Release Notes

Tektronix

Grass Valley Series 7000
Signal Management Systems
Software Release 6.41

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Version 6.41

May 1998

SMS 7000 Release Notes

Introduction

This document contains release notes for Version 6.41 (170035-07) of the Series 7000 Signal Management System. This document describes the operational changes, the software, firmware, and hardware required, and the procedures for performing the update from Versions 3.x, 4.x, 5.x and 6.x systems to 6.41.

Note Please read *Software, Hardware, and Firmware Required* on page 2 before proceeding with this Installation.

Enhancements and Fixes

Series 7000 Version 6.41 software offers the following enhancements and fixes to improve upon previous software versions.

Enhancements

- The Serial Node Controller Protocol Interface code has been added to the standard SMS 7000 Software Code. Use the information on the back of the title page to contact Customer Service to order the *Grass Valley SMS 7000 Serial Node Controller Protocol Interface, Protocol Manual*.

Fixes

- 256x128 Node Controller was not controlling inputs above 128 properly. The parameters were fixed to control the full 256 inputs.
- Unknown Error Message 24 was erroneously printing out on system console after programming Node Controllers. Code fixed to report error properly.

Software, Hardware, and Firmware Required

Releases previous to 6.x are composed of software, firmware, and hardware assemblies; however, versions 6.x and 6.41 are software upgrades only.

- Software is on IBM PC compatible 1.44 MB 3.5 inch floppy diskettes
- Firmware is loaded into ROMs and must be installed by replacing the appropriate ROM IC on an appropriate Series 7000 module
- Required firmware/hardware changes to Version **3.x** MCPU to install and run Version 6.41 are as follows:
  - Install the MCPU Programmable Logic Device that provides the flash memory control logic.
  - Replace 80960CA microprocessor with 80960CF.
  - Replace the FLASH memory SIMMS.
  - Install the MCPU Interrupt Controller Programmable Logic Device.
  - Install the MCPU Boot PROM.
  - Install two Mica Capacitors.
  - Update each Node Controller with a new NBX ROM.
- Required firmware/hardware changes to Version **4.x** MCPU to install and run Version 6.41 are as follows:
  - Install the MCPU Programmable Logic Device that provides the flash memory control logic.
  - Replace 80960CA microprocessor with 80960CF.
  - Replace the FLASH memory SIMMS.
  - Install the MCPU Boot PROM.
  - Install two Mica Capacitors.
  - Update each Node Controller with a new NBX ROM.
- Required firmware/hardware changes to Version **5.x** MCPU to install and run Version 6.41 are as follows:
  - Replace 80960CA microprocessor with 80960CF.
  - Install two Mica Capacitors.
  - Update each Node Controller with a new NBX ROM.

- No required firmware/hardware changes to Version **6.x** MCPU to install and run Version 6.41. Version 6.x to 6.41 is a software upgrade only.

On page 14 is a matrix of the appropriate versions of hardware (circuit modules) for each Series 7000 Release.

Note Whenever a circuit module or any part is updated to a new level, the dash version of the part must be re-marked to keep service records accurate. Re-ink or permanently label updated parts with the new -xx version. Refer to the compatibility matrices in Table 10 on page 9 of this document.

6.41 MCPU Upgrade Kit

If you are installing a Version 6.41 distribution for the first time, you will be using a 6.41 MCPU upgrade kit. The kits contain all firmware and hardware required to upgrade a Version 3.0, 4.0, or 5.x system to Version 6.41.

Three upgrade kits are available:

- Part number 170182-01, Upgrade from Version R3.x to R6.x
- Part number 170183-01, Upgrade from Version R4.x to R6.x
- Part number 170184-01, Upgrade from Version R5.x to R6.x

The contents of the kits are described in the following sections.

Upgrade Kit number 170182-01 is for 3.x to 6.41 upgrade.

Table 1. Version 6.x Upgrade Kit for 3.x to 6.41

Item	Part Number	Quantity	Description
1	160135-00	2 per mcpu	Preloaded 2 MByte FLASH Memory SIMMs
2	SC2813-00	1 per mcpu	80960CF E0 Step Microprocessor
3	052844-06	1 per mcpu	MCPU Boot ROM
4	151026-01	1 per mcpu	Flash ROM Memory Control Logic PLD
5	052874-04	1	MCPU Interrupt Controller PLD
6	FMN2546-00	1 per mcpu	470pf Mica Capacitor
7	FMN2522-00	1 per mcpu	470pf Mica Capacitor

Upgrade Kit number 170183-01 is for 4.x to 6.41 upgrade.

Table 2. Version 6.x Upgrade Kit for 4.x to 6.41

Item	Part Number	Quantity	Description
1	160135-00	2 per mcpu	Preloaded 2 MByte FLASH Memory SIMMs
2	SC2813-00	1 per mcpu	80960CF E0 Step Microprocessor
3	052844-06	1 per mcpu	MCPU Boot ROM
4	151026-01	1 per mcpu	Flash ROM Memory Control Logic PLD
5	FMN2546-00	1 per mcpu	470pf Mica Capacitor
6	FMN2522-00	1 per mcpu	470pf Mica Capacitor

Upgrade Kit number 170184-01 is for 5.x to 6.41 upgrade.

Table 3. Version 6.x Upgrade Kit for 5.x to 6.41

Item	Part Number	Quantity	Description
1	FMN2546-00	1 per mcpu	470pf Mica Capacitor
2	FMN2522-00	1 per mcpu	470pf Mica Capacitor
3	SC2813-00	1 per mcpu	80960CF E0 Step Microprocessor

Firmware

Version 6.x updates contained the following Series 7000 Firmware Assemblies and have not been updated with version 6.41 release.

Table 4. Firmware Assemblies

Description (Socket #)	Number per Board	Firmware Part Number	Board(s)/ Part Number
MCPU Boot ROM (SU5)	1	052844-06	MCPU/062876-04
MCPU PLD (SU48) [a]	1	151026-01	MCPU/062876-04
HX NC ROM(U17) [b]	1	151109-06	HX Node Controller/062797-04
HX NC ROM(U18) <Table Footnote XRef*>b	1	151108-06	HX Node Controller/062797-04
NBX ROM [c]	1	052855-04	Node Controller 062840-09

[a] MCPU PLD SU48 is required to use the new 2MB Flash SIMMs.

[b] New Horizon Node Controller ROMs (151109-06 & 151108-06) are required for each Horizon Node Controller module (062797) in the system.

[c] One new NBX ROM (052855-04) is required for each Series 7000 Node Controller module (062840) in the system.

Note A 3.0 to 6.x update also requires new Tally Module ROMs (GVP part number 151036-01).

6.41 MCPU Software

Five 3.5 inch floppy diskettes contain the Series 7000 V6.41 software (GV part number 170035-08).

Diskettes #1 & #2; MCPU, Node Controller, Amezi, Tally Manager, and Panel Application Software 6.41 has been pre-loaded into the 2MByte Flash Memory assemblies provided in the MCPU Upgrade Kits.

Note When using an MCPU Upgrade Kit with pre-programmed FLASH memory SIMMs, programming the MCPU Flash from diskettes #1 and #2 described above is not necessary.

Diskettes #1 & #2

Disk, MCPU, Node Controller, Amezi, Tally Manager, and Panel Application Software 6.41 (P/N 151157-12 & 159220-04).

Table 5. Diskettes 1 & 2 Contents

File	Description
AMEZI.BIN [a]	Amezi Application Software
AZGVG.BIN [a]	Amezi Application Software for GV matrices (HX, 440, Performer, 20-TEN)
BPS32.MOT [a]	Button Per Source Panel Application Software
CLF.FTP	FTP Script for CLF.MOT only
CLF.MOT [a]	Client Control Panel Application Software (former version)
CLFLOAD.BAT	Software Load Batch File for CLF.MOT only
CLN.FTP	FTP Script for CLN.MOT only
CLN.MOT [a]	Client Control Panel Application Software
CLNLOAD.BAT	Software Load Batch File for CLN.MOT only
COS.FTP	FTP Script for COS.MOT only
COS.MOT [a]	Custom Cubicle Or Studio Panel Application Software
COSLOAD.BAT	Software Load Batch File for COS.MOT only
CSOS.BIN[a]	Node Bus and Control Panel Bus Manager Software
EDP.MOT [a]	Eight Destination Paging Panel
EDPLOAD.BAT	Software Load Batch File for EDP.MOT only
EDP.FTP	FTP Script for EDP.MOT only
FL.MOT [a]	Node Controller Application Software
MB4.MOT	Multi-Bus Four Panel Application Software
MB8.MOT [a]	Multi-Bus Eight Panel Application Software
MCO.FTP	FTP Script for MCO.MOT only

Table 5. Diskettes 1 & 2 Contents - (continued)

File	Description
MCO.MOT [a]	Custom Machine Control Panel Application Software
MCOLOAD.BAT	Software Load Batch File for MCO.MOT only
PROGCP.RED [a]	7000 Sys. Diag. Script to Program Control Panels
PROGNC.RED[a]	7000 Sys. Diag. Script to Program Node Controllers
PXD.MOT [a]	Programmable XY Destination Panel Application Software
PXS.MOT [a]	Programmable XY Source Panel Application Software
R6.FTP	FTP Script for option 1 (normal load)
R6BIG.FTP	FTP Script for option 2 (alternate load)
R6LOAD.BAT	Software Load Batch File
README	Version 6.4 Notes
README.MEZ	Amezi and Tally Manager Installation Notes
README.NCP	Node Controller and Panel Application Installation Notes
README.SMS	MCPU Installation Notes
SCP.MOT	Simple Control Panel Application Software
SETUP.EXE	The MCPU Install Program
SID.FTP	FTP Script for SID.MOT only
SID.MOT[a]	Custom Source Identification Application Software
SIDLOAD.BAT	Software Load Batch File for SID.MOT only
SMS [a]	Software, MCPU Application 6.4
STMG.BIN [a]	Tally Manager Software
SVR.FTP	FTP Script for SVR.MOT only
SVR.MOT [a]	Server Control Panel Application Software
SVRLOAD.BAT	Software Load Batch File for SVR.MOT only
UCP.MOT [a]	Universal Control Panel Application Software
UMD.FTP	FTP Script for UMD.MOT only
UMD.MOT [a]	Under Monitor Display Panel Application Software
UMDLOAD.BAT	Software Load Batch File for UMD.MOT only

[a] File loaded into MCPU FLASH memory

Diskette #3, Disk, PC GUI Application Software (P/N 151159-07

Load diskette #3 into an IBM compatible PC running Windows 3.1.

