

USER GUIDE



Soundcraft
S6000
AUTOMATION

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Soundcraft

S6000 AUTOMATION

USER GUIDE

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1. Introduction

Introduction

The Series 6000 Integrated Automation system is a factory fitted option which provides computer control of mutes and fader levels on up to 64 channels. (The largest 6000 console at present is 52 channels).

Fader levels and mute information are read from the desk, while all other control is carried out on an ATARI ST computer.

The system may be used in several different ways:

- as a VCA subgrouping system, with up to 16 groups.
- by using each VCA as a noise gate .
- as a "snapshot" system, capable of recalling fader and mute settings either under manual control, or against time-code.
- as a full real-time automation system, storing and replaying mute and fader movements to 1/4 frame (approx. 1/100th second) accuracy.

In addition, the system allows the generation of MIDI information (note on/off, patch and song changes, etc.) against time-code with 1/4 frame accuracy, under control of a "Cue List" (a series of user defined events which occur at specific times).

Note: Tape returns and groups cannot be automated at present.

The hardware comes in four parts:-

- a VCA card mounted on each automated input channel.
- the "PAN", mounted below the console base panel, containing the fader reader card, a number of "AUTO" interface cards and optional SMPTE reader card.
- an APS150 power supply providing automation power.
- a CPS150 power supply providing automation power.

An ATARI Computer is required, which supports the main user interface, handling disk filing, record/write status switching, noise gate parameter adjustment, CUE list manipulation, VCA subgroup set-up etc. The system cannot be used without the ATARI in the automated mode.

All communication with the desk automation is via a MIDI link. However, if the SMPTE card is fitted in the "PAN", it communicates with the ATARI via the computer's printer port.

2. Installing the System

Installing the System

Items supplied by Soundcraft

Before installing the system, please check that all the components have been supplied in satisfactory condition.

1. One Soundcraft Series 6000 Automation console.
2. One CPS450 power supply.
3. One extra CPS450 power supply if the console has 44 input channels or more.
4. One CPS150 power supply.
5. One APS150 power supply.
6. Rack Mount Kits for CPS and APS power supplies.
7. One S6000A program disk.
8. One software key (dongle).
9. One (standard) S6000 manual.
10. One Series 6000 Automation Software Manual.
11. This User Manual.

Items you will need

You will need to provide the following equipment to use the system:

1. An ATARI ST computer with at least 1 MB of memory, e.g.
 - 520ST
 - 1040ST
 - MEGA ST 2
 - MEGA ST 4

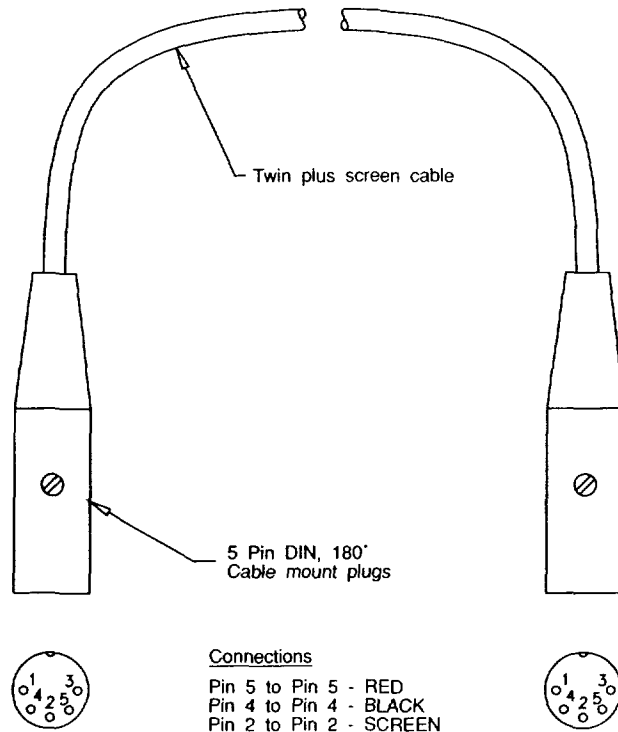


IT IS RECOMMENDED THAT AN ATARI MEGA ST 2 OR 4 BE USED TOGETHER WITH A HARD DISK.

This will enable much longer mixes to be created. The actual mix length available is dependent on the amount of fader activity, but as a rough guideline, an ATARI 1040ST will allow a mix of approximately 20 minutes, while a MEGA 2 would have enough memory for approximately an hour-long mix.

