



# SoftLogix 5800 Controller, Version 16.03

Catalog Numbers 1789-L10, 1789-L30, 1789-L60

Topic	Page
About This Publication	1
Compatible Versions of Software	1
System Requirements	3
Enhancements	4
Corrected Anomalies	6
Known Anomalies	12
Restrictions	16
Functionality Issues in Specific Circumstances	20
Additional Resources	26

## About This Publication

This publication describes enhancements, anomalies (known and corrected), and restrictions for SoftLogix 5800 controller, version 16.03.

We strongly recommend that you also review the information concerning the previous revision, revision 15, contained in publication [1789-RN517](#), before updating your controller. Previous revision release notes are available in PDF form at <http://literature.rockwellautomation.com>.

We indicate with a change bar, as shown to the right of this paragraph, information that has changed since the last version of this publication.

## Compatible Versions of Software

To use version 16.03, the following minimum software versions are required.

### Software Requirements

Software	Required Version
RSLinx Classic	2.50 or higher
RSLinx Enterprise	4.00
RSLogix 5000	16.03
RSNetWorx for ControlNet	8.00
RSNetWorx for DeviceNet	
RSNetWorx for EtherNet/IP	

**Firmware and Drivers Required for PCI-based products**

<b>PCI-based Products</b>	<b>Compatible Versions</b>
1784-PCIC/B, 1784-PCICS/B	4.10 firmware and driver version 4.05 <sup>(1)</sup>
1784-PCIC/A, 1784-PCICS/A	3.10 firmware and driver version 4.05 <sup>(1)</sup>
1784-PCIDS/B	3.016 firmware and driver version 2.01
1784-PCIDS/A	2.008 firmware and driver version 2.01
1784-PM16SE	16.20 firmware and driver version 16.02 <sup>(2)</sup>
1784-PM02AE	16.01 firmware and driver version 16.02 <sup>(2)</sup>

<sup>(1)</sup> If you are installing a ControlNet card for the first time or if you already have a ControlNet card installed, use the instructions in the ControlNet Communication Card Release Notes, publication [1784-RN530](#), to install or update the driver, as appropriate.

<sup>(2)</sup> **Windows 2000 and Windows XP users:** If you are installing a motion card for the first time, use the instructions in the SoftLogix 5800 Controller Installation Instructions, publication 1789-IN001, to install the driver. If you already have a motion card installed, follow the Update Motion Drivers in Windows 2000/XP Systems procedure on page 24.

## System Requirements

This table identifies system requirements for the SoftLogix 5800 controller.

Category	Requirement
Personal computer	<p>IBM-compatible Pentium 4 1.6 GHz or greater <sup>(1)</sup></p> <p>Other requirements include:</p> <ul style="list-style-type: none"> <li>• Floppy drive to support the Activation disk</li> <li>• Hard disk drive must support bus mastering</li> <li>• You might also need bus-mastering drivers for the computer chip set; for Intel motherboards, this software is called "Application Accelerator"</li> </ul> <p>Demanding applications including sequential, motion, and other local applications running on the computer may require a dual CPU to achieve performance requirements.</p>
Operating system	<p>Supported operating systems:</p> <ul style="list-style-type: none"> <li>• Microsoft Windows 2000 with Service Pack 4 (recommended)</li> <li>• Microsoft Windows XP with Service Pack 1 or higher (recommended)</li> <li>• Microsoft Windows 2003 Server</li> </ul>
RAM	256 Mbytes of RAM minimum
Hard disk space	50 Mbytes of free hard disk space (or more based on application requirements)
Motion requirements	<p>Primary 32-bit PCI slot</p> <p>One slot per motion card</p> <p>1784-PM16SE requirements:</p> <ul style="list-style-type: none"> <li>• Maximum of four 1784-PM16SE cards per computer</li> <li>• Can associate only one 1784-PM16SE card with one controller</li> </ul> <p>1784-PM02AE requirements:</p> <ul style="list-style-type: none"> <li>• Maximum of four 1784-PM02AE cards per computer</li> <li>• Maximum of four 1784-PM02AE cards can be associated with one controller</li> <li>• Cannot associate a 1784-PM02AE motion card with the same controller as a 1784-PM16SE card</li> </ul>
Network requirements	<p>Primary or extended 32-bit PCI slot</p> <p>One slot per communication card</p> <p>Supports 1784-PCICS for ControlNet</p> <p>Supports 1784-PCIDS for DeviceNet</p> <p>Supports commercially-available Ethernet port for EtherNet/IP</p> <p>Third-party networks through the Rockwell Automation Encompass Program</p>
Video requirements	<p>16-color VGA graphics adapter</p> <p>640 x 480 or greater resolution</p> <p>(256-color 800 x 600 minimum for optimal resolution)</p>

<sup>(1)</sup> The SoftLogix controller has only been tested and qualified on genuine Intel processors.

**IMPORTANT**

Treat the computer running a SoftLogix controller like an industrial controller and not a computer. A computer can perform many operations that are incompatible with the real-time operations required by a SoftLogix controller.

## Enhancements

This enhancement was made available with SoftLogix 5800 controller, version 16.03.

### Enhancements Provided with Version 16.03

Enhancement	Description
Ability to Run with Data Execution Protection (DEP)	The SoftLogix controller is able to be in Run mode when the computer Basic Input/Output System (BIOS) has DEP enabled. In previous versions, attempting to place the SoftLogix controller in Run mode with DEP enabled resulted in a major fault.

These enhancements were made available with version 16.00.

### Enhancements Provided with Version 16.00

Enhancement	Description
Add-On Instructions	<p>With version 16 of RSLogix 5000 programming software, you can design and configure sets of commonly used instructions to increase project consistency. Similar to the built-in instructions contained in Logix5000 controllers, these instructions you create are called Add-On Instructions. Add-On Instructions reuse common control algorithms. With Add-On Instructions, you can:</p> <ul style="list-style-type: none"> <li>• ease maintenance by animating logic for a single instance.</li> <li>• protect intellectual property with password-protected instructions.</li> <li>• reduce documentation development time.</li> </ul> <p>For more information about using Add-On Instructions, see the Logix5000 Controllers Common Procedures Programming Manual, publication <a href="#">1756-PM001</a>.</p>
FactoryTalk Alarms and Events	Alarms are now embedded in the controller with two new instructions, ALMD and ALMA, available in RSLogix 5000 software. These digital and analog alarm instructions are fully self-contained.
Ability to Unicast Producer/Consumer Tags on EtherNet/IP Networks	Version 16 enables you to use RSLogix 5000 software to set Producer and Consumer tag connections to Unicast. Setting the tags to Unicast decreases the network bandwidth and simplifies Ethernet switch configuration.

