SoftLogix 5800 Controller, Version 17

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

IMPORTANT

Before updating your controller, we strongly recommend that you review information pertinent to previous major firmware revisions. For example, when updating from revision 16.*x* to 17.*x*, view information for revision 16 in the SoftLogix Controllers, Revision 16 Release Notes, publication 1789-RN016, in addition to the content of these release notes.

Firmware release notes contain material for all minor revisions subsequent to each major revision. If your controller, for example, is at revision 16.00, and not the last minor revision, 16.03, you should view all of the information for revision 16.00...16.03 before updating to revision 17.*x*.

CompactLogix Controllers, Revision 16 Release Notes, publication 1789-RN016, are available at http://www.rockwellautomation.com/literature.

About This Publication

This publication describes enhancements, anomalies (known and corrected), and restrictions for SoftLogix 5800 controller, versions 17.01 and 17.00.

We strongly recommend that you review the information provided regarding previous firmware revisions. We recommend that you do so because, if you are upgrading your firmware through multiple previous revisions, all of the information specific to all of the revisions is applicable.

For example, if you need to upgrade your 1789-L60 controller from revision 16.00 to 17.01, all of the information specific to revisions 16.00, 16.03, and 17.00 is applicable.

Compatible Versions of Software

To use version 17.00, or later, the following minimum software versions are required.

Software Requirements

Software	Required Version
RSLinx Classic RSLinx Enterprise	2.54 (CPR 9, SR 1) 5.17 (CPR 9, SR 1)
RSLogix 5000 programming	17.01 (CPR 9, SR 1)
RSNetWorx for ControlNet	9.00 (CPR 9, SR 1)
RSNetWorx for DeviceNet	
RSNetWorx for EtherNet/IP	
FactoryTalk Activation Client	3.00.60 (CPR 9, SR 1)

Compatible PCI-based Cards and Drivers

This table lists PCI-based cards, firmware, and drivers that can be used with the SoftLogix controller, version 17.

Firmware and Drivers Required for PCI-based products

PCI-based Products	Compatible Versions
1784-PCIC/B, 1784-PCICS/B	4.10 firmware and driver version 4.06(1)
1784-PCIC/A, 1784-PCICS/A	3.10 firmware and driver version 4.06(1)
1784-PCIDS/B	3.016 firmware and driver version 2.01
1784-PCIDS/A	2.008 firmware and driver version 2.01
1784-PM16SE	17.13 firmware and driver version 17.10(2)
1784-PM02AE	17.03 firmware and driver version 17.01(2)

(1) 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 Note*s*, publication 1784-RN530, to install or update the driver as appropriate.

(2) **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 29.

System Requirements

This table identifies system requirements for the SoftLogix 5800 controller.

Category	Requirement
Personal computer	IBM-compatible Pentium 4 1.6 GHz or greater [1] Other requirements include: • Floppy drive to support the Activation disk. • Hard disk drive must support bus mastering. • You might also need bus-mastering drivers for the computer chip set; for Intel motherboards, this software is called "Application Accelerator". Demanding applications including sequential, motion, and other local applications running on the computer may require a dual CPU to achieve performance requirements.
Operating system	Supported operating systems: • Microsoft Windows 2000 with Service Pack 4 (recommended) • Microsoft Windows XP with Service Pack 1 or higher (recommended) • Microsoft Windows 2003 Server
RAM	256 Mbytes of RAM minimum
Hard disk space	50 Mbytes of free hard disk space (or more based on application requirements)
Motion requirements	Primary 32-bit PCI slot One slot per motion card 1784-PM16SE requirements: • Maximum of four 1784-PM16SE cards per computer • Can associate only one 1784-PM16SE card with one controller 1784-PM02AE requirements: • Maximum of four 1784-PM02AE cards per computer • Maximum of four 1784-PM02AE cards can be associated with one controller • Cannot associate a 1784-PM02AE motion card with the same controller as a 1784-PM16SE card
Network requirements	Primary or extended 32-bit PCI slot One slot per communication card Supports 1784-PCICS for ControlNet Supports 1784-PCIDS for DeviceNet Supports commercially-available Ethernet port for EtherNet/IP Third-party networks through the Rockwell Automation Encompass Program
Video requirements	16-color VGA graphics adapter 640 x 480 or greater resolution (256-color 800 x 600 minimum for optimal resolution)

[1] 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 is provided with controller version 17.01.

Enhancements With Revision 17.01

Enhancement	Description
False Execution Time of Add-On Instructions Improved	With previous revisions, the false execution time of an Add-On Instruction was dependent on the number of parameters (input, output, and inout) configured for the instruction. The more parameters configured, the longer the false execution time of the Add-On Instruction. With this revision, the false execution time of an Add-On Instruction is now constant if a scan false routine is not created. To determine the false execution time of Add-On Instructions based on your controller, reference the values published in the Logix5000 Controllers Execution Time and Memory Use Reference Manual, publication 1756-RM087. Lgx00091647

These enhancements were made available with SoftLogix 5800 controller, version 17.00.

