



## **ProcessLogix R200.3 Quick Start**

This Quick Start guide describes the tasks you will need to complete to become familiar with the ProcessLogix™ System.:

<b>For information on:</b>	<b>Go here:</b>
Before You Begin	Page 5
Starting the Software	Page 5
Creating a Controller	Page 9
Creating Analog I/O Modules	Page 12
Creating Digital I/O Modules	Page 14
Assigning Modules to a Controller Execution Environment (CEE)	Page 16
Creating a PID Loop	Page 17
Creating a Control Module	Page 17
Building the PID loop	Page 19
Downloading the Control Module to the 1757-PLX52 Process Controller Module	Page 23
Verifying Proper Operation	Page 24
Viewing Pre-built Screens	Page 24
Shutting-down the System	Page 25

This Quick Start also explains what you need to do before you begin installing the system. Refer to the ProcessLogix Hardware Installation Instructions, publication 1757-5.1 for information on the components that make up your ProcessLogix System

**ATTENTION**



The ProcessLogix server runs on Microsoft Windows NT™ 4.0 (Service Pack 5). Only Service Pack 5 is Y2K compatible.

---

The tasks described in this QuickStart represent a sample program. This program is not intended for actual process control applications. After you have completed the tasks in this sample program, you can use the sample to guide you as you program your own process control application.

When completing the tasks in this Quick Start, always use the parameter names we suggest so that the pre-built screens provided with the ProcessLogix system work correctly.

## Important User Information

Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Allen-Bradley does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

Allen-Bradley publication SGI-1.1, *Safety Guidelines for the Application, Installation and Maintenance of Solid-State Control* (available from your local Allen-Bradley office), describes some important differences between solid-state equipment and electromechanical devices that should be taken into consideration when applying products such as those described in this publication.

Reproduction of the contents of this copyrighted publication, in whole or part, without written permission of Rockwell Automation, is prohibited.

---

Throughout this manual we use notes to make you aware of safety considerations:

---

**ATTENTION**

Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss

---

Attention statements help you to:

- identify a hazard
  - avoid a hazard
  - recognize the consequences
- 

**IMPORTANT**

Identifies information that is critical for successful application and understanding of the product.

---

Allen-Bradley is a trademark of Rockwell Automation

## European Communities (EC) Directive Compliance

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

### EMC Directive

This product is tested to meet the Council Directive 89/336/EC Electromagnetic Compatibility (EMC) by applying the following standards, in whole or in part, documented in a technical construction file:

- EN 50081-2 EMC — Generic Emission Standard, Part 2 — Industrial Environment
- EN 50082-2 EMC — Generic Immunity Standard, Part 2 — Industrial Environment

This product is intended for use in an industrial environment.

## **Low Voltage Directive**

This product is tested to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 - Equipment Requirements and Tests. For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the Allen-Bradley publication Industrial Automation Wiring and Grounding Guidelines For Noise Immunity, publication 1770-4.1.

This equipment is classified as open equipment and must be mounted in an enclosure during operation to provide safety protection.

## Before You Begin

Before you begin installing the system, ensure that you have already:

- installed the chassis and power supply
- installed the 1757-PLX52 Process Controller module
- installed the CNB Module
- installed the analog and digital I/O modules you want to use in your system
- set up and configured the ProcessLogix server

We tell you how to do all of these tasks in the ProcessLogix Hardware Installation Instructions, publication 1757-5.1.

**TIP**

The ProcessLogix server is shipped from the factory with the software already installed.



## Starting the Software

In this section, we tell you how to start:

- The ProcessLogix server program
- Control Builder software

**TIP**

The System Repository, a database that contains information about your control environment, and the CDA program (which controls communications between ProcessLogix server applications and RSLinx™ communication software) are Windows NT Services that start automatically.



## Verifying ControlNet nodes and I/O modules

The CDA program starts up RSLinx and all configured drivers for ControlNet communications from the server to the controller backplane.