**Enhancements Provided with Version 16.00**

<b>Enhancement</b>	<b>Description</b>
Logix Date Base Changed to be January 1, 1970	<p>The Logix real-time clock operates as a 64-bit binary number that counts microseconds from a fixed date. Prior to version 16, the base date was January 1, 1972. Recent developments with the Common Industrial Protocol (CIP) specification have resulted in the selection of a different base date of January 1, 1970 by the Open DeviceNet Vendors Association (ODVA). With version 16, the date base that Logix products use has been changed to bring it into alignment with the CIP specification. Additionally, in support of the changes to the real-time clock, several other GSV attributes were also added: LocalDateTime, TimeZoneString, ApplyDST (daylight savings time), and DSTAdjustment.</p> <p>Generally, the date and time were accessed via the GSV instruction within a Logix program by using the "DateTime" attribute, which breaks down the date and time to its various components (<math>\mu</math>sec, sec, min, hour, day, month, year). Applications that use this attribute to the real-time clock should not be impacted by this change. However, the time was also available in its 64-bit form by using the "CurrentValue" GSV attribute. A GSV to "CurrentValue" of wall clock was changed to the number of microseconds from the new base date. Any applications that interpreted the old 1972 64-bit number may now require a change.</p>
EtherNet/IP Reduced Heartbeat	<p>The Reduced Heartbeat feature reduces the rate at which heartbeat packets are sent from a device in an I/O connection or a Produced/Consumed connection. This feature preserves bandwidth in EtherNet/IP network installations.</p> <p>The change is automatic and requires no selection. You will notice a reduction in the packets per second used on your EtherNet/IP network for several cases including all input modules and Produce/Consume tags.</p> <hr/> <p><b>IMPORTANT</b> If you upgrade your SoftLogix controller to version 16.x, you must also upgrade these adapters' firmware revisions to 2.003:</p> <ul style="list-style-type: none"> <li>• 1734-AENT, POINT I/O EtherNet/IP adapter</li> <li>• 1738-AENT, ArmorPoint I/O EtherNet/IP adapter</li> </ul> <p>Failure to upgrade your EtherNet/IP adapter firmware may impact your application if more than one Logix controller is connected to POINT I/O or ArmorPoint I/O modules.</p> <p>For more information on using the 1734-AENT or 1738-AENT adapters with Logix controllers that have been upgraded to firmware revision 16.x or later, see:</p> <ul style="list-style-type: none"> <li>• POINT I/O EtherNet/IP Adapter Release Notes, publication <a href="#">1734-RN002</a></li> <li>• ArmorPoint I/O Release Notes, publication <a href="#">1738-RN002</a></li> </ul>

## Corrected Anomalies

These anomalies have been identified and corrected in controller version 16.03.

### Anomalies Corrected in Version 16.03

Anomaly	Description
Data programmed to move into an indexed array location may be written to an unspecified location within the same array.	When an Add-On Instruction is used to move data into a particular location within an UDT with an indexed array, the data may be moved to a location other than that you specified.  Lgx00077630
Completing edits to an I/R rung pair while in Program mode may result in a major fault.	Making changes to an I/R (Insert/Replace) pair and accepting them in Program mode may result in a major fault when the controller is placed in Run mode.  Lgx00077667
Use of a PXRQ instruction results in loss of communication.	When a PXRQ instruction is used, communication failures occur. A red X then appears over the controller, indicating a fault.  Lgx00075450
Completing an edit online causes unexpected behavior.	When multiple edits are made to a program rung without assembling or canceling rung edits while the SoftLogix 5800 controller is online, the edits appear to be accepted and verified. However, the behavior that results from the edits does not correspond to that programmed.  This anomaly does not occur when individual edits are made while the SoftLogix 5800 controller is online.  Lgx00074801
Adding a new program while in Run mode results in a loss of communication.	If a new program is added to the controller tasks while the controller is in Run mode, RSLinx software indicates a loss of communication with the controller. A red X appears over the controller in SoftLogix 5800 software. This anomaly occurs in both RSEmulate 5000 and SoftLogix 5800 software.  Lgx00075243
A Major Non-Recoverable Fault occurs when a Message (MSG) instruction is used.	As a MSG instruction closes the connection, an internal variable may be incorrectly initialized. In turn, a Major Non-Recoverable Fault is registered and a red X displays over the controller.  Lgx00076132
Arrays passed to a set of select instructions within an Add-On Instructions may only be partially processed.	When an InOut array is passed to any of the instructions listed below in the form of an array element (for example, array[0]) the instruction uses the AOI's parameter definition to compute its end address, not that of the InOut array passed in. Therefore, if the array's argument and parameter sizes do not match the array may only get partially processed.  This anomaly may impact use of the following instructions:  ARD, ARL, AWA, AWT, BSL, BSR, COP, CPS, DEDT, DDT, FBC, FGEN, FFL, FFU, FLL, GSV, LFL, LFU, MAOC, MAPC, MATC, MAVC, MCCM, MCCC, MCLM, MCSV, MCT, MCTP, MSTD, PXRQ, RMPS, SQL, and SSV.  Lgx00070317

**Anomalies Corrected in Version 16.03**

<b>Anomaly</b>	<b>Description</b>
Simultaneous branches in a Sequential Function Chart may not execute at the same time or in the same scan.	<p>When encountering a simultaneous set of branches, it may take two scans of the routine before all of the simultaneous branches execute. It does not take more than two scans for all simultaneous branches to completely execute.</p> <p>Lgx00075143</p>
During Prescan, a Major Recoverable Fault, Type 6, Code 1, occurs.	<p>Each task programmed for a Logix controller has a Prescan Watchdog of 5 seconds. You cannot change this setting in RSLogix 5000 software.</p> <p>The fault typically occurs when these elements are present in the program:</p> <ul style="list-style-type: none"> <li>• Add-On Instructions that use PreScan mode.</li> <li>• A large program with many tasks and subroutines where a majority of the application memory is used by the application code and not tags.</li> </ul> <p>Other elements and factors may also cause the fault, however, those listed are the most common.</p> <p>When the fault occurs, the Prescan Watchdog has been exceeded. With this firmware revision, the Prescan Watchdog has been increased to 60 seconds.</p> <p>Lgx00077337</p>
Use an ACL with other ASCII Serial Port instructions results in a Major Non-Recoverable Fault.	<p>If an ACL instruction is executed while other ASCII instructions are active, a Major Non-Recoverable Fault may occur.</p> <p>Lgx00076857</p>
Add-On Instructions yield unexpected results.	<p>When calling an Add-On Instruction, if the data types of the tags passed into or out of the instruction do not match the parameter definitions, unexpected behavior can result.</p> <p>In the logic of an Add-On Instruction, reading a tag of type INT can also yield incorrect results.</p> <p>Lgx00075524</p>
Digital alarms (ALMD) may prematurely report an in-alarm state.	<p>The tag InAlarm reports the alarm (InAlarm=1) prematurely as the in-alarm state is reported before the time entered in the MinDurationPRE tag expires.</p> <p>Lgx00075889</p>