Enhancements With Revision 17.00

Enhancement	Descriptions
FactoryTalk Activation	With version 17 of the SoftLogix controllers, activation of the software is completed by using the FactoryTalk Activation utility. This utility should be installed with your SoftLogix software. For more information about this enhancement, see: • the contents of your software package. • FactoryTalk Activation Help (viewable by clicking Start > Programs > Rockwell Software > FactoryTalk Activation > FactoryTalk Activation Help). FactoryTalk Activation Help is available after you have fully installed the utility.
Advanced Process Control Instructions	Three new instructions targeted for process applications have been added. The new instructions are: • Internal Model Control (IMC) – Compares actual process error against error calculated by an internal first order lag plus deadtime model. • Coordinated Control (CC) – Controls a single process variable by manipulating as many as three different outputs. • Modular Multivariable Control (MMC) – Controls process variables to their setpoints using up to three controller outputs. Instructions need to be purchased separately and licensed per use. The catalog numbers and associated use types are: - 9324-RLDAPCENE – provides a license to use the instructions in RSLogix 5000 and provides a license to use them in a single Logix controller. - 9324-RLDAPCCLENE - provides a license to use the instructions in an additional controller, pay-to-deploy.

Enhancements With Revision 17.00

Enhancement	Descriptions
Runtime Partial Import	You can now import programs, equipment phases, routines, rungs, and new Add-On Instructions into a running system. You can add these new components, as well as replace existing programs, equipment phases, and routines, while the system is running. New tags and User-Defined Types will be created as needed with values initialized from the import file. Data values of existing tags will be maintained.
Kinetix6000 Advanced Safety Drive (S1) Support	Version 17 provides support for the Kinetix6000 SERCOS S1 Advanced Safety based family of drives. The safety status can be directly accessed by the user's application via two new SERCOS Axis attributes (GuardStatus and GuardFaults) in the Axis_Servo_Drive data type. The configuration of the S1 Drive's safety parameters is done via an Ethernet WEB based interface and downloaded to the Kinetix6000 drive via this Ethernet connection.
Kinetix6000 Enhanced Safe Torque-off Drive (S0) Support	Version 17 provides support for the Kinetix6000 SERCOS S0 Enhanced Safety based family of drives. The safety status can be directly accessed by the user's application via a bit attribute (SafeOff) in the Axis_Servo_Drive data type.
Pause Management for Step Timer ACC	The Logix5000 timers store a portion of the wall clock with each scan and compare this to the value from the last scan. The timer's ACC value is updated by the difference. Previous to version 17, when a Sequential Function Chart (SFC) routine was paused and then released, all of the step timers jumped forward by the length of the pause time. Version 17 now provides an option to control how the step timers will treat the pause – ignore it or count the pause time.
Reading SFC Chart Paused State via GSV Instruction	The paused state of a Sequential Function Chart can be determined programmatically using the Get System Variable (GSV) instruction.
Produced/Consumed Tag Structures Status	Status information can be included with produced and consumed tags. In order to take advantage of this enhancement, the Produced/Consumed tag will need to be a User Defined Type (UDT) with the first member being of data type CONNECTION_STATUS.(1)
Added Extended Error Codes for MAOC Cam & Compensation array errors.	For Error Codes 36 and 37, new Extended Error Codes are available for Output Cam array and Output Compensation array errors. The Extended Error Codes describe errors that may occur because the element is incorrectly configured or the value of one of its members is out of range.
Support of Programmable Jerk for Multi-Axis Coordinated Move Instructions	Support for programmable jerk has been extended to the multi-axis move instructions, that is, MCCM, MCLM, MCCD and MCS. You are now able to specify acceleration and deceleration jerk rates for the multi-axis coordinated moves directly via operands in the instruction faceplate for S-Curve profile motion for these instructions. The configurable maximum jerk rates are also accessible programmatically via the Get System Variable (GSV) and the Set System Variable (SSV) instructions. For project conversions, the new Jerk Operands are pre-populated in the MCLM, MCCM, MCCD and MCS instructions with default values for Jerk rate as 100% of time.
Support for Programmable Jerk for Single-Axis Change Dynamics Instruction (MCD)	The MCD instruction is used to Change the Speed, Acceleration and Deceleration of a running Single Axis Motion. Now with the Programmable Jerk, you can specify the Accel and Decel Jerk for S-Curve Profiles.

Enhancements With Revision 17.00

Enhancement	Descriptions
Added ability to apply change dynamics to Active and Pending Motion	A new enumeration, that is Active and Pending Motion, has been added to the Scope variable of the MCCD instruction. Choosing Active and Pending Motion specifies that the changes affect the motion dynamics of the active coordinated motion instruction and any pending coordinated motion instruction in the queue.

(1)Note that RSNetWorx software, version 9.00.00 or later is required when scheduling a ControlNet network that has Produced/Consumed tags with status

Corrected Anomalies

These anomalies have been corrected in controller version 17.01.