You should verify at least once the ControlNet nodes and the I/O modules you will be using in your system. For purposes of illustration, we are using two ControlNet nodes in this manual:

- a ControlNet module with address 1 at slot 0 in the chassis (To set the node address, adjust the rotary switches on top of the module. See the schematic on the right side of the module for a guide to selecting the address), and
- the ProcessLogix server at ControlNet address 20 (set in RSLinx Software)

**TIP**

If the LED on the front of the ControlNet module reads ERR, no other ControlNet devices are present on the network.



Verify the ControlNet nodes using NTOOLS:

1. To view chassis configuration click on:  
Start ⇒ Programs ⇒ ProcessLogix Engineering Tools ⇒ NTOOLS.
2. Click OK
3. Click on NetworkTools ⇒ Settings.
4. Select the Ping radio button.
5. Click OK.
6. Click on NetworkTools ⇒ Ping.
7. Click on 01CNI. Set the chassis slot setting to match your chassis size (this is a one-time setting).
8. Verify that all I/O modules appear as configured in the chassis.
9. Exit NTOOLS by clicking on NetworkTools ⇒ Exit.

## Starting the ProcessLogix server

The ProcessLogix Server program is the operating system for the ProcessLogix server. To start the server:

1. Click on:

Start ⇒ Programs ⇒ ProcessLogix Server ⇒ Start-Stop ProcessLogix Server.

2. On the dialog box that appears, click on Start. If server is already started, skip to next section.
3. A dialog box asking you if you are sure you want to start the server appears. Click on Yes.

### TIP

You may experience a delay while the system launches all server tasks and services



## Turning off areas

“Areas” are portions of a process you wish to control. This Quick Start assumes that areas are turned off. To turn off areas:

1. Click on Start ⇒ Programs ⇒ ProcessLogix Server ⇒ Station.
2. Select Configure ⇒ Areas.
3. Access manager mode.
  - a. Click on “Oper” in the bottom right of the screen. You see a flashing cursor in a box in the upper right corner of the screen (below the toolbar).
  - b. Type mngr (lower case).
  - c. Press the Enter key. “Oper” changes to “Mngr”.



- To disable areas, uncheck the Areas Enabled checkbox



- Close the Station screen.

## Starting Control Builder

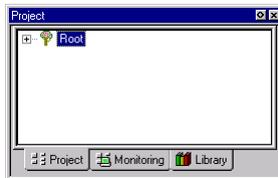
Control Builder software is an application you use to develop Control Module and Sequential Control Modules. The Control Modules and Sequential Control Modules are downloaded to the 1757-PLX52 Process Control Module.

To start Control Builder:

- Click on:

Start ⇒ Programs ⇒ ProcessLogix Engineering Tools ⇒ Control Builder

Control Builder starts up displaying a “tree” view. We describe the available trees in the following table:



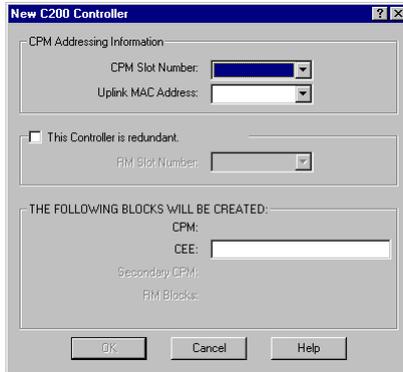
this tree view:	shows you:
Project	the offline copy of your project
Loaded/Monitoring	The loaded or runtime (currently monitoring) copy of the application executing on the 1757-PLX52 Process Controller module
Library	<ul style="list-style-type: none"> <li>• available I/O modules (IOM)</li> <li>• available function blocks for use in Control Modules</li> <li>• available function blocks for use in Sequential Control Modules</li> </ul>

Once you have opened Control Builder, you can begin configuring your hardware.

## Creating a Controller

The first step in configuring your hardware is creating a controller.

1. To create a controller:
2. In Control Builder, select File ⇒ New ⇒ Controller ⇒ C200. Realize that C200 = PLX52. You see the New Controller dialog box.