**Anomalies Corrected in Version 16.03**

<b>Anomaly</b>	<b>Description</b>
Circular colinearity error.	<p>In addition to the circular colinearity error (44) for a coordinate system with three primary axes, we have now added the same error check for a coordinate system with two primary axes. The current error check for a three-axes system generates the error if the specified start, end and center points are colinear in any specific order. However, for a two-axis coordinate system, the error is only generated if the specified points are both colinear and in this order:</p> <p>Start Point -&gt; End Point -&gt; Center Point</p> <p>For example, for a two-axes coordinate system with these three points:</p> <ul style="list-style-type: none"> <li>• Error 44 is generated: Start Point = (0,0) -&gt; End Point = (10,0) -&gt; Center Point = (20,0)</li> <li>• No error is generated: Start Point = (0,0) -&gt; End Point = (20,0) -&gt; Center Point = (10,0)</li> </ul> <p>Lgx00069493</p>
MAS IP bits may remain set if an MGS instruction is initiated.	<p>If an MGS instruction is issued while MAS-All instructions are being executed, the MAS instruction in process bit would remain latched true. All axis motion would stop, but the MAS instructions would remain in process.</p> <p>Lgx00076212</p>
Position overshoot on velocity-limited moves.	<p>For moves with very special combinations of fast velocities, slow decelerations, and distances that produced velocity-limited moves, it was possible to sometimes overshoot a programmed end point and then return to it.</p> <p>Lgx00069310</p>

These anomalies have been identified and corrected in controller version 16.00.

### Anomalies Corrected in Version 16.00

Anomaly	Description
Once lost, communication over the EtherNet/IP network cannot resume without manual intervention	<p>If your Ethernet module loses its connection to the EtherNet/IP network, for example, because the connection timed out or the Ethernet cable was disconnected, it does not resume communication on the network. This anomaly requires your manual intervention for communication to resume.</p> <p>Lgx00064349</p>
PanelView Plus operator terminals utilizing the serial port to communicate with the controller will not establish communication at startup.	<p>When the application on the PanelView Plus operator terminal begins to initialize communication with the controller, the controller responds with packets that exceed the 500 byte packet size. The PanelView Plus terminal then stops attempting communication with the controller. When this occurs, data is not updated on the PanelView Plus operator terminal.</p> <p>Lgx00074400</p>
Using FFL (FIFO load) or LFL (LIFO load) instructions in the same program as an Add-On Instruction may cause the controller to experience a Major Non-Recoverable Fault.	<p>If an Add-On Instruction is executed after a FFL or LFL instruction in a given program, the internal registers are incorrectly written to and the result is a Major Non-Recoverable Fault. For the fault to occur, all of the following must be true:</p> <ul style="list-style-type: none"> <li>• The Add-On Instruction and FFL and LFL instruction must be in the same program in a Logix application. <ul style="list-style-type: none"> <li>If the application has two programs defined and the Add-On Instruction is in program A and the FFL or LFL are in program B no anomaly will be seen.</li> </ul> </li> <li>• The FFL/LFL must load a scalar type (SINT, INT, DINT, or REAL). <ul style="list-style-type: none"> <li>If the source value is a structure, no anomaly will be seen.</li> </ul> </li> <li>• The FFL/LFL must be scanned before the Add-On Instruction. <ul style="list-style-type: none"> <li>If the Add-On Instruction comes first in the code, no anomaly will be seen.</li> </ul> </li> </ul> <p>The rung condition does not matter. If the required conditions exist, the fault will occur during prescan.</p> <p>Lgx00074725</p>
Extensive use of UID and UIE instructions results in a User-Task Watchdog timeout fault.	<p>If you use extensive amounts of UID and UIE instructions, when the controller is put into Run mode, a Major Recoverable Fault type 6, code 1, Task Watchdog Expired, may be logged. Attempts to clear the fault and return to Run mode are unsuccessful.</p> <p>Lgx00050393</p>
Event Task Overlap Counter registers large values after the controller is put in Run mode.	<p>If an application that uses event-based tasks is downloaded to the controller and then the controller is put into Run mode, the overlap counts for event-based tasks may exceed 800,000. This value is a false indication of task overlaps and does not affect the execution of event-based tasks.</p> <p>Lgx00058132</p>
Changes to RPI are not correlated between all workstations when multiple workstations are connected to the controller.	<p>If you are online with one controller from two or more workstations and you alter the RPI setting for an I/O connection on one workstation, the change in RPI does not register on the other workstations. The change in RPI registers only if the altered RPI program is uploaded from the controller by the other workstations.</p> <p>Lgx00070714</p>

**Anomalies Corrected in Version 16.00**

<b>Anomaly</b>	<b>Description</b>
Minor faults logged multiple times when certain instructions are used.	<p>The same minor faults, typically a minor math-overflow error, may be logged more than once, depending on the type of instructions used in the program. For example, if in a task the program contained a Multiply instruction that logged a math overflow error as a minor fault, a GSV instruction in the same program will log the same fault when it should not.</p> <p>Instructions affected include Message BTR, Message BTW, GSV, SSV, UIE, UID, STOD, STOR, STOI, PCMD, PSC, PATT, PDET, PCLF, PPD, and PRNP.</p> <p>Lgx00028500, Lgx00045361, and Lgx00045365</p>
LimitsInv and SelectLimitInv are swapped.	<p>In the High/Low Limit (HLL) instruction:</p> <ul style="list-style-type: none"> <li>• LimitsInv parameter is set when the SelectLimit is invalid.</li> <li>• SelectLimitInv parameter is set when the HighLimit and LowLimit parameters are invalid.</li> </ul> <p>Lgx00055977</p>
Motion Coordinated Move (MCCM) instruction may not produce a move to the specified end points.	<p>In Circular-center Programming mode, a MCCM instruction may fail to reach the specified end point of a 180° arc if the circle center is programmed incorrectly.</p> <p>Lgx00044813</p>
Blended path contour may deviate beyond the confines of the programmed path.	<p>In some very unique circumstances, when either changing velocity profile types or having drastically different acceleration and/or deceleration values on the two moves comprising a blended contour, the resultant blended path contour may deviate beyond the confines of the programmed path.</p> <p>Lgx00045400</p>
Unexpected motion can happen when you home a rotary axis of a SERCOS drive.	<p>A rotary axis of a SERCOS drive can move with unexpected motion if you use a Homing Offset when you home the axis. The axis starts to move at a high speed until a position error fault happens. Once the fault happens, the axis responds with the configured fault action. For example, the default fault action is Disable Drive. In that case, the controller disables the axes and the drive stops the axis.</p> <p>This issue happens under this specific combination of circumstances.</p> <ul style="list-style-type: none"> <li>• The type of axis is AXIS_SERVO_DRIVE (SERCOS interface drive).</li> <li>• The Positioning mode of the axis is Rotary.</li> <li>• The axis has a <b>Homing</b> Offset that is near or greater than the Position Unwind value of the axis.</li> <li>• A Motion Axis Home (MAH) instruction executes when the axis is near its unwind position.</li> </ul> <p>For more information, see Tech Note 34404, available in the Tech Support Knowledgebase.</p> <p>Lgx00061613 and Lgx00056675</p>

