SC Series v. 2.1 Release Notes

Introduction

This document covers SC Series software version 2.1, and identifies differences with respect to version 2.0. A familiarity with the existing SC-Series manuals is assumed.

Customer Desires	Solutions Provided by v. 2.1
■ Customers wanted the ability to schedule simple, one-time sessions from their sites.	■ The Site Originate Conference feature is an easy to use scheduler integrated into the SC Series Site Controller. It allows users to set up sessions with a simple touch screen interface, without sacrificing security.
■ Customers wanted a reliable connection from MCS-300 to SC Series with error correction. This connection would remotely administer SC Series Sites, and perform tasks such as: updating software, changing configurations, performing diagnostics, an so on.	■ The Network feature is the future of site connectivity. It replaces the less reliable serial connection to a remote site with a TCP/IP link over the same line. This creates a Wide Area Network (WAN) with the MCS-300 Sun SparcStation as the server. It lets you use the standard network tools Telnet and FTP to access and administer the PC at a remote site through the Sun server. Having a network connection to the site opens up a wide range of possibilities. Site Originate Conferencing is only the first of many new features that will make use of this innovative connectivity technology.
■ Customers wanted to remotely control all of the equipment at the far-end site.	■ The Site Mirroring feature allows any device controlled by a SC Series at a site to be controlled remotely by another SC Series system, even if the local setup is different than the far end setup.
■ Customers wanted to be able to interface the SC Series Site Controller to room control equipment made by Crestron and other manufacturers.	■ The proprietary graphical user interface, PC Touch by AMX, has been replaced by Visual Basic resulting in a SC Series system which is faster and more robust. The interface to the room control hardware has been enhanced to support AMX, Crestron and others.

On-Line Documentation

- The SC Series manuals and release notes are now available via an Internet web page in Adobe PDF format. They can be read with Adobe's Acrobat Reader, a freeware program which is available for a variety of platforms. The web page can be found at:
  http://www.tek.com/VND/Support/welcome.html#manuals
  Once you are at this web page, click on any item that you want to download.

- The on-line version of the SC Series User's Guide is installed with the software. To view or print it you must first install Adobe Acrobat Reader (included as a separate disk) and then simply OPEN or PRINT the file titled **SC21.PDF**. Hard copies of the SC Series User's Guide manual can be ordered from Tektronix. The ordering number is TP5191-02.

- The on-line version of the SC Series Installation and Service Manual is installed with the software. To view or print it you must first install Adobe Acrobat Reader and then simply OPEN or PRINT the file titled **SCINST20.PDF**. Hard copies of the SC Series Installation and Service Manual can be ordered from Tektronix. The ordering number is TP5194-01.

New Features

Site Originate Conference

This feature is an easy to use scheduler integrated into the SC Series Site Controller. It allows a user to set up a session with a simple touch screen interface, without sacrificing security.

Network Connectivity

This replaces the unreliable serial connection to a remote site with a TCP/IP link over the same line. It actually creates a Wide Area Network (WAN) with the MCS-300 Sun computer as the server. It lets you use the standard network tools Telnet and FTP to access and administer the PC at a remote site through the Sun.

Site Mirroring

This feature will mirror the far-end site during remote control. The Instructor can see and control all of the Student's equipment. It allows any device controlled by a SC Series v2.1 at a site to be controlled remotely by another SC Series v2.1.

Crestron Support

The interface to the room control hardware has been enhanced to support Crestron room controller hardware and other similar hardware, in addition to the previously supported AMX room controller.

Visual Basic GUI

The previous proprietary graphical user interface (GUI) has been replaced by a new interface created using Visual Basic, resulting in a GUI which is open, faster, and more robust.

New Standard Devices

A number of new devices are now supported with standard control pages: Audio Cassette, Slide Projector, Record VCR, Camera with 8 Presets, Document Camera with Controllable Lights, and Generic Input (for devices without controls). Three User Defined pages that can be customized are also supported.

16 x 16 Video Router Support

SC Series v2.1 now supports 3rd party video routers with up to 16 inputs and 16 outputs.

