MIXER MODE: THE SOUNDCRAFT MIXER

BRIEF INTRODUCTION

To view the Soundcraft Si manual, click on the LCD screen in the image above, or select the following link.**SOUNDCRAFT Si IMPACT** (downloads/soundcraft/SiImpactUserManual_V1.6_screen.pdf)

It would be impossible for write a step by step guide in sound mixing, every event is different, every audio engineer mixes differently. There is no real "right way," but there are many wrong ways. I urge you to read the Soundcraft manual, and to also invest a great deal of time in practicing with the different setups. The manual and training videos are located in the Information and Downloads section on this tutorial.

Analog & Digital Workflow Differences

Traditional Analog Mixer	Digital Mixer Differences
Connecting Inputs	
Inputs are connected to the back of the board and correspond directly with channels.	Inputs on the back of the board may correspond with faders but may need to be assigned. Additional inputs via Ethernet stage boxes may also need to be assigned to faders.

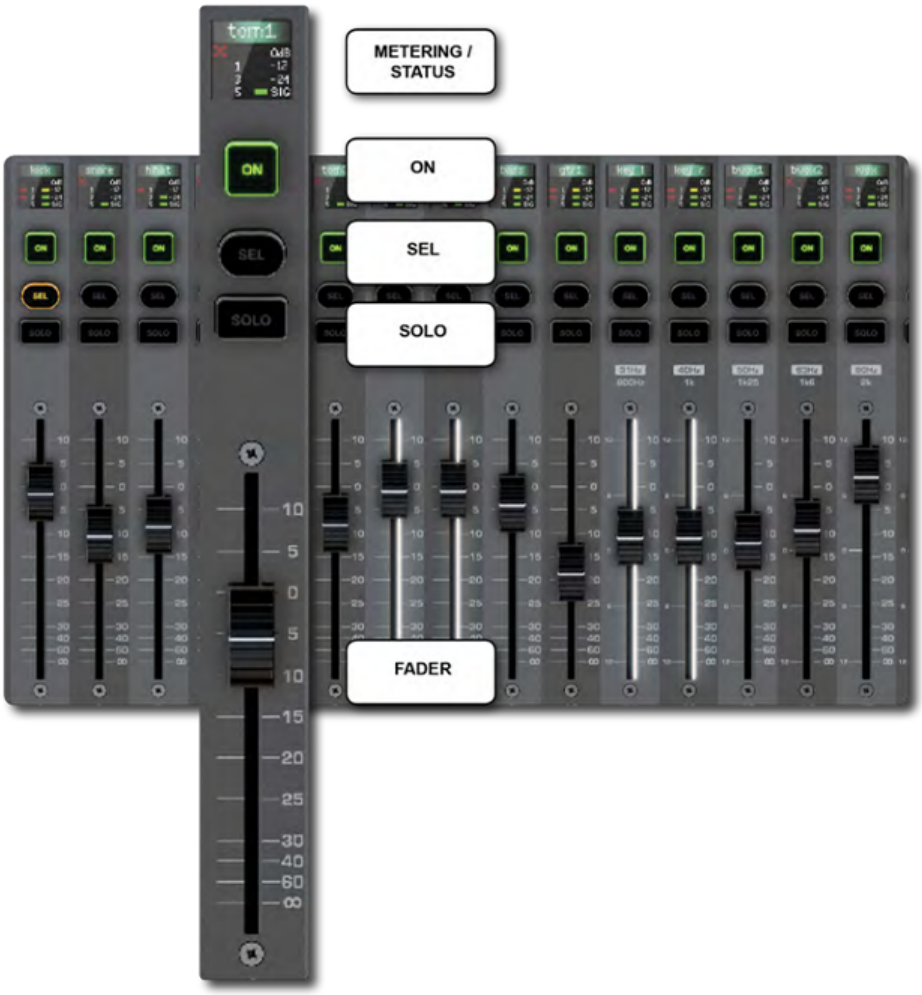
Adjusting Channel Settings	
Dedicated controls on each channel strip allow you to quickly dial in mic gain, EQ, and other settings, while providing a summary of channel settings at a glance.	**Select** buttons on each channel allow you to use a **single master section** to dial in gain, EQ, dynamics, and additional settings.
Setting Up Sends	
Individual send knobs on each channel let you quickly dial in additional mixes. Sends typically have master volumes and pre-/post-fader assignment buttons.	Sends may be set up from the master section by setting the channel layout to send mode or by another method. Outputs are often freely assignable in the master control section, allowing you to pair physical outputs with send or group buses.
Setting Up Groups	
VCA groups are usually assigned via small buttons along the fader or elsewhere on the channel. The number of groups is always limited by the circuitry.	While some digital mixers handle groups similar to the way analog mixers do, group assignments are typically much more fluid and far less limited. With layered banks of faders, groups may live on their own layer for easy access during live mixing.
Accessing Effects and Processing	
Typically, analog mixing consoles don't have effects or master bus processing onboard. When they do have effects, they're usually assigned to one of the auxiliary send buses. Other channel and bus processing is usually available via insert points.	Most digital mixers include extensive effects and processing, minimizing the need for a rack full of outboard gear and effects processors. The tradeoff is that if you want to use outboard gear, you'll probably need to route signal through an assignable send.

Mute Button

First thing you will notice on a digital mixer is that there is no Mute button. The mute button is one of the most basic functions of an audio console. When the mute button is engaged the track is not audible (or muted). If the button is disengaged, the track is on and audible. If you don't see a 'mute' button on your console, you may simply have a track on/off button or switch. When the track is in the 'on' position, the channel is essentially unmuted, and when the track is in the 'off' position, the channel is essentially muted.