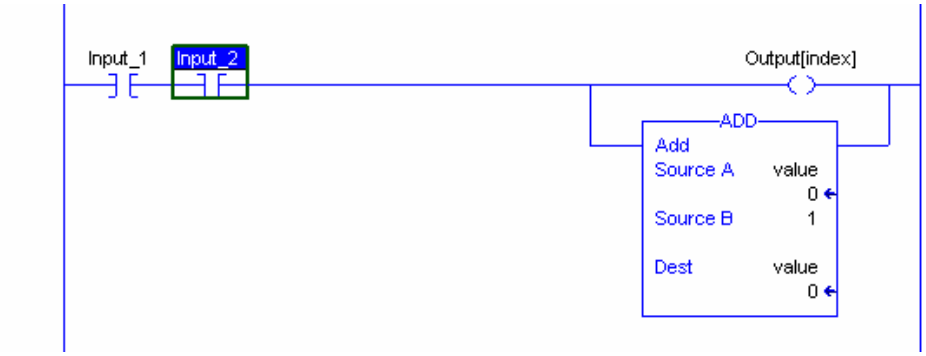
Anomalies Corrected With Firmware Revision 17.01

Firmware Revision	Description
17.01	A Digital Alarm (ALMD) configured to trigger when the input condition of the alarm is false does not trigger if the alarm condition is false when you conduct a download or return to Run mode. When the Condition parameter of the ALMD instruction is not set (that is, Input = 0) **and** either the program has recently been downloaded to the controller, or the controller has been changed from Run to Program and back to Run mode, the alarm is not activated (that is, the InAlarm bit is not set). These behaviors may result, depending on your application: • Programming designed to respond to the activated alarm is not executed. • Messages designed to be indicated at the operator station in response to the activated alarm are not indicated. • The alarm's history log does not indicate that the alarm was activated. If you choose not to upgrade to this revision, you must toggle the Condition parameter from set (that is, Input = 1) to not set (that is, Input = 0) to activate the alarm. If your Condition parameter is set, then the alarm activates as expected after you download or change the controller mode. Lgx000104435

Anomalies Corrected With Firmware Revision 17.01

Firmware Revision	Description
17.01	Online edits result in major non-recoverable faults (MNRFs). Causes of this anomaly include: • a controller that was or is near its limits in memory. • doing many online edits (tag additions and deletions) without downloading again. • using RSLinx Enterprise software (CPR9). When this anomaly occurs, the controller generates a major non-recoverable fault during an online edit (tag additions and deletions). I/O goes to their configured safe state, and the user application is cleared from memory. At this point, a Code 1 Type 60 or 61 major fault will be logged in the controller. This requires you to download the application again. When online edits are made to a controller, RSLinx Enterprise software (CPR9) monitors them. When a large number of edits are made to a controller, RSLinx Enterprise software (CPR9) re-optimizes communication to the controller. Two anomalies in RSLinx Enterprise software (CPR9) are aggravating factors to this controller anomaly: • The algorithm used to determine if communication re-optimization is needed causes communication re-optimization to occur too often. • When the communication re-optimizations occur, the connections to the controller should close. However, these connections do not close. This causes the controller to orphan all information related tags on scan by RSLinx Enterprise software (CPR9). You must upgrade your controller firmware and apply RSLinx Enterprise patches. The RSLinx Enterprise patches reduce the likelihood of the controller faulting and remove the excessive memory consumption. The firmware upgrade eliminates the controller major non-recoverable faults caused by this anomaly. These RSLinx Enterprise patches are on the Rockwell Automation Knowledgebase, http://www.rockwellautomation.com/knowledgebase: • RSLinx Enterprise software version 5.00 CPR9, ID number 65818 • RSLinx Enterprise software version 5.17 CPR9 SR1, ID number 65819 • RSLinx Enterprise software version 5.20 CPR9 SR2, ID number 65820 Lgx00096513

Anomalies Corrected With Firmware Revision 17.01

Firmware Revision	Description
17.01	Fault handlers can be defined at the controller and program scope levels. These fault handlers are typically used to handle major recoverable faults that can occur during runtime execution of an application due to programming errors. A typical example of this would be handling indirect addressing that has gone out of range; MyTag[`index`], where `index` is larger than the size of the array. Faults can also be handled by the controller during pre-scan of the controller program on the transition to Run mode. Again, for example, the handling of indirect addressing that has gone out of range. There is an anomaly when these methods attempt to handle a fault. These are the possible ways the anomaly can manifest itself: • The controller will experience a major non-recoverable fault. I/O goes to their configured safe state, and the user application is cleared from memory. At this point, a Code 1 Type 60 or 61 major recoverable fault will be logged in the controller. This requires you to redownload the application. • Tag data corruption. • Online saving or uploading failures. • Anomalous program execution. For example, if a rung is being scanned false and there is an instruction that has false execution, the fault handler executes so the remainder of the rung will scan true. In the example below, the OTE instruction has an index out of range. After returning from the fault handler, the ADD instruction will execute, even though the rung input conditions are false.  Lgx00106482, Lgx00104782, Lgx00097014

These anomalies have been identified and corrected in previous controller versions 17.*x*.