Table 6. Diskette 3 Contents

File	Description
SMS7000.EXE	The GUI executable (P/N 151221-05)
SETUP.EXE	The GUI install program
TKLIB.DLL	PC NFS Dynamic Link Library
README.GUI	Installation Notes

Diskette #4, Disk, Visual Status Display Software (P/N 153324-03)

Load diskette #4 into an IBM compatible PC running Windows 3.1.

Table 7. Diskette 4 Contents

File	Description
VSD.EXE	The Visual Status Display executable
SETUP.EXE	The VSD Setup program
README.V	Installation Notes
VSD.INI	VSD Initialization File
*.VSD	Display Template Files

Diskette #5, Disk, Print Configuration Tool (P/N 153322-03)

Load diskette #5 into an IBM compatible PC running Windows 3.1.

Table 8. Diskette 5 Contents

File	Description
PRINTCFG.EXE	The Print Configuration Tool executable
SETUP.EXE	The GUI install program
README.PRT	Installation Notes

The following table contains the version shown by the system diagnostic command **ver all** with the exception of the PC Applications, GUI, VSD and PRINTCFG. Individual software subsystem version numbers are documented in the README file on each disk.

Table 9. Release 6.41 Software Versions

Software/Firmware	Version	File
MCPU Application sms	SMS6.4	SMS
MCPU Boot ROM	SMSB5.30	
Network ASN (Amezi)	AMEZ6.3	AMEZI.BIN
Network GSC	CSOS6.3	CSOS.BIN
Network GSC	STMG6.3	STMG.BIN
Network PSD	LBCP6.3	(sms)
Network RPC	LBCP6.3	(sms)
Network IPC	--------	(sms)
Network SDT	LBCP6.3	(sms)
NBX (Node Ctrlr)	NBX_6.02	
Node Controller App.	6.41	FL.MOT
CPOS	CPOS1.00	
Panel App. BPS32	BPS6.4	BPS32.MOT
Panel App. UCP	UCP6.4	UCP.MOT
Panel App. MB8	MB86.4	MB8.MOT
Panel App. CLN	CLN6.4	CLN.MOT
Panel App. CLF	CLN6.4	CLF.MOT
Panel App. COS	COS6.4	COS.MOT
Panel App. MCO	MCO6.4	MCO.MOT
Panel App. SID	SID6.4	SID.MOT
Panel App. SVR	SVR6.4	SVR.MOT
Panel App. UMD1/2/3	UMD6.4	UMD.MOT
Panel App. PXS	PXS6.4	PXS.MOT
Panel App. PXD	PXD6.4	PXD.MOT
Panel App. EDP	EDP6.4	EDP.MOT
GUI	6.4	SMS7000.EXE
VSD	6.3	VSD.EXE
PRINTCFG	6.3	PRTCNFG.EXE
Panel App. SCP	6.4	SCP.MOT
Panel App. MB4	6.4	MB4.MOT

Software/Firmware Compatibility Matrix

Table 10 below is a matrix of Series 7000 software releases beginning with the 5.30 release showing the various supported software and firmware. Information on releases prior to version 5.3 is shown in Table 11 on page 12.

Table 10. Software Compatibility Matrix Versions 5.30 and Above

Software/Firmware Assembly	Part Number	R5.30 4/95	R5.37 1/96	R6.0 4/96	R6.3 6/97	R6.4 12/97	R6.41 5/98
Disk, MCPU Application Software 5.30	151157-07	■					
Disk, MCPU Application Disk 1 Software 5.37	151157-08	■	■	■			
Disk, MCPU Application Disk 1 Software 6.0	151157-09			■			
Disk, MCPU Application Disk 1 Software 6.3	151157-10				■		
Disk, MCPU Application Disk 1 Software 6.4	151157-11					■	
Disk, MCPU Application Disk 1 Software 6.41	151157-12						■
Disk, MCPU Application Disk 2 Software 5.37	159220-00	■	■	■			
Disk, MCPU Application Disk 2 Software 6.0	159220-01			■			
Disk, MCPU Application Disk 2 Software 6.3	159220-02				■		
Disk, MCPU Application Disk 2 Software 6.4	159220-03					■	
Disk, MCPU Application Disk 2 Software 6.41	159220-04						■
Disk, Series 7000 PC GUI Software 5.30	151159-03	■					
Disk, Series 7000 PC GUI Software 5.41	151159-04		■	■			
Disk, Series 7000 PC GUI Software 6.0	151159-05			■			
Disk, Series 7000 PC GUI Software 6.3	151159-06				■		
Disk, Series 7000 PC GUI Software 6.4	151159-07					■	■
Disk, Series 7000 PC VSD Software 5.30	153324-00	■					
Disk, Series 7000 PC VSD Software 5.34	153324-01	■	■	■			
Disk, Series 7000 PC VSD Software 6.0	153324-02			■			
Disk, Series 7000 PC VSD Software 6.3	153324-03				■	■	■
Disk, Series 7000 PC PRTCNFG Software 5.30	153322-00	■					
Disk, Series 7000 PC PRTCNFG Software 5.40	153322-01	■	■	■			
Disk, Series 7000 PC PRTCNFG Software 6.0	153322-02			■			
Disk, Series 7000 PC PRTCNFG Software 6.3	153322-03				■	■	■
Firmware, 80960CA, MCPU Module	052844-06	■	■				
Firmware, 80960CF, MCPU Module	SC2813-00			■	■	■	■
Firmware, Analog Audio MEC	052852-03	■	■	■	■	■	■
Firmware, Analog Video MEC	052849-02	■	■	■	■	■	■
Firmware, Analog Video MEC	052849-03	■	■	■	■	■	■
Firmware, An. Vid MEC on 062908 bds. 2x1[a]	052849-03	■	■	■	■	■	■
Firmware, Cont. Panel Operating Sys.	052846-01	■	■	■	■	■	■
Firmware, Digital Audio MEC	052851-01	■	■	■	■	■	■
Firmware, Digital Video MEC	052850-02	■	■	■	■	■	■
Firmware, Digital Video MEC	052850-03	■	■	■	■	■	■
Firmware, Dig. Vid. MEC on 062935 bds.2x1[a]	052850-03	■	■	■	■	■	■
Firmware, Digital Video MEC	052850-04	■	■	■	■	■	■
Firmware, Dig. Vid. MEC on 062935 bds.2x1[a]	052850-04	■	■	■	■	■	■
Firmware, SDV_C Digital Video MEC	156068-00				■	■	■
Firmware, HX NC App Even R6.0	151109-06			■	■	■	■
Firmware, HX NC App Odd R6.0	151108-06			■	■	■	■
Firmware, HX NC App Even R5.30	151109-05	■	■				

Table 10. Software Compatibility Matrix Versions 5.30 and Above - (continued)

Software/Firmware Assembly	Part Number	R5.30 4/95	R5.37 1/96	R6.0 4/96	R6.3 6/97	R6.4 12/97	R6.41 5/98
Firmware, HX NC App Odd R5.30	151108-05	■	■				
Firmware, Node Cntrl R3 Boot ROM (U18)	052865-03	■	■	■	■	■	■
Firmware, Node Cntrl R3 Boot ROM (U17)	052866-03	■	■	■	■	■	■
Firmware, Tally Module	151036-01	■	■	■	■	■	■
Firmware, FCX Frm Ctrlr Up Ver 3.0	052854-02	■	■	■	■	■	■
Firmware, NBX Comm Proc Up R4.0	052855-03	■	■				
Firmware, NBX Comm Proc Up R6.0	052855-04			■	■	■	■
Software, Amezi Driver 5.30	none	■					
Software, Amezi Driver 5.37	none		■				
Software, Amezi Driver 6.0	none			■			
Software, Amezi Driver 6.3	none				■		
Software, Amezi Driver 6.4	none					■	■
Software, BPS32 Panel Appl 5.30	none	■					
Software, BPS32 Panel Appl 5.37	none	■	■				
Software, BPS32 Panel Appl 6.0	none			■			
Software, BPS32 Panel Appl 6.3	none				■		
Software, BPS32 Panel Appl 6.4	none					■	■
Software, Client Control Panel App 5.30 (CLN)	none	■					
Software, Client Control Panel App 5.37 (CLN)	none	■	■				
Software, Client Control Panel App 6.0 (CLN)	none			■			
Software, Client Control Panel App 6.3 (CLN)	none				■		
Software, Client Control Panel App 6.4 (CLN)	none					■	■
Software, Client Former Control Panel Appl 6.0 (CLF)	none			■			
Software, Client Former Control Panel Appl 6.3 (CLF)	none				■		
Software, Client Former Control Panel Appl 6.4 (CLF)	none					■	■
Software, COS Control Panel Appl 5.30	none	■					
Software, COS Control Panel Appl 5.37	none	■	■				
Software, COS Control Panel Appl 6.0	none			■			
Software, COS Control Panel Appl 6.3	none				■		
Software, COS Control Panel Appl 6.4	none					■	■
Software, CSOS Driver APPl 4.0	none	■					
Software, CSOS Driver APPl 5.37	none	■	■				
Software, CSOS Driver APPl 6.0	none			■			
Software, CSOS Driver APPl 6.3	none				■		
Software, CSOS Driver APPl 6.4	none					■	■
Software, MB8 Panel Appl 5.30	none	■					
Software, MB8 Panel Appl 5.37	none	■	■				
Software, MB8 Panel Appl 6.0	none			■			
Software, MB8 Panel Appl 6.3	none				■		
Software, MB8 Panel Appl 6.4	none					■	■
Software, MCO Control Panel Appl 5.30	none	■					
Software, MCO Control Panel Appl 5.37	none	■	■				
Software, MCO Control Panel Appl 6.0	none			■			
Software, MCO Control Panel Appl 6.3	none				■		
Software, MCO Control Panel Appl 6.4	none					■	■
Software, Node Ctrl Appl 5.30	none	■					
Software, Node Ctrl Appl 5.37	none		■				
Software, Node Ctrl Appl 6.0	none			■			