1. **Turn everything down or off before plugging new devices into the mixer.**
   It's hard to know where every level is set if you don't start them at zero. Lower everything to the lowest setting, plug-in every device you'll use, then slowly adjust the faders and other components to achieve the desired results.
2. **Set group adjustments for each channel.**
   You can bunch several adjustments, making it reusable for additional channels. For example, you can set the same list of modifications for Group A, then copy-paste it to Group B to have the same effect. It takes a little while to create the first group, but it changes instantly afterward.
3. **Change inputs to different channel groups.**
   Once you've plugged everything into the mixer, you can set a channel for every input or group them together, as you read above. This customization streamlines the process by making each channel follow a dedicated line, which can be bunched together.
4. **Cycle through the pages to view meters, sets, and more.**
   Most digital mixers have several tabs you can look through to change all of the settings. Check your meters to ensure you're not blowing out the speakers or going out of the desired range. You can also review the groups you created and adjust them digitally.
5. **Assign new effects to each part of the digital mixer.**
   Perhaps one of the best features of digital mixers is you can make a new effect or sound correspond with several knobs and buttons. You don't have to stick with the default setup. It's an excellent way to change between podcast episodes, performances, and more.

The below images are from selected pages within the Soundcraft manual, to view the full manual, select the link which will open the manual on a seperate page.**SOUNDCRAFT Si IMPACT MANUAL** (downloads/soundcraft/SiImpactUserManual_V1.6_screen.pdf)



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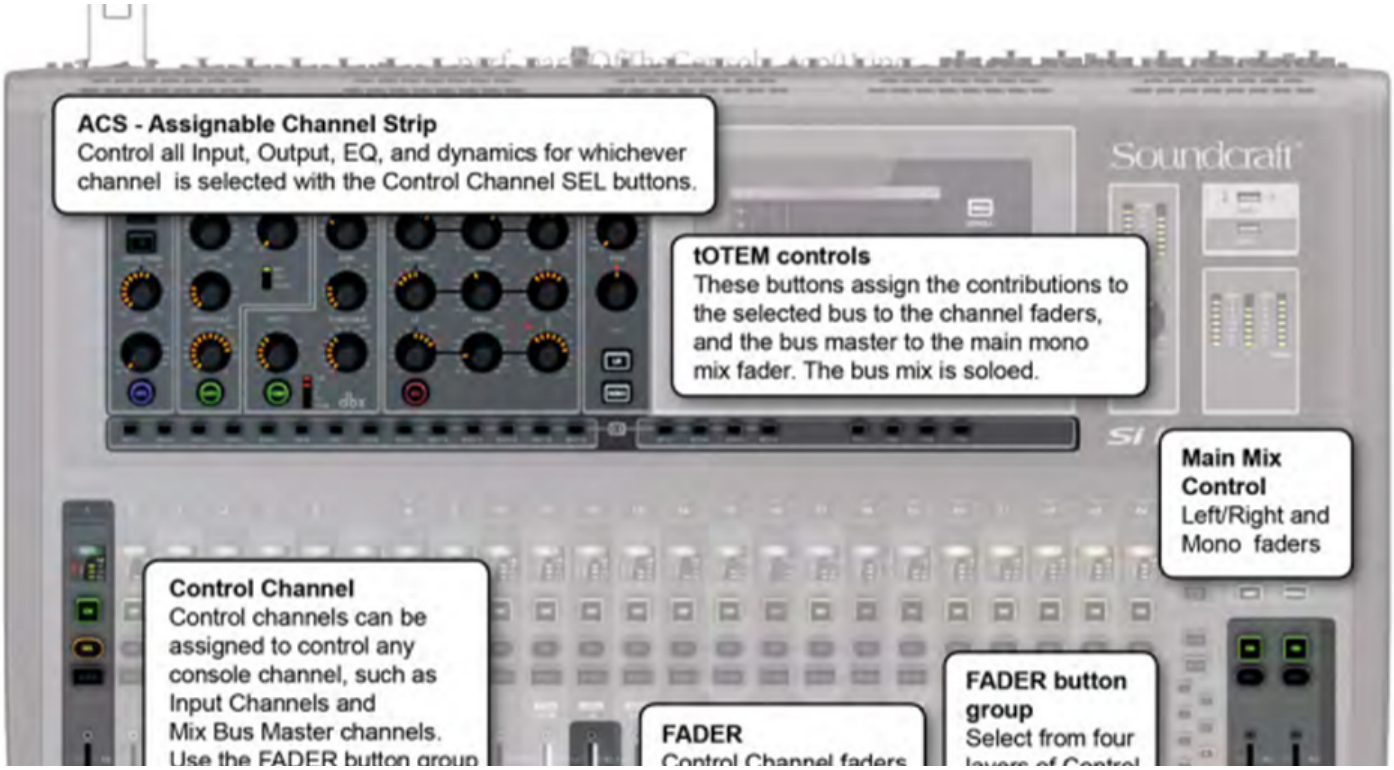

