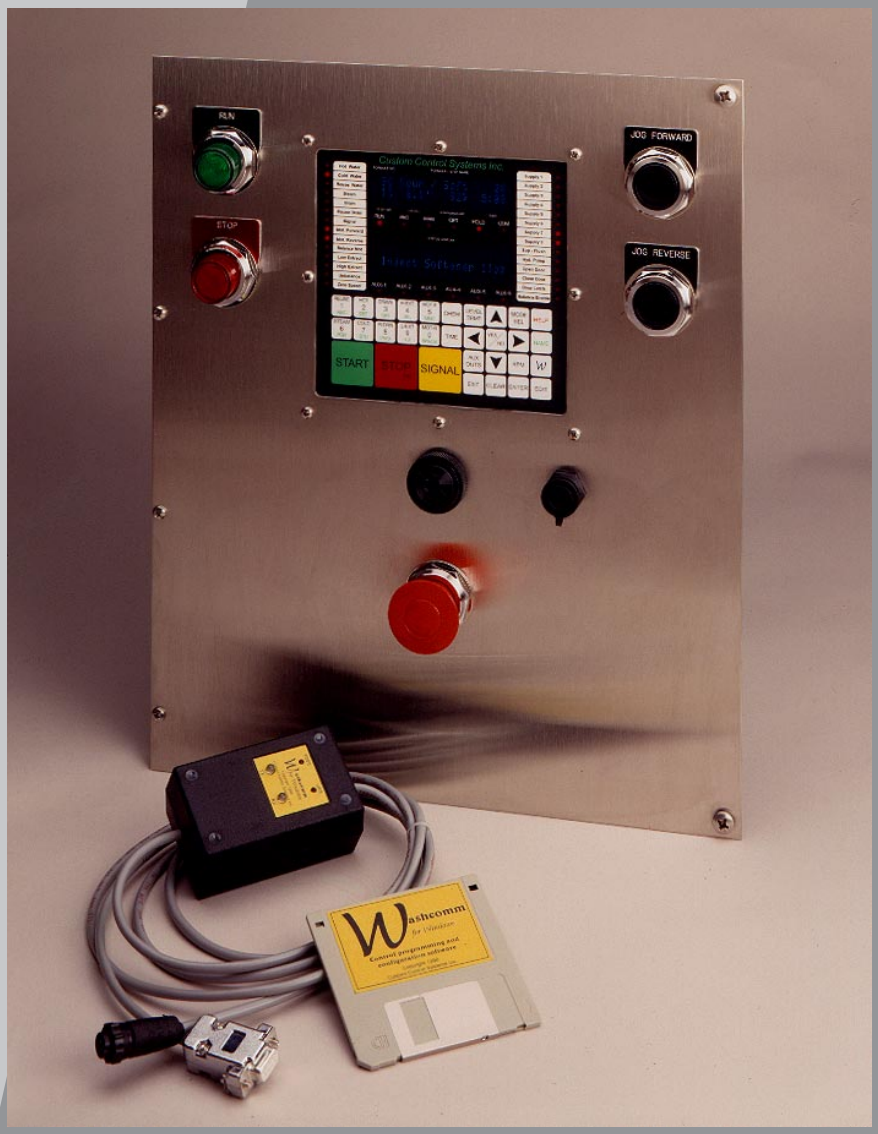
Custom Control Systems Inc.



Installation and User's Guide

WashComm Control Programming Software

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Contents

Introduction **4**
What is WashComm? *4*
Getting Started **4**
System Requirements *4*
Installing WashComm *4*
Launching WashComm *4*
WashComm's Main Screen **4**
Toolbar *4*
Programming Bar *4*
Header Bar *4*
Using WashComm's Machine List View **5**
Machine List *5*
Changing the Name of a Machine *5*
Adding a Machine to the Machine List *5*
Removing a Machine from the List *5*
Copying Machine Setup Information *5*
Formula Sharing *5*
Quick Temperatures and Levels (Washer Controls Only) *6*
Entering Information About your Plant *6*
Using WashComm's Formula List View **6**
Formula List *6*
Adding a Formula *6*
Removing a Formula *6*
Changing a Formula Name *6*
Returning to the Washer List View *6*
Using WashComm's Step List View **7**
Selecting a Formula *7*
Editing a step *7*
Scaling/Replacing Temperatures and Levels *7*
Adding an End Step to a Formula *7*
AutoPrograms *7*

Using WashComm's Step Editor 7
Step Editor Note 7
Clearing a Step 7
Programming Outputs 7
Programming Temperatures and Levels 8
Adding a Chemical Injection 8
Changing a Chemical Injection 8
Removing a Chemical Injection 8
Adding a Custom Step Name 8
Programming Step Time 8
Using WashComm's I/O Assignment List View 8
Editing I/O Assignments 8
Using WashComm's Multi I/O Assignment List View 9
Editing Multi I/O Assignments 9
Using WashComm's Supply I/O Assignment List View 9
Editing Supply I/O Assignments 9
Using WashComm's Supply Calibration List View 10
Editing Supply Calibration 10
Using WashComm's Option List View 10
Editing Options 10
Using WashComm to Program Controls With a WashComm Cable 11
Setting up WashComm to use a WashComm Cable 11
WashComm Cable Box 11
Downloading to a Control 11
Uploading from a Control to a Computer 12

Introduction

What is WashComm?

WashComm is a software package designed to make programming and configuring Custom Control Systems Washer and Dryer controls quick, easy, and convenient. Instead of programming each control from the machine's front panel, you can set up your wash formulas on a portable computer and download them directly to your washer controls using the WashComm cable.

Getting Started

System Requirements

To install WashComm, you will need a portable or desktop computer that meets the following requirements:

- 486 (or better) processor
- 32 (or more) megabytes of RAM
- 3 free megabytes of hard drive space
- Microsoft Windows 95, 98, ME, 2000, XP or NT
- Mouse, trackball, or trackpad recommended

Installing WashComm

Insert the installation disk into drive 'A.' Go to the Start menu and select "Run...". When asked for the name of a program, folder, or document, type "a:\setup" and press [RETURN]. This will launch the WashComm installer, which will perform the rest of the installation process. The installer will automatically add a "WashComm" item to your start menu in the "Programs" section.