Configurable Video Router Cross-Points

The cross-point settings for the Video Router can now be configured separately for Instructor and Student sessions. This allows different monitor assignments to be preset, and switched at session start.

Hide Button

The SC Series interface screen can now be completely hidden so that the computer can be used for other purposes (such as web browsing). The SC Series software continues to operate in the background while hidden (without user input).

How to Install Version 2.1

Installing the SC Series Software

If you installed SC version 2.1 Beta you should uninstall it using the Add/Remove Programs option on the Control Panel.

Install SC Series 2.1 as you would any other software product, using the Add/Remove Programs on the Control Panel:

1. Click on Start in the lower left corner to display the Start menu.

2. Highlight Settings and click on Control Panel to display the Control Panel window.

3. Insert SC Series Disk 1 in drive A.

4. Double click on the Add/Remove Programs icon in the Control Panel window to display the Add/Remove Programs Properties dialog.

5. Follow the instructions given to install SC Series v2.1.

The previous version of the SC Series software (if any) will not be removed and you may go back to it at any time. If you wish, you may delete the Desktop icon for the previous version to remove confusion between versions.

The installer will copy the current configuration files from the previous SC-Series software into the 2.1 directory and install the new configuration into the SC-Series 2.1 directory as name.new files. These files will not over-write the original files.

> **NOTE:** *Once the new configuration files are finalized for a given installation, you should back them up immediately.*

Setting Up the Network Connection

The following steps are necessary only if you are using a TCP/IP connection. Site Originate Conference requires a TCP/IP connection.

You will need to obtain the IP address of the MCS Master (usually 192.168.0.10 for stand-alone networks) and the IP address and name of this Site Controller computer from your network administrator.

If you have a Network card in the computer and the Site Controller and the MCS Master are part of your network you can skip setting up a PPP (Point-to-Point Protocol) connection between the Site Controller and the MCS Master.

Creating a Hosts File

The "Hosts" file contains the names and IP addresses of the computers referenced by the Site Controller. At a minimum it must have this computer and the MCS Master in the list. A sample Hosts file (Hosts.sam) is shipped with Windows 95. To copy this file to Hosts and modify it:

1. Click on the Start button then highlight Programs and then click on Windows Explorer.

2. Click on the Windows directory on the left side panel of the Windows Explorer.

3. Scroll down in the right side panel until you find the file Hosts.sam.

4. With the right mouse button, click on Hosts.sam. You will get a Pop-up menu. Choose: Copy.

5. With the right mouse button, click in an empty area of the right side panel. You will get a Pop-up menu. Choose: Paste.

6. A new file: "Copy of Hosts.sam" will be created in the Windows directory. It should be highlighted. Click on it and change the name to "HOSTS". Press Enter.

7. Double-click on Hosts. You will get a "Open With" dialog. Scroll down until you find NOTEPAD and click on it.

8. Use the arrow keys to move cursor to the bottom of the screen. Then enter:

        192.168.0.10<tab>master
        192.168.0.xxx<tab>sitehostname

    (The IP Address for master and the values "xxx" and "sitehostname" should be obtained from your network administrator.)

9. Select File then Exit. Answer YES to save.

Installing the Dial-Up Networking for PPP

The Dial-Up Networking is needed for the PPP (Point-to-Point Protocol) connection. To install the Dial-Up Networking:

1. From the Control Panel, double click Add/Remove Programs.

2. Select the Windows Setup Tab.

3. Make sure that the Communications option is checked and that 4 of 4 components are selected. If not, click on the check box once or twice.

4. Click OK to close the Add/Remove Programs dialog.

5. If prompted, restart the computer.

Installing Dial-Up Adapter and TCP/IP for PPP

The Dial-Up Adapter and TCP/IP are needed for the PPP (Point-to-Point Protocol) connection. To install the Dial-Up Adapter and TCP/IP:

1. From the Control Panel, double click Network.

2. Select the Configuration tab.

3. Under "The following network components are installed" window check to see if Dial-Up Adapter is already installed. If not:

    a) Click on Add then double click Adapter. The Select Network adapters dialog will be displayed.

    b) Select Microsoft under Manufacturers and Dial-Up Adapter under Network Adapters.

    c) Click OK to close the Select Network adapters dialog.