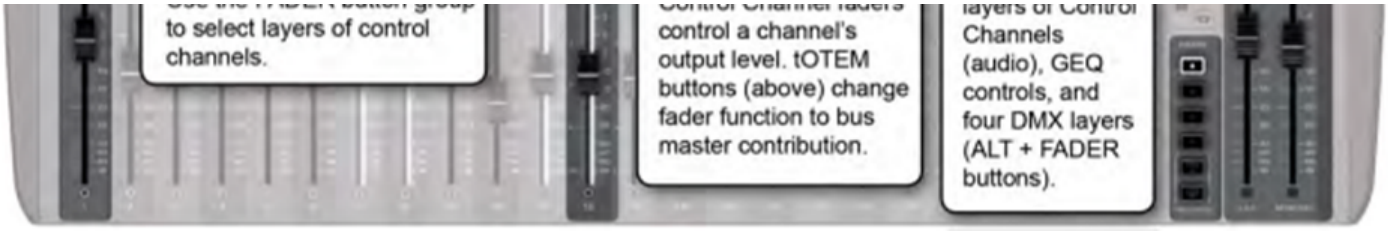

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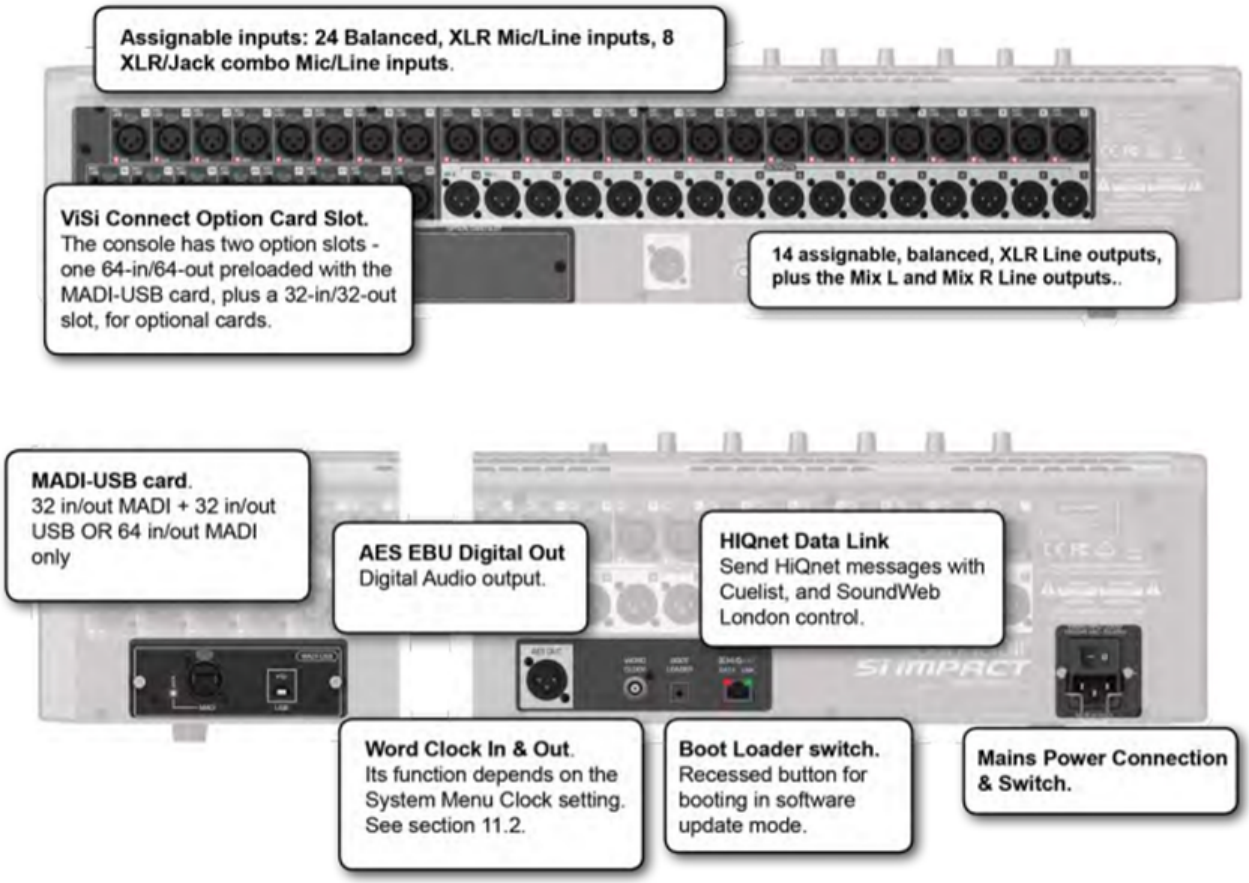

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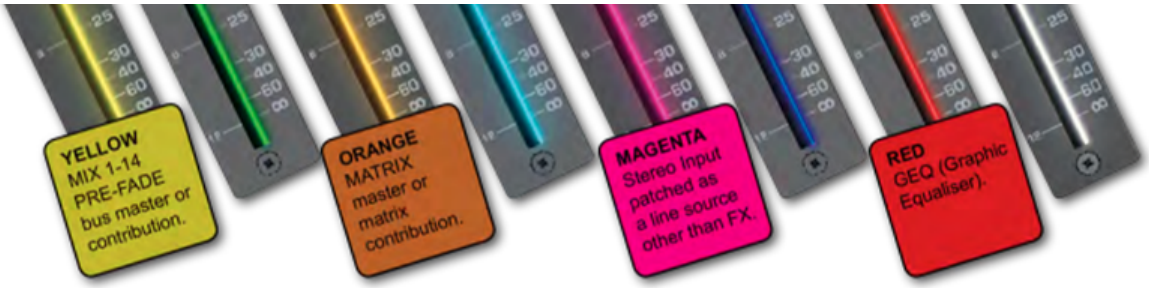
Soundcraft FaderGlow™ is a unique feature that gives the user an additional level of status indication, and can significantly reduce operating errors.