Launching WashComm

From the Start menu, choose the "Programs" folder, then the "WashComm" folder, and finally select the "WashComm" item in the "WashComm" folder.

WashComm's Main Screen

Toolbar

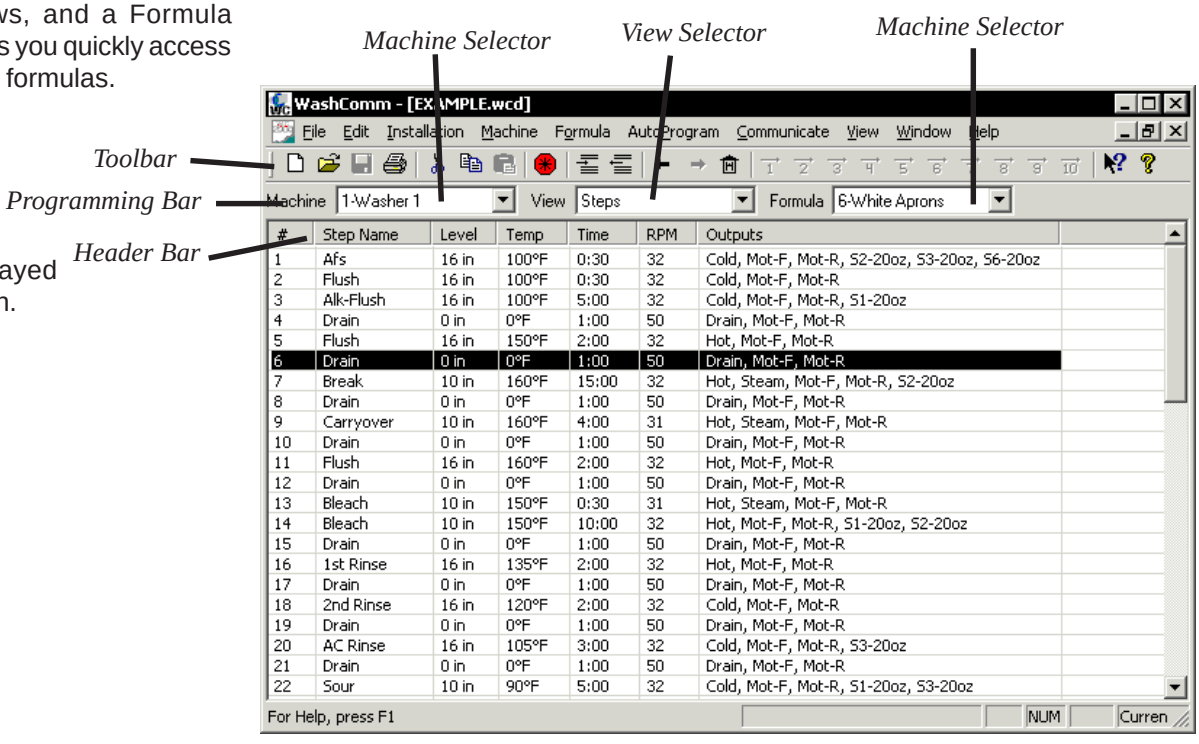
The toolbar gives you quick access to commonly used features of WashComm, like saving a file, printing a file, cut, copy, paste, adding an end step, inserting or deleting a step, or adding steps from an AutoProgram.

Programming Bar

The programming bar allows you to quickly and conveniently switch between different washers, formulas, or views. It contains a Washer selector, which lists all of the washers currently set up in WashComm, a View selector, which lets you quickly change between Formula, Step, I/O Assignment, Multi I/O Assignment, Option, Supply Calibration and Supply I/O Assignment views, and a Formula selector, which lets you quickly access any of a washer's formulas.

Header Bar

The header bar provides column headings for the information displayed in the main screen.

