not All, the edge results were not correct.
10. Fixed problem where sometimes an exception occurred if the CenterPntObjResult property was set to All at runtime.
11. Fixed VCal and VCalPoints. An undefined calibration error was being issued unless the calibration name parameter was a string.
12. Fixed a problem where if a sequence or calibration was deleted at runtime but VSave was not called, an object reference not found exception occurred.

13. Fixed a problem for Polar object. If the FrameResult was set to All at runtime and vision graphics were being displayed, exceptions could occur.

RC+ API 7.0

General

RC+ API 7.0 was named VB Guide in previous EPSON RC+ products.

Executing Spel commands within a button click event

In .NET, if you execute a method in a button click event, you cannot click another button to execute another method on the first click. For example, if you execute the Go method in a button click event, and attempt to click another button to execute the Abort method, the second button will not respond the first time. This is true even if Connectivity 7.0 is not used. Instead, use the button MouseDown event to execute the Go method, or execute Spel commands in a separate thread as described in the following topic.

Executing Spel motion commands in a separate thread

If you will be executing Spel motion commands from your .NET application, it is recommended that you execute them in a separate thread. This will allow other methods such as Abort to be executed from other buttons. The example below shows a separate thread for Spel motion commands.

```
private void btnStartCycle_Click(object sender, EventArgs e)
{
    btnStartCycle.Enabled = false;
    btnStopCycle.Enabled = true;
    m_stop = false;
    m_spel.ResetAbort();

    // Start the robot cycle
    System.Threading.Thread t = new System.Threading.Thread(RobotCycle);
    t.Start();
}

private void btnStopCycle_Click(object sender, EventArgs e)
{
    m_stop = true;
    m_spel.Abort(); // Optional. This will immediately stop the cycle
    btnStopCycle.Enabled = false;
    btnStartCycle.Enabled = true;
}

private void RobotCycle()
{
    try
    {
        do
        {
            m_spel.Jump("pick");
            m_spel.On("GripOn");
        }
    }
}
```

```
        m_spel.Delay(100);  
        m_spel.Jump("place");  
        m_spel.Off("GripOn");  
        m_spel.Delay(100);  
    } while (!m_stop);  
}  
catch (SpelException e)  
{  
    // If the error is not "Command aborted by user",  
    // then show the error message  
    if (e.ErrorNumber != 10101)  
        MessageBox.Show("Spel error occurred\r\n\r\n" + e.Message);  
}  
}
```

Vision Guide 7.0

Using one camera from two controllers

The EPSON CV1 supports two vision projects. Each vision project can be used by one controller, so two controllers can use the same CV1. 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 network cameras configured in Setup | System Configuration | Vision. If communication cannot be initiated, a message box is displayed stating that one or more network 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, re-select the camera in the Sequence property grid, or 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:

1. In EPSON RC+ 7.0, select Project | Import.
2. Select PC and click Next.
3. Select EPSON RC+ 3.x / 4.x for the Project Type.
4. 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 7.0, 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.

Camera connected to another PC warning message

Normally, if one PC tries to connect to a network 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 CV1, then on the next connection attempt, you may receive the message described above. In this case, reset the camera from Setup | System Configuration | Vision, or power cycle the camera. Then rebuild the current project using Project | Rebuild.