**Anomalies Corrected in Version 16.00**

<b>Anomaly</b>	<b>Description</b>
MAOC instruction output remains ON when enable input is low.	<p>An Output CAM element is configured with a Latch type of Position and Enable, and Unlatch type of Position and Enable. While the CAM element is active (the output is ON) the application sets the Unlatch Position to the value of the Latch Position. The output remains ON even if the Enable Input is dropped.</p> <p>For more information, see Technote 37835, available in the Tech Support Knowledgebase.</p> <p>Lgx00069685</p>
In coordinated motion a rotary axis always moves.	<p>When there is a rotary axis configured for the Coordinate System, the rotary axis makes one complete revolution even if the current command position is equal to the position in the Motion Coordinated Linear Move (MCLM) instruction.</p> <p>Lgx00056359</p>
SlaveAxis.PositionCamLockStatus is reset when master axis stops/starts quickly using a Motion Axis Jog (MAJ) instruction.	<p>When the manual jog input is cycled ON and OFF at a rapid rate, the SlaveAxis.PositionCamLockStatus gets reset and the SlaveAxis.PositionCamStatus remains set.</p> <p>Lgx00066064</p>
While an axis is accelerating an MAS is initiated, a delay is experienced before the axis begins to decelerate to a stop.	<p>This occurs with "Stop Move" and "Stop Jog" in combination with S-Curve velocity profiles. While an MAM or MAJ is accelerating, an MAS is initiated to stop it. Even though the deceleration rate is higher than the ones specified in the MAM or MAJ, the axis begins to slow at lower rate before decelerating at the higher rate programmed in the MAS.</p> <p>Lgx00055080</p>
A Cam Profile can become locked such that an MCCP instruction can no longer update it.	<p>This anomaly may occur if an MCSV executing in an application task is interrupted by the motion task which has a MAPC instruction currently in-process.</p> <p>Lgx00060994</p>
On a unidirectional home, the .IP bit is cleared, the AxisHomedStatus attribute is set, but the .PC bit is not set.	<p>If the home direction is unidirectional and the home offset is less than the distance to decelerated, then the axis is simply decelerated to a stop. The axis does not reverse direction to move to the home position. In this case, the .PC bit of the MAH instruction is not set. The .PC bit is set when the axis stops at the configured home position.</p> <p>Lgx00063431</p>
Processing of denormalized number exceptions causes a Major Non-Recoverable Fault.	<p>A denormalized number is any 32-bit, floating-point value that is less than <math>1.75494210 \times 10^{-38}</math> or greater than <math>-1.75494210 \times 10^{-38}</math>, excluding zero. Denormalized numbers typically occur when very small real numbers are divided by very large real numbers.</p> <p>This anomaly typically occurs when the following sequence takes place.</p> <ol style="list-style-type: none"> <li>1. The controller is handling an exception of a floating-point denormalized number in task A.</li> <li>2. Then task B begins to execute and handles an exception of a floating-point denormalized number.</li> <li>3. And, task B completes as task A begins again.</li> </ol> <p>Lgx00057774</p>

## Known Anomalies

This table lists known anomalies of controller version 16.03 and the catalog numbers affected.

Anomaly	Description
Indirectly addressing an instance tag in an Add-On Instruction results in a Major Non-Recoverable Fault.	<p>When an indirectly-addressed instance tag is used instead of a directly-addressed instance tag within an Add-On Instruction, a Major Non-Recoverable Fault occurs. Typically the major fault occurs during the prescan of the controller.</p> <p>See the Restrictions section on page 16 for more information about this anomaly.</p> <p>Lgx00077261</p>
Passing a User-defined Data Type (UDT) into an Add-On Instruction results in a Major Recoverable Fault or data memory corruption.	<p>When a UDT is passed into an Add-On Instruction, and certain conditions are met, a Major Recoverable Fault or data memory corruption may occur.</p> <p>The conditions required for Major Recoverable Fault or data memory corruption include:</p> <ul style="list-style-type: none"> <li>• A one-dimensional array that is a UDT is passed into the Add-On Instruction.</li> <li>• The UDT contains a member that is an array.</li> <li>• Inside the Add-On Instruction, an operand address that specifies an immediate member of the UDT array and a variable element of the member array (for example, <code>array[0].memberArray[x]</code>) is used.</li> </ul> <p>If <b>all</b> of these conditions are met, the anomalous behavior results.</p> <p>Lgx00077270</p>
Motion Redefine Position (MRP) Error 13 for Positions within the range	<p>You may get the error "Parameter out of Range" if the MRP is executed when:</p> $\text{Current Position} + \text{MRP Position} > 2^{31}/\text{Axis Conversion Constant.}$ <p style="text-align: center;">Or</p> $\text{Current Position} + \text{MRP Position} < -2^{31}/\text{Axis Conversion Constant.}$ <p>For example, assume that the:</p> <ul style="list-style-type: none"> <li>• Axis conversion constant = 120000.0 feedback counts/1.0 unit</li> <li>• Current command position = 17893.0 units</li> </ul> <p>If you MRP with a position of five units, which exceeds <math>2^{31}/\text{Axis Conversion Constant}</math>, the MRP will error.</p> <p>To work around this problem, move the axis to a value within the acceptable range specified above.</p> <p>Lgx00073719</p>