2. Cables

- a) Two 5 way DIN to DIN cables, for the MIDI interface.
(See diagram below)



MIDI CABLE WIREFORM

The following parts are required to make these two cables:-

- 4 x DIN 5 way 180 degree cable mount plugs, (two per cable).
- 2 appropriate lengths of twin plus screen cable, (one per cable).

The connections for each cable are as follows:-

Pin 2 to pin 2 - (screen)

Pin 4 to pin 4 - (black)

Pin 5 to pin 5 - (red)

- b) If SMPTE timecode is to be used, then three cables are required.
- Two stereo 6.3mm jack plugs will be needed on two twin plus screen cables, and the connectors at the other end of these cables will depend on the audio equipment carrying the timecode information.
 - The third cable should be a 25 way ribbon cable with a 25 way male D-type connector at one end, and a 25 way female D-type connector at the other, for the SMPTE reader interface to the ATARI.
- c) One 3 power outlets on a switched distribution panel for CPS and APS power supplies, plus two outlets for the ATARI and monitor. For consoles with 44 input channels or more one additional power outlet will be needed for the extra CPS450 power supply.

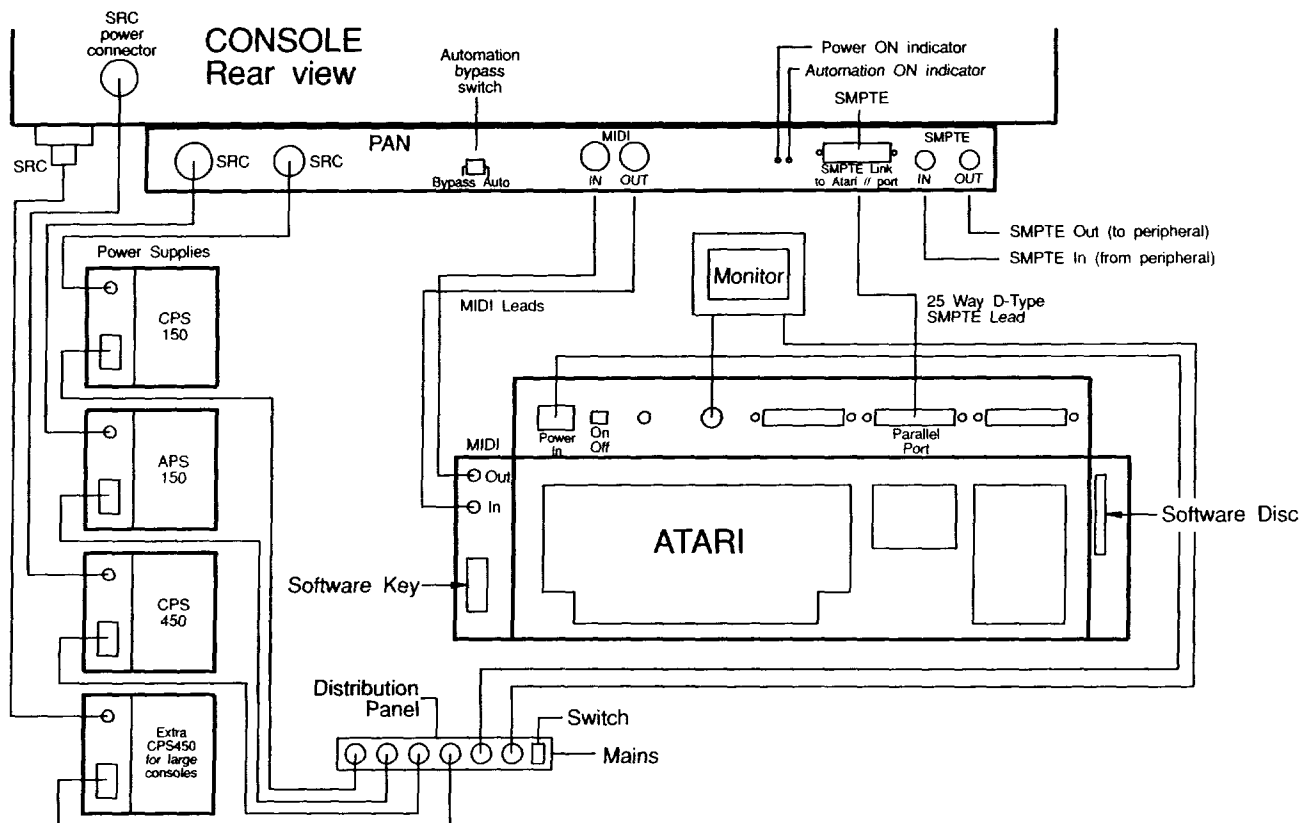
Installing the S6000 console.