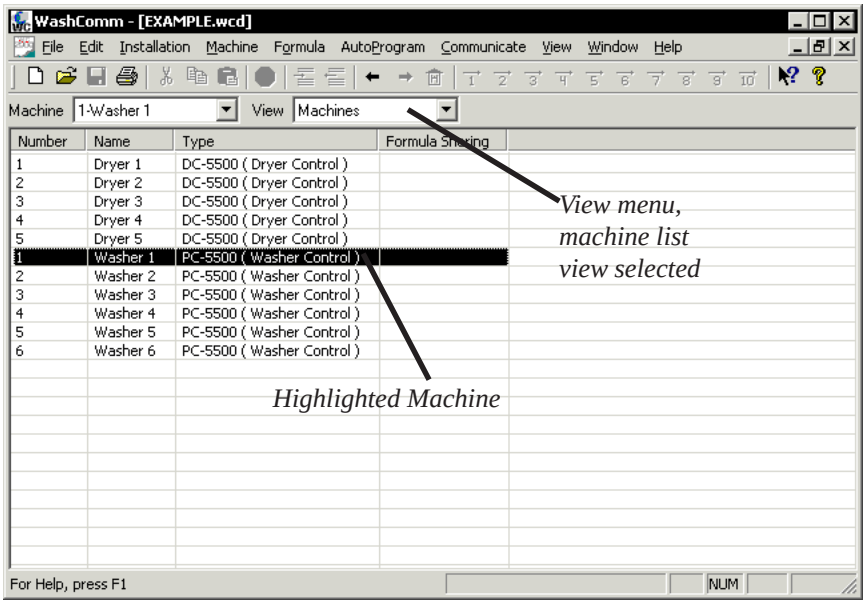


#	Step Name	Level	Temp	Time	RPM	Outputs
1	Afs	16 in	100°F	0:30	32	Cold, Mot-F, Mot-R, S2-20oz, S3-20oz, S6-20oz
2	Flush	16 in	100°F	0:30	32	Cold, Mot-F, Mot-R
3	Alk-Flush	16 in	100°F	5:00	32	Cold, Mot-F, Mot-R, S1-20oz
4	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
5	Flush	16 in	150°F	2:00	32	Hot, Mot-F, Mot-R
6	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
7	Break	10 in	160°F	15:00	32	Hot, Steam, Mot-F, Mot-R, S2-20oz
8	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
9	Carryover	10 in	160°F	4:00	31	Hot, Steam, Mot-F, Mot-R
10	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
11	Flush	16 in	160°F	2:00	32	Hot, Mot-F, Mot-R
12	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
13	Bleach	10 in	150°F	0:30	31	Hot, Steam, Mot-F, Mot-R
14	Bleach	10 in	150°F	10:00	32	Hot, Mot-F, Mot-R, S1-20oz, S2-20oz
15	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
16	1st Rinse	16 in	135°F	2:00	32	Hot, Mot-F, Mot-R
17	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
18	2nd Rinse	16 in	120°F	2:00	32	Cold, Mot-F, Mot-R
19	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
20	AC Rinse	16 in	105°F	3:00	32	Cold, Mot-F, Mot-R, S3-20oz
21	Drain	0 in	0°F	1:00	50	Drain, Mot-F, Mot-R
22	Sour	10 in	90°F	5:00	32	Cold, Mot-F, Mot-R, S1-20oz, S3-20oz

Using WashComm's Machine List View

Machine List

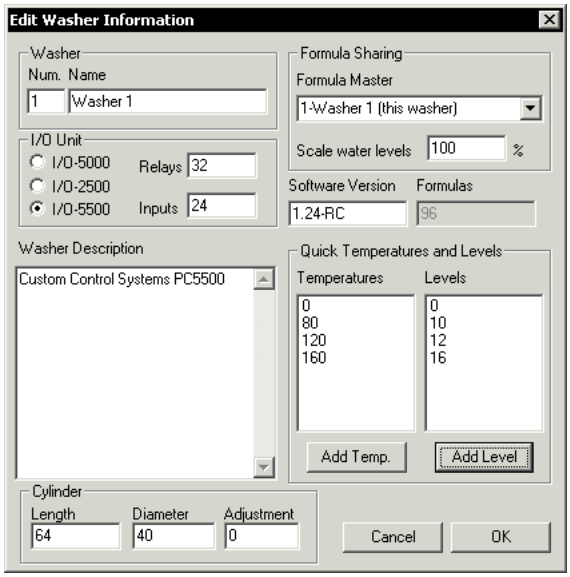
When you first start WashComm, it will display a list of the machines set up in the file. If this is the first time you've launched WashComm, there will be a single washer listed, called "New Washer."



Machine List View

Changing the Name of a Machine

To change the name of a machine, first highlight it in the machine list. Then go to the "Installation" menu and choose "Edit Machine Information...". This will bring up a dialog box that will allow you to modify the machine's name (as it will appear in the washer list). From the Edit Machine Information dialog you can also tell WashComm what I/O Unit is connected to the control, enter a longer machine description (machine serial number, control type, etc.), enable Formula Sharing, enter the control software version, and set up Quick Temperatures and Quick Levels. Formula Sharing, Quick Temperatures, and Quick Levels are explained in separate sections.



Edit Machine Information Screen

Adding a Machine to the Machine List

To add a machine to the list, go to the "Installation" menu and select "Add Machine...". WashComm will ask you what type of control you want to add, and whether you want this machine to share formulas with another machine.

Removing a Machine from the List

To remove a machine from the machine list, highlight the machine you want to remove. Then go to the "Installation" menu and choose "Remove Machine."

Copying Machine Setup Information

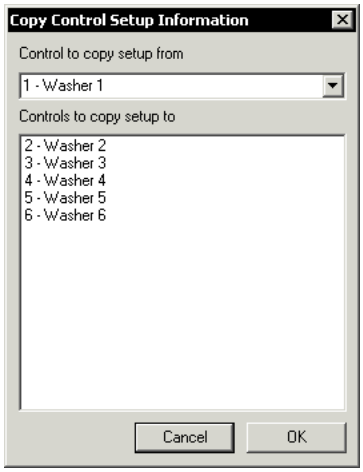
If you have two machines with identical setup (the same I/O Assignments and Option settings), you can copy that information from one machine in the machine list to another. Under the "Installation" menu, select "Copy Machine Setup Information...", and select the source and destination machines. Then click "OK".

Formula Sharing

If you have a number of machines with identical formulas, you can use Formula Sharing to automatically update the formulas in all of those machines when you change one. When you set up Formula Sharing, you must designate one machine as a "formula master." Any changes made to the formula master's formulas will be reflected in the slave machines' formulas.

To set up Formula Sharing, highlight the machine you want to be the "slave" machine and choose "Edit Machine Information..." from the "Installation" menu. In the "Formula Sharing" section of the Edit Machine Information dialog box, select the machine you want to act as formula master from the dropdown box.

For example, if you want washer 2 to get its formulas from washer 1, make washer 1 the formula master for washer two by selecting washer 1 in the Formula Master dropdown box for washer 2.



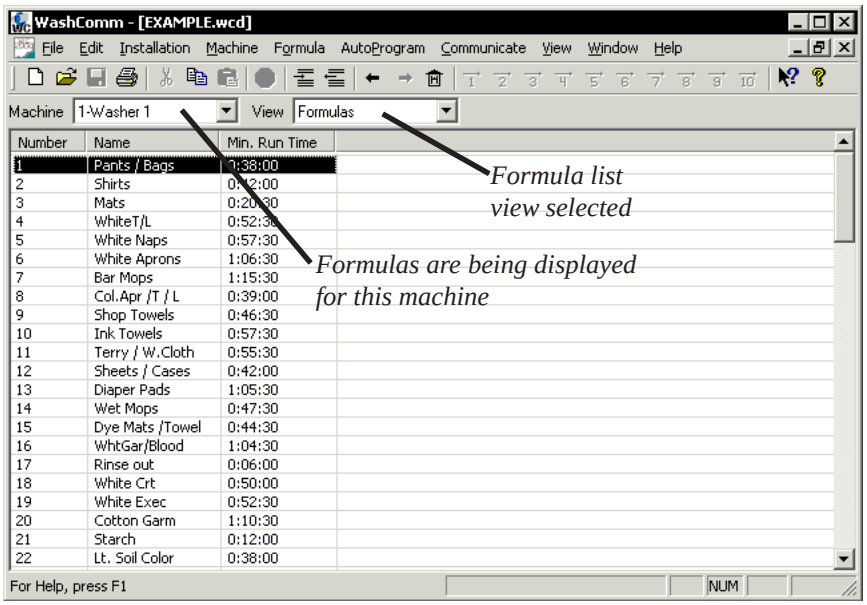
Copy Machine Setup Screen

Quick Temperatures and Levels (Washer Controls Only)
Quick Temperatures and Levels allow you to preset temperatures and levels in the formula editor. Usually, these will be set to the low, medium, and high settings recommended by the washer's manufacturer.
To add a quick temperature or level, highlight the washer you want to add the temperature or level to and select "Edit Machine Information..." from the "Installation" menu. In the Edit Machine Information dialog box, click the button marked "Add Temp." or "Add Level." WashComm will ask you what temperature or level you want to add.