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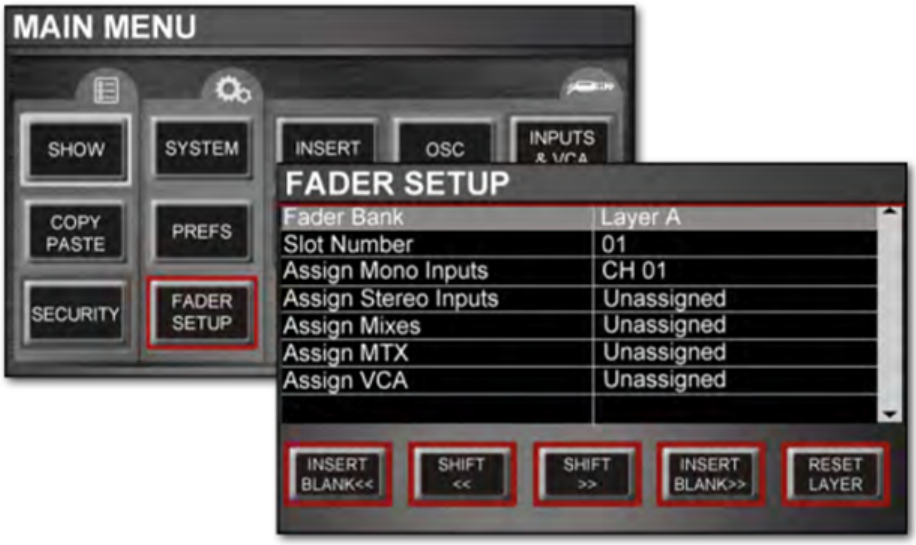
Control Channel Assignment is accessed via the FADER SETUP button in the Touch Screen Main Menu. Select the Control channel using the Fader Layer and SEL buttons in the usual way - the current Fader Bank and Slot Number cannot be edited in the FADER SETUP menu.



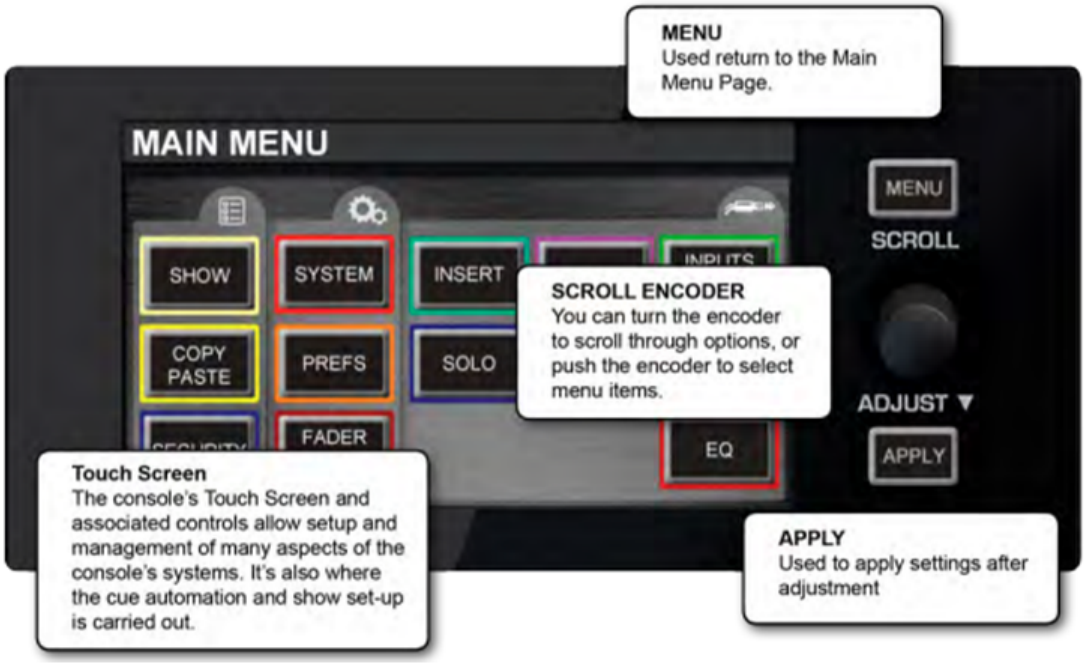
A DSP channel or VCA Master can be assigned to more than one Control channel, though you cannot assign more than one channel or VCA Master to a single Control Channel.

(tp-images/sb/scm5.png)

(tp-images/sb/scm6.png)

TOUCH SCREEN

The console colour Touch Screen can be used through direct touch, or in conjunction with the Scroll Encoder and MENU / APPLY buttons. It provides access to System settings and preferences, Copy/Paste and cuelist / Show functionality, as well as settings for inputs, outputs monitoring, the solo system, plus a frequency response-type display of the 4-band EQ.