4. Under "The following network components are installed" window check to see if TCP/IP is already installed. If not:

    a) Click on Add then double click Protocol.

    b) Select Microsoft under Manufacturers and TCP/IP under Network Protocols.

    c) Click OK to close the Select Network Protocol dialog.

5. Dial-Up Adapter and TCP/IP are the only components needed. Unless other applications require them, select and remove all other components.

6. Double-click on TCP/IP. The TCP/IP Properties dialog will be displayed.

7. Select the IP Address tab and choose Specify an IP address. Enter the IP Address assigned by your network administrator for this computer and a Subnet Mask of 255.255.255.0.

8. Select the WINS Configuration tab and choose Disable WINS Resolution.

9. Select the Gateway tab. Make sure no Gateway is installed.

10. Select the Bindings tab. Make sure there are no Bindings.

11. Select the DNS Configuration tab and choose Disable DNS.

12. Click OK to close the TCP/IP Properties dialog.

13. Click OK to close the Network dialog.

14. If prompted, restart the computer.

Installing a Null Modem Driver for PPP

A Null Modem Driver (Direct Connection) is needed only for the PPP (Point-to-Point Protocol) connection. To install a Null Modem Driver:

1. From the Control Panel, double click Modems.

2. Check the box that says "Don't detect my Modem, I'll select it from a list."

3. Click Next. A list of Manufacturers and Models will be displayed.

4. Click "Have Disk...". The Install From Disk dialog will be displayed.

5. Click Browse. A file Open dialog will be displayed.

6. Under Folders, double click "c:\".

7. Double click progra~1.

8. Double click grassv~1.

9. Double click sc21. The file: mdmcbx2.inf should be displayed under File name.

10. Click OK to close the Open dialog.

11. Click OK to close the Install From Disk dialog. You should see "Direct Connection" under Models.

12. Click Next. A list of communication ports will be displayed.

13. Under "Select the port to use with this modem:" select COM4 (or whatever COM port the codec is connected to).

14. Click Next and then Finish.

15. Click OK to close the Modems Properties dialog.

Setting Up a Dial-Up Network for PPP

A Dial-Up Network is needed only for the PPP (Point-to-Point Protocol) connection. To install a Dial-Up Network:

1. Double click My Computer at the upper left corner of the screen.

2. Double click Dial-Up Networking. If this is the first time setting up a new Dial-Up Network, Windows95 will automatically bring you with the Make New Connection dialog. Otherwise, double click Make New Connection.

3. Enter "PlatoPPP" as the name for the computer you are dialing and select Direct Connection under Select a modem.

4. Click Configure. The Direct Connection Properties dialog will be displayed.

5. Select the General tab:

    a) Choose COM4 (or whatever COM port the codec is connected to) as the port that communicates with the Master system.

    b) Set the Maximum speed to 38400.

    c) Set the Speaker volume to Off.

    d) Uncheck "Only connect at this speed".

6. Select the Connection tab:

    a) Set the Connection preferences to 8 data bits, no parity and 1 stop bit.

    b) Uncheck "Wait for dial tone before dialing".

    c) Check "Cancel the call if not connected within 60 secs".

    d) Uncheck "Disconnect a call if idle for more than 30 mins".

7. Click Port Settings. The Advanced Port Settings are displayed. Click Defaults and then click OK.

8. Click Advanced. The Advanced Connection Settings dialog will be displayed:

    a) Check "Use error control".

    b) Uncheck "Required to connect".

    c) Check "Compress data".

    d) Uncheck "Use flow control".

    e) Set "Modulation type" to Standard.

    f) Leave "Extra settings" blank.

    g) Uncheck "Record a log file".

    h) Click OK to close the dialog.