Anomaly	Description
SSV of MotionGroup Average Scan Time causes a jump in scan time	<p>If an SSV instruction with a value of zero is executed against the MotionGroup attribute TaskAverageScanTime, when the GSV instruction is finished, the average scan time will have jumped to an incorrect value. The larger the Coarse Update Period, the larger the jump will be. For example, with a Coarse Update Period of 26 ms, the average scan time value can increase to over 300 ms.</p> <p>Lgx00071520</p>
Axis ActualAcceleration tag is not updated for virtual axes.	<p>For the virtual axis, the Axis_tag.ActualAcceleration does not update, but the Axis_tag.CommandedAcceleration does. The actual position of a physical axis is based on actual motor feedback, which is why the virtual Actual Acceleration tag does not update on a virtual axis. To work around this anomaly, use these command-based tags:</p> <ul style="list-style-type: none"> <li>• Virtual_Axis.CommandPosition</li> <li>• Virtual_Axis.CommandVelocity</li> <li>• Virtual_Axis.CommandAcceleration</li> </ul> <p>Lgx00073829</p>
Large position error for sequential, short, three-dimensional circles	<p>This anomaly may occur if you are running several sequential, short, three-dimensional circles by using motion control circular moves on a ControlLogix 1756-L55 processor with a low-coarse update period. If the coarse update period is increased, the user will not see the problem.</p> <p>Lgx00070145</p>
Setting invalid home sequence value via SSV instruction	<p>Do not attempt to program a set system value (SSV) instruction to set the home sequence to torque or torque marker if the drive is not a SERCOS. If you do so on a non-SERCOS drive, any subsequent attempt to program this attribute via an SSV will produce a minor controller fault.</p> <p>Lgx00068281</p>
PI function block appears to stop executing as the output does not change and no instruction faults are logged.	<p>If the PI instruction is being used in Linear mode, this floating-point equation is used to calculate the ITerm.</p> $Kp \times Wld \times \frac{WldInput + WldInput_{n-1}}{2} \times DeltaT + ITerm_{n-1}$ <p>Due to the use of the single-precision floating point values, it may be possible, depending on the values of WLD and KP, for the ITerm value to be small enough, less than 0.0000001, to be lost when adding to the ITerm<sub>n-1</sub>.</p> <p>For more information regarding the PI instruction, see the Logix5000 Controllers Process Controls and Drives Instructions User Manual, publication <a href="#">1756-RM006</a>.</p> <p>Lgx00070832</p>
Changes made to a timeout in the alarms system require a new download of the program to controller.	<p>To verify that the timeout change is used by the controller, you must download the program to the controller after each change to the timeout variable.</p> <p>Lgx00069461</p>

<b>Anomaly</b>	<b>Description</b>
The Slot Status bit for an I/O connection is slow to update if the connection is lost.	<p>When using I/O on an Ethernet network, if the connection to the network is lost at the adapter, the SlotStatusBit for that connection will not register the disconnect for nine seconds or more.</p> <p>If you require loss-of-connection data more quickly than the nine seconds, use the GSV instruction to monitor the entry status of the connection as it updates more quickly than the SlotStatusBit.</p> <p>Lgx00072697</p>
When the SFC instruction's Last Scan of Active Steps option is set to Automatic Reset, a Major Non-Recoverable Fault occurs.	<p>A Major Non-Recoverable Fault may occur when these elements are present in the program:</p> <ul style="list-style-type: none"> <li>• Within an SFC, a JSR instruction is used to jump to another SFC, also know as a nested SFC.</li> <li>• One or more of the nested SFC instructions contains Simultaneous Branches.</li> <li>• The Last Scan of Active Steps option (specified in the SFC Execution tab of the controller Properties dialog) is set to Automatic Reset.</li> </ul> <p>To avoid a Major Nonrecoverable Fault when these elements are present, set the Last Scan of Active Steps to Don't Scan or to Programmatic Reset.</p> <p>Lgx00072702</p>
A function block is initiated, either directly or indirectly by an SFC instruction, when the parent step becomes active.	<p>During the first scan of an SFC step, the Step.FS bit is set. In addition, the S:FS bit is set, which allows the logic in any associated actions to easily detect the first scan state. This behavior is useful when a subroutine that is called by multiple actions (actions that may be connected to other steps) is used. The first scan state can be detected without programming a reference to the tag of a specific step.</p> <p>Many function blocks contain internal data that must be initialized before the block can be used. One of the methods a block uses to determine if it should initialize is by evaluating the S:FS bit, which the function block identifies as the first scan following a prescan.</p> <p>Lgx00071558</p>

Anomaly	Description
<p>An SFC R action continues to post-scan on the specified action.</p>	<p>This anomaly occurs only if the SFC Last Scan of Active Steps option is set to Programmatic Reset or Automatic Reset. When the default, Don't Scan, is set, the anomaly does not occur.</p> <p>The intention of a reset action, type R, is to terminate the execution of another action that was previously stored. When configured as described above, the reset action causes logic to execute a final scan.</p> <p>The reset action does not check to verify that an action is stored before it completes the final scan. As a result, each time the reset action is scanned, the target logic will be scanned one last time.</p> <p>These observable behaviors may result:</p> <ul style="list-style-type: none"> <li>• The timer of the stored action will continue to time even though the action is no longer active.</li> <li>• The logic in the stored action will be executed in the configured mode.</li> <li>• At Automatic Reset, non-retentive outputs are cleared.</li> <li>• At Programmatic Reset the logic will execute. In this situation, the action logic checks for the final scan condition (action.A = 1 and action.Q = 0) and performs some shutdown operations. This is the code that will be executed.</li> </ul> <p>Lgx00069295</p>
<p>Attempts to call an SFC routine from a FOR instruction can cause a Major NonRecoverable fault on the controller.</p>	<p>Attempts to call an SFC routine either directly from a FOR instruction or indirectly via a JSR instruction originating from a FOR instruction can cause a Major NonRecoverable fault on the controller due to a system level access violation.</p> <p>To work around this anomaly, ensure that SFCs are never executed in the same control path after a FOR instruction. If you cannot ensure this to be the case, replace the role of FOR instructions with a manually constructed loop-iterator when needing to employ SFCs in your application.</p> <p>Lgx00073342</p>
<p>Unspecified X2 and Y2 parameters in an FGEN instruction can prevent your program from downloading to the controller.</p>	<p>If you do not specify X2 and Y2 parameters in an FGEN instruction when used with a SoftLogix 5800 controller that has been upgraded to firmware revision 16, your program may not download to the controller.</p> <p>As a workaround, declare a dummy array with a size equal to 1 or more, for example, REAL DUMMY[1], and use that array for both the X2 and Y2 parameters. Additionally, make sure the XY2SIZE member in the backing tag is its default value of 0.</p> <p>Lgx00073042</p>

## Restrictions

This SoftLogix controller has these restrictions.