Table 10. Software Compatibility Matrix Versions 5.30 and Above - (continued)

Software/Firmware Assembly	Part Number	R5.30 4/95	R5.37 1/96	R6.0 4/96	R6.3 6/97	R6.4 12/97	R6.41 5/98
Software, Node Ctrl Appl 6.3	none				■		
Software, Node Ctrl Appl 6.4	none					■	
Software, Node Ctrl Appl 6.41	none						■
Software, PC GUI & Support Appl 5.30	none	■					
Software, PC GUI & Support Appl 5.41	none		■				
Software, PC GUI & Support Appl 6.0	none			■			
Software, PC GUI & Support Appl 6.3	none				■		
Software, PC GUI & Support Appl 6.4	none					■	■
Software, Server Control Panel App 5.30 (SVR)	none	■					
Software, Server Control Panel App 5.37 (SVR)	none	■	■				
Software, Server Control Panel App 6.0 (SVR)	none			■			
Software, Server Control Panel App 6.3 (SVR)	none				■		
Software, Server Control Panel App 6.4 (SVR)	none					■	■
Software, SID Control Panel Appl 5.30	none	■					
Software, SID Control Panel Appl 5.37	none	■	■				
Software, SID Control Panel Appl 6.0	none			■			
Software, SID Control Panel Appl 6.3	none				■		
Software, SID Control Panel Appl 6.4	none					■	■
Software, Tally Manager Driver 5.30	none	■					
Software, Tally Manager Driver 5.37	none	■	■				
Software, Tally Manager Driver 6.0	none			■			
Software, Tally Manager Driver 6.3	none				■		
Software, Tally Manager Driver 6.4	none					■	■
Software, UCP Panel Appl 5.30	none	■					
Software, UCP Panel Appl 5.37	none	■	■				
Software, UCP Panel Appl 6.0	none			■			
Software, UCP Panel Appl 6.3	none				■		
Software, UCP Panel Appl 6.4	none					■	■
Software, Under Mon. Display Appl 5.30	none	■					
Software, Under Mon. Display Appl 5.37	none	■	■				
Software, Under Mon. Display Appl 6.0	none			■			
Software, Under Mon. Display Appl 6.3	none				■		
Software, Under Mon. Display Appl 6.4	none					■	■
Software, PC VSD App & Spt Software 5.34	none	■	■				
Software, PC VSD App & Spt Software 6.0	none			■			
Software, PC VSD App & Spt Software 6.3	none				■	■	■
Software, PC Print Cnfig App & Spt Software 5.40	none	■	■				
Software, PC Print Cnfig App & Spt Software 6.0	none			■			
Software, PC Print Cnfig App & Spt Software 6.3	none				■	■	■
Software, PXD Panel Appl 5.30	none	■					
Software, PXD Panel Appl 5.37	none	■	■				
Software, PXD Panel Appl 6.0	none			■			
Software, PXD Panel Appl 6.3	none				■		
Software, PXD Panel Appl 6.4	none					■	■
Software, PXS Panel Appl 5.30	none	■					
Software, PXS Panel Appl 5.37	none	■	■				
Software, PXS Panel Appl 6.0	none			■			
Software, PXS Panel Appl 6.3	none				■		

Table 10. Software Compatibility Matrix Versions 5.30 and Above - (continued)

Software/Firmware Assembly	Part Number	R5.30 4/95	R5.37 1/96	R6.0 4/96	R6.3 6/97	R6.4 12/97	R6.41 5/98
Software, PXS Panel Appl 6.4	none						
Software, MB4 Panel Appl 6.3	none						
Software, MB4 Panel Appl 6.4	none						
Software, SCP Panel Appl 6.3	none						
Software, SCP Panel Appl 6.4	none						
Software, EDP Panel Appl 6.4	none						

[a] Analog video Secondary Switch modules 062908 use MEC software version -03 only

Table 11. Software Compatibility Matrix Versions 1.0 to 4.06

Software/Firmware Assembly	Part Number	R1.0	R2.0 1/93	R2.1 7/93	R3.0 10/93	R3.05 10/93	R3.06 11/93	R3.07 12/93	R4.05 6/94	R4.06 8/94
Disk, Amezi & Tally Mgr App Software	151158-00									
Disk, Amezi & Tally Mgr App Software 4.0	151158-01									
Disk, Amezi & Tally Mgt App Software 4.06	151158-02									
Disk, MCPU Application Software	151157-00									
Disk, MCPU Application Software 3.05	151157-01									
Disk, MCPU Application Software 3.06	151157-02									
Disk, MCPU Application Software 3.07	151157-03									
Disk, MCPU Application Software 4.0	151157-04									
Disk, MCPU Application Software 4.06	151157-05									
Disk, Node Ctrl & Pnl Appl Software 4.0	151156-01									
Disk, Node Ctrl & Pnl Appl Software 4.06	151156-02									
Disk, Node Ctrl & Pnl Application Software	151156-00									
Disk, Series 7000 PC GUI Software	151159-00									
Disk, Series 7000 PC GUI Software	151159-01									
Disk, Series 7000 PC GUI Software 4.0	151159-02									
Firmware, 80960CA, MCPU Module	052844-00									
Firmware, 80960CA, MCPU Module	052844-01									
Firmware, 80960CA, MCPU Module	052844-02									
Firmware, 80960CA, MCPU Module	052844-03									
Firmware, 80960CA, MCPU Module	052844-04									
Firmware, 80c152, MCPU Module (csos)	052845-00									
Firmware, Analog Audio MEC	052852-00									
Firmware, Analog Audio MEC	052852-01									
Firmware, Analog Audio MEC	052852-02									
Firmware, Analog Audio MEC	052852-03									
Firmware, Analog Video MEC	052849-00									
Firmware, Analog Video MEC	052849-01									
Firmware, Analog Video MEC	052849-02									
Firmware, Analog Video MEC	052849-03									
Firmware, Control Panel Operating System	052846-00									
Firmware, Control Panel Operating System	052846-01									
Firmware, Digital Audio MEC	052851-00									
Firmware, Digital Audio MEC	052851-01									
Firmware, Digital Video MEC	052850-00									
Firmware, Digital Video MEC	052850-01									
Firmware, Digital Video MEC	052850-02									
Firmware, HX NC App Even R4.0	151109-04									
Firmware, HX NC App Odd R4.0	151108-04									

Table 11. Software Compatibility Matrix Versions 1.0 to 4.06 - (continued)

Software/Firmware Assembly	Part Number	R1.0	R2.0 1/93	R2.1 7/93	R3.0 10/93	R3.05 10/93	R3.06 11/93	R3.07 12/93	R4.05 6/94	R4.06 8/94
Firmware, HX_NC App Even	151109-00		■	■						
Firmware, HX_NC App Even	151109-01				■	■	■	■		
Firmware, HX_NC App Odd	151108-00		■	■						
Firmware, HX_NC App Odd	151108-01				■	■	■	■		
Firmware, Node Cntrl R3 Boot Rom (U18)	052865-03				■	■	■	■	■	■
Firmware, Node Cntrl R3 Boot Rom (U17)	052866-03				■	■	■	■	■	■
Firmware, Node Controller App Even	052866-01	■								
Firmware, Node Controller App Odd	052865-01	■								
Firmware, Node Controller App Ver 2.0 (U16)	052865-02		■	■						
Firmware, Node Controller App Ver 2.0 (U17)	052866-02		■	■						
Firmware, Tally Module	151036-00				■	■	■	■		
Firmware, Tally Module	151036-01								■	■
Firmware, Frame Controller	052854-00	■								
Firmware, FCX Frm Ctrlr Up Ver 2.0	052854-01		■	■						
Firmware, FCX Frm Ctrlr Up Ver 3.0	052854-02				■	■	■	■	■	■
Firmware, Node Bus Comm	052855-00	■								
Firmware, NBX Comm Proc V2	052855-01		■	■						
Firmware, NBX Comm Proc Up R3.0	052855-02				■	■	■	■		
Firmware, NBX Comm Proc Up R4.0	052855-03								■	■
Software, Amezi Driver 4.0	none								■	
Software, Amezi Driver 4.06	none									■
Software, BPS32 Control Panel App Rev 3.0	none				■	■	■	■		
Software, BPS32 Panel Appl 4.0	none								■	■
Software, Client Control Panel App	none								■	■
Software, COS Control Panel Appl 4.0	none								■	■
Software, CSOS Driver APPl 4.0	none								■	■
Software, CSOS Driver APPL 2.0	none		■							
Software, CSOS Driver APPL 2.1	none			■						
Software, CSOS Driver APPL 3.X	none				■	■	■	■		
Software, CSOS Driver APPL 4.0	none								■	■
Software, MB8 Control Panel App Rev 3.0	none				■	■	■	■		
Software, MB8 Panel Appl 4.0	none								■	■
Software, MCO Control Panel Appl 4.0	none								■	■
Software, MCPU Application Release 1.0	none	■								
Software, MCPU Application Release 2.0	none		■							
Software, MCPU Application Release 2.1	none			■						
Software, Node Ctrl Appl 4.0	none								■	
Software, Node Ctrl Appl 4.0	none									■
Software, PC GUI & Support Appl 4.0	none								■	■
Software, Server Control Panel App	none								■	■
Software, SID Control Panel Appl 4.0	none								■	■
Software, Tally Manager Driver 4.0	none								■	■
Software, UCP Control Panel App Rev 3.0	none				■	■	■	■		
Software, UCP Panel Appl 4.0	none								■	■
Software, Under Monitor Display App	none				■	■	■	■		
Software, Under Monitor Display Appl 4.0	none								■	■