9. Select the Options tab. Nothing except Display modem status option should be checked.

10. Click OK to close the Direct Connection Properties dialog.

11. Click Next.

12. Enter any number for the Telephone number (stupid dialog).

13. Click Next and then click Finish.

14. With the right mouse button, click on PlatoPPP in the Dial-Up Networking window. You will get a Pop-up menu. Choose: Properties. A PlatoPPP dialog will be displayed:

    a) Unselect "Use country code and area code"

    b) Click Server Type. The Server Types dialog will be displayed.

    c) Choose PPP:Window95,WindowsNT3.5,Internet for "Type of Dial-Up Server".

    d) Check "Log on to network"

    e) Check "Enable software compression".

    f) Uncheck "Require encrypted password".

    g) Uncheck "NetBEUI".

    h) Uncheck "IPX/SPX Compatible".

    i) Check "TCP/IP".

    j) Click "TCP/IP Settings...". The TCP/IP Settings dialog will be displayed.

    k) Choose "Specify an IP address" and enter the IP address that is assigned to this computer by your network administrator.

    l) Choose "Server assigned name server address".

    m) Check "Use IP header compression".

    n) Check "Use default gateway on remote network".

    o) Click OK to close the TCP/IP Setting dialog.

    p) Click OK to close the Server Types dialog.

15. Click OK to close the PlatoPPP dialog.

Testing the PPP Connection

After setting up the PPP connection you need to test the link to Master. Make sure you have a physical cable connection to the Master System installed on your computer. Make sure the Master system has configured this site for a PPP Network connection.

1. Reboot the Computer.

2. Double click PlatoPPP.

3. Enter in the username assigned to this PPP connection by your network administrator and use the password "master5" and click Connect.

4. As it is making a connection to the PPP server you will see "dialing..", "Verifying password...", "Log on to network..." and "connected at xxx" messages.

5. If this is the first time to connect to a remote machine through PPP you will be prompted by a dialog asking you for "User Name" and "Password" for log onto Windows. Use the same user name and password you used for your PPP account.

6. After connected, open up a DOS shell. Type 'ping master' in side the DOS shell. If the network setup is correct you should see response from the Master system inside the DOS shell. If you see time-out messages it means the Network setup is not correct.

Configuring SC Series to Talk TCP/IP

To configure SC Series to use the Network connection instead of the Serial one you will need to modify the file Plato.cfg in the "\Program Files\Grass Valley\SC21" directory:

1. Click on the Start button then highlight Programs and then click on Windows Explorer.

2. Double click on Program Files, Grass Valley, and SC21.

3. Find plato.cfg and double click on it. If Windows 95 prompts you with a list of applications to run plato.cfg file, choose NOTEPAD.

4. Add or change the following lines:

    OpMode = 1
    LocalHost = mysitename
    SunHost = master

    (Where mysitename is the name of the computer assigned by your system administrator.)

5. Exit Notepad and save plato.cfg.

Testing SC Series Network Connection

Now, try to schedule and run a short session:

1. Make sure the PC's clock and time zone are correct.

2. If PPP Connection not already running, double-click PlatoPPP in the Dial-Up Networking window and enter "master5" as the password.

3. Double-click on the SC Series 2.1 icon on the Desktop. SC Series should come up.

4. Click on the CONFERENCE button. Should get a Username and Password dialog. Enter your username and password you use to log onto MCS-300. Ask your system administrator for them.

5. Should get the Site Originate Conference scheduler. Set up a short session to run.

6. Click on MCS-300 button to return to main interface.

Finishing the Network Setup

To finish the setup you will want to configure the computer to restart if the connection is lost and to have Telnet and FTP access to it:

1. Click on the Start button then highlight Programs and then click on Windows Explorer.

2. Double-click on Program Files, Grass Valley and SC21.

3. Right click on ppp_monitor.exe. A pop-up menu will be displayed. Choose: Copy.

4. Double click on Windows, Start Menu, Programs and StartUp.

5. Right-click in a empty area in the right panel. A pop-up menu will be displayed. Choose: Paste Shortcut.

6. Repeat the last three steps for telnetd.exe and serv-u32.exe.

7. With the right mouse button, click on the SC Series V2.1 icon on the Desktop. Choose Copy.

8. Again paste a shortcut into the Startup directory.

9. Close all windows and restart the computer.

10. If all works well the PPP connection will be made by PPP Monitor after about a minute. You can verify it by looking for it on the Task Bar.
    If it does not work click on PPP Monitor on the Task Bar. The latest error message will be displayed in the window. All the status and error messages are kept in:

    c:\Program Files\Grass Valley\SC21\monitor.log

No windows are associated with telnetd.exe and serv-u32.exe. It won't even show up in the task bar at the bottom of the screen. The only place they show up is if you press Ctrl-Alt-Del, which brings up the task list window.