Restriction	Description
<p>Outputs controlled by an MAOC instruction can remain ON in some configurations.</p>	<p>This anomaly occurs when the output CAM ON window positions are redefined while the output controlled by the output CAM element is active. In some instances, the Motion Planner may not detect the off-crossing of the window and the output controlled by the output CAM element remains ON. This issue is applicable to any output point or virtual output controlled by an MAOC instruction.</p> <p>For more information, see Tech Note 37835.</p>
<p>Passing a User-defined Data Type (UDT) into an Add-On Instruction results in a Major Recoverable Fault or data memory corruption.</p>	<p>An anomaly occurs when you pass a tag based on a User-defined Data Type (UDT) into an Add-On Instruction, and certain conditions are met that result in a Major Recoverable Fault or data memory corruption.</p> <p>Conditions required for Major Recoverable Fault or data memory corruption include:</p> <ul style="list-style-type: none"> <li>• A one-dimensional array tag that is based on a UDT is passed into the Add-On Instruction.</li> <li>• The UDT tag contains a member that is a one-dimensional array.</li> <li>• Inside the Add-On Instruction, an operand address that specifies an immediate member of the UDT tag array and a variable element of the member array (for example, array[0].memberArray[x]) is used.</li> </ul> <p>Examples:</p> <pre>UDT array[0].memberArray[x]</pre> <p>When the size of the UDT array is smaller than that of the memberArray and the [x] value of the memberArray is larger than the size of the UDT array, a Major Recoverable Fault Code 4 Type 20 occurs.</p> <pre>UDT array[0].memberArray[x]</pre> <p>When the size of the UDT array is bigger than the memberArray and the [x] value is smaller than the size of the UDT Array but larger than the size of the memberArray, the expected fault does not occur and the data is written to a location outside the bounds of the memberArray.</p> <p>Lgx00077270 and Lgx00076136</p>

Restriction	Description
Use of an indirectly-indexed tag within an Add-On Instruction instance tag is not accepted by the RSLogix 5000 program.	<p>In RSLogix 5000 software, version 16.00, if you use an indirectly-indexed array in an instance tag of an Add-On Instruction, anomalous behavior may result.</p> <p>For example, in the instruction call <code>MyAOI (AOIData [ Index ] )</code>, the value <code>[ Index ]</code> selects the <code>AOIData</code> tag element used to call <code>MyAOI</code>. The use of <code>[ Index ]</code> results in anomalous behavior when the program is executed.</p> <p>In RSLogix 5000 software, version 16.03, and controllers firmware revision 16.20, if an indirectly-indexed tag is used in an instance tag, the edit is not accepted by the program. Instead, use a directly-indexed instance tag. For example, instead of using tag <code>MyAOI (AOIData [ Index ] )</code>, use tag <code>MyAOI (AOIData [ 2 ] )</code> or similar so that the exact element of the array is directly-indexed. The program accepts directly-indexed instance tags.</p> <p>You may continue to use indirectly-addressed tags in Add-On Instruction parameters without anomalous behavior in RSLogix 5000 software, versions 16.00 and 16.03.</p> <p>Lgx00077261</p>
Upload of Add-On Instruction With Literal Boolean Input Parameter Modifies Offline Image	<p>When an Add-On Instruction (AOI) containing a literal value for one of its Boolean Input parameters is referenced from a Ladder Diagram routine, an upload of the project will modify the display of the literal value by appending a ".0". Each time the project is downloaded and re-uploaded, another ".0" is appended, so that after the second download/upload sequence, the project file will not verify and can no longer be downloaded without first editing the modified literal value. The edit may be successfully performed either online or offline. Note, however, that when editing online, because the rung is in an unverified state, the "Finalize All Edits in Program" will not operate. In this case, use of the Accept/Test/Assemble sequence of operations will allow the edit to be completed. This condition does not affect the executing image, which will continue execution using the unmodified literal value. To avoid exposure to this problem, replace the literal value with a reference to a tag having the desired value.</p> <p>Lgx00077802</p>
Repeated minor faults can cause the controller to display a red X.	<p>If your SoftLogix controller experiences repeated minor faults, it may display a red X. This only happens in systems in which minor faults are repeatedly generated on each program scan. To avoid this, correct any programs that may cause repeated minor faults to occur.</p>
Trends may momentarily block the RSLogix 5800 thread from executing.	<p>Running or stopping a trend momentarily blocks the RSLogix 5800 thread from executing. Depending on your application and system performance, this can affect motion by causing increased errors in axis position or velocity. Controllers containing programs that generate motion should be in Program mode when starting or stopping a trend.</p>
Downloading to a SoftLogix controller while another controller in the chassis is running a motion application may affect the motion application.	<p>Do not perform a download to a SoftLogix controller in the chassis while another controller in the same chassis is running a motion application. Doing so can cause the motion application to glitch.</p>

<b>Restriction</b>	<b>Description</b>
Make sure to only single-click on the SoftLogix 5800 button during installation.	<p>Do not double-click on the SoftLogix 5800 button on the installation browser screen. This can cause two copies of the SoftLogix 5800 installation procedure to launch. If two copies of the installation program start, you may not be able to perform a normal uninstall. If this occurs, you will see this error message when an uninstall is attempted: "Failed to load dll: _UninstallTmp".</p> <p>If this situation occurs, you have to manually uninstall the program. The manual uninstall procedure is available as the P19762551 technical note document.</p>
Avoid mixed operand types between the destination and its inputs.	<p>For maximum portability across platforms, it is best to avoid mixed operand types between the destination and its inputs. If getting identical results for similar operations across languages is important to you, make sure to perform floating point operations. The tradeoff is that floating point operations come at a price in terms of performance. Other considerations exist as well such as how compatible your operands are with that of the I/O being used and so on. See below for more details on typed operations across Logix platforms and across languages.</p>

## Performing Typed Operations

Keep in mind the following when performing typed operations.


Typed Operation	Description
Across Logix platforms	<p>Due to the fact that the SoftLogix family is based on open systems technology, the controller performs computational operations much the same way as open systems platforms and tools do it. This becomes important when performing mixed typed operations such as dividing two integers and storing the result in a real. Integer operations typically truncate the rational portion of a computation result while floating point operations preserve it.</p> <p>For example, when a SoftLogix program performs “<math>a = n / m</math>” where the data types for ‘a’, ‘n’, and ‘m’ are real, integer, and integer respectively, this specifies an integer divide between ‘n’ and ‘m’ and places the answer into ‘a’, performing an integer to real conversion. If ‘n’ = 800 and ‘m’ = 1000, the result is 0 and gets stored into ‘a’ as 0.0.</p> <p>Alternatively, when a ControlLogix program performs the same “<math>a = n / m</math>” where the data types for ‘a’, ‘n’, and ‘m’ are real, integer, and integer respectively, this specifies a floating point divide between ‘n’ and ‘m’ and places the answer into ‘a’, with no conversion needed. If ‘n’ = 800 and ‘m’ = 1000, the result is 0.8 and gets stored into ‘a’ as 0.8.</p> <p>In SoftLogix software, the input operand types dictate the operation while in ControlLogix, if any of the operands are real, a floating point operation is performed. SoftLogix software performs the operation exactly like a C routine would.</p>
Across languages	<p>There are instruction differences across programming languages as well as across Logix platforms. The following examples use the operation “<math>i = n / m</math>” where all the operands are integers.</p> <p>Ladder DIV instructions perform an integer divide operation and store the immediate result in the destination. For ‘n’ = 800 and ‘m’ = 1000, ‘i’ is equal to 0. The DIV function block instructions only does floating point operation;. The function block instruction converts the inputs to reals (if necessary) and then converts the result from a real to the destination type (if necessary). In this example, ‘n’ is converted to 800.0 and ‘m’ is converted to 1000.0. The result of the operation is 0.8. That result then gets converted to an integer where rounding rules apply and the final destination value is 1.</p> <p>This difference between ladder and function block instructions applies to all Logix platforms. Function block instructions only perform floating point operations.</p>

## Functionality Issues in Specific Circumstances

You may experience some or all of these issues when programming or using your SoftLogix 5800 controller.

