ADJUSTABLE FREQUENCY DRIVES

SERIES 9000 AF DRIVES

SVLoad Tool

Loading System Software

Instruction Sheet



Loading System Software

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WARNING: When installing new system software into an AF drive, ensure that the system software matches the drive's ratings exactly. Installing incorrect software will cause the some drive functions to operate incorrectly, and may cause serious damage to the drive and connected equipment.

Because of the variety of uses for this equipment and because of the differences between this solid-state equipment and electromechanical equipment, the user of and those responsible for applying this equipment must satisfy themselves as to the acceptability of each application and use of the equipment. In no event will EATON Cutler-Hammer be responsible or liable for indirect or consequential damages from the use or application of this equipment.

1. Introduction

This manual assumes that the SVLoad tool is installed on a computer that is communicating with an SV9000 drive. It covers instructions on how to communicate with the drive via the SVLoad application and how to use the SVLoad application to change or update the drive's system software.

2. Determining the SV9000 Drive Type



CAUTION: It is critical to verify that the type code you choose in the SVLoad program matches the drive's catalog number exactly (see below). Choosing the incorrect type code may destroy the drive.

The SV9000 drive's catalog number can be determined by viewing the drive's nameplate, as found in the illustration below:



Figure 1: SV9000 Drive Nameplate

3. SVLoad Basics

• To run the SVLoad Application, double click on the SVLoad icon.



Figure 2: The SVLoad Program Icon

• For screen definitions, see Figures 3-5 below.

The system, option and application buttons are used to change to the system, option, and application screens.

SVLoad System Option Program Start Loading All System Program	Use the Serial Link button — to set up communication between your computer and the drive
Type Code SV9 F30 A C - 5 M 0 A 00 Change File: Browse Switch off the frequency converter before start. Start Cancel Cancel	 Use the Change button to identify the type of drive that the system software will be loaded on. (only used when loading system software)

Follow the instructions in this area while loading system, option, or application files

_Click on the Browse button and choose the latest system file. The file shown in this line will be loaded to the drive.

Figure 3: Start-up Screen

SVLoad Application: Loading System Software



Choose the COM port that the SVDrive cable is plugged into.

Choose the baud rate for loading software. 19200 baud is the recommended baud rate. Choose lower baud rates in electrically noisy environments.





Figure 5: The Type Code Setup Screen

4. Establishing Communication



CAUTION: Do not use any cable other than SVDrive cable. Using the incorrect type of communication cable may cause the computer or drive failure.

- 1. Plug the SVDrive cable into an unused serial communication port on the computer. Instructions for making an SVDrive cable are included in the "SVLoad Application Instruction Sheet."
- 2. Unplug the keypad or keypad cable from the Series 9000 drive.
- 3. Plug the SVDrive cable into the Series 9000 drive communication port that the keypad or keypad cable had been plugged into.
- 4. Run the SVLoad software by clicking on the SVLoad icon.



5. Click on the "Serial Link" button.

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E <u>x</u> it H <u>e</u> lp						
System Program	Option Programs	Application	(Serial Link		
	Start Loading A	I				
System Progra	am					
Type Code SV9 F3	0 A C - 5	M 0 A	A 00	C <u>h</u> ange		
File:						
				Browse		
Switch off the frequency converter before start						
Switch off t	ne nequency c	Diverter Delore	start.	<u>C</u> ancel		

6. Select the COM port of the computer that the SVDrive cable is plugged into.

	P SVLoad E <u>x</u> it H <u>e</u> lp				
	System Program	Option Programs	Application		Serial Link
	Serial Link				
	Serial Port		Bau	l Rate	
(COM 1	O COM 2	19	200	
	O COM 3	O COM 4		_	

7. Set the baud rate to match the computer and drive specifications.



- Note: The baud rate is selectable between 1200 baud and 115200 baud. The recommended baud rate setting is 19200; however in magnetically clean environments, higher baud rates will be acceptable. If the "Too many retransmissions" error is generated, lower the baud rate.
- 8. Click on the System Program button. (see instructions below)

5. Loading System Software

1. Run the SVLoad software by clicking on the SVLoad icon.



- 2. Establish communication between your computer and the Series 9000 drive. For information on how to set up communications, see the section of this manual titled "Establishing Communication."
- 3. Click on the "System Program" button if the system screen is not shown.