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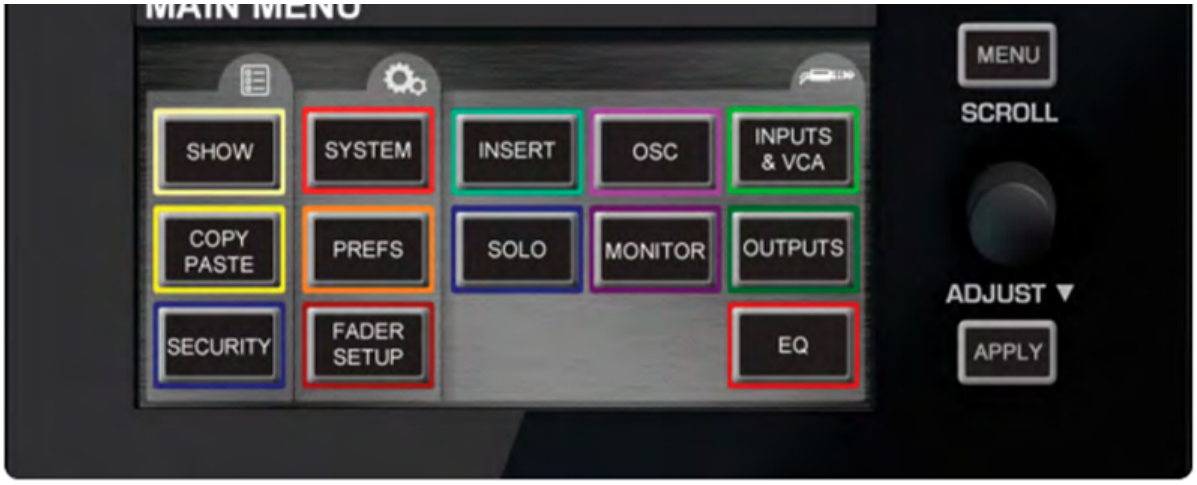
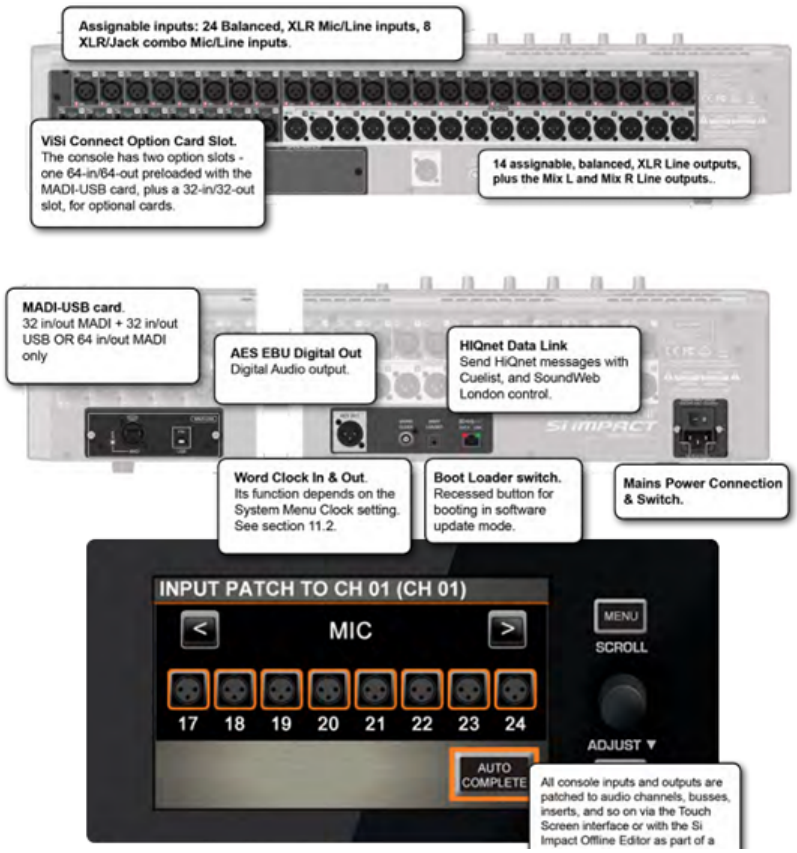
The Touch Screen Main Menu can be accessed at any time by pressing the MENU button next to the Touch Screen. From here you can navigate to any of the settings menus.



(tp-images/sb/scm8.png)

The console has an assignable patching system for all inputs and outputs. In other words, any DSP Channel input or output can be assigned a physical input or output. At its simplest, this might mean that the input to Channel 1 is patched to MIC01 (the first local mic/line XLR socket).



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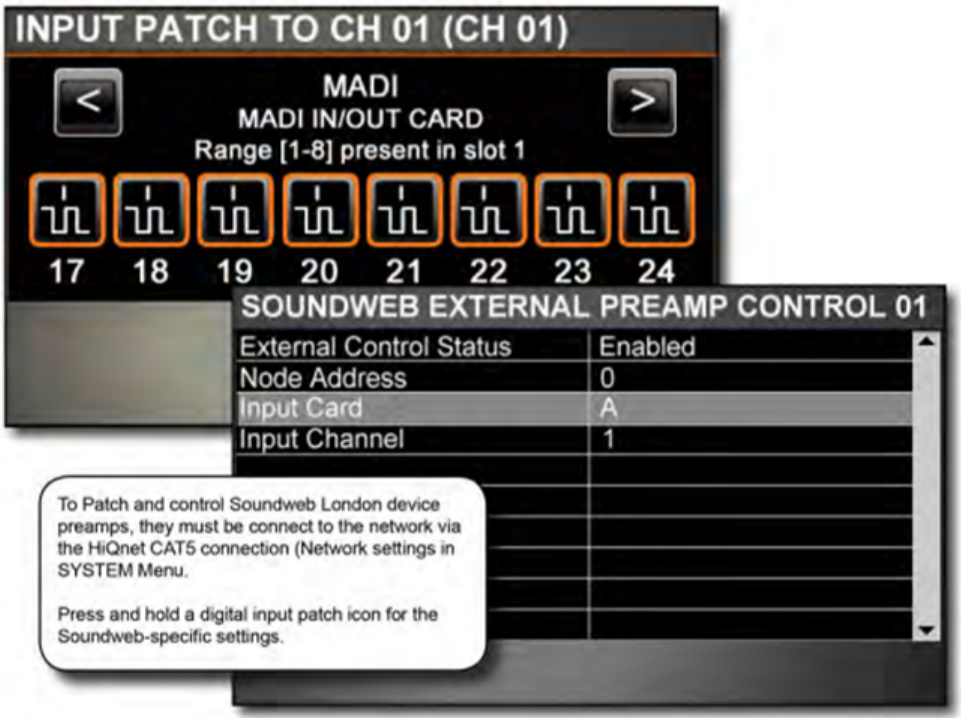
INPUTS AND OUTPUTS > PATCHING

When patching an input or output, you will be presented with an I/O selection screen. The current patch is shown with an orange tick over the relevant patch icon.