3. On the New Controller dialog box, select the following:

in this field:	select:
CPM Slot Number	01
"Uplink" MAC Address	01 (for the ControlNet CNB card)

### TIP



As you enter the CPM slot number and the uplink MAC address, notice the CPM Name and CEE Name fields on the bottom half of the New Controller screen. You will see that the CPM name is assigned automatically. The software also provides a default name for your CEE. You can change the CEE name by clicking on the CEE name field and typing a new name.

If you want to change the CEE name, do so now, since the CEE name references all screen and tag names in the server database.

4. Click on OK.

5. To see your newly configured CPM and CEE, click the Project tab.

**TIP**



To see the CPM and CEE, you may need to expand the ProjectRoot branch of your tree by clicking on the small “+” sign to the left of the word Root.

The CEE is listed under the CPM and is connected directly to it. This tells you that the CEE is assigned to the CPM.

6. Enter the server parameters by following these steps:
  - a. Under the Project tab, double-click on the CPM0101 icon.
  - b. To display the server parameters form, select the Server Parameters tab.
  - c. Enter the following parameters (non-case-sensitive):

in this field	for the CPM, enter	for the CEE, enter
Point Detail Page	sysdtlcpma.dsp	sysdtlceea.dsp
Group Detail Page	sysgrpcpma.dsp	sysgrpceea.dsp

- d. Click on OK.

7. Load the CPM and the CEE:

**TIP**



Loading the CPM also loads the corresponding CEE.

To see the CPM and CEE, you may need to expand the ProjectRoot branch of your tree by clicking on the small “+” sign to the left of the word Root.

The CPM should appear green

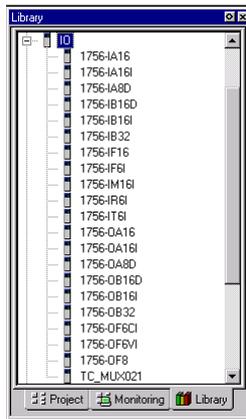
- a. In the project tab, click on CPM0101.
  - b. From the Toolbar Menu, click on the green down arrow.
  - c. A “Load” dialog box appears. Verify the selected object is CPM0101, and click on Continue.
  - d. To verify the loaded CPM and CEE, click on the Monitoring Tab.

## Configuring I/O Modules

Once you have created a controller, the next step is to configure the I/O modules you will use in your system.

Before you can configure a module, you must add it from the library to your project:

1. Click on the Library tab.
2. Click the + to the left of the I/O icon to see a list of available modules.



3. Create the I/O module blocks by dragging and dropping these templates from the Library tab to the Project tab (on the second tree display).

Be sure to add the modules in the order listed here so that ProcessLogix automatic module numbering conventions work correctly.

- 6-channel isolated analog input module (1756-IF6I)
- 6-channel isolated analog output module (4-20 MA; 1756-OF6CI)

or

- 6-channel isolated analog output module (voltage output; 1756-OF6VI)

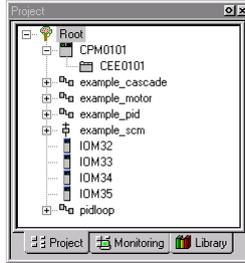
and

- 16-channel isolated digital input module (24V DC; 1756-IB16I)

- 16-channel isolated digital output module (24V DC: 1756-OB16I)

**TIP**

You see the modules displayed after the heading IOM under Project Root.



## Configuring analog input modules

To configure the analog input modules:

1. Double-click on the IOM with the lowest number after it (for example, IOM8). This will bring up the configuration screen for the 6-channel isolated analog input module (1756-IF6I).

**TIP**



IOM8 is an example of the automatic module numbering convention. We will provide you with an example module number as we show you how to configure all the I/O modules. The module numbers you see in your application may vary.

On the IOM Configuration screen that is displayed, select the Main tab.