Install the Soundcraft Series 6000 Automated console as per the instructions in the Series 6000 user manual. The console will not operate without the automation power supplies, therefore when you have made the necessary connections do not switch on, but continue with the automation installation instructions.

Installing the automation

Power Supplies

All the power supplies which power the console and the automation should be powered from a common point as shown in the diagram below.



S6000 AUTOMATION - INTERCONNECTION DIAGRAM

The CPS450 power supplies (one for consoles with less than 44 input channels, and two for consoles with 44 input channels or more) are connected to the console as normal.

The CPS150 power supply connects to the right-hand SRC connector on the back of the PAN and powers the VCA circuits inside the console.

The APS150 power supply connects to the left-hand SRC connector on the back of the PAN and provides +5 Volts and +/-12 Volts for the digital automation and fader reader circuits.

MIDI link

Your ATARI computer communicates with the S6000 automation via a midi link. (See 'Cables' in this chapter for details of how to make up the midi leads.)

Connect MIDI OUT on the ATARI to MIDI IN on the PAN, and MIDI IN on the ATARI to MIDI OUT on the PAN. (See diagram on previous page).

SMPTE time code connections

The SMPTE time code generator/reader is an option in the S6000 Automation System. If your system does not have it then skip this section.

Connect the 25-way D-type lead from the SMPTE Link connector on the PAN to the CENTRONICS/PARALLEL port on the back of the ATARI . Note that the ATARI will not read this port unless the lead is connected and the Automation System ON when the ATARI is powered up.

Connect the SMPTE IN jack connector at the back of the PAN to the SMPTE OUT on your peripheral equipment (normally a multi-track tape machine) and the SMPTE OUT jack connector on the PAN to the SMPTE IN on your equipment.

Your automated console is now ready for use. For switching ON procedures please continue to the next section.

3. Switching On

3. Switching ON

Powering Up

After following the installation instructions in the last section you are ready to power up.

- Switch on all the power supplies.
- Check that the leds on the front panels of the power supplies are lit.
- Check that the +5 V led on the back of the PAN is lit.

BYPASS mode

The console should operate normally without the ATARI computer being on, providing that all the power supplies are connected and switched on. This is **BYPASS** mode and is entered by switching the bypass switch on the back of the PAN. When in **BYPASS** mode the **AUTO** led on the back of the PAN should be **OFF**.

Switch to **BYPASS** mode and check that the console is operating normally.

Backing up the software.



Before running any S6000 Automation software you MUST make a copy of the software disk, so that the original disk can be archived.

The copy will then be your working master disk.

The software consists of three files, **MROS**, **PROG.DAT** and **S6000.PRG**, which should be copied onto a new disk using the procedures outlined in your **ATARI** manual or the instructions in Appendix 1. The original should then be stored in a safe place.

Booting up the software.

First, if the **ATARI** is switched on, switch it **OFF**.

Then insert the black software key into the slot on the left hand side of the **ATARI**.



Note that the software key should already be inserted into the slot when the ATARI is powered up.

Next, switch on the computer and insert the working master disk which you made earlier into the disk drive.

The program is stored in the file called **S6000.PRG**.

Execute it as follows:

- Double click with the mouse on a: drive.
- Double click with the mouse on **S6000.PRG**.

You will now have to wait up to 2 minutes for the program to load into the ATARI memory.

When the software has finished loading, a picture of the desk will be displayed. A window will appear which should say:

NN channels detected
OK Retry

where NN is the number of channels in your console, or the number of channels plus 4.

If the correct number of channels have been detected then click with the mouse on OK and the automated console should be displayed on the screen. You are then ready to run the console in automation mode.

If the wrong number of channels is indicated OR

No Response from S6000
Ignore Retry

is displayed, then the system is not operating correctly. Check that the Midi Synchro Setup page in the software is setup correctly. This page is accessed via the FILE menu and the correct settings are shown in Appendix 2 of this manual. If the correct number of channels are still not detected by the ATARI when exiting from the MIDI Synchro Setup page, then go back to the section on Installation (Chapter 2) and check that the instructions have been carried out correctly.