Entering Information About your Plant
WashComm puts your plant name on all formula and setup printouts. To enter your plant name and address, select "Edit Installation Information" from the "Installation" menu.

Using WashComm's Formula List View

Formula List
The formula list displays the names of the formulas stored for each control. You can get to the formula list by double-clicking on a machine in the machine list view, or by choosing "Formulas" from the view selector.



Number	Name	Min. Run Time
1	Pants / Bags	1:38:00
2	Shirts	0:42:00
3	Mats	0:20:30
4	WhiteT/L	0:52:30
5	White Naps	0:57:30
6	White Aprons	1:06:30
7	Bar Mops	1:15:30
8	Col.Apr /T / L	0:39:00
9	Shop Towels	0:46:30
10	Ink Towels	0:57:30
11	Terry / W.Cloth	0:55:30
12	Sheets / Cases	0:42:00
13	Diaper Pads	1:05:30
14	Wet Mops	0:47:30
15	Dye Mats /Towel	0:44:30
16	WhtGar/Blood	1:04:30
17	Rinse out	0:06:00
18	White Crt	0:50:00
19	White Exec	0:52:30
20	Cotton Garm	1:10:30
21	Starch	0:12:00
22	Lt. Soil Color	0:38:00

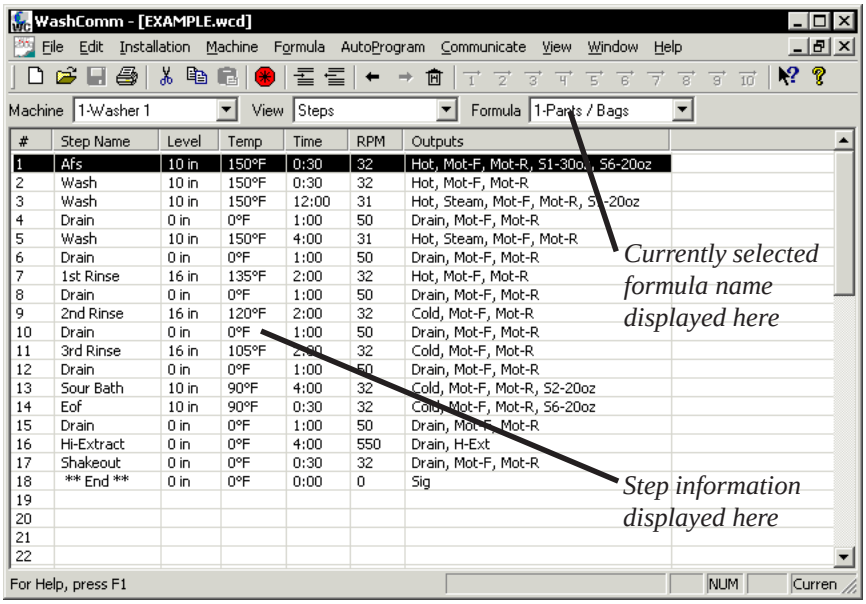
Adding a Formula
To add a formula, highlight the formula in the formula list that you want the new formula you're inserting to come before. Choose "Insert" from the "Edit" menu, type [CONTROL]-I on the keyboard, or click the "insert step or formula" button on the toolbar.
NOTE: If you insert a formula into the formula list, it will move the higher-numbered formulas down and destroy the last formula in the list.

Removing a Formula
To remove a formula, highlight the formula that you want to delete, and choose "Delete" from the "Edit" menu, type [CONTROL]-D on the keyboard, or click the "delete step or formula" button on the toolbar. WashComm will allow you to delete a formula and move the other formulas on the list up or to insert a blank formula in place of the one you want to delete.

Changing a Formula Name
To change the name of a formula, select the formula in the formula list view and choose "Change formula name..." from the "Formula" menu.

Returning to the Washer List View
You can return to the machine list view from the formula list view by choosing "Machines" from the view selector, or by clicking the "back" button on the toolbar.

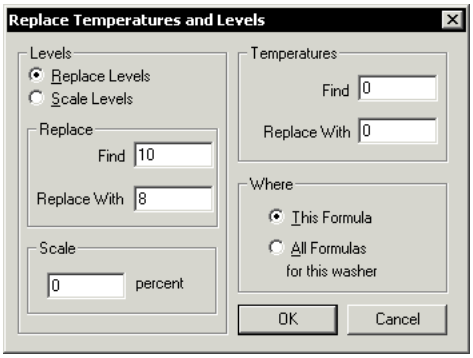
Using WashComm's Step List View



Selecting a Formula
You can select a different formula any time you're in the step list view using the formula selector.

Editing a step
To edit a step, highlight the step you wish to edit and double-click it or press [RETURN].

Scaling/Replacing Temperatures and Levels
WashComm allows you to perform a search-and-replace on the water temperatures programmed in the steps of a formula. It also allows you to scale water levels (to work with a different size machine) or search-and-replace water levels.
To scale or replace a water level or temperature, select "Replace Temp and Level..." from the "Formula" menu. This will bring up the "Replace Temperatures and Levels" dialog box.



Replace temperatures and levels screen

Adding an End Step to a Formula
You can add an end step to a formula one of three ways: type [CONTROL]-E on the keyboard, use the End Step button on the toolbar, or select "End Step" from the "Formula" menu.