<b>in this field:</b>	<b>enter:</b>
Module Name	LabAI
IOM Slot Number	the slot number containing this module (remember that chassis numbering begins with 0)
Remote I/O Chassis Mac Address	0
CNI Slot Number	0

2. Select the Channel Configuration tab.
3. On the Channel Configuration screen that is displayed, enter this information:

<b>in this field:</b>	<b>select:</b>
Input Range	0V to 10V
Notch Filter	60Hz

4. Click on the Server Parameters tab.
5. On the Server Parameters screen, enter these parameters (non-case-sensitive):

<b>in this field:</b>	<b>enter:</b>
Point Detail Page	sysdtlaia.dsp
Group Detail Page	sysgrpaia.dsp

6. Click on OK.

## Configuring analog output modules

To configure the analog output modules:

1. Double-click on the IOM with the lowest number after it (for example, IOM9). This will bring up the configuration screen for the 6-channel isolated analog output module (1756-OF6CI; current output, or 1756-OF6VI; voltage output).
2. Click on the block for this module and select Configure Parameters.
3. On the IOM Configuration screen that is displayed, select the Main tab.

<b>in this field:</b>	<b>enter:</b>
Module Name	LabA0
IOM Slot Number	the slot number containing this module
Remote I/O Chassis Mac Address	0
CNI Slot Number	0

4. Select the Channel Configuration tab.
5. On the Channel Configuration screen that is displayed, enter this information:

<b>in this field:</b>	<b>enter:</b>
Shed Mode	unchecked (de-select the check mark)
Calibration Bias	0

6. Click on the Server Parameters tab.
7. On the Server Parameters screen, enter these parameters (non-case-sensitive):

<b>in this field:</b>	<b>enter:</b>
Point Detail Page	sysdtlaoa.dsp
Group Detail Page	sysgrpaoa.dsp

8. Click on OK.

## Configuring digital input modules

To configure the digital input modules:

1. Double-click on the IOM with the lowest number after it (for example, IOM10). This will bring up the configuration screen for the 16-channel, 24V DC isolated analog input module (1756-IB16D).
2. On the IOM Configuration screen that is displayed, select the Main tab.

<b>in this field</b>	<b>enter</b>
Module Name	LabDI
IOM Slot Number	the slot number containing this module
Remote I/O Chassis Mac Address	0
CNI Slot Number	0

3. Select the Module Configuration tab.
4. In the Filter Times for Channels 0 -7 field, select 1 msec for all channels.

5. In the Filter Times for Channels 8 -15 field, select 1 msec for all channels.
6. Click on the Server Parameters tab.
7. On the Server Parameters screen, enter these parameters (non-case-sensitive):

<b>in this field</b>	<b>enter</b>
Point Detail Page	sysdtldia.dsp
Group Detail Page	sysgrpdx.dsp

8. Click on OK.

## Configuring digital output modules

To configure the digital output modules:

1. Double-click on the remaining IOM with a number. This will bring up the configuration screen for the 16-channel, 24V DC isolated analog output module (1756-OB16D).
2. On the IOM Configuration screen that is displayed, select the Main tab.

<b>in this field:</b>	<b>enter:</b>
Module Name	LabD0
IOM Slot Number	the slot number containing this module
Remote I/O Chassis Mac Address	0
CNI Slot Number	0

3. Click on the Server tab.
4. On the Server Parameters screen, enter these parameters (non-case-sensitive):

<b>in this field:</b>	<b>enter:</b>
Point Detail Page	sysdtldoa.dsp
Group Detail Page	sysgrpdx.dsp

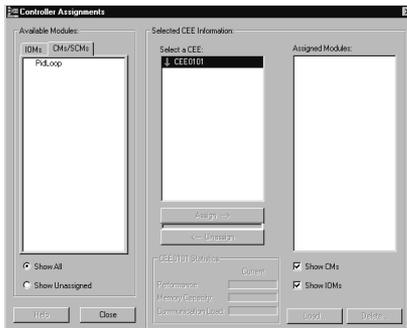
5. Click on OK.

## Assigning Modules to a Controller Execution Environment

Once you have configured I/O modules, you must assign them to the controller execution environment (CEE).