Automation Mode

Switch the system into automation mode by switching the BYPASS switch on the back of the PAN. When the system is in AUTOMATION mode the AUTO led will be lit on the back of the PAN. Small discrepancies in fader gain are to be expected between BYPASS and AUTOMATION modes, and so during normal operation only one of these modes should be used. It is assumed that normally the console will be run in automation mode.

You are now ready to use the automation system.

4. Using the Automation System

4. Using the automation system

Having worked through the installation instructions in Chapter 2 and the switching on procedure in Chapter 3 you are now ready to use the automation system.

The instructions in this section are intended only to give the user a brief guide on how to record and playback a mix using the automation. It should only be used as an initial starting point after which the software manual which is supplied with the console should always be used.

There are many more features to the software than are mentioned here and these are described in detail in the software manual.

Setting up the software

- Check that your software is set up to match your console by selecting FILE menu and clicking on Hard/Soft Connections.
- Click on YES to confirm that you wish to change the settings.
- CONFIRM that your data will be lost (assuming that at this stage you do not have a mix stored in memory that you wish to keep).
- Edit the number of inputs to match the number of inputs on your console (if necessary).

The masters are NOT automated in this system and the number of groups is always 16.

- Click OK when ready.

The connection page will now be displayed. This page enables you to define whether a channel should be controlled from the DESK or from the SCREEN.

- Click on a channel to change between DESK or SCREEN.

Normally all the inputs will be controlled from the DESK and all the groups and masters from the SCREEN.

- Check this is correct then click on the left hand top corner arrow to return to the main page.

To check that the console is being controlled by the automation press "SHIFT W" on the ATARI. This switches all the automated channels into WRITE mode. This means that any fader movement at an automated channel will be detected by the computer, displayed on the screen, then a VCA value will be calculated and written back to the console causing the gain of that channel to change.

- Move each of the input faders in turn and watch them move on the ATARI screen.
- Press each of the MUTES and watch them switch on the screen.

Setting up a title

The automation system assumes that the user will work within a title and create various mixes within that title. Therefore the first step to starting work is to define your title.

- Select the DATA menu and click on TITLE SHEET.

This page enables you to record information about the people involved and the date that a project was worked on etc. Most important it enables you to record the time code type and the start and end times of your title. This information will be the same for all mixes within this title. For more information on the data which is stored as part of the title refer to the software manual, sections 19 - 22.

When you have set up your parameters click OK to exit the title sheet.

Recording a time code track

If your system includes the SMPTE time code reader/generator then you will probably want to record some time code on one track of your tape using the SMPTE option to generate the time code.

Generate time code as follows:

- Select FILE menu and click on MIDI Synchro Set UP.
- Set Syncro to TIMELOCK.
- Click on WRITE SMPTE.

For "Write SMPTE code from device" select TIMELOCK (This refers to the SMPTE generator installed in the automation PAN).

- Set the cue time to the required value and press return to start generating timecode.

The automation should start generating time code which will be displayed in the top right hand corner of the screen. This can then be recorded on the tape machine.

- Press OK when you wish to stop generating time code.

Recording a mix.

- To record a mix press "Shift W" to switch all channels into WRITE mode.

This means that all fader movements and mute switches will be recorded as part of the mix.

If you have the time code option, then you should operate in CLIENT mode.

- To start recording press PLAY on the tape machine.

If you do not have the time code option, you should operate in MASTER mode.

- To start recording click on RUN on the screen and the internal time code will start counting.
- To switch between MASTER and CLIENT click on the top RIGHT HAND corner of the screen.

You can now start creating your mix by adjusting the fader and mute settings on the console. Any changes will be recorded in the memory of the ATARI. The amount of ATARI memory which is left at any time is displayed on the screen.

- To stop recording either press stop on the tape machine (CLIENT) or stop on the ATARI screen (MASTER).

When the time code stops the ATARI will automatically switch all channels to READ mode. (This is set by setting Auto Read in the OPT menu). Therefore when you play back your mix the data that was stored will be played back (READ from memory) and will not be written over by changes at the console unless you switch back to WRITE mode.

- Play back your mix by rewinding the time code back to the start and pressing PLAY again.

You should observe the fader movements and mute switches which you recorded being played back.



More information on recording and updating your mixes is given in the software manual.

Saving and Loading a mix.