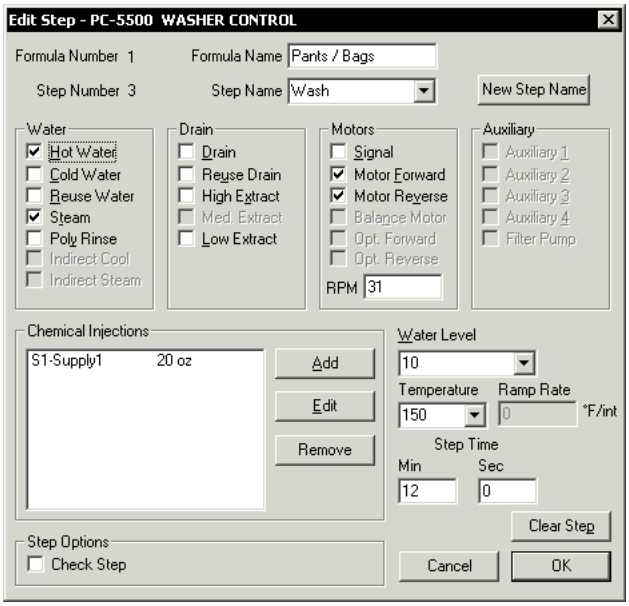
AutoPrograms
AutoPrograms let you store a frequently-used sequence of steps and quickly insert them into a formula. WashComm allows you to set up as many as ten AutoPrograms.
To assign steps to an AutoProgram, control-click or shift-click on the steps you want to reuse. Then select "Assign Steps to AutoProgram" from the "AutoProgram" menu. WashComm will ask you to assign a name to the AutoProgram, and will display that name in the AutoProgram menu.
To use an AutoProgram, simply click on the toolbar button for the AutoProgram you wish to use (1 through 10), or select the AutoProgram you want from the AutoProgram menu.

Using WashComm's Step Editor

Step Editor Note
The Step Editor in WashComm is designed to operate similarly to the program mode in PC-5000 series controls. If you are familiar with programming the PC-5000, you should have little difficulty programming formulas in WashComm.

Clearing a Step
If you want to clear a programmed step, press the "clear" button on the step editor.

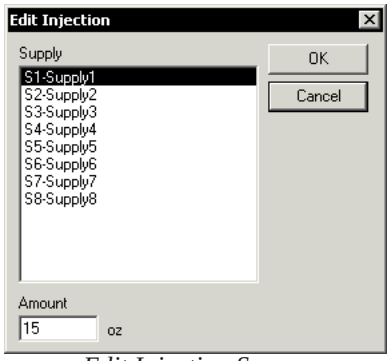
Programming Outputs
To program outputs, click on the checkbox next to the output you want to turn on or off, or press the "hot-key" (the underlined letter in the caption next to each checkbox) for the output.



Step Editor

Programming Temperatures and Levels
You can program temperatures and levels either by using the "quick" temperature or level dropdown boxes, or by typing the desired amount into the temperature or level boxes.

Adding a Chemical Injection
Chemical injections can be added by clicking on the "Add" button in the chemical injections section. WashComm will bring up the Edit Injection dialog box. To add an injection, click on the chemical in the chemical list, then type in the amount of the chemical that you want to inject.



Edit Injection Screen

Changing a Chemical Injection
To change the amount of a chemical injection, highlight the injection you wish to change in the step editor, and click the "Edit" button in the chemical injections section.

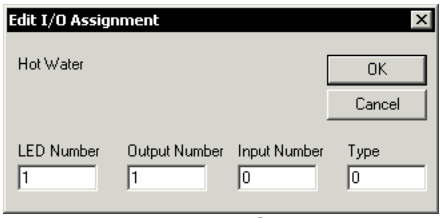
Removing a Chemical Injection
To remove a chemical injection, highlight the injection you wish to remove in the step editor, and click the "Remove" button in the chemical injections section.

Adding a Custom Step Name
If the step name you're looking for isn't in the list of pre-programmed step names, you can add a name to the list by clicking the "New Step Name" button. WashComm will ask you for the new name you'd like to add, and automatically add it to the list of step names.

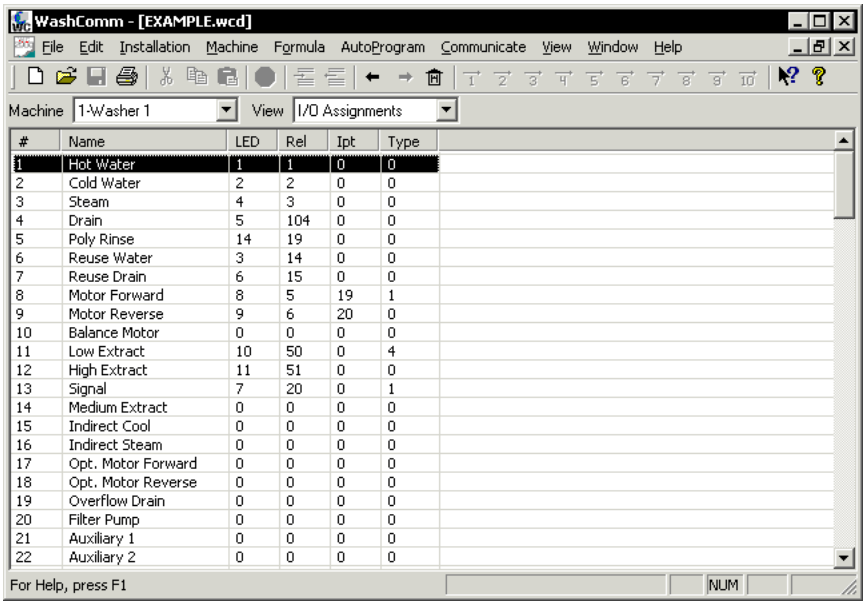
Programming Step Time
To program the step time, enter the number of minutes and seconds into the minutes and seconds boxes under the step time section.

Using WashComm's I/O Assignment List View

Editing I/O Assignments
To edit an I/O Assignment, highlight the desired I/O Assignment and double-click on it or press [RETURN]. This will bring up the Edit I/O Assignment dialog box. Please consult the Reference Manual for your control for more information on I/O Assignments.