Hardware Compatibility Matrix

The following table lists hardware assembly numbers for the various Series 7000 Software Releases. Matrix Element Control (MEC) circuitry on each matrix module must be at the proper revision level, or later, to take full advantage of 6.4 features. Check the table for minimum versions (-xx) of modules to fully support R6.4

Table 12. Series 7000 Hardware Compatibility

Hardware Assembly	Part #	R3.0	R3.05	R3.06	R3.07	R3.1	R4.0	R5.37	R6.0	R6.3	R6.4	R641
Horizon Node Controller	062797	-00E	-01B				-02A	-03A	-04A	-04C		
Analog Video Input	062836	-02A								-03B		
Analog Video Output	062837	-02A								-02K		
Analog Video Crosspoint	062838	-02A						-03A				
Node Controller	062840	-02C					-03A	-04A	-06A	-07A	-08A	-09A
Analog Video Output	062843	-02A								-02E		
Serial Digital Video Input	062862	-02A								-02H		
Serial Digital Video Crosspoint	062863	-02A								-02H		
Serial Digital Video Output	062864	-02A								-02F		
Serial Digital Video Output Monitor	062866	-02A								-02E		
Non-reclock. Digital Video Input	062870	-02B								-02J		
Non-reclock. Digital Video Output	062871	-02A								-02F		
Digital Video Tertiary Output	062873						-00			-00F		
MCPU Controller Module	062876	-01R/-02C		-02K			-03B	-04	-05	-05B		
Controller Frame Motherboard	062877	-01A								-01B		
CIF Module	062884						-00E			-00J		
Source Tally I/O bd.	062886	-00H								-00L		
General Purpose Control Panel bd.	062888	-10/-11					-10E/-11F/-20B			-10J/-11K/-20E		
Coax I/F mezzanine	062893	-00B								-00D		
Backplane I/F mezzanine	062899						-00A			-00D		
Secondary Switch 2x1 bd.	062908	-01A						-02A		-02C		
Secondary Switch 8x1 bd.	062910	-01A								-02B		
Analog Audio Matrix module	062922	-03B								-04E		
Digital Audio Matrix module	062930	-01D								-02F		
Data Matrix module	062931	-01C	-01C/-02KC							-01H/-02KG		
Digital Vid Secondary Switch	062935	-00B								-00F		
Digital Vid Distribution Amplifier	062936	-00B								-00J		
Node Control Expansion module	062938	-01B								-01E		
Async Mezzanine	160018	-00A								-00C		
Global Serial Channel Mezzanine	160019						-00F			-00J		
UART Mezzanine	160020	-00A		-00B	-00D					-00K		
Ethernet Mezzanine	160023	-00A		-00B	-00C		-00D			-00J		

Table 12. Series 7000 Hardware Compatibility - (continued)

Hardware Assembly	Part #	R3.0	R3.05	R3.06	R3.07	R3.1	R4.0	R5.37	R6.0	R6.3	R6.4	R641
Controller Frame	092844	-02								-02E		
BPS-32 Control Panel	092845	-02					-03		-06			
MB8 Control Panel	092846	-02					-03		-06			
Under Monitor Display [a]	092847	-02					-03/-12/-22/-32		-06/-15/-25/-35			
Dual Under Monitor Display [a]	092852	-02					-03/-12/-22/-32		-06/-15/-25/-36			
Triple Under Monitor Display [a]	092876						-30		-33			
UCP Control Panel	092857	-02					-03		-06			
Client Control Panel[b]	092858	-00							-03			
Server Control Panel	092859	-00							-03			
PXS Control Panel	190033							-02	-03			
PXD Control Panel[c]	190035							-02	-03			
PXYE Control Panel[c]	190034							-02	-03			
SID I/F Control Panel	190009								K04			
MB4 Control Panel	190099									-00		
SCP Control Panel	190098									-00		
Brd. 32 Channel SDV Input	160226									-00		
Brd, 32 Ch SDV Reclocking Output	160236									-00		
Brd, 32x32 SDV Crosspoint	160227									-00		
Brdm SDV Dual Sync Vid O/P Mon	160261									-00		
COS Control Panel	Custom									-00		
MCO Control Panel	Custom									-00		
EDP Control Panel	190115										-00	

[a] The VMD.MOT application is loaded into single, dual, and triple Under Monitor Display hardware.

[b] Either CLN.MOT (standard) or CLF.MOT applications can be loaded into the Client Control Panel hardware.

[c] The PXD.MOT application is loaded into both PXD and PXYE Control Panel hardware.

Hardware, Firmware, and Software Installation

Installation information for Version 6.41 MCPU Update Kits in systems that currently run Version 3.x, 4,x, 5.x, or 6.x Software.

Requirements

- -02 version Control Frame (092844-02) with Ethernet power modification, SMS-DV64X64, or SMS-64V Compact System with Controller
- For systems that contain the NC Expansion option, the 062938-01 version Node Controller Expansion Boards (062938-00 modules do **not** work)
- A PC running Windows 3.1 (not Windows95), and PC/NFS 5.0 (or higher) configured to support a Serial (SLIP) connection to the MCPU CFG/CTL port or an Ethernet connection to the Ethernet port. (Please refer to the *Series 7000 Configuration Manual* for PC NFS information.)
- A dumb terminal (or equivalent) connected to the MCPU CTL port to be used as the system terminal
- *Series 7000 Installation Manual* (TP3387-06 or later)
- *Series 7000 Configuration Manual* (TP3561-01 or later)

Procedures

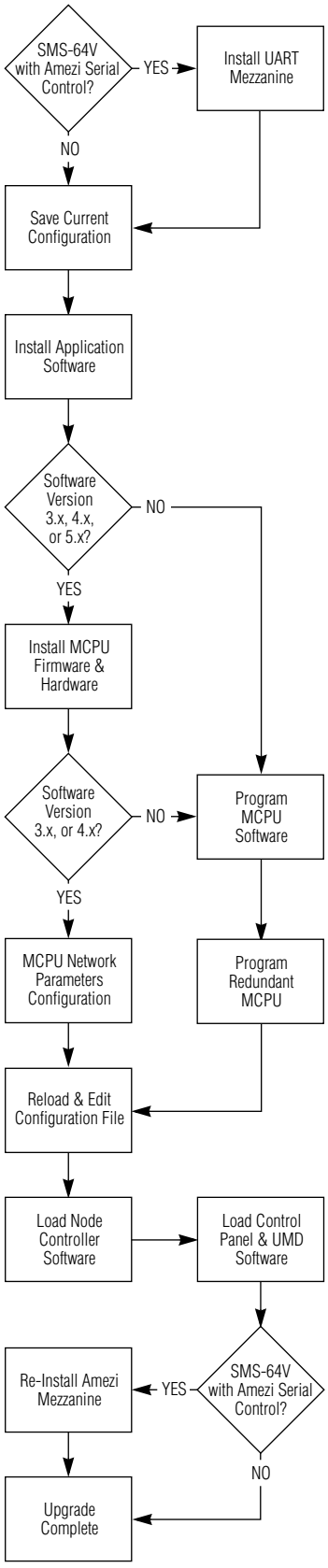

Figure 1. Upgrade Flowchart

Use Figure 1, and Table 13 to determine which of the following procedures are needed to upgrade your current system.

Table 13. Upgrade Table

Versions		
6.x	**5.x**	**4.x or 3.x**
Install UART Mezzanine (page 18) (SMS-64V with Amezi Serial Control only)	Install UART Mezzanine (page 18) (SMS-64V with Amezi Serial Control only)	Install UART Mezzanine (page 18) (SMS-64V with Amezi Serial Control only)
Save Current Configuration (page 20)	Save Current Configuration (page 20)	Save Current Configuration (page 20)
Install Application Software (page 21)	Install Application Software (page 21)	Install Application Software (page 21)
Program MCPU Software (page 28)	Install MCPU Firmware and Hardware (page 25)	Install MCPU Firmware and Hardware (page 25)
Program Redundant MCPU (page 35)	Program MCPU Software (page 28)	MCPU Network Parameters Configuration (page 27)
Reload and Edit Configuration File (page 35)	Program Redundant MCPU (page 35)	Reload and Edit Configuration File (page 35)
Load Node Controller Software (page 37)	Reload and Edit Configuration File (page 35)	Load Node Controller Software (page 37)
Load Control Panel and UMD Software (page 38)	Load Node Controller Software (page 37)	Load Control Panel and UMD Software (page 38)
Re-Install Amezi Mezzanine (page 39) (SMS-64V with Amezi Serial Control only)	Load Control Panel and UMD Software (page 38)	Re-Install Amezi Mezzanine (page 39) (SMS-64V with Amezi Serial Control only)
	Re-Install Amezi Mezzanine (page 39) (SMS-64V with Amezi Serial Control only)	

Install UART Mezzanine

This is to be used when upgrading SMS-64V Systems with Amezi Serial Control only.