To assign modules to the CEE:

1. From Control Builder, select Tools⇒Assign.  
You see the Controller Assignment screen.



2. On the Assignment screen that appears, click on the IOMs tab in the Available Modules area of the screen.
3. Select all four modules.(To select all four modules, click on the first module, hold down the Shift Key and click on the last module).
4. Select the correct CEE from the CEE list box.
5. Click on Assign. After a few seconds, you see the IOMs displayed in the Assigned Modules list box.
6. Select all of the IOMs from the Assigned Modules List box.

### ATTENTION



Load only the I/O Modules that physically exist in the chassis.

7. Click on Load. When prompted, click OK to Load Project Version.

- Click on Continue to load the selected items to the CEE.

### TIP



After the input modules are loaded from Control Builder, the status LEDs stop blinking and glow steady green on the hardware input module.

The output module will continue to flash until the 1757-PLX52 is put into run mode, and the I/O are activated.

- Close the Controller Assignments dialog box.

## Creating a PID Loop

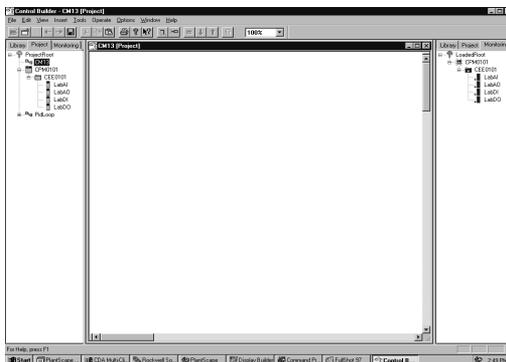
The next step is to create a Control Module to control a process. In this example, we will create a PID loop.

### Creating the Control Module

To create the Control Module:

- Create a new Control Module by clicking on File ⇒ New ⇒ Control Module.

You see a blank window for the Control Module in the center of your screen.



- Rename the Control Module:

- a. Double-click anywhere in the palette. You see the Parameter Configuration screen.
  - b. In the Name field, enter FIC102.
3. Click on the Server tab.
  4. On the Server Parameters screen, enter these parameters (non-case-sensitive):

<b>in this field</b>	<b>enter</b>
Point Detail Page	sysdtlpida.dsp
Group Detail Page	sysgrppida.dsp

5. Click on OK to close the Parameter Configuration screen.
6. Save your changes by clicking on File ⇒ Save. Notice that the new Control Module name appears in the Project Tab.
7. Close Control Module FIC102

## Assigning the Control Module to the Controller Execution Environment

To assign the Control Module for our PID loop to the CEE:

1. From Control Builder, click on Tools ⇒ Assign.
2. On the Controller Assignments dialog box, select the CMs/SCMs tab.
3. Select FIC102 from the list box in the Available Modules area of the screen.
4. Click on Assign. The FIC102 module is displayed in the Assigned Modules list box.
5. Close the Controller Assignments dialog box.

## Building the PID Loop

To develop the PID loop:

1. In the Project tab, open the control drawing by clicking on FIC102.
2. Display the available function blocks by clicking on the “+” to the left of the appropriate library in the tree display.
3. To select a block, click on it.
4. To move the block to your diagram, drag it to the area of the palette where you want it.
5. Rename the block by double-clicking on the block to bring up the Parameters Configuration dialog box.
6. Add the following function blocks to the Control Module. Double click on each block to change the name according to the chart below.

function block	name
AICHANNEL	AI00
DATAACQ	DACA
PID	PIDA
AOCHANNEL	A000
NUMERIC	

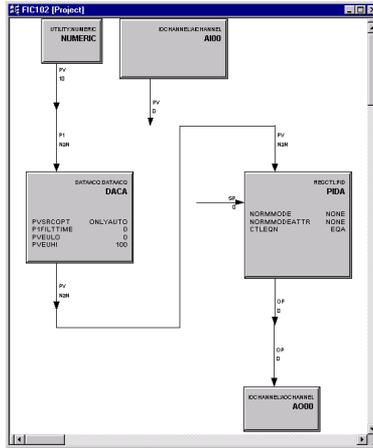
**TIP**

By matching this naming convention you will be able to use the standard displays associated with Station.