Scroll left or right through the available options and select from the labelled patch icons. The system will only show option cards if they are fitted, or if the show was *created* on a console with expansion cards fitted, or if the show was created with option cards in the offline editor.

(tp-images/sb/scm10.png)

The console can control BSS Soundweb London devices' preamp controls via Harman's HiQnet protocol. When a digital audio transport card (Dante, BLU Link, Cobranet, etc.) is installed and your Si console is connected to a network with Soundweb London devices via the HiQnet port on the back of the console, you can now bring up the SOUNDWEB LONDON EXTERNAL PREAMP control.



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Using the fitted MADI-USB card, the Si Impact can be connected to A variety of additional I/O, including the Soundcraft Stageboxes.

Soundcraft Mini Stagebox

Two variations of a smaller Stagebox for general use when modular I/O is not required.

The Mini Stagebox 32 (3U) provides 32 analogue inputs and 8 analogue line outputs, with 4 pairs of AES outputs, providing a total I/O capacity of 32 inputs and 16 outputs, with the Mini Stagebox 16 (2U) model providing 16 analogue inputs and 8 line outputs making a 16 x 8 matrix. They connect to any of the Soundcraft Si Series and Vi Series consoles via a MADI card fitted to the option card slot.

Soundcraft Compact Stagebox

A high density of I/O connections in only 4U of rack space. The modular unit is fully configurable but is offered with a standard configuration of 32 mic/line inputs, 8 line outputs, 8 channels of AES/EBU outputs and 2 expansion slots for standard Studer D21m I/O cards. The D21m is the I/O architecture for Studer as well as Soundcraft digital mixing systems and allows connection to most popular digital formats, including CobraNet®, AVIOM A-Net®16, Ethersound, ADAT and RockNet. A MADI recording interface can also be fitted to the expansion slots.

(tp-images/sb/scm12.png)

INPUTS AND OUTPUTS > MADI-USB CARD

The Soundcraft MADI-USB Combo card offers digital audio connection between an Si series console and Apple Mac or PC with a USB port, as well as any of the Soundcraft range of Stageboxes via Soundcraft's proprietary Cat 5 MADI connection.

Audio capability across the USB link is 32 channels in and 32 channels out at 48KHz, switchable between digital output channels 1-32 and 33-64. The Cat 5 MADI port can be used simultaneously with up to 32 inputs and 64 outputs (Digital output channels 1-64). However, more MADI inputs are possible at the expense of the USB inputs, which would give 64 MADI inputs, 64 MADI outputs, and 32 USB outputs (NO USB inputs).

NOTE: By Default, the Si Impact card is set-up to handle 32 USB channels in and out (channels 33-64), plus 32 MADI channels in and 64 MADI channels out (channels 1-64). If you require a different configuration, you must change the DIP Switch settings on the card itself.

Connection and setup of the card to a PC is made simple with the use of the Soundcraft digital audio driver and associated control panel. USB connection to a Mac requires no extra software or drivers.

(tp-images/sb/scm13.png)

The Assignable Channel Strip (ACS) follows the currently selected DSP Channel and provides almost all of the controls relating to that. It is broken down into logical sections, making it easy to identify control groups and functions at a glance.

There is a dedicated control for each function and each control has a dedicated label and scale, just as you would find on an analogue mixer

The exact value of any control will be shown on the Touch Screen using the Function Focus feature (see section 7.1) as you adjust them.

(tp-images/sb/scm14.png)
(tp-images/sb/scm15.png)

DSP ELEMENTS > ACS > INPUT

The input section mainly provides the features required for input channels such as phantom power and mic/line level. Metering is applicable to all DSP channel types, and HPF (High Pass Filter) is available in Mix Bus Master Channels.

(tp-images/sb/scm15.png)

DSP ELEMENTS > ACS > GATE

A Gate is a threshold-driven gain reduction process normally used to attenuate a signal when its level falls below the Threshold. Setting the Threshold just above a noise floor or background noise, for example, will allow the Gate to attenuate the source during periods when the main input (voice, instrument etc) is silent.

This gate includes a Sidechain Filter section. This allows you to control what frequency range is compared to the threshold level. For instance, you could limit the sidechain range to only 'Ess' vocal frequencies. In conjunction with a carefully set threshold this would act as an effective 'broadband' De-Esser.

(tp-images/sb/scm16.png)

DSP ELEMENTS > ACS > COMPRESSOR

A compressor is a threshold driven process used to reduce the dynamic range of a signal by applying gain reduction when the signal level exceeds the threshold and applying 'make-up gain' to keep the overall level consistent.

You can use compression to increase the apparent loudness of a signal without increasing the peak level, or to control overly dynamic sources.

(tp-images/sb/scm17.png)

DSP ELEMENTS > ACS > EQUALISER

The channel EQ (Equaliser) section is used for sculpting the tonal (frequency-based) balance of the signal. The Impact EQ has four fully parametric, full range bands - LF and HF have switchable bell/shelf modes. You can check the EQ 'curve' via the Touch Screen Main Menu EQ button.

(tp-images/sb/scm18.png)

DSP ELEMENTS > ACS > OUTPUT

The outputs section contains features specific to the outputs of all channels. Delay and Pan (or balance) are applicable to all channel types, while LR and MONO/ CENTRE routing is specific to input and Mix Bus Master output channels (not Matrix master channels).