Some Compact System (SMS-64V) configurations may use a Controller Module with an Amezi card in the #2 mezzanine position running Native Protocol. These systems do not have the capability to run a system terminal.

To install new MCPU Application Software on these systems, the Amezi mezzanine must be temporarily replaced with a UART mezzanine to run the system terminal. The MCPU module is configured with a UART mezzanine in the lower mezzanine position and an Amezi mezzanine in the upper mezzanine position.

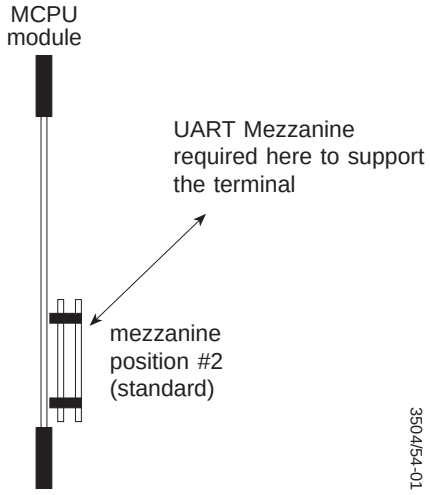

Figure 2. Amezi Mezzanine Location

To Change the Amezi to a UART Mezzanine:

1. On the PC, at the **`pc dos`** prompt, use **`ping`** to verify that the network interface works properly.

   Enter the following commands:

   For MCPU #1
   `C:\> ping sms7000`

   For MCPU #2
   `C:\> ping sms7000b`

   The system should respond as follows:
   `C:\> sms7000 (192.0.2.2) is alive`

   If not, refer to the *Series 7000 Configuration Manual,* and verify the proper installation of PC NFS and SLIP Network Interface.

2. Telnet into the System Diagnostic Interface.

   Enter the following command:

   For MCPU #1

   C:\> telnet sms7000

   For MCPU #2

   C:\> telnet sms7000b

3. Press **RETURN** to see the SMS7000> System Diagnostic prompt.

4. Enter the following commands at the System Diagnostic prompt:

   SMS7000> del “slip.ini”

   SMS7000> del “console.ini”

5. Verify the above files have been deleted by examining a directory listing of the FLASH file system.

   Enter the **dir** command:

   SMS7000> dir

   The files just deleted should NOT exist in the FLASH file system directory.

   Exit the Telnet program by typing logout

   SMS7000> logout

CAUTION If you do not properly EXIT Telnet (logout), you will not be able to re-establish Telnet communication except by RESETTING the MCPU(s).

6. Remove the MCPU(s) from the frame. Remove the top Amezi mezzanine and replace it with a UART mezzanine board. Re-insert the MCPU(s). Both mezzanines must now be UART mezzanines.

7. Verify that the System Diagnostic Interface (SMS7000> prompt) is now running on the CTL port of the Compact 64V. (Native Protocol is no longer running.) The communications parameters are as follows:

   RS232 9600 baud 8 data bits Parity = None 1 stop bit.

Save Current Configuration

This is to be used when upgrading from all versions.

Using the version 3.x, 4.x, 5.x, or 6.x Configuration Editor (GUI) on your Windows PC save the configuration.

To Save the Current Configuration File:

1. Open Windows.
2. Double-click on the SMS 7000 icon to access the Connect to Router window.

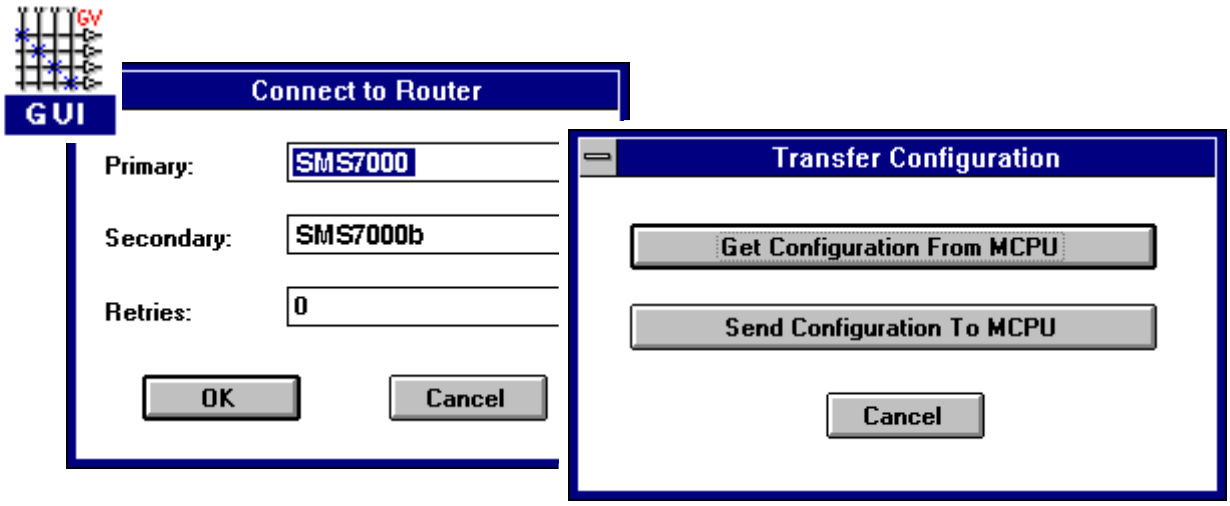

Figure 3. GUI Icon, Connect to Router, and Transfer Configuration Windows

3. Click on **OK** to cause your PC to connect to the router and establish communications with the MCPU. The Transfer Configuration window will appear.
   Clicking on **CANCEL** will return to the OffLine configuration building or editing mode.
4. Click on **Get Configuration From MCPU** to transfer default configuration file to the GUI PC.
5. Under the **OnLine** menu, select **Disconnect** to go OffLine.

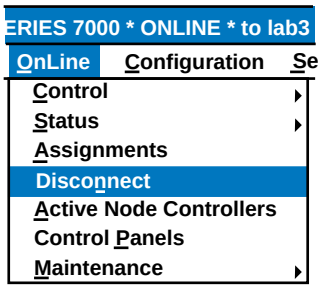

Figure 4. Disconnect Menu

6. Under the **File** menu, select **Save As** to save a copy of the current configuration to the GUI PC hard drive or to other media such as a floppy diskette.

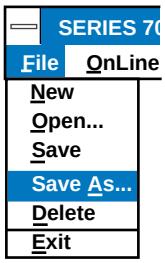

Figure 5. Save As Menu

Install Application Software

This is to be used when upgrading from all versions.

To copy files onto the PC for updating the Series 7000 MCPU and to load Series 7000 PC programs, insert the disk labeled Series 7000 MCPU Application Software, start Windows, select Run from the File menu of the Program Manager, and enter:

```
A:\SETUP
```

Use the appropriate drive designation in your entry if the setup disk is inserted in a drive other than the A drive.

The program briefly displays a title screen, and then displays the Welcome screen:

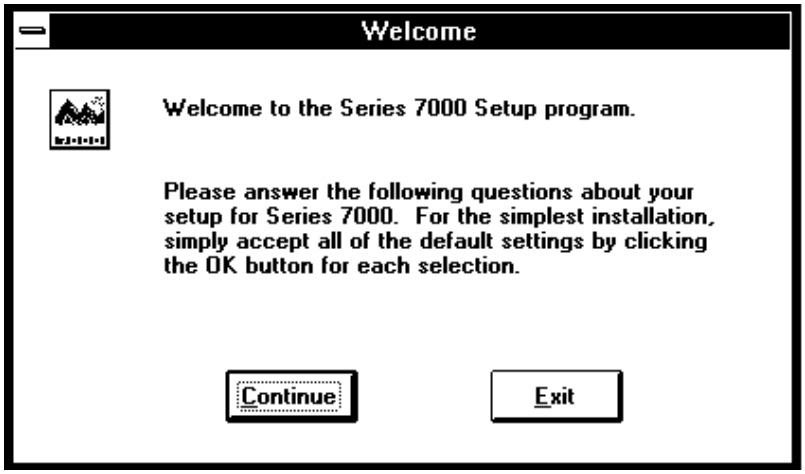

Figure 6. Welcome window

Press the continue button, and the Custom Installation screen displays:

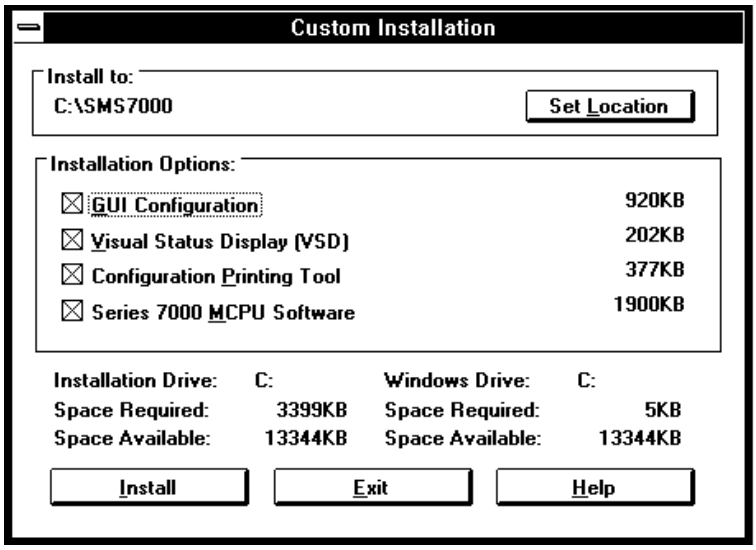

Figure 7. Custom Installation Window

Click on the check-boxes to select which Series 7000 options you need to load onto your PC.