Issue	Description
Performance issues	<p>Performance-related considerations that should be made are as follows.</p> <ul style="list-style-type: none"> <li>• The latest drivers for various items like video and networking devices may be required for satisfactory system operation. We recommend that you use Microsoft-certified drivers for video cards and Ethernet NICs if performance problems are observed when running motion applications. Certified drivers can be found on Microsoft's website. You can also use Windows Update to update drivers on Windows 2000/XP systems or see the website of the hardware manufacturer.</li> <li>• All graphical (especially OpenGL) screen savers should be disabled when running motion applications.</li> <li>• There is an anomaly associated with computers running Windows 2000 or Windows XP using certain vendors motherboard chipsets. The SoftLogix controller stops running and reports a watchdog fault and/or a connection timeout fault. These fault conditions are erroneously caused by the Windows 2000/XP System Performance Counter jumping forward unexpectedly. Microsoft states the problem occurs as a result of a design defect in the peripheral component interconnect (PCI) to Industry Standard Architecture (ISA) bridge of some chipsets. Microsoft provides a description of the issue "Performance Counter Value May Unexpectedly Leap Forward" (Q274323) which can be viewed at <a href="http://support.microsoft.com/default.aspx?scid=kb:en-us:q274323">http://support.microsoft.com/default.aspx?scid=kb:en-us:q274323</a>.</li> </ul>
General issues	<p>If you use drive image software to duplicate your hard disk drive in order to deploy multiple SoftLogix 5800 systems, follow these steps to ensure proper operation of the systems. The installation of SoftLogix 5800 on a computer generates a unique CIP serial number that is used to identify messages from that node on the network. This serial number must be unique for every SoftLogix 5800 computer in the system.</p> <ol style="list-style-type: none"> <li>1. Prior to running the drive image software to produce the master image, make sure that there are no controllers in the chassis and then terminate the Chassis Monitor by right-clicking on the icon in the tool tray and selecting Shutdown Monitor.</li> <li>2. Delete the key ASASerialNumber from the Windows registry using the regedit.exe tool provided with your Windows operating system.</li> <li>3. HKEY_LOCAL_MACHINE\SOFTWARE\Rockwell Automation\VirtualBackplaneMonitor\Installed Modules\0001!000E!000F ASASerialNumber</li> <li>4. Create the drive image with the computer in this state, making sure that you do not run the Chassis Monitor again since that will cause the CIP serial number to be regenerated in the registry. After the master image is copied to your new computer and the computer is re-booted, a unique CIP serial number will be generated the first time that the Chassis Monitor is launched.</li> </ol>

Issue	Description
Instruction set issues	<ul style="list-style-type: none"> <li>• If you run SoftLogix 5800 software and you perform continuous messaging or block-transfers where the instructions are triggered by their own enable bits (.EN), there is a potential for the instructions to stop executing and remain in a state with only the enable bit set. The SoftLogix 5800 controller may stop responding and require removal and re-insertion in the virtual chassis to recover from this fault. The RSLogix 5000 project will also have to be re-downloaded.</li> </ul> <p>You can prevent this problem by using the Cache Connections option on the Communications tab of the message configuration dialog. You can cache as many as 32 instructions with any combination of message instructions and block-transfer instructions. For example, you can cache 28 message instructions and 4 block-transfer instructions.</p> <p>If you configure more than 32 cached connections, some of the connections will be made without caching, which causes this issue to continue to occur. In general, lower the frequency of less critical messages/block-transfers and use caching for critical messages/block-transfers.</p> <ul style="list-style-type: none"> <li>• The SoftLogix 5800 controller executes on a 32-bit microprocessor, which can perform 80-bit floating point operations. Due to extensive accuracy, comparisons between one REAL operand and another could reveal small differences in the lesser significant digits (for example, 1.000005 and 1.000052). As an alternative, use the LIM instruction when REAL operands are involved.</li> </ul>
Motion card issues	<div style="border: 1px solid black; padding: 5px;"> <p><b>IMPORTANT</b> If you have a virtual axis on a SoftLogix 5800 controller as a master reference, you must also have a physical axis in the same motion group on the same controller. Avoid producing a virtual axis on one controller and then consuming that axis on another controller located in the virtual chassis that contains the slave axis. You cannot obtain smooth motion on any of the slave axes in this scenario if the controller with the virtual axis does not contain a physical axis.</p> </div>

Issue	Description						
1784-PCIDS DeviceNet module issues	<ul style="list-style-type: none"> <li>If you place the SoftLogix 5800 controller in Program mode with DeviceNet I/O currently mapped through a 1784-PCIDS module, and then you use RSNetWorx software to change the data mapping on the network, the controller does not detect this change until the 1784-PCIDS module is reset. You can reset the module in the RSLogix 5000 Controller Organizer. Right-click on the module, select Properties, Then choose the Module Info tab and click Reset Module. You can also reset the module by removing and re-inserting the module in the SoftLogix chassis. You can reset the module while the SoftLogix controller is running. The connections are automatically established after the 1784-PCIDS module is reset.</li> </ul> <hr/> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <div style="display: flex; align-items: center;"> <div style="background-color: black; color: white; padding: 2px 5px; font-weight: bold; margin-right: 10px;">ATTENTION</div> <div style="flex-grow: 1;"> <p>Do not reset a module that is currently being used for control. The connection to the module will be broken and control might be interrupted.</p> </div> </div> <div style="text-align: center; margin-top: 10px;">  </div> </div> <hr/> <ul style="list-style-type: none"> <li>The 1784-PCIDS card in the SoftLogix 5800 chassis uses the CommandRegister bits the same way as a 1756-DNB module. Use the CommandRegister.Run bit to enable/disable output data on the DeviceNet I/O network.</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 50%; padding: 5px;">When CommandRegister.Run is set to</th> <th style="width: 50%; padding: 5px;">The 1784-PCIDS card</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Zero (0)</td> <td style="padding: 5px;">                     Is in Idle mode.                      In Idle mode, the card still receives inputs from its slave devices on the network, but the card does not send active output data to the devices.                 </td> </tr> <tr> <td style="padding: 5px;">One (1)</td> <td style="padding: 5px;">                     Is in Run mode.                      In Run mode, the card sends active outputs on the network and receives inputs.                 </td> </tr> </tbody> </table>	When CommandRegister.Run is set to	The 1784-PCIDS card	Zero (0)	Is in Idle mode. In Idle mode, the card still receives inputs from its slave devices on the network, but the card does not send active output data to the devices.	One (1)	Is in Run mode. In Run mode, the card sends active outputs on the network and receives inputs.
When CommandRegister.Run is set to	The 1784-PCIDS card						
Zero (0)	Is in Idle mode. In Idle mode, the card still receives inputs from its slave devices on the network, but the card does not send active output data to the devices.						
One (1)	Is in Run mode. In Run mode, the card sends active outputs on the network and receives inputs.						