(tp-images/sb/scm19.png)

DSP ELEMENTS > CONTROL CHANNEL

Control channels contain the primary performance controls and indicators. Layers of Control Channels (assigned to various 'actual' channels) are selected using the FADERS (Fader Layers) button group. Control channel positions are assigned to channels using the Touch Screen FADER SETUP menu (see section 3.2.1).

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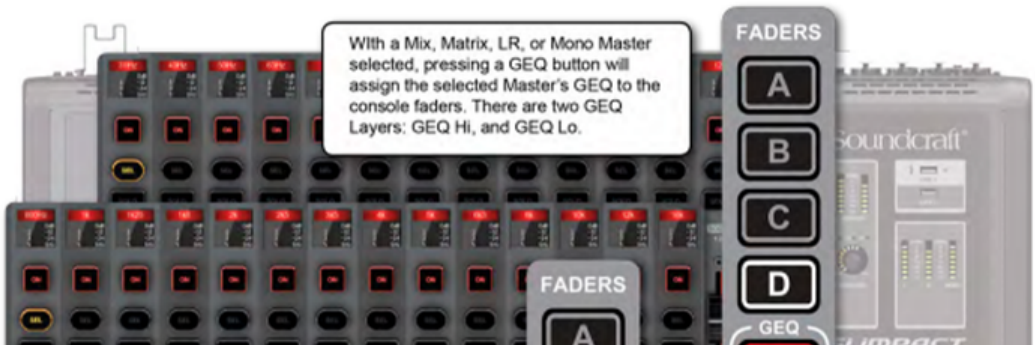
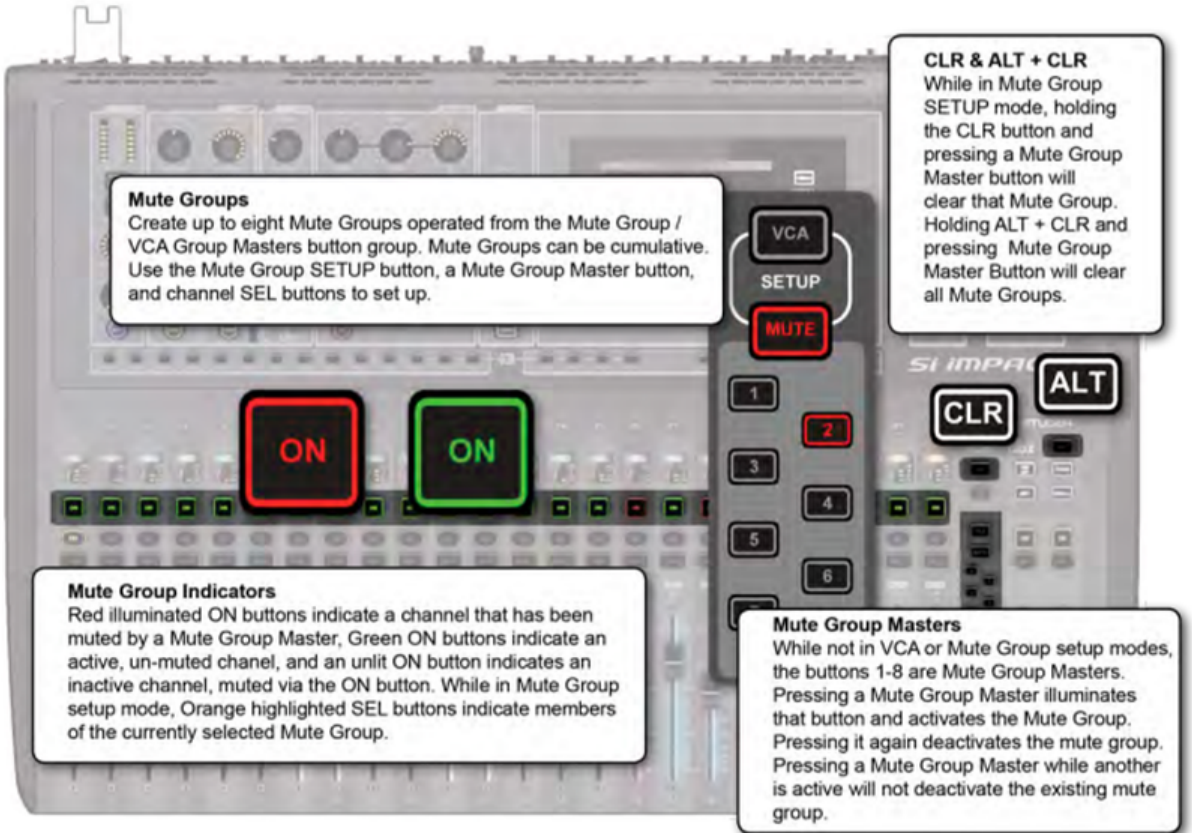
DSP ELEMENTS > GRAPHIC EQ (GEQ)

28-Band Graphic Equalisers (GEQs) are available to all Output Masters on the console: Mix Bus, Matrix Bus, and Left/Right and Mono/Centre Bus Masters. All Masters can run GEQs simultaneously.