Configuration Changes

A number of changes have been made to the SC Series Configuration system for version 2.1. Sample configuration files have been included with the software. For existing systems, they will have the extension ".NEW" (e.g. PLATO.NEW).

System Configuration File: PLATO.CFG

The following variables have been added to PLATO.CFG:

OpMode   The Mode of operation (default: 0).
0   Serial
1   Network (TCP/IP)

LocalHost   The name of this PC (if Network)

SunHost   The name of the MCS Master (if Network)

HWPort   The COM Port the HW Controller is connected to (default: 2).

HWPortBR   The BAUD rate of the HW Connection (default: 19200).

HWIntType   The Type of HW Interface (default: 0).
0   Standard
1   AMX RS232 (no SC-100 / PCCOM)

Select Control Bar Configuration File: SCB.CFG

The following lines in SCB.CFG have changed:

Control Types (line 4)

0	None. The button is hidden from the user.
1	Video In control.
2	Main Video Out control (16 inputs).
3	Main and PIP Video Out control (10 inputs).
4	Auxiliary Video Out control (16 inputs).
5	PIP Video Out Control (16 inputs).
6	Camera control (6 presets).
7	VCR control.
8	Laser Disk control (VCR).
9	Audio control.
10	Audio control with train button.
11	Document Camera control.
12	Video Slide control (camera).
13	Audio Cassette control (VCR).
14	Record VCR control (VCR).
15	Document Camera control with lights.
16	Camera control (8 presets).
36	Generic Input control (for devices with no controls).
37	User Defined control 1.
38	User Defined control 2.
39	User Defined control 3.

Control Descriptions (lines 31 - 40)

These lines define the descriptions displayed in the control page for each control. Line 31 is for control 1, 32 for control 2, ... and 40 for control 10. There are a maximum of 32 characters. The \0A is no longer needed to separate the lines. The text will wrap automatically.

Video Source Selector Configuration File: VSS.CFG

The following lines in VSS.CFG have changed or been added:

Configuration Type (line 5)

> Line 5 defines the type of VSS configuration. The valid types are:
> 0 - Single VSS (max. of 16 x 16).
> 1 - Two 8 x 4 video source selectors are combined to give an effective 12 x 4.

Input Icons (lines 21 & 22)

> Lines 21 & 22 define the icons to display on each VSS input select button. The data is arranged in pairs. One pair for each of the 16 possible inputs. The first number in each pair is the selected icon the second is the unselected icon.

Preview Output (line 28)

> Line 28 defines the VSS output connected to the Preview. Valid values for this entry are 0 through 15. -1 indicates that there is no preview.

Main Output (line 36)

> Line 36 defines the VSS output connected to MAIN. Valid values for this entry are 0 through 15.

PIP Output (line 37)

> Line 37 defines the VSS output connected to PIP. Valid values for this entry are 0 through 15. -1 indicates that there is no PIP.

PIP Input for Question (line 38)

> Line 38 defines the VSS input to display in the PIP when the Question button is pressed. Valid values for this entry are 1 through 16. -1 indicates that there is no PIP is to be displayed with a Question.

VSS Connections (lines 50-54)

> Defines which VSS input to connect to each of the VSS outputs for:
> **Off-air (50)**- No session.
> **On-line (51)**- Student session
> **Pre-air (52)**- 60 seconds before Instructor session
> **On-air (53)**- Instructor session
> **Pre-off (54)**- 60 seconds before end of Instructor session
> If undefined or set to -1, the site controller keeps the output connected to the whichever input it was previously connected to. Legal values for VSS input: 0 - black, 1-16.