## Wire the blocks

The Numeric block you created enables us to simulate a control loop. For this loop to work properly, do not wire the AICHANNEL block.



1. Double-click on the source wire. The cursor changes to a “+”.
2. Click on the destination wire.

**TIP**

For additional wire segments as you draw your wire, click the left mouse button.



## Configure parameters

1. On the Numeric block, double-click in the gray area. You see the Numeric Parameters Configuration screen.
2. Enter these parameters:

in this field	enter
PV	10.0

3. Click on OK.
4. On the PID block, double-click in the gray area. You see the PID Parameters Configuration screen.
5. Click on the Algorithm tab.
6. Enter these parameters:

in this field	enter
T1	.1
T1 High Limit	2.0
High Gain Limit	2.0
Overall Gain	.5

7. Click on OK.
8. On the AICHANNEL block, double-click in the gray area. You see the AICHANNEL Parameters Configuration screen.
9. Enter these parameters:

in this field	select
Module Name	LabAI
Currently Assigned Slots	Channel 0

10. After you have selected Channel 0, click on Assign Channel and click OK.

11. On the AOCHANNEL block, double-click in the gray area. You see the AOCHANNEL Parameters Configuration screen.
12. Enter these parameters:

in this field	select
Module Name	LabAO
Currently Assigned Slots	Channel 0

13. After you have selected Channel 0, click on Assign Channel and click OK.

## Enter alarms

1. Double-click on the DATACQ block to display the Parameters Configuration screen.
2. Click on the Alarms tab.
3. Enter these alarms:

---

**IMPORTANT**

You must enter the PV High alarm first to enable the PV High High alarm.

---

type	trip point	priority	severity
PV High	85	High	0
PV High High	95	Urgent	0

4. Click on OK.

## Save and exit

1. Save your changes by clicking on File ⇒ Save, or close the diagram.
2. Close Control Module FIC102.

## Downloading the Function Block Diagram to the 1757-PLX52 Process Control Module

Use one of these two methods to download your function block diagram to the controller module.

### Method 1

1. In Control Builder, select “=” from the toolbar to display the Module Assignment screen.
2. In the Assigned Modules list box, select FIC102.
3. Click on Load. Click on OK to load the Project Version. Click on Continue to load the selected object to the CEE.
4. When the load is complete (status bar at 100%; Load Complete message displayed), close the Controller Assignment dialog box.

### Method 2

1. In the Project tab, click on FIC102.
2. From the Toolbar Menu, click on the green down arrow to download the function block diagram.
3. Click on Continue to load the selected object.

## Changing the Controller Execution Environment for the 1757-PLX52 Process Control Module from Inactive to Active

To execute your program, you must change the CEE from inactive to active. If the CEE is not already activated, follow these steps to change it to active:

1. In the Monitoring tab, click on CEE0101.
2. Select Operate ⇒ Activate This CEE and its IOMs and CMs.  
You see the CEE and everything listed under it in the tree view under the Monitoring tab go solid green.
3. Click on Yes to change the state of the selected objects.

## Verifying Proper Operation

Follow these steps to verify that your PID loop operates properly:

1. In the Monitoring tab, double-click on FIC102. The PID diagram opens.
2. On the PID block, look at the MODE parameter to ensure that it is set to MAN (manual).
3. With the PID block in manual mode, double-click on the OP parameter and set it to 80.
4. On the PID block, double-click on the MODE parameter and set it to AUTO (automatic).
5. Double-click on the setpoint wire and set the setpoint to 25.0.
6. Verify that the PID OP output value (displayed near the wire) changes.
7. Change the NUMERIC.PV to 20, then 30. Observe the OP output of the PID block for changes.
8. Close the diagram *without* saving your changes.

## Viewing Pre-built Screens

To view the pre-built screens provided with the ProcessLogix system:

1. If the Station application program is not running, click on:

Start ⇒ Programs ⇒ ProcessLogix Server ⇒ Station.