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.01	Outputs remotely located via a network may not go to their predefined PROGRAM mode state on a change out of RUN mode	When a controller changes from RUN mode to a non-RUN mode state, that is to PROGRAM mode or a recoverable faulted state, the controller's outputs may not transition to their predefined PROGRAM mode state. Any of the following transitions from RUN mode to a non-RUN mode may cause this anomaly to occur: • The key switch on the controller is turned from RUN mode to PROGRAM mode. • A remote command is sent to the controller to change from RUN mode to PROGRAM mode • The controller detects a major recoverable fault that causes an operating mode change from RUN mode to a faulted mode. If your experience a major non-recoverable fault on your controller, the controller's outputs will transition to their predefined fault mode state. Lgx00099405
	The CONNECTION_STATUS.RunMode indication in a Produced tag may not indicate correctly.	When using Produced/Consumed tags with CONNECTION_STATUS, the CONECTION_STATUS.RunMode indication in the producing controller may not indicate correctly if it is not in RUN mode. The CONNECTION_STATUS.RunMode indication in the Consuming controller will indicate correctly. Lgx00099405
17.00	Setting the message timeout bit (.TO) causes a major nonrecoverable fault (MNRF).	Setting a message timeout bit (.TO) in the message control structure while the message is active may result in a MNRF on the controller. To avoid causing a MNRF, do not change the message timeout bit (.TO). Instead, change the values for the unconnected timeout (.UnconnectedTimeout) and connection rate (.ConnectionRate) in the message control structure. For more information about changing the values in the message control structure, see the Logix5000 Controllers General Instruction Reference Manual, publication 1756-RM003. Lgx00098991

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	A CPT instruction that uses a variety of data types results in Negative status flag being set.	Execution of CPT instruction with certain data types results in the Negative (S:N) status flag being set though the computed value is not negative. Lgx00075315
	A program that uses a FGEN instruction without optional operand values may result in RSLogix 5000 closing unexpectedly.	Downloading a program that uses a FGEN (Functional Generator) instruction where the optional operands are not specified results in RSLogix 5000 software closing unexpectedly. With this correction, you may choose not to specify the optional operands and completing a download of the program to the controller is successful (that is, the download completes without RSLogix 5000 software closing unexpectedly). Lgx00073042
	Using a For/Break instruction to a SFC results in a major fault.	Previously, SoftLogix 5800 software did not support the use of a For/Break instruction (for example, a FOR instruction) that called an SFC subroutine. If you attempted to execute a program that contained a For/Break instruction that called a SFC subroutine, a major fault of the SoftLogix controller occurred. Lgx00073342
	Use of FOR instruction with certain operands causes dead loop.	When a FOR instruction is used with the operand values listed below, the program executes in a dead loop. Operand conditions that cause the anomaly: • Initial value, Terminal value, and Step size are all literal. • Step size value is less than zero. • Initial value is less than the Terminal value. If all three operands meet the conditions listed above, a Watchdog timeout occurred. With this anomaly correction, the FOR instruction with these operand values executes properly. Lgx00076539
	Ethernet connections from SoftLogix controller to PowerFlex drives intermittently lost.	Due to the PowerFlex drives' method of opening and maintaining an Ethernet connection with the SoftLogix controller, the Ethernet connection between the drive and the controller would intermittently be lost and then re-established. With this anomaly correction, the SoftLogix controller has been modified to more-effectively maintain the Ethernet connection with PowerFlex drives. Lgx00079311, Lgx00082489, Lgx00085877, Lgx00085878
	First Scan status flag (S:FS) not set after a subroutine with a RMPS executes.	If an XIC or XIO that assesses the First Scan status flag (S:FS) is executed after a JSR that calls an RMPS instruction, the First Scan status bit is not set. If the subroutine that contains the RMPS instruction is called after the XIC or XIO, this anomaly does not occur. Lgx00080709

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	External routine that causes an access violation displays incorrect fault code.	After an external routine has caused a major fault, the Major Faults tab displays error code 0 when it should be 88 decimal. This causes difficulty when troubleshooting your external routines. With this correction, the correct error code, 88 decimal, displays when an external routine causes an access violation. Lgx00082924, Lgx00082867, Lgx00083139
	Serial-port control structure bit RN inaccurately cleared.	This anomaly occurs when using firmware revision 16.20 or later. If the ACL instruction is used to clear instructions from the ASCII queue, the serial-port control structures' RN bit is cleared (that is, the RN bit is set to zero) although it should not be. Lgx00081063
	Serial messages broadcast from a master controller to station address 255 results in other messages failing.	When two controllers are used in a master/slave configuration and the message to the broadcast station address (255) is executed, that message errors. Some messages occurring after the message addressed to address 255 also error with the same error code. Lgx00079116
	Indirectly addressing an instance tag in an Add-On Instruction results in a Major Non-Recoverable Fault.	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. Lgx00077261, Lgx00076136
	Motion Redefine Position (MRP) Error 13 for Positions within the range.	You may get the error "Parameter out of Range" if the MRP is executed when: Current Position + MRP Position > 2^{31}/Axis Conversion Constant. Or Current Position + MRP Position <- 2^{31}/Axis Conversion Constant. For example, assume that the: • axis conversion constant = 120,000.0 feedback counts/1.0 unit. • current command position = 17,893.0 units. If you MRP with a position of five units, which exceeds 2^{31}/Axis Conversion Constant, the MRP will error. Lgx00073719

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	SSV of MotionGroup Average Scan Time causes a jump in scan time.	If an SSV instruction with a value of zero is executed against the MotionGroup attribute TaskAverageScanTime, then a GSV instruction is executed. The average scan time jumps 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. Lgx00071520
	Axis ActualAcceleration tag is not updated for virtual axes.	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. Lgx00073829
	MCT error 61 with extended error 10 for zero length moves.	You will get error 61 with extended error 10 if you execute an MCT instruction immediately after the .PC bit for a Motion Coordinated Linear Move (MCLM) or Motion Coordinated Circular Move (MCCM) is set for a zero length move, indicating that axes are moving or locked by some other operation. To work around this error, execute a minimum of a one-iteration delay right before executing the MCT instruction after the completion of the zero-length coordinated move instruction. This delay is not necessary if the move before the MCT has any length. Lgx00075286
	Setting invalid home sequence value via SSV instruction.	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 drive. 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. Lgx00068281