I/O Assignment Editor Screen

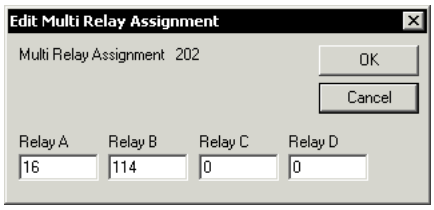


I/O Assignment List View

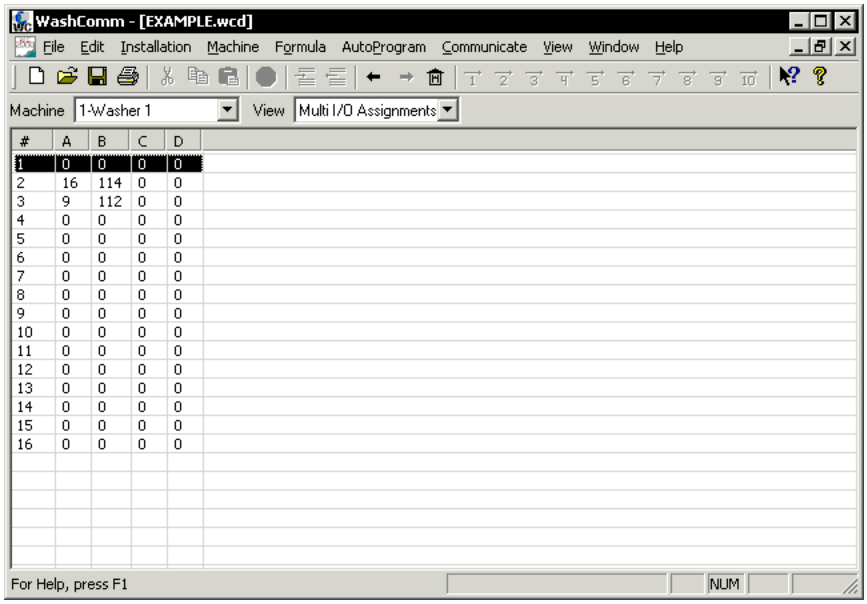
Using WashComm's Multi I/O Assignment List View

Editing Multi I/O Assignments

Highlight the Multi I/O Assignment you wish to edit and double-click on it or press [RETURN]. WashComm will then bring up the Edit Multi I/O Assignment dialog box. Please consult the PC-5000 Technical Reference Manual for more information on Multi I/O Assignments.



Multi I/O Assignment Editor



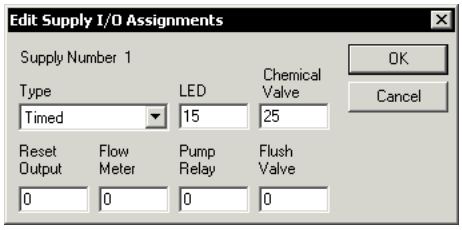
#	A	B	C	D
1	0	0	0	0
2	16	114	0	0
3	9	112	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0

Multi I/O Assignment List View

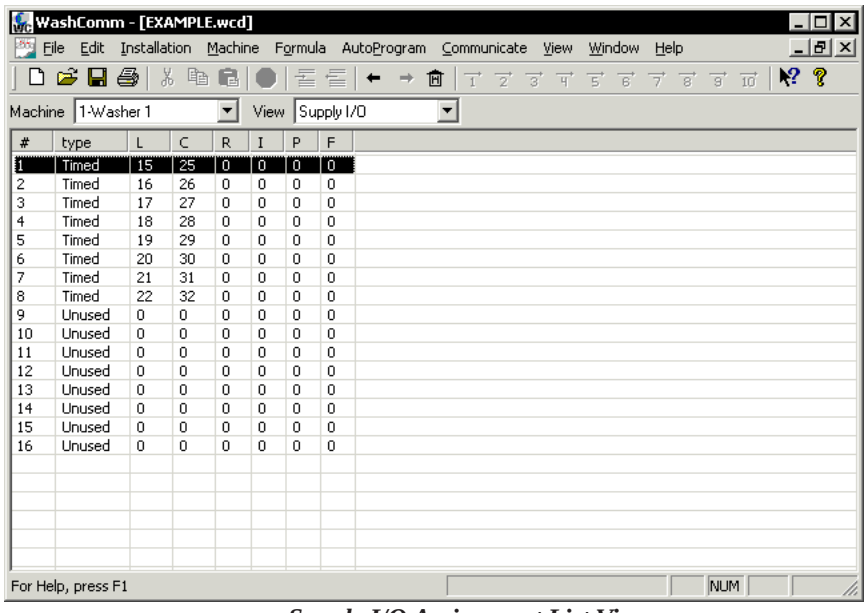
Using WashComm's Supply I/O Assignment List View

Editing Supply I/O Assignments

To edit a Supply I/O Assignment, highlight the Supply I/O Assignment you wish to edit and double-click or press [RETURN]. WashComm will bring up the Edit Supply I/O Assignments dialog box. Please consult the PC-5000 Technical Reference Manual for more information on Supply I/O Assignments.