For more information on configuring your SoftLogix 5800 system, see the SoftLogix 5800 System user manual, publication 1789-UM002.

## Install Revision 16

To install the controller, run the install.exe file on the CD media. This launches a CD browser that lets you install the SoftLogix 5800 controller and RSLinx software.

---

**IMPORTANT**

Install RSLinx software before installing the SoftLogix 5800 controller. You must add the virtual backplane driver in RSLinx software to connect to the SoftLogix engine.

Also, make sure .Net is installed on your computer before installing the SoftLogix 5800 controller. During the installation, the process verifies that the correct version of .Net is installed. If you do not have .Net on your computer, you cannot install the controller.

---

Use Add/Remove Programs in the control panel to remove previous versions of the SoftLogix 5800 controller. When installing or uninstalling, note any messages that recommend a system reboot. Failure to follow the reboot instructions can render your installation inoperable.

For more information about installing the controller, see the SoftLogix 5800 Controller Installation Instructions, publication 1789-IN001. The SoftLogix 5800 product documentation is in PDF format at <CD-drive letter>\Documentation.

## Update Motion Drivers in Windows 2000/XP Systems

If you are installing the motion card for the first time, use the instructions in 16 Axis PCI SERCOS Interface Card Installation Instructions, publication 1789-IN041, to install the driver.

If you are using Windows 2000/XP and have a motion card in your system, you must update the driver for the motion card by using the procedure below.

1. Right-click My Computer and choose Manage.
2. Open Device Manager under System Tools.
3. Expand the A-B Virtual Backplane folder.
4. Right-click the appropriate motion device and choose Properties.
5. Select the Driver tab and click the Update Driver button.
6. Use the wizard to install a new driver.
  - a. In Windows 2000, select “Search for a suitable driver for my device (recommended)” and click Next.  
In Windows XP, select “Install from a list or specific location (Advanced)” and click Next.
  - b. In Windows 2000, make sure “Specify Location” is the only item checked and click Next.
  - c. In Windows XP, make sure “Include this location in the search” is checked and click Next.
  - d. Click Browse and locate the new driver in directory:  
<CD-drive letter>\SoftLogix 5800\Drivers\Win2k  
**or**  
C:\Program Files\Rockwell  
Automation\SoftLogx5800\Drivers\Win2k  
(the path will be different if you did not install the SoftLogix controller in the default directory)
  - e. Click Next to update the motion driver.
  - f. If asked to overwrite newer versions of files, select YES.
  - g. Click Finish to complete the update wizard.

## Use Motion Drivers in Windows XP

The Windows XP System Restore feature affects how motion runs on a SoftLogix 5800 controller. When System Restore is enabled, random motion retries occur, which may result in irregular motion and/or motion glitches.

The System Restore feature provides a way to restore the system to a previously known state that would otherwise require you to reinstall an application or even the entire operating system. Applications that are compatible with Windows XP integrate with System Restore to create a restore point before an installation begins. By default, the feature creates a restore point every 24 hours while the system is up. It does this by creating a restore point directory and then creating a snapshot a set of critical system files, including parts of the registry. System Restore tracks changes to files and directories, and saves copies of files that are being changed or deleted in a change log. Restore point data is maintained on a per-volume basis.

For motion to operate correctly, you must disable System Restore.

1. From the Start Menu, right-click My Computer and choose Properties.

The System Properties page displays.

2. Select the System Restore tab from the System Properties page.
3. Check the box labeled Turn off System Restore.
4. Click OK so the change takes effect.

## Additional Resources

Resource	Description
Logix5000 Controllers Common Procedures Programming Manual, publication <a href="#">1756-PM001</a>	Contains information specific to Add-On Instructions and other programming information.
SoftLogix 5800 Controllers Revision 15 Release Note, publication <a href="#">1789-RN517</a>	Describes anomalies and enhancements related to controller revision 15.
ControlLogix Combination Controller and SERCOS Interface Module Revision 16 Release Notes, publication <a href="#">1756-RN642</a>	Describes anomalies and enhancements specific to the 1756-L60M03SE Combination Controller and Sercos Interface Module.
Logix5000 Process Controls and Drives Instructions Reference Manual, publication <a href="#">1756-RM006</a>	Contains information specific to the PI instruction.
Outputs Controlled by MAOC Instruction Tech Note, ID 37835	Further describes the MAOC instruction anomaly.
ControlFlash Firmware Upgrade Kit Quick Start, publication <a href="#">1756-QS105</a>	Contains informations about firmware upgrades, installation instructions, and error messages.
POINT I/O EtherNet/IP Adapter release notes, publication <a href="#">1734-RN002</a>	Further describes the firmware upgrade to 2.003.
ArmorPoint I/O release notes, publication <a href="#">1738-RN002</a>	Further describes the firmware upgrade to 2.003.

You can view or download Rockwell Automation publications at <http://literature.rockwellautomation.com>. To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

Tech Notes and other resources are available at <http://www.rockwellautomation.com/knowledgebase>.

**Notes:**

## Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At <http://support.rockwellautomation.com>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://support.rockwellautomation.com>.

## Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running.

United States	1.440.646.3434 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

## New Product Satisfaction Return

Rockwell tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning, it may need to be returned.

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

Allen-Bradley, SoftLogix 5800, SoftLogix, FactoryTalk, RSLinx, TechConnect, and Rockwell Automation are trademarks of Rockwell Automation, Inc.

Trademarks not belonging to Rockwell Automation are property of their respective companies.

[www.rockwellautomation.com](http://www.rockwellautomation.com)

### Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 1789-RN016B-EN-E - August 2007

Supersedes Publication 1789-RN016A-EN-E - February 2007

PN 14549

Copyright © 2007 Rockwell Automation, Inc. All rights reserved. Printed in the U.S.A.