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	Duration Cam - Latch and Unlatch Delays.	Duration cams enable an application to turn an output on at a specific position and off after the configured Duration time. Latch and unlatch delays adjust the point at which an output turns on and off, regardless of axis speed. If you enter a latch delay, your application will adjust the point at which your output turns on. For example, a latch delay of 0.5 seconds will cause your output to turn on 0.5 seconds sooner and then remain on for the configured Duration time, in addition to the 0.5-second head start. However, using this example, currently, the total time your application's output remains on is being decreased by 0.5 seconds. If you enter an unlatch delay, your application will adjust the point at which your output turns off. For example, an unlatch delay of 0.5 seconds will cause your output to turn off 0.5 seconds sooner. However, using this example, currently, the total time your application's output remains on is extended by 0.5 seconds above and beyond the configured Duration time. If you execute a latch and unlatch delay for the identical value, no anomaly occurs, and the output will remain on for the configured Duration time. Lgx00068599
	When the SFC instruction's Last Scan of Active Steps option is set to Automatic Reset, a Major Non-Recoverable Fault occurs.	A Major Non-Recoverable Fault may occur when these elements are present in the program: • Within an SFC, a JSR instruction is used to jump to another SFC, also know as a nested SFC. • One or more of the nested SFC instructions contains Simultaneous Branches. • The Last Scan of Active Steps option (specified in the SFC Execution tab of the controller Properties dialog) is set to Automatic Reset. To avoid a Major Non-Recoverable Fault when these elements are present, set the Last Scan of Active Steps to Don't Scan or to Programmatic Reset. Lgx00072702

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	An SFC R action continues to post-scan on the specified action.	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. 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. 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. These observable behaviors may result: • The timer of the stored action will continue to time even though the action is no longer active. • The logic in the stored action will be executed in the configured mode. • At Automatic Reset, non-retentive outputs are cleared. • 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. Lgx00069295
	Acknowledging an analog or digital alarm does not clear the alarm's unacknowledged (InAlarmUnack) tag.	If an alarm has an active status (InAlarm tag is true) and is unacknowledged (InAlarmUnack is true), acknowledging the alarm does not reset the alarm's unacknowledged tag (that is, even after being acknowledged, the InAlarmUnack continues to be true). This anomalous behavior occurs with both digital (ALMD) and analog (ALMA) alarms. Lgx00081999
	Writing 483 SINT values to another controller using a MSG instruction causes an error.	If you attempt to write 483 SINT values to another controller by using a MSG instruction, an error occurs. This anomalous behavior does not occur with any other amount of SINT values (for example, attempting to write 482 or 484 SINT values to the other local controller does not cause this anomaly). Lgx00057515
	Message errors may occur when using a CIP data table read or write message.	If you perform a CIP data table read or write message to another controller with User-defined Data Types (UDTs), the message instructions may error with code 16#001F (extended error code 16#203). Lgx00083193
	Attempts to rename Alias tags for bits within in a DINT referenced by an HMI are unsuccessful.	If your HMI references any bit of a DINT and you try to rename Alias tags for bits 0...7 within that DINT, the new alias name fails to be set. Attempting to rename Alias tags for bits 8 and higher is successful. Lgx00079805

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	Use of certain Function Block instructions causes various minor faults.	The use of these Function Block instructions may result in various minor faults when your program executes; BAND, BOR, BNOT, BXOR, CTUD, D2SD, D3SD, DFF, JKFF, OSFI, OSRI, RESD, SETD, TONR, TOFR, RTOR, and OSC. The minor faults result because the Overflow status flag (S:V) is set each time an instruction listed above is carried out. Lgx00045364, Lgx00028500
	Nested SFCs, when configured to Automatic Reset, are prescanned rather than postscanned.	Normally, if in an SFC where the configuration of the last scan is set to Automatic Rest, the code of associated actions are executed a final time and the scan mode is set to postscan. Postscan execution is a system-defined mode similar, but not the same as, prescan. With this anomaly, if an action in the SFC contains a JSR to another SFC, the suburoutine is prescanned rather than postscanned (that is, the incorrect scan mode is set). Many instructions, especially motion instructions, remain inactive during a postscan, but re-initialize during a prescan. Lgx00086725
	The SPCascadeInv value of a PIDE instruction is set any time SPCascade exceeds the SP limits.	When the AllowCasRat and UseRatio tags are set, the SPCascadeInv should be set only if SPCascade multiplied by the ratio value exceeds the SP limits. However, the SPCascadeInv is set any time SPCascade exceeds the SP limits. SPCascade is set even when the setpoint (SPCascade multiplied by the ratio value) is below SP limits. Lgx00065664
	Setting the WALLCLOCKTIME object may result in a Major Nonrecoverable Fault (MNRF) or an incorrect WALLCLOCKTIME value.	Using an SSV instruction to set the local controller's WALLCLOCKTIME may result in an incorrect WALLCLOCKTIME value upon execution of the program. This incorrect time is usually evident in the seconds field. The discrepancy in the WALLCLOCKTIME may also result in a MNRF during controller power down or just after controller power has been cycled. Lgx00078925
	Totalizer (TOT) instruction may continually remain in Program Mode.	Setting the ProgValueReset input puts the Totalizer into Program Mode. The ProgOper output continues to indicate the mode requested (that is, Operator mode), however, only ProgStartReq, ProgStopReq and ProgResetReq are recognized. Lgx00077908