Camera Configuration File: CAMERA.CFG

The following lines in CAMERA.CFG have changed:

Camera Controls (lines 4-7)

> Two more presets have been added: Column 16 - Preset #7, Column 17 - Preset 8.
> The Light Controls for the Document Camera with lights are Tilt Up = Lights On, Tilt Down = Lights Off.
> The Slide Projector Controls are: Pan Left = Reverse, Pan Right = Forward.

Audio Configuration File: AUDIO.CFG

The number of Audio Controls has increased from four to six.

PPP Monitor Configuration File: MONITOR.CFG

A new configuration file for the PPP Monitor program has been created. The variables are:

CONNECTION_NAME   The dial-up connection entry name (PlatoPPP)

MCS_HOSTNAME   The remote MCS-300 hostname (master)

AUTO_REBOOT   If the computer should reboot if it cannot connect (0 - No, 1 - Yes)

CHECK_PERIOD   The time interval (seconds) to check the PPP link (120)

RECONNECTION_PERIOD   The time interval (seconds) to keep trying reconnection (120)

REQUEST_TIMEOUT   The time-out (seconds) for each network time request (20)

CONFIRM_TIMEOUT   The time-out (seconds) for reboot confirmation (30)

MAX_TRIES   The max. number of tries to request time, if it doesn't succeed first (3)

Generic Control Interface

Additional GCI events have been added for the Originate (Instructor) Session states. They are:

Pre-Air (8)

This event indicates that a session will start in 60 seconds with this site as the Originate Site. Note that, this event will not be sent if the start time for a session is earlier than the current time.

On-Air (9)

This event indicates that a session has started with this site as the Originate Site.

Pre-Off (10)

This event indicates that a session with this site as the Originate Site will end in 60 seconds.

Visual Basic GUI

With the Visual Basic GUI there are of course no AMX button presses being sent to the Axcent[2]. If your AMX code depends on these, you will have to modify your code. The appropriate method is to use the GCI interface instead of looking for specific buttons.

You can send commands directly to the GUI from your AMX or Crestron code. The commands are:

RESET

Resets all the object states to OFF.

SHOW objID

Makes all objects with an ID of objID visible. For example, the command:

    SHOW 130

would make all objects numbered 130 visible.

HIDE objID

Hides all objects with an ID of objID. For example, the command:

    SHOW 50

would make all objects numbered 50 hidden.

SETSTATE objID,state

Sets the state of all objects with an ID of objID to state. Where state is 0 for OFF and 1 for ON. For example, the command:

    SETSTATE 100,1

would set all objects numbered 100 to ON. If the object is a Video Overlay window the MCI Overlay is opened for ON and closed for OFF.

SETTEXT objID,"text"

Sets the text of all objects with an ID of objID to "text". For example, the command:

    SETTEXT 180,"Hello World!"

would set the text of all objects numbered 180 to "Hello World!". Note that, objects with pictures cannot have text.

SETPICTURE objID,state,"file.bmp"

Sets the picture displayed on all objects with an ID of objID when they are in state to "file.bmp". Where state is 0 for OFF, 1 for ON or 2 for both states. For example, the command:

    SETPICTURE 66,0,"bmps\pic_off.bmp"

would set the OFF picture of all objects numbered 66 to "bmps\pic_off.bmp". Note that, objects with text cannot have pictures. It is customary to put all pictures in the "bmps" directory, but it is not required.

SETLEVEL objID,level

Sets the level of all gauges with an ID of objID to level. Level is between 0 and 255. For example, the command:

    SETLEVEL 301,180

would set the level of all gauges with ID of 301 to 180.

PUSH objID[,state]

Simulates a button push. For example, the command:

> PUSH 113

would instruct the GUI to act as though the user had pressed a button with ID of 113 (the Question Button). This allows a different input device such as a remote control or a touch panel to operate the GUI. The state flag indicates pressed (1) or released (0). So for example, the command:

> PUSH 15,1

would press and hold the button with ID of 15. You should make sure the release is sent later.