Before SAVING a mix you should also have saved your current title, because when you LOAD back your mix you will also need to LOAD the title.

- Select SAVE TITLE by going into the FILE menu.
- Give your title a filename and press on CONFIRM to save it.
- Now save your mix by selecting SAVE MIX in the MIX menu.
- Select the start and end times of your mix to be saved (which must be within the start and end times of the title) and press OK.
- Give the mix a name and it will be stored on disk for you to recall at a later date.
- To LOAD a mix go into the MIX LIST (MIX menu) and select the MIX you wish to load.

Again you must have the correct title loaded before you load a mix from within that title.

Appendix

Instructions for copying disks on the ATARI.

To format a blank disk:

- Insert the blank disk into the drive.
- Click once with the cursor on A: drive
- Select FILE menu at top of screen.
- Click once on FORMAT.
- Click on OK to proceed with the formatting.
- Click OK again to start formatting.

Wait for disk to finish formatting.

- Click OK.
- Click on CANCEL to exit formatting

OR

- to format another disk insert the new disk and click OK.

To copy a disk from a MASTER:



NB. If an extra disk drive is to be used for copying then the drive needs to be connected before the ATARI is powered up.

- Insert a blank formatted disk (disk A) in the drive in the computer.
- Double click on A drive.
- If NO extra drive is being used then remove disk A from the drive.
- Insert MASTER disk (disk B) in the drive in the computer OR in the extra drive if being used..
- Double click on B drive.
- Click OK to read the master disk.
- Select the 3 system files on disk B (MROS, PROG.DAT, S6000.PRG) by drawing a box around them with the mouse.

(To draw the box hold the left button on the mouse down and drag the mouse across the screen.)

- Drag the selected files to drive A window using the mouse.
- Click OK to start copying.
- If NO extra drive is used insert disk A into the drive when prompted.
- Click OK.
- If NO extra drive is being used continue to swap the disks when prompted until the copying is complete.

If an extra drive IS being used copying will be completed without having to move the disks.

Appendix 2

Recommended Settings for the Midi Synchro/Setup Page

The MIDI Synchro/Setup Page is accessed via the FILE MENU and defines the interconnections between the different components of the system. The recommended initial settings for the Soundcraft S6000 Automation system are shown here.

Synchro	TIMELOCK
SC-AUTO CONNECTED TO	MROS
FADER READER CONNECTED TO	MROS
DATA FOR SC-AUTO SENT ON	MROS
ON OFF MTC SENT ON	MROS

Warranty

- 1 **Soundcraft** means Soundcraft Electronics Ltd.
End User means the person who first puts the equipment into regular operation.
Dealer means the person other than Soundcraft (if any) from whom the End User purchased the Equipment, provided such a person is authorised for this purpose by Soundcraft or its accredited Distributor.
Equipment means the equipment supplied with this manual.
- 2 If within the period of twelve months from the date of delivery of the Equipment to the End User it shall prove defective by reason only of faulty materials and/or workmanship to such an extent that the effectiveness and/or usability thereof is materially affected the Equipment or the defective component should be returned to the Dealer or to Soundcraft and subject to the following conditions the Dealer or Soundcraft will repair or replace the defective components. Any components replaced will become the property of Soundcraft.
- 3 Any Equipment or component returned will be at the risk of the End User whilst in transit (both to and from the Dealer or Soundcraft) and postage must be prepaid.
- 4 This warranty shall only be available if:
 - a) the Equipment has been properly installed in accordance with instructions contained in Soundcraft's manual; and
 - b) the End User has notified Soundcraft or the Dealer within 14 days of the defect appearing; and
 - c) no persons other than authorised representatives of Soundcraft or the Dealer have effected any replacement of parts maintenance adjustments or repairs to the Equipment; and
 - d) the End User has used the Equipment only for such purposes as Soundcraft recommends, with only such operating supplies as meet Soundcraft's specifications and otherwise in all respects in accordance Soundcraft's recommendations.
- 5 Defects arising as a result of the following are not covered by this Warranty: faulty or negligent handling, chemical or electro-chemical or electrical influences, accidental damage, Acts of God, neglect, deficiency in electrical power, air-conditioning or humidity control.
6. The benefit of this Warranty may not be assigned by the End User.
7. End Users who are consumers should note their rights under this Warranty are in addition to and do not affect any other rights to which they may be entitled against the seller of the Equipment.