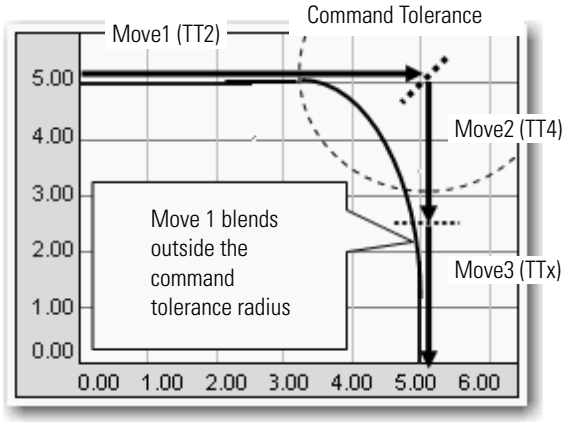
Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	Jerk parameters of master offset move are incorrectly computed.	The Master Offset Moves are used to offset the Position cams. The Jerk parameters of the Master offset Move using a MAM instruction are incorrectly applied if the conversion constant of the master and the slave are different. The slave axis conversion constant is applied instead of the master axis conversion constant for master offset move. Lgx00081390
	Motion Stop issues if Program Stop Action is Hard disable for a Virtual Axis.	If MCLM or MCCM instructions are in process and the controller transitions to Program Mode, the system's transition takes longer than expected for the axes to stop. Your controller experiences this issue only if the Program Stop Action configured in the axis properties is set to Hard Disable. With the corrected behavior in this release, the transition to the program mode is immediate. Lgx00077357
	Prevent execution of Motion Instructions while an MGS, MAS-ALL or MCS-All instruction is executing.	Previously, if certain Motion Instructions overlapped while Motion Stop Instructions were active, your application experiences unexpected behavior. When an instruction is actively stopping and a second instruction is initiated that overlaps the active instruction you see this anomaly. With firmware revision 17.00, if certain Motion Instructions overlapped while Motion Stop Instructions are active, you see Error Code #78. For more information about Error Code #78 and the affected Motion Instructions, see the Error Codes for Motion Instructions Appendix of the Logix5000 Controllers Motion Instructions Reference Manual, publication 1756-RM007. Lgx00083819
	Parameter combination caused non-recoverable fault on controller.	A non-recoverable fault is caused by a very unlikely and unexpected combination of initial conditions when velocity = 0 and acceleration < > 0. The only way to achieve this combination of initial conditions is to stop the axis with an MAS instruction (Speed = 0) or an MCD instruction (Speed = 0) and to start the motion exactly one iteration before the MAS instruction or MCD instruction is complete. Lgx00082075
	An armed MAOC will remain armed during a system power cycle.	If an MAOC instruction is armed when a system power cycle occurs, the MAOC will remain armed at power up. The MAOC instruction may become disarmed if a physical axis fault is detected. Additionally, the MAOC instruction may cause a group overlap fault if a physical axis reports a large delta position during power-up. Lgx00085513
	Execution time change for some motion instructions.	With controller firmware revision 17.00, there is a change in the instruction execution times for numerous motion instructions. Lgx00085687

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	Axis experiences unwanted motion on rotary axis.	You may experience unwanted motion if your application has the following conditions: • The axis is a rotary axis. • The axis position was less than 1/2 drive count away from unwind. • An MRP instruction was executed with a commanded position of zero. Lgx00078215
	Axis may move in opposite direction for Rotary Positive or Rotary Negative moves.	An axis may move in the opposite direction specified in a MAM instruction if the following events occur at the same time: • The servo loop for an axis is closed by an MSO instruction. and • A MAM instruction (with a Move Type of Rotary Positive or Rotary Negative) is configured with Merge Enabled and is executed in the same iteration as the MSO instruction. The axis doesn't reverse the direction but instead continues moving to the programmed end point in the direction of the MAM instruction. You may also experience similar issue for a non-merged move if a MAM Instruction with Move Type Rotary Positive or Rotary Negative is followed by a MAM instruction with a rotary move in the opposite direction while the move is in progress. The axis doesn't reverse the direction but instead continues moving to the programmed end point in the direction of the first MAM. Lgx00080848, Lgx00081561
	An MCD Instruction on Rotary Unidirectional moves with reduced deceleration may cause a Non-Recoverable Fault.	Your controller occasionally experiences a non-recoverable fault if the following sequence of events occurs: • A rotary axis is programmed to move in either a positive or negative only mode in an MAM instruction. • The rotary axis is currently decelerating. • An MCD instruction is issued to stop such an axis by a programmed speed of 0. A slight overshoot may result when the axis finally comes to a stop. When this axis is restarted again by another MCD, the non-recoverable fault may occur. Lgx00080762