Supply I/O Assignment Editor



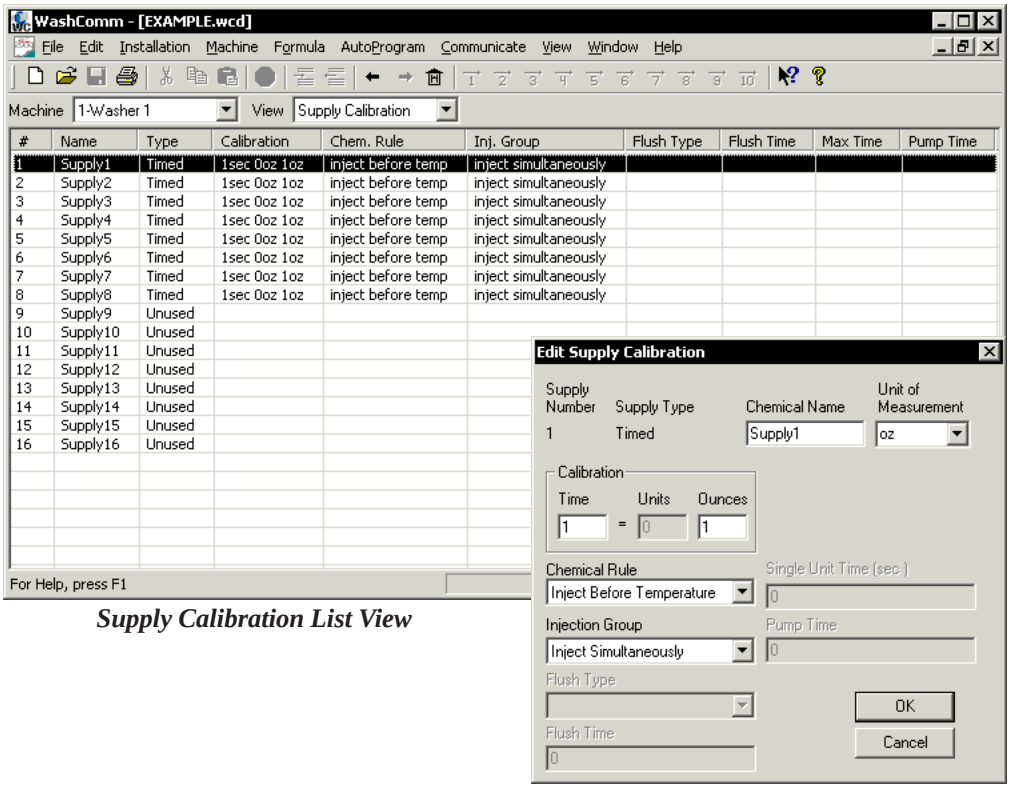
#	type	L	C	R	I	P	F
1	Timed	15	25	0	0	0	0
2	Timed	16	26	0	0	0	0
3	Timed	17	27	0	0	0	0
4	Timed	18	28	0	0	0	0
5	Timed	19	29	0	0	0	0
6	Timed	20	30	0	0	0	0
7	Timed	21	31	0	0	0	0
8	Timed	22	32	0	0	0	0
9	Unused	0	0	0	0	0	0
10	Unused	0	0	0	0	0	0
11	Unused	0	0	0	0	0	0
12	Unused	0	0	0	0	0	0
13	Unused	0	0	0	0	0	0
14	Unused	0	0	0	0	0	0
15	Unused	0	0	0	0	0	0
16	Unused	0	0	0	0	0	0

Supply I/O Assignment List View

Using WashComm's Supply Calibration List View

Editing Supply Calibration

To edit Supply Calibrations, highlight the Supply Calibration you wish to edit and double-click or press [RETURN]. WashComm will bring up the Edit Supply Calibration dialog box. Please consult the PC-5000 Technical Reference Manual for more information on Supply Calibration.



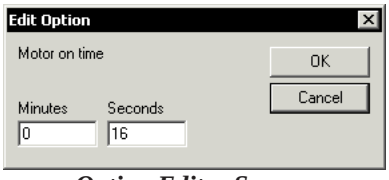
Supply Calibration List View

Edit Supply Calibration Screen

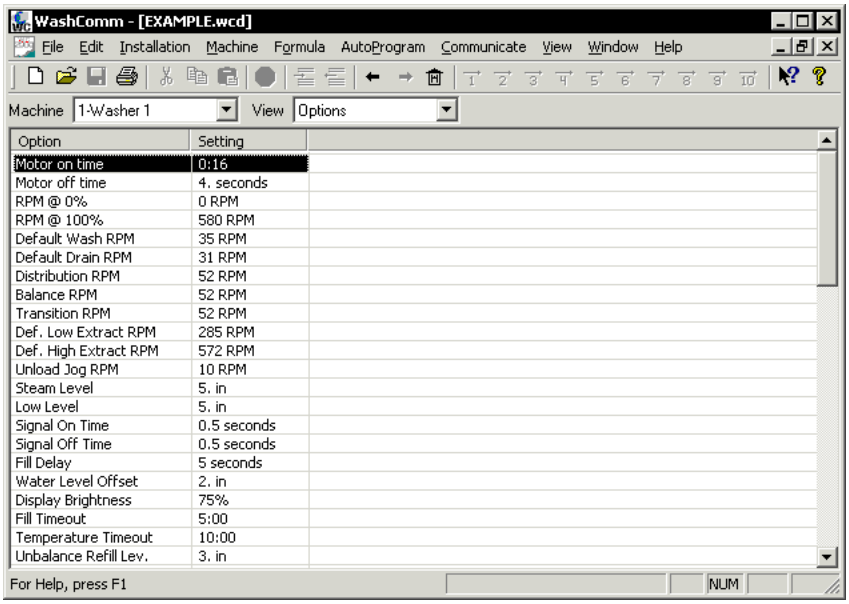
Using WashComm's Option List View

Editing Options

To edit Options, highlight the Option you wish to edit and double-click or press [RETURN]. WashComm will bring up the Edit Option dialog box. Please consult the PC-5000 Technical Reference Manual for more information on individual control Options.

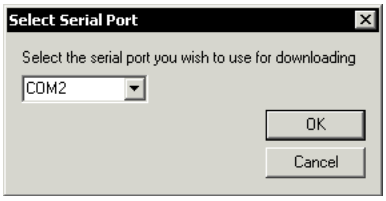


Option Editor Screen



Option List View

Using WashComm to Program Controls With a WashComm Cable



Select Serial Port Screen

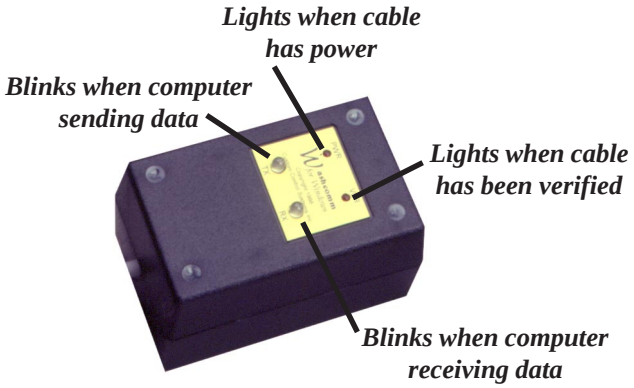
Setting up WashComm to use a WashComm Cable

Before you can use WashComm to download information to a control, you must first give WashComm some information about your serial port connections.