To select a different directory to store your Series 7000 software, press the Set Location button. The Installation Location dialog box displays:

Figure 8. Installation Location Window

For an explanation of the installation options, press the **HELP** button, and the following help screen displays.

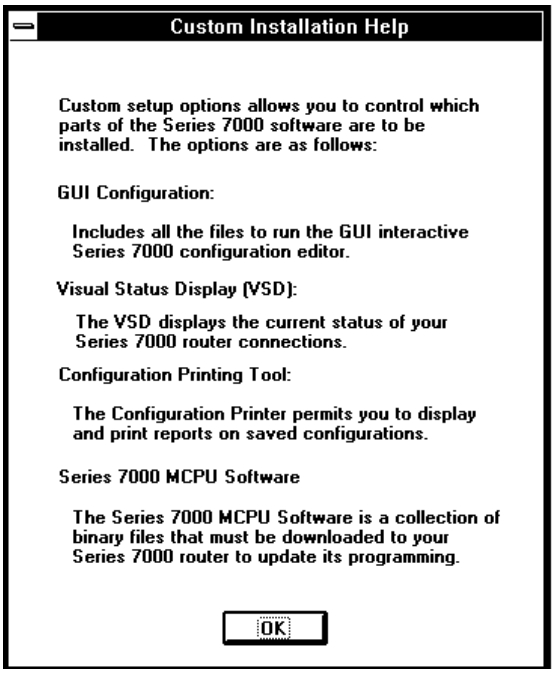

Figure 9. Custom Installation Help Window

If you install the PC GUI software, the installation procedure may change your NFS directory. The system asks you to respond with this dialog box:

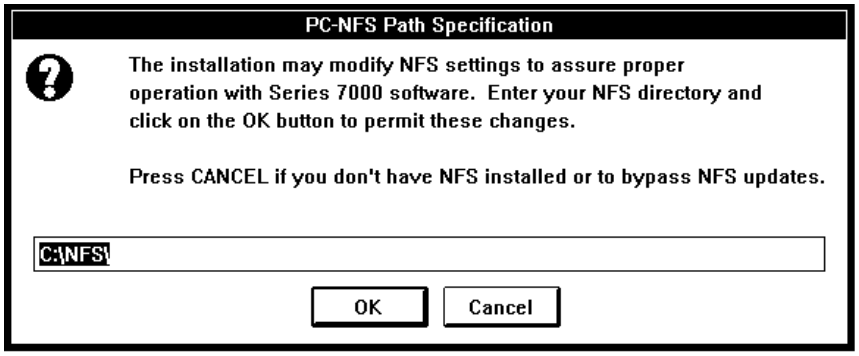

Figure 10. PC-NFS Path Specification Window

You may bypass NFS checking by selecting the ***CANCEL*** button.

The installation procedure asks you to insert other disks as needed with a dialog box similar to the following:

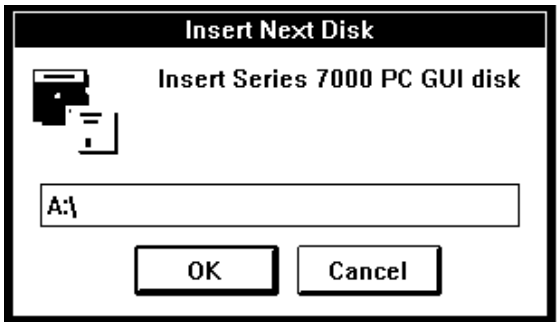

Figure 11. Insert Next Disk Window

If you install the Series 7000 software on a PC that already has a prior software version, the system may make backups of your previous files. If it does, the system displays the following information screen:

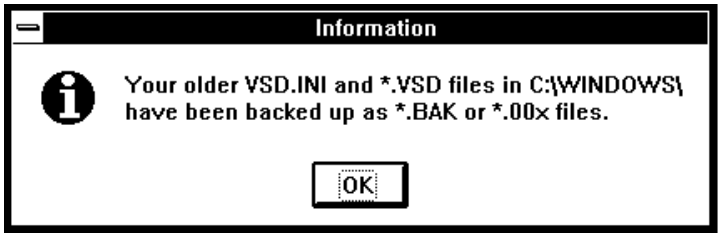

Figure 12. Information Window

As the installation completes, the system prompts you to view the Series 7000 **READ ME** file or to return to the Window operating system directly:

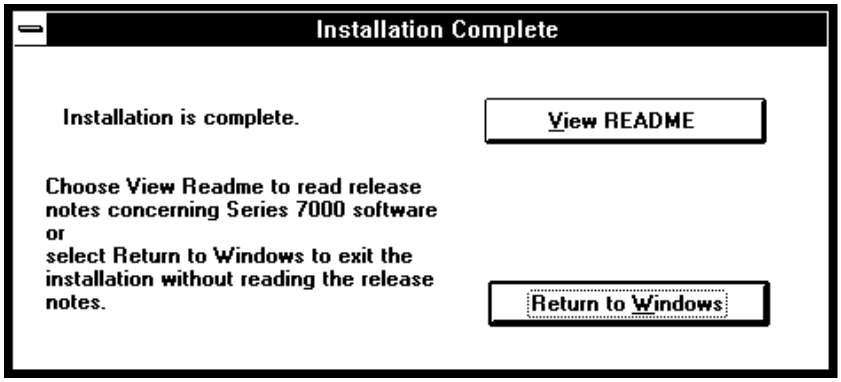

Figure 13. Installation Complete Window

Install additional programs, such as the PC GUI, PC Visual Status Display, or the Print Configuration Tool, by inserting the corresponding disks and running the setup program on each disk. This allows installation of individual programs without stepping through the entire procedure.

Install MCPU Firmware and Hardware

This is to be used when upgrading from versions 3.x, 4.x and 5.x only.

CAUTION Use ground straps and take appropriate ANTI-STATIC precautions when handling modules and IC components.

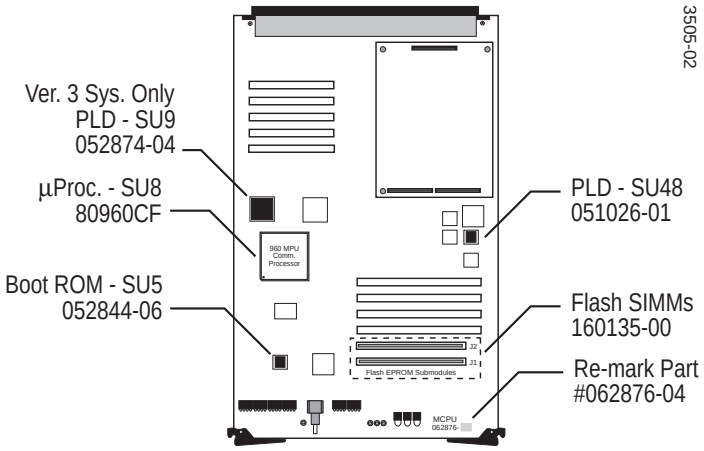

Figure 14. Firmware Locations

Remove the Main and Redundant MCPU(s) from their frame. Change the Boot ROM, FLASH SIMMs, 80960CA Microprocessor, and PLD ICs listed below on each module.

Add the two Mica Capacitors by following the instructions provided with FMN 2546-00 and FMN 2522-00.

CAUTION Verify the Flash SIMMs label and the socket in which they should be inserted. Place the J1 SIMM in the J1 socket, and the J2 SIMM in the J2 socket.

Use a marking pen to update each MCPU to the -04 version number, that is 062876-04. Version numbers **MUST** be updated to avoid future service problems.

Table 14. New MCPU Firmware and Hardware

Description	Quantity per Board	New Firmware, Hardware Part Number	Board(s)/ Part Number
MCPU Boot ROM (SU5) (Ver. 3 & 4 systems only)	1	052844-06	MCPU/062876-xx
MCPU PLD (SU48) (Ver. 3 & 4 systems only)	1	051026-01	MCPU/062876-xx
MCPU PLD (SU9) (Ver. 3 systems only)	1	052874-04	MCPU/062876-xx

Table 14. New MCPU Firmware and Hardware

Description	Quantity per Board	New Firmware, Hardware Part Number	Board(s)/ Part Number
MCPU FLASH SIMMs (J1, J2) (Ver. 3 & 4 systems only)	2	160135-00	MCPU/062876-xx
MCPU 80960CF (SU8) MicroProcessor (E0 STEP) (Ver. 3, 4, & 5 systems only)	1	SC2813-00	MCPU/062876-xx

Install the MCPU(s). The FLASH ROMs have been preloaded with MCPU application software. After installing the ROMS, the MCPU application runs, but peripheral devices such as panels, coprocessors, and node controllers will not come on-line and not function properly until the following steps are completed:

- New NC application software is programmed into the NC FLASH
- New Panel Application software is loaded into all panels and properly configured
- A configuration is sent to the system from the PC GUI

CAUTION After updating the MCPU to 6.41, the module may appear to communicate properly with Node Controllers and CP Bus Devices. However, until the Node Controllers and CP Bus Devices are updated, the system will not function reliably.

MCPU Network Parameters Configuration

This is to be used when upgrading from versions 3.x and 4.x only.

If not already connected, connect a dumb terminal to the system CTL port.

It is necessary to configure your MCPU network parameters to allow proper communication of network devices such as the GUI PC.