Corrected Anomalies with Previous Revisions

Revision No.	Anomaly	Description
17.00	An Incremental MCCM Move with Merge Enabled May Cause Error#46: Circular R1 R2 Mismatch Error.	Your controller occasionally sees a Circular R1 R2 Mismatch error on a merge of a MCCM instruction with: • Circle Type = Center and Move Type = Incremental or • a Circle Type = Center Incremental and any Move Type Whether the occurred error was a function of the parameters of the circle and the merge point of the circle. Lgx00079059
	Combination of Termination Types may cause you to miss the target position.	You may have missed hitting the end point of a move with Termination Type 4 or 5 (TT4/5) when it was preceded by another move with Termination Type 2 or 3 (TT2/3). See figure below as one possible combination:  Lgx00088549

Known Anomalies

This table lists known anomalies of controller versions 17.00…17.01.

Known Anomalies with Versions 17.00…17.03

Anomaly	Description
An invalid Process Variable (PV) used by a Proportional Integral Derivative (PID) instruction results in a control loss of the PV.	When an invalid Process Variable (PV) value, for example a positive infinity (INF) or not a number (NaN), is used by the Proportional Integral Derivative (PID) instruction, the PID instruction becomes stuck and control of the PV is lost. To reset the instruction and recover control, you have to access the .Data array of the PID instruction and clear any values that are invalid. The PID instruction would then begin to control the PV. Lgx00082890
Use of a FFU instruction in an SFC program results in a major nonrecoverable fault (MNRF).	Use of an FFU instruction in a SFC program results in a major nonrecoverable fault (MNRF) when the last scan of the SFC is configured to Auto Reset. Lgx00096621
Use of a FIND instruction results in a major recoverable fault (MRF)	Attempts to use the FIND instruction to search a large string of characters results in a MRF. If you attempt to use the ASCII FIND instruction to search a source-data string of 32,767 characters, or more, a major fault Type 4 Code 51 results. Lgx00094007
Carry Status flag not set as expected.	When certain values are converted from a floating-point number to an integer, the Carry Status flag (S:C) is not set as expected for the value being converted. Lgx00074175
Using an SSV instruction to set a task priority of 0 results in unexpected execution times.	If you use a SSV instruction to set a task's priority at 0 (by using the class name Task, attribute Priority), abnormal task execution times result. This because tasks cannot have a priority of 0 (permissible priority values are 1…15). To avoid abnormal task execution times, do not use the SSV instruction to set a task's priority at 0. Lgx00076850
Setting the WALLCLOCKTIME object may result in a Major Nonrecoverable Fault (MNRF) or an incorrect WALLCLOCKTIME value.	Using an SSV instruction to set the local controller's WALLCLOCKTIME using the LocalDateTime attribute may result in an incorrect WALLCLOCKTIME value upon execution of the program. This incorrect time is usually evident in the seconds field. The discrepancy in the WALLCLOCKTIME may also result in a MNRF during controller power down or just after controller power has been cycled. To avoid this behavior, use the DateTime attribute and arithmetic to handle the GMT offset instead of using the LocalDateTime attribute to set the local controllers WALLCLOCKTIME object. Lgx00078925

Known Anomalies with Versions 17.00…17.03

Anomaly	Description
Setting the message timeout bit (.TO) causes a major nonrecoverable fault (MNRF).	Setting a message timeout bit (.TO) in the message control structure while the message is active may result in a MNRF on the controller. To avoid causing a MNRF, do not change the message timeout bit (.TO). Instead, change the values for the unconnected timeout (.UnconnectedTimeout) and connection rate (.ConnectionRate) in the message control structure. For more information about changing the values in the message control structure, see the Logix5000 Controllers General Instruction Reference Manual, publication 1756-RM003. Lgx00098991
Changes made to a timeout in the alarms system require a new download of the program to controller.	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. Lgx00069461
PI function block appears to stop executing as the output does not change and no instruction faults are logged.	If the PI instruction is being used in Linear mode, this floating-point equation is used to calculate the ITerm. $Kp \times Wld \times \frac{WldInput + WldInput_{n-1}}{2} \times DeltaT + ITerm_{n-1}$ 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 $ITerm_{n-1}$. For more information regarding the PI instruction, see the Logix5000 Controllers Process Control and Drives Instructions User Manual, publication 1756-RM006. Lgx00070832
Deleting program tags while online is successful, even though they are being referenced by RSLinx software and should not be deleted.	RSLogix 5000 software and Logix5000 controller firmware provide the ability to delete program tags while online with the controller. As a precaution, the software checks the tag to verify that is not in use (that is, the tag is not being scanned or referenced) by RSLinx Classic or Enterprise software. If the tag is being used by RSLinx software, the deletion is not allowed and an error dialog box indicates "Failed to delete tag". However, with certain tags, the deletion is always allowed - even if the tag is being used by RSLinx software. Tag types that are always deleted, even if being used by RSLinx software include: • Motion Axis • Motion Group • Digital Alarm • Analog Alarm • Message Lgx00086136, Lgx00085678