To set up WashComm to work with a WashComm cable, select “Serial Port Setup...” from the “Communicate” menu. This will bring up the Select Serial Port screen. Select the COM port (serial port) that the WashComm Cable will be connected to.

WashComm Cable Box

The WashComm cable box has four LEDs on the cover: PWR, VER, TX, and RX. The PWR LED indicates that the WashComm Cable is receiving power from the control. The VER LED indicates that the WashComm Cable has successfully been verified. The TX LED shows serial data being transmitted from the computer, and the RX LED shows serial data being received by the computer.



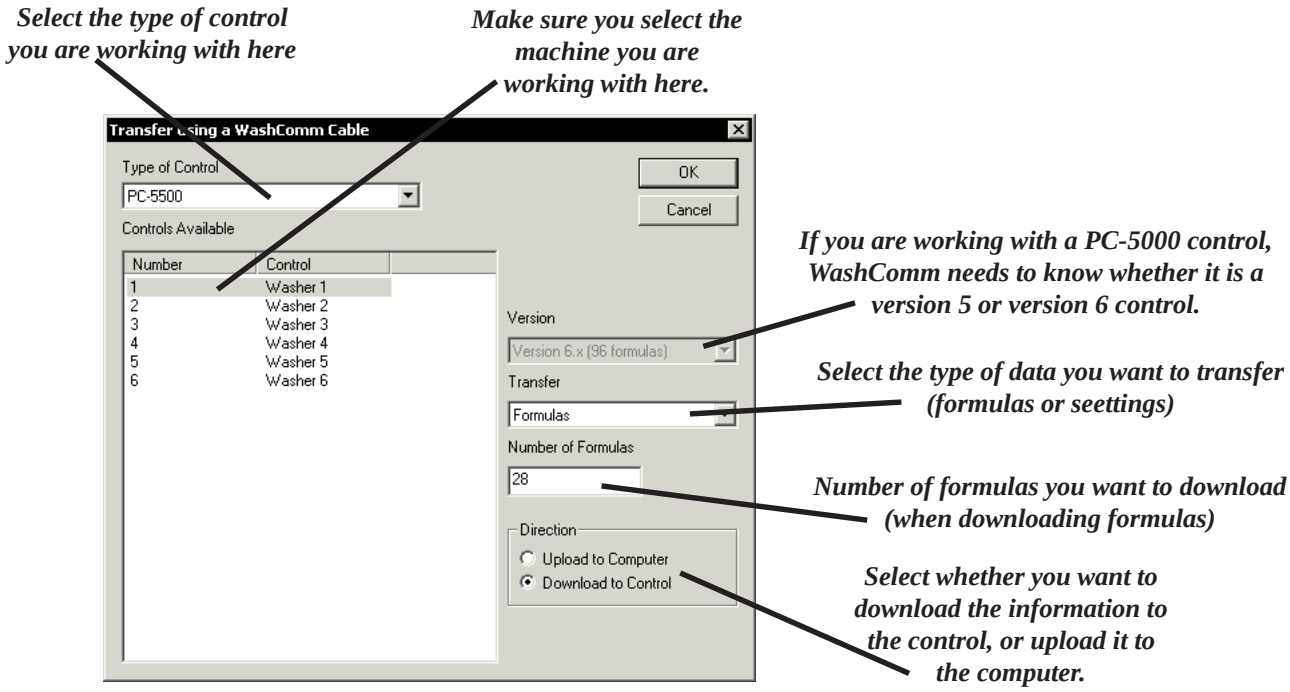
Downloading to a Control

Before you can download formulas to a control, verify that your WashComm Cable settings are correct.

To download formulas to a control, connect the 9-pin DIN connector from the WashComm Cable to the back of your computer, and the circular waterproof connector to the circular connector on the machine’s front panel. The WashComm Cable receives power from the control when connected, so the PWR light should light up.

Once the cable is connected, select “Using a WashComm Cable...” from the “Communicate” menu. This will bring up the Transfer Using WashComm Cable screen. Select the type of control that is on the machine in the “Type of Control” section, then click on the machine you are actually working with in the “Controls Available” section. If you’re working with a PC-5000, select whether you have a 32-formula or 96-formula control. If you want to download your wash or dry formulas, select “Formulas” in the “Transfer” section. Select “Settings” to send control setup information (I/O Assignment, Chemicals, etc.). Then select “Download to control” in the “Direction” section. Click “OK”.

WashComm will then tell you to go to the communications functions on the control and select “Receive Formulas” or “Receive I/O Assignments”. Press [ENTER] on the control’s keypad, and the control’s display should say “Receiving.” Then press “OK” on the dialog box. WashComm will verify the cable, and then start the download process.



Uploading from a Control to a Computer

Before you can upload formulas from a control, verify that your WashComm Cable settings are correct.

To upload formulas to a control, connect the 9-pin DIN connector from the WashComm Cable to the back of your computer, and the circular waterproof connector to the circular connector on the machine's front panel. The WashComm Cable receives power from the control when connected, so the PWR light should light up.

Once the cable is connected, select "Using a WashComm Cable..." from the "Communicate" menu. This will bring up the Transfer Using WashComm Cable screen. Select the type of control that is on the machine in the "Type of Control" section, then click on the machine you are actually working with in the "Controls Available" section. If you're working with a PC-5000, select whether you have a 32-formula or 96-formula control. If you want to download your wash or dry formulas, select "Formulas" in the "Transfer" section. Select "Settings" to send control setup information (I/O Assignment, Chemicals, etc.). Then select "Upload to computer" in the "Direction" section. Click "OK".

WashComm will then tell you to make sure that the computer is connected to the control. Click "OK" so it can verify your WashComm cable. Once the cable has been successfully verified, WashComm will tell you to click "OK" again.

If you are sending formulas, go to the Options mode in the control and select "Send Formulas" in the Communications Functions section. Press [ENTER] on the control's keypad, and the control's display should say "# of formulas to send." Enter the number of formulas you'd like to send, and press [ENTER] on the control's keypad again. The control's display should then say "Sending."

If you are sending settings, go to the Options mode in the control and select "Send I/O Assignments" in the Communications Functions section. Press [ENTER] on the control's keypad, and the control's display should say "Sending."