Verify that the left MCPU (MCPU #1) is up and running as primary (yellow LED on). (If not, type **switchmcpu** at the diagnostic terminal Series 7000 prompt to switchover to the left MCPU.) At the diagnostic terminal type:

```
SMS7000> booted
```

This starts the boot parameter editor. Current boot parameters will be displayed with the cursor positioned ready for your input.

If the boot parameter is correct, press **RETURN** to skip it. If it is not correct, enter the desired value. Verify that your primary MCPU(s) boot parameters match those below. Boot parameters for the secondary MCPU are in brackets [ ] to the right of the values for the primary. Pay particular attention to the **inet on ethernet** field and the **target name** field.

```
boot device: fi
processor number: 0
host name: PC
file name: SMS
net on ethernet (e): 192.0.2.2[192.0.2.3]
inet on backplane (b): 192.0.3.4
host inet (h): 192.0.2.1
gateway inet (g):
user (u): smsuser
ftp password (p): smsuser
flags (f): 0x8
target name (tn): sms7000[sms7000b]
startup script:
other (o): sl (for SLIP)   ei (for Ethernet)
```

After verifying the boot parameters for the primary MCPU, type **switchmcpu** at the sms7000 prompt and repeat booted for the secondary MCPU. After verifying boot parameters on the secondary MCPU, type **switchmcpu** again to allow the master MCPU to run as primary.

Program MCPU Software

This is to be used when upgrading from versions 5.x and 6.x only.

Application software version 6.41 must be loaded into MCPU FLASH for systems updating from 5.x and 6.x to work properly.

You must remove the redundant MCPU from the frame while booting from the Ethernet or SLIP device. You will perform Step 4 for the primary MCPU and then repeat it for any redundant MCPU. The redundant MCPU will use slightly different names and IP addresses. These are indicated in brackets [ ] to the right of the primary MCPU entries below.

You must be at the DOS C: prompt to complete the following steps:

1. At the PC, run the file transfer protocol daemon (FTPD) on the PC:

```
C:\> CD \SMS7000
C:\SMS7000> FTPD -d
```

Note The PC NFS FTPD program fails to run if the file FTPD.LCK exists in the NFS install directory. If this file exists, execute the following commands to remove it:

```
C:\> CD \NFS
C:\NFS> ATTRIB -R FTPD.LCK
C:\NFS> DEL FTPD.LCK
C:\NFS> CD \SMS7000
```

2. Change the Boot Device to the PC

   Insert the primary MCPU only (in the left or main MCPU slot) and quickly interrupt the boot process by repeatedly striking the **RETURN** key at the terminal keyboard. This is a one to two second operation. (When you do the Back-up MCPU, place it in the right or redundant slot and remove the primary MCPU.)

Note The PC-NFS ping utility will not work when the Series 7000 is at the boot prompt.

You should see the 7000 BOOT prompt:

```
SMS7000 Boot>
```

If not; try again.

You may view the boot parameters by using the p (lower case only) command:

```
SMS7000 Boot> p
```

Inquire of the Main MCPU parameters first, and then with the Backup MCPU installed and the Main MCPU removed repeat the process. The Back-up MCPU uses slightly a different name and IP address. In the example below, Backup MCPU(s) name and IP address are indicated in brackets [ ] to the right of the Main MCPU entries.

You should see something similar to the following displayed at the system console:

```
boot device: fi
processor number: 0
host name: PC
file name: SMS
inet on ethernet (e): 192.0.2.2:ffffff00
                      [192.0.2.3:ffffff00]
host inet (h): 192.0.2.1
user (u): smsuser
ftp password (pw): smsuser
flags (f): 0x8
target name (tn): sms7000[sms7000b]
other (o): sl (for SLIP)ei (for Ethernet)
```

Using the **c** command, change the **boot device** boot parameter from **fi** (FLASH) to **sl** for SLIP or **ei** for Ethernet.

SMS7000 Boot> **c**

You are prompted to change each line of parameters.

CAUTION Do not change parameters other than those indicated here!

Simply hit **CR** to skip over them.

Type **@** at the **SMS7000 Boot>** prompt to begin the download:

SMS7000 Boot> **@**

You will see a message at the 7000 console indicating that the MCPU software is being downloaded to flash. Three numbers will eventually appear to the right of this message. Each number displayed is the size of a MCPU program segment. The size of each segment is displayed after the segment is copied into the flash memory. The FTPD program at the PC will report status as well.

If you do not see **FTPD Status...Connection, Log in, and Disconnect** *dialog at the PC running FTPD, return to* *Install Application Software on page 21**!*

3. Change the Boot Device back to MCPU Flash ROM

   Using the **reboot** or **booted** command, change the boot device back to **fi** for Flash.

   Using the **p** command, verify that the boot parameters are set to the following:

```
boot device: fi
processor number: 0
host name: PC
file name: SMS
inet on ethernet (e): 192.0.2.2:ffffff00
                     [192.0.2.3:ffffff00]
inet on backplane (b):[blank]
host inet (h): 192.0.2.1
gateway inet (g): [blank]
user (u): smsuser
ftp password (pw): smsuser
flags (f): 0x8
target name (tn): sms7000[sms7000b]
istartup script: [blank]
other (o): sl (for SLIP)   ei (for Ethernet)
```

   Press **RESET** button on MCPU. The system now boots from flash with the NEW MCPU APPLICATION. The console eventually displays the **SMS7000>** diagnostic interface prompt.

4. Load the Coprocessor and Panel Executable Files into the MCPU(s) flash memory.

Note It will save much aggravation if you take care not to run out of flash memory. Check for available space (using the **dir** command at the diagnostic terminal) before and after loading software into the router. If it reports 0 bytes of available memory, you will need to perform the *Flash Memory Limitations and Recovery Procedure* on page 34 (reformatting flash memory) to reclaim use of all sectors of flash memory:

When loading these files, you must select either option 1 or option 2 indicated by a 1 or 2 at the end of the command line.

For example:

To select Option 1

```
SMS7000>R64LOAD sms7000 1 [sms7000b 1]
```

To select Option 2

```
SMS7000>R64LOAD sms70002[sms7000b 2]
```

Option 1

Select option 1 for the normal load of universal and programmed button panels plus the custom panels such a cubicle or studio, machine control, source ID, client-server and under monitor display types. This option includes the Non GVP alien matrixes via native protocol, however, GVP matrices (Hx GPI, 440, Performer, 20-Ten via azgvg.bin) are excluded.

The excluded GVP alien matrix support may be loaded individually from the C:\SMS7000 directory. Be aware that you must delete any unneeded files listed below from the target MCPU file system to make at least 473,000 bytes of free Disk space before executing the batch command to load the excluded GVP alien matrix support.

These files are typical files that *may* not bee needed and can be removed to make room for others:

cln.mot	clf.mot	svr.mot
mco.mot	sid.mot	cos.mot
umd.mot		

Example:

Software Load Batch File (GVP alien matrix support) for AZGVG.BIN only.

C:\SMS7000> **AZLOAD**

Option 1 needs approximately 1,685,000 bytes in the target MCPU. Since the MCPU file system is approximately 2, 080,000 bytes, this will leave approximately 400,000 bytes for config and other user files.

Option 1 installs the following files:

csos.bin	amezi.bin	stmg.bin
ucp.mot	bps32.mot	mb8.mot
umd.mot	mco.mot	cos.mot
svr.mot	cln.mot	sid.mot
pxs.mot	pxd.mot	fl.mot
progcp.red	prognc.red	mb4.mot
		scp.mot

Option 2

Select option 2 for the alternate load which includes both GVP and Non GVP alien matrix support. Option 2 requires approximately 1,770,000 bytes in the target MCPU. Since the MCPU file system is approximately 2, 080,000 bytes, this leaves approximately 300,000 bytes for config and other user files.

Option 2 loads the following files:

csos.bin	amezi.bin	azgvg.bin
stmg.bin	ucp.mot	bps32.mot
mb8.mot	pxs.mot	pxd.mot
fl.mot	progcp.red	prognc.red
mb4.mot	scp.mot	

Note CLF.MOT is not included in either of these options; to use this application, see the note on page 38

To provide room on the file system, option 2 excludes the special panel files for cubicle or studio, machine control, source ID, client-server and under monitor display types. Any of the above excluded panel types may be loaded individually from this C:\SMS7000 directory using the following commands from the PC prompt:

Software Load Batch File for COS.MOT only.

```
C:\SMS7000> COSLOAD
```

Software Load Batch File for MCO.MOT only

```
C:\SMS7000> MCOLOAD
```

Software Load Batch File for SID.MOT only.

```
C:\SMS7000> SIDLOAD
```

Software Load Batch File for SVR.MOT only.

```
C:\SMS7000> SVRLOAD
```

Software Load Batch File for UMD.MOT only.

```
C:\SMS7000> UMDLOAD
```

Software Load Batch File for EPD.MOT only.

```
C:\SMS7000> EDPLOAD
```

To aid in panel-type identification excluded from option 2, refer to the panel descriptions in the following list:

SVR.MOT	Server Control Panel (drives clients) see *Operation Manual* Section 9
CLN.MOT	Client Control Panel (current version) see *Operation Manual* Section 9
CLF.MOT	Client Control Panel (former version) see *Operation Manual* Section 9
COS.MOT	Cubicle or Studio Panel CBS custom
MCO.MOT	Machine Control Panel CBS custom
SID.MOT	Source Ident Display Panel CBS custom
SCP.MOT	Simple Control Panel see *Operation Manual* Section 7
MB4.MOT	Multi-Bus Control Panel see *Operation Manual* Section 11
UMD.MOT	Under Monitor Display Panel see *Service Manual* Section 3
EDP.MOT	Eight Destination Paging Panel see *Operation Manual* Section 12