Known Anomalies with Versions 17.00…17.03

Anomaly	Description
SSV class name SerialPort, attribute PendingComDriverID, does not set.	Attempting to use a SSV instruction to set the SerialPort class, PendingComDriverID attribute, is unsuccessful. Lgx00073954
Setting the Read/Write Buffer size parameter before enabling the Echo Mode does not result in a message echo.	In the User Protocol tab of the Controller Properties dialog box, if the Read/Write Buffer size is specified before Echo Mode is checked, the message echo does not execute. For the message echo to execute, first check Echo Mode, then specify the Read/Write Buffer size. Lgx00087052, Lgx00087176
Unsuccessful MSG execution results in subsequent unsuccessful messages in master/slave controller configurations.	When a DF-1 serial connection is used between a master and slave controller, a MSG instruction is not successfully executed and an in-polling sequence error occurs if the master station address is not listed in the poll node list. However, with this anomaly, after the in-polling sequence error, subsequent MSG instructions are also unsuccessful. To workaround this anomaly, change the master controller's station address to a different value or re-execute the unsuccessful MSG instruction in Master Transmit mode and use the Between Station Polls parameter. Lgx00083882
RMPS instruction in a continuous task does not countdown.	If a RMPS instruction is used in a continuous task and a Soak Time value greater than 1024 minutes is specified, the countdown (SoakTimeLeft) does not countdown and the RMPS instruction appears to stop executing. This anomaly does not occur if the RMPS is used in a periodic task or the continuous task program is run in SoftLogix 5800 or Emulator 5000 software. To workaround this anomaly, either: • Use multiple soaks to achieve your total soak times greater than 1024 minutes. • Use the RMPS in periodic task that has a Period on 10 ms or greater. Lgx00085036, Lgx00083654
Axis Stopping Status bit is incorrect for MAS(All) Instruction with Coordinated Motion	If you execute a MAS of Type=ALL on motion that started with an MCLM instruction, the Axis.StoppingStatus bit briefly transitions to true but then transitions back to false and remains in that state until the axis comes to a complete stop. Lgx00085033

Restrictions

This SoftLogix controller has these restrictions.

Restriction	Description
Repeated minor faults can cause the controller to display a red X.	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.
Trends may momentarily block the RSLogix 5800 thread from executing.	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.
Downloading to a SoftLogix controller while another controller in the chassis is running a motion application may affect the motion application.	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.
Make sure to only single-click on the SoftLogix 5800 button during installation.	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”. If this situation occurs, you have to manually uninstall the program. The manual uninstall procedure is available as the P19762551 technical note document.
Avoid mixed operand types between the destination and its inputs.	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 trade-off 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.

Performing Typed Operations

Consider the following when performing typed operations.

Typed Operation	Description
Across Logix platforms	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. For example, when a SoftLogix program performs "a = n / m" 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. Alternatively, when a ControlLogix program performs the same "a = n / m" 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. 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.
Across languages	There are instruction differences across programming languages as well as across Logix platforms. The following examples use the operation "i = n / m" where all the operands are integers. 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. This difference between ladder and function block instructions applies to all Logix platforms. Function block instructions only perform floating point operations.

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	Performance-related considerations that should be made are as follows. • 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. • All graphical (especially OpenGL) screen savers should be disabled when running motion applications.
General issues	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. 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. 2. Delete the key ASASerialNumber from the Windows registry using the regedit.exe tool provided with your Windows operating system. 3. HKEY_LOCAL_MACHINE\SOFTWARE\Rockwell Automation\ VirtualBackplaneMonitor\Installed Modules\0001!000E!000F ASASerialNumber 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.

Issue	Description
Instruction set issues	• 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. 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. 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. • 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.
Motion card issues	**IMPORTANT** 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.

<table>
<tr><th>Issue</th><th>Description</th></tr>
<tr><td>1784-PCIDS DeviceNet module issues</td><td>

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.

ATTENTION
 
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.

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.

<table>
<tr><th>When CommandRegister.Run is set to</th><th>The 1784-PCIDS card</th></tr>
<tr><td>Zero (0)</td><td>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>One (1)</td><td>Is in Run mode.
In Run mode, the card sends active outputs on the network and receives inputs.</td></tr>
</table>
</td></tr>
</table>

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

Install Revision 17.*x*

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

IMPORTANT

Install RSLinx software before installing the SoftLogix 5800 controller.

Before you are able to connect to the SoftLogix controller using RSLogix 5000, you must add the virtual backplane driver to slot 0 of the SoftLogix controller. If you do not install the virtual backplane driver, you will not be able to use persistent storage.

Also, make sure .Net is installed on your computer before installing the SoftLogix 5800 controller. .Net can be installed from the SoftLogix or RSLogix 5000 software CD.

During installation the of the SoftLogix controller, the installation utility 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 1784-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

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Resource	Description
Logix5000 Controllers Common Procedures Programming Manual, publication 1756-PM001	Contains information specific to Add-On Instructions and other programming information.
SoftLogix 5800 Controllers Revision 16 Release Note, publication 1789-RN016	Describes anomalies and enhancements related to controller revision 16.
Logix5000 Process Controls and Drives Instructions Reference Manual, publication 1756-RM006	Contains information specific to the PI instruction.

You can view or download Rockwell Automation publications at http://www.rockwellautomation.com/literature. 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.

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At http://rockwellautomation.com/support, 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://rockwellautomation.com/support.

Installation Assistance

If you experience a problem 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 product up and running.

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

New Product Satisfaction Return

Rockwell Automation 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 and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the 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 the return procedure.

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