- Click on the text box in the upper right corner of the screen (below the toolbar).



to view the detail screen for the:	do this
controller	<ol style="list-style-type: none"> <li>Type CPM0101 in the box.</li> <li>Press [F12].</li> </ol>
CEE	<ol style="list-style-type: none"> <li>Type CEE0101 in the box.</li> <li>Press [F12].</li> </ol>
PID loop	<ol style="list-style-type: none"> <li>Type FIC102 in the box.</li> <li>Press [F12].</li> </ol>
I/O modules	<ol style="list-style-type: none"> <li>Type the name of the I/O module in the box.</li> <li>Press [F12].</li> </ol>
alarms	Click on the red, blinking alarm indicator at the bottom of the screen, or click on the Alarm icon in the toolbar menu.

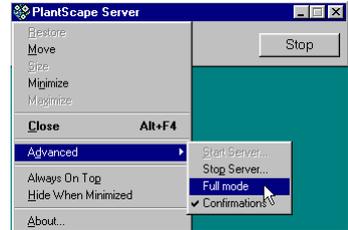
## Shutting Down the System

Follow this procedure to shut down your system in an orderly manner:

Before shutting down the system, verify that the process being controlled is off-line.

- Close all open Control Modules in Control Builder.
- To close Control Builder, from the main menu, select File ⇒ Exit.
- To close Station, in the Station application window, select Station ⇒ Exit.
- Unload the database:
  - Select Start ⇒ Programs ⇒ ProcessLogix Server ⇒ Start-Stop ProcessLogix Server.
  - Ensure that the window is in the Full mode view. To do this:

- Left-click your pointer in the upper left corner of the Server Start-Stop dialog box.
- Choose Advanced  $\Rightarrow$  Full mode.



- Click the Database Unloaded radio button.
  - When asked to confirm, click Yes.
  - When the server changes states, close the dialog box.
- Shut down the System Repository:
    - From Windows NT, select Start  $\Rightarrow$  Settings  $\Rightarrow$  Control Panel.
    - Double-click on the Services icon. You see the Services dialog box.
    - Select the PlantScape System Repository service by highlighting it.
    - Click the Stop button to shut down the System Repository and the CDA server.
    - Shut down RSLinx:
      - From Windows NT, select Start  $\Rightarrow$  Settings  $\Rightarrow$  Control Panel.
      - Double-click on the Services icon. You see the Services dialog box.
      - Select RSLinx by highlighting it.
      - Click the Stop button to shut down RSLinx.
      - Close the Services dialog box.
  - Close any open windows.
  - Shut down the Windows NT workstation.

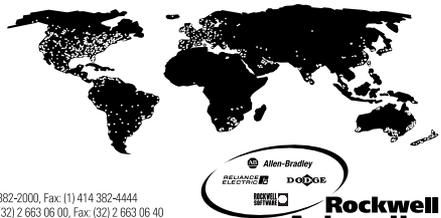
**Notes:**

---

**Reach us now at [www.rockwellautomation.com](http://www.rockwellautomation.com)**

Wherever you need us, Rockwell Automation brings together leading brands in industrial automation including Allen-Bradley controls, Reliance Electric power transmission products, Dodge mechanical power transmission components, and Rockwell Software. Rockwell Automation's unique, flexible approach to helping customers achieve a competitive advantage is supported by thousands of authorized partners, distributors and system integrators around the world.

**Americas Headquarters**, 1201 South Second Street, Milwaukee, WI 53204, USA, Tel: (1) 414 382-2000, Fax: (1) 414 382-4444  
**European Headquarters SA/NV**, avenue Hermann Debroux, 46, 1160 Brussels, Belgium, Tel: (32) 2 663 06 00, Fax: (32) 2 663 06 40  
**Asia Pacific Headquarters**, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846



Publication 1757-QS020A-US-P - December 1999

PN 957236-94

Supersedes Publication 1757-10.1 - April 1999

© 1999 Rockwell International Corporation. Printed in the U.S.A.