Flash Memory Limitations and Recovery Procedure

If file space is not available on the target MCPU flash file system, the PC monitor may display the following error:

```
---> PORT (etc.)
---> STOR file.name (which failed to load to the MCPU
file system)
netout: Socket is not connected
Error in input file
---> QUIT
C:\SMS7000>
```

Note It will save much aggravation if you take care not to run out of flash memory. Check for available space (using the **`dir`** command at the diagnostic terminal) before and after loading software into the router. If it reports 0 bytes of available memory, you will need to perform the *Flash Memory Limitations and Recovery Procedure* on page 34 (reformatting flash memory) to reclaim use of all sectors of flash memory:

- Make sure your router configuration is saved on the GUI PC.
- Save (or write down the contents of) the following files in flash:
  (**`copy "thefilename" 0`** will show the file contents)
  the "gateways" file, if any
  any.ini file other than boot.ini, eventlog.ini or console.ini
- Reformat Flash Memory:
  Start a Reboot
  `C:\sms7000> Reboot`
  from the Diagnostic Terminal) then hit a key to stop the boot process.
  `C:\SMS7000 Boot> F`
  (then **`y`**, please reformat flash) to reformat 2047 sectors with no errors. The next 2 lines resave boot.ini to flash memory:
  `C:\SMS7000 Boot> c`
  `C:\ SMS7000 Boot> ctrl-D`
- Restore saved files:
  Use the GUI to send the config to the MCPU & to save it in Nonvolatile(flash) Memory. The other saved files can be ftp'd to the router, or you can recreate the file in flash memory by typing:

  ```
  copy 0 "thefilename"
  type first line here
  type second line here etc.
  then to verify it, type:

  C:\sms7000. copy "thefilename" 0
  ```

- Reload MCPU software using the **`"R64load"`** command at the PC

Loading EDP Panel Software Into Nonvolatile Memory

The Eight Destination Paging (EDP) panel software is not loaded as part of either Option 1 or Option 2.
To load EDP software:

- Make sure there is enough room (200000 bytes) in flash memory for this software.
- To check, type
  `C:\sms7000> dir`
  from the diagnostic terminal to list files;
- To make space, remove unneeded control panel mot files from flash memory.
  For example:
  `C:\sms7000. del mco.mot`
  will delete the MCO panel fill (you may wish to keep fl.mot, which is the node controller file)
- From the SMS7000 directory of the PC, type:
  `C:\sms7000> edpload sms7000[edpload sms7000b]`

Program Redundant MCPU

This is to be used when upgrading from versions 5.x and 6.x only.

Repeat *Program MCPU Software* on page 28 for the Backup MCPU.

The redundant MCPU will use slightly different names and IP addresses. These are indicated in brackets [ ] to the right of the primary MCPU entries.

Reload and Edit Configuration File

This is to be used when upgrading from all versions.

Using the Windows Configuration Editor (GUI), open and download your configuration and edit the Coprocessor Configuration.

Version 6.41 relies on the configuration GUI to maintain the coprocessor configuration.

- For Version 4.0 systems, a FLASH DISK file named **`COPROC.CFG`** containing this information; the file was manipulated using the system diagnostic commands, **`slot`** and/or **`pg`**.
- For Version 6.1 and later, the **`COPROC.CFG`** file is no longer used and may be removed using the Diagnostic Terminal with the **`SMS7000>del “coproc.cfg”`** command. The configuration GUI provides the interface to manipulate these records.

Because of this, the operator is required to edit the coprocessor configuration using the following procedure.

1. Start the GUI and open the configuration you saved previously.

   If you are opening a Version 3 configuration, you will see text in the Message Window as follows:
   `Reading <some kind> s (e.g., Reading Sources)`
   `Error on line x char y: parse error`

   There will be one such parse error for each kind read in. They are harmless. To eliminate them, save the configuration using the current version of the GUI. (Use the **`File/Save As`** menu item.)

2. Connect to the router allowing the GUI to SEND the configurations.

   Using the configuration GUI, select ***COPROCESSORS*** on the ***SETUP*** pulldown menu.

   The coprocessor dialog box contains a list of your system's coprocessors. By default, the system names global serial channel processors GSss_n, where ss indicates the slot and n indicates the mezzanine position. Asynchronous Serial I/O coprocessors (AMEZI) are named by default, ASss_n. There are always at least two coprocessor records in any system. These are the two Global Serial Channel coprocessors located on the MCPU. There is only one coprocessor record for a redundant pair of MCPU(s) and CIF mezzanines.

3. Review your coprocessor configurations and make any changes required.

Note Coprocessors to be used with Grass Valley 440, Performer, or 20-TEN interfaces must be loaded with the AZGVG.BIN file.

When satisfied, save the configuration on your PC and in the MCPU(s) non-volatile memory. Please refer to the *Series 7000 Configuration Manual* for additional detail.

Load Node Controller Software

This is to be used when upgrading from all versions.

CAUTION This applies to systems being updated from versions 3.x, 4.x, or 5.x where the NBX boot ROM is replaced. In the following step, replacement of NBX boot ROM will cause the Node Controllers to lose their names. Note the current names so you can later restore them using the GUI Active Node Controller **Rename** command.

1. Program Series 7000 Node Controllers with the 6.41 Application.

   - Enter the following command at the Series 7000 System Diagnostic Interface to program the Node Controllers (NC).
     `SMS7000> inputfrom “prognc.red”`

   - After programming is complete, cold-start each Node Controller by removing the module from the frame and re-inserting it. Verify that version 6.1 NBX ROM (052855-04 or greater) is installed on each Node Controller module.

   - Verify that the Node Controllers are properly named (see Caution below) and on-line using:
     `SMS7000> ver nc`

CAUTION Redundant Node Controller pairs must be named properly. They must have identical names with the exception of a single digit suffix. The suffix must be 1 for the primary Node Controller and 2 for the secondary Node Controller. The total length of the name cannot exceed eight alpha-numeric characters. For example, the names NC1 and NC2 are valid names for a Node Controller pair. Another example is NCVID1 and NCVID2.

This is a critical step. Node Controller redundancy will not work unless the Node Controllers are properly named.

2. To upgrade from version 5.3 or earlier, install a new NBX boot ROM (052855-04) for each Series 7000 Node Controller:

   Remove the Node Controllers from the frame, and replace the NBX ROMs. Use a marking pen to change the version number on the module to -06 (062840-06). Replacing the ROM causes the Node Controller to loose the current crosspoint status.

   Replace the Node Controllers in the frame, and re-program the Node Controllers. Doing so takes them off-line, so no changes occur during the programming and the MCPU restores the Node Controllers crosspoint status after programming them.

   If the NBX ROM is installed before the MCPU update, the Node Controllers revert to their default name of ELVIS 1 (or 2) and must be renamed back to the operational name before MCPU control is restored.

3. Install HX NC ROMs

   If you have HX Node Controllers, you must remove and replace the ROM ICs containing the application. HX Node Controllers do not have FLASH ROM and therefore are not programmed using the procedure for Series 7000 Node Controllers.

Table 15. Horizon Node Controller Firmware

Description	Quantity per Board	Firmware Part Number	Board(s)/ Part Number
HX NC ROM(U17)	1	151109-05	HX Node Controller/062797-01
HX NC ROM(U18)	1	151108-05	HX Node Controller/062797-01

Note After replacing the Horizon Node Controller's ROMs, the modules must be cold-started using this unique procedure: remove the module from the frame, and re-insert it while holding in the cold-start push-button located at the top of the module. Continue to push the button in until the red ERR LED goes off.

Load Control Panel and UMD Software

This is to be used when upgrading from all versions.

At the system terminal enter the following command:
`SMS7000> inputfrom "progcp.red"`

After typing the command above, the system sequentially programs each panel of the corresponding type.

Note The default application loaded into the Client panel is **`cln.mot`**. If you want to load **`clf.mot`** application software for Client Former functionality, use
`sms7000>prog "clf.mot" cp cln`
after running the batch file "**`progcp.red".`**

The panels/umds display the string download with a rotating | in the last character position to indicate a download is in process. Other functions are not accessible from the keyboard until the download is complete.

- After programming, check each panel's revision string. This is done at the terminal using the following command:

  SMS7000> **`ver cp`** OR SMS7000> **`ls cp`**

- Also, confirm the software version loaded into each panel. To do so, on panels with a dedicated ID button, a single ID button press initiates the ID function. In most other panels, however, four consecutive presses are needed to initiate the ID sequence.

Re-Install Amezi Mezzanine

This is to be used when upgrading SMS-64V Systems with Amezi Serial Control only.

If your system uses an Amezi controller mezzanine board in position #2 of the MCPU mezzanines, you have placed a temporary UART in the top mezzanine slot of the MCPU to perform this update. Perform the following to re-install the Amezi.

1. At the System Diagnostic Interface, enter the following commands:

   SMS7000> **`del “console.ini”`**
   SMS7000> **`del “slip.ini”`**

2. Verify that these files have been deleted using the **`dir`** command:

   SMS7000> **`dir`**

3. Switchover to the redundant MCPU, if present:

   SMS7000> **`switchmcpu`**

4. At the system diagnostic interface, enter the following commands:

   SMS7000> **`del “slip.ini”`**
   SMS7000> **`del “console.ini”`**

5. Remove the MCPU board(s) from the system

6. Remove the TOP UART mezzanine(s) and re-install the Amezi board

7. Insert the MCPU(s) in the compact frame

   Native protocol automatically runs on the CTL port.

   SLIP automatically runs on the CNFG/CTL port.

8. Run the PC GUI and configure the Amezi board

9. Connect the computer or equipment running native protocol to the CTL port