System Program	
/ Button	
SVLoad	
Exit Help	
System Option Program Programs Application	Serial Link
Start Loading All	
System Program	
Tune Code	
SV9 F30 A C - 5 M 0 A 00	C <u>h</u> ange
File:	
	Browse
	<u>S</u> tart
Switch off the frequency converter before start.	<u>C</u> ancel

4. Click on the "Change" button in the type code box.



5. Choose the correct options to match the nameplate on the drive.



WARNING: It is critical to verify that the type code you set matches the drive exactly. Choosing the incorrect type code may destroy the drive.



- 6. Click on the "OK" button to return to the System Program screen.
- 7. Click on the "Browse" button.

SVLoad			
E <u>x</u> it H <u>e</u> lp			
System Option Program Programs	Application	Serial L	Link
Start Loading	All]	
System Program Type Code SV9 F30 A C - File: Switch off the frequency	5 M 0 a	A 00 Change Brows e start. Cance	■ ← Browse Button

8. Find and choose the system software file (*.bin) you wish to install.

Open		? ×
File name:	Eolders: c:\svengine\svprog\svload c:\ svengine svprog svload	OK Cancel N <u>e</u> twork
List files of <u>type:</u> Programs (*.BIN)	Dri <u>v</u> es:	

- 9. Click the "OK" button in the find dialog.
- 10. Check that the file name shown in the SVLoad application is the appropriate file.
- 11. Follow the instructions shown in the lower half of the Application window.

SVLoad Exit Help				_ 🗆 X
System Program	Option Programs	Application]	Serial Link
S	itart Loading A	I		
Type Code - SV9 F3 File:	o A C - 5	M 0 /	A 00	Change Browse
Switch off th	ne frequency c	onverter before	e start.	<u>S</u> tart <u>C</u> ancel

System Software load instructions

12. Click on the "Start" button.

SVLoad					
E <u>x</u> it H <u>e</u> lp					
System Program	Option Programs	Application		Serial Link	
9	Start Loading A	I]		
System Progra	am				
Type Code SV9 F3	0 A C - 5	M 0 /	A 00]	C <u>h</u> ange	
File:				Browse	
Switch off t	he frequency c	onverter before	e start. (<u>S</u> tart Lancel	 A→Start Button

13. Follow additional instructions shown in the lower half of the Application window.

Exit Help System	Option	Application	1	Serial Link
Program	Frograms Start Loading A		{	
Type Code SV9 F7 File:	5 A C · O	MOI	B 00	C <u>h</u> ange
C:\CH_DRI*	1\RELEAS~1\	.SV9000\SYST	EM\STANDAF	Browse
Switch on H	ne frequency c	onverter!		<u>S</u> tart

System Software load instructions

14. A status bar will be shown in the lower part of the screen, as below:

📱 S¥Load				_ 🗆 X
E <u>x</u> it H <u>e</u> lp				
System Program	Option Programs	Application		Serial Link
	Start Loading A	I		
System Progr	am			
Type Code SV9 F7 File: C:\CH_DRI C:\SVENGIN	'5 A C - 0 '1\RELEAS~1\ IE\SVPROG\S\ 5	M 0 0 SV9000\SYST /LOAD\SM000 102	3 00 EM\STANDAR 30D.LDR	Change Browse Start Cancel

15. When loading is finished, a confirmation screen is displayed. Cycle power to the drive, then click the OK button to exit.

SVLoad				_ 🗆 🗵			
E <u>x</u> it H <u>e</u> lp							
System Program	Option Programs	Application		Serial Link			
9	Start Loading A	I					
System Progra	am						
Type Code - SV9 F7 File: C:\CH_DRI^	Type Code Change SV9 F75 A C - 0 M 0 B 00 Change File: C:\CH DRI~1\RELEAS~1\SV9000\SYSTEM\STANDAR Browse						
C:\CH_DRI~	1\RELEAS~1\	5 V 9000\SYSTI	EM\STANDAF	C Start			
	1	00%					
	SVLOAD	_	×	Lancel			
	Loading ready ! Turn frequency	converter off, the	n on.				
	[OK					

6. Troubleshooting

6.1 Communication Errors

Error Message	Cause/Solution
"Too many retransmissions"	<i>Cause:</i> Noise interference with communication; <i>Solution:</i> Set baud rate to a lower value <i>See "Establishing Communication" section.</i>

For technical support contact your Cutler-Hammer distributor or the Cutler-Hammer AF Drives Product Integrity Center at 1-800-322-4986.