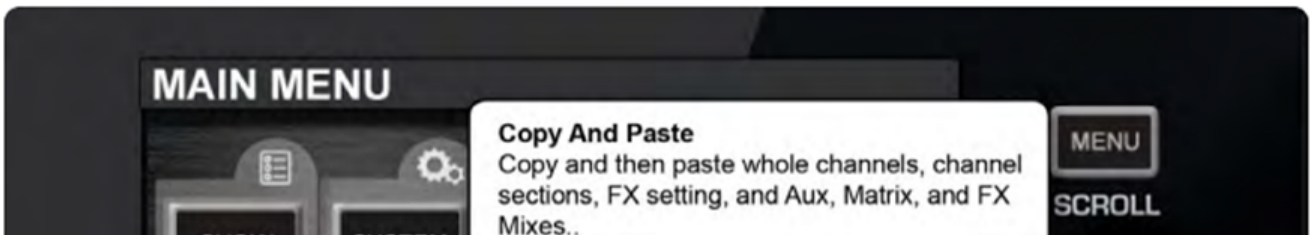
(tp-images/sb/scm21.png)

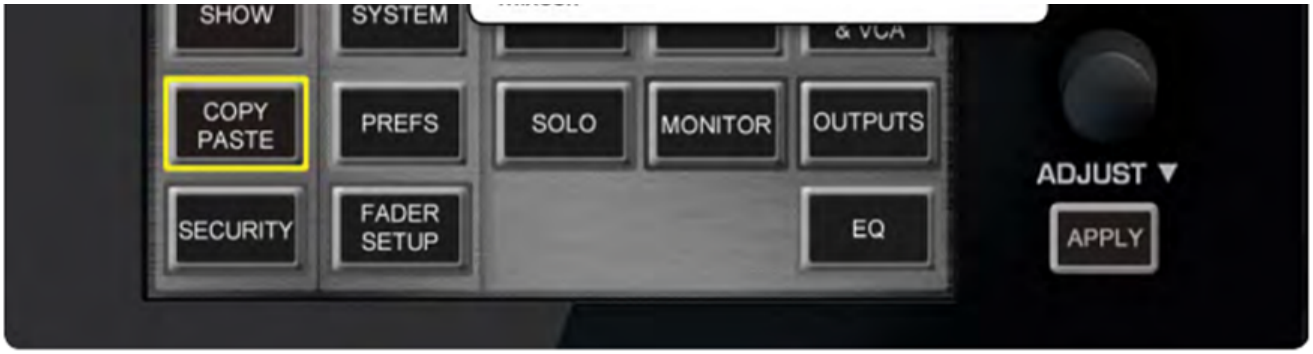
Mute Groups enable group-muting of selected channels at any time. Create up to eight Mute Groups operated from the Mute/VCA Group Masters button group 1-8. Mute Groups can be cumulative. While not in VCA or MUTE setup modes, the buttons are always Mute Group Masters.



(tp-images/sb/scm22.png)

This facility allows almost any processing section to be copied easily and quickly from a channel or bus and pasted to another channel or bus. You can also copy and paste the internal Lexicon FX settings and Aux, FX Send, and Matrix mixes.

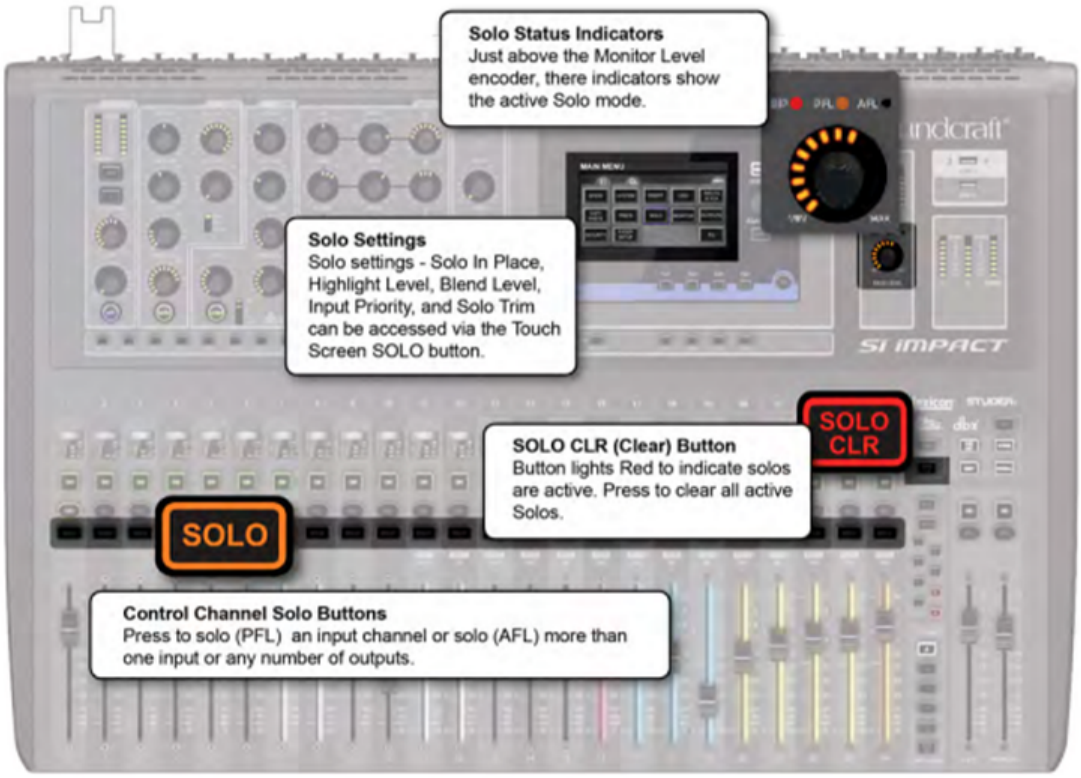




When you press COPY PASTE (Touch Screen Main Menu), or when you reselect a channel or bus while the COPY PASTE mode is active, the console's clipboard captures the state of that selection. If you have a channel selected, that channel's processing (except GAIN or 48V status') is copied; if you have a bus mix selected via the FADER FOLLOW (tOTEM) buttons, that bus mix is copied.

(tp-images/sb/scm23.png)

Solo provides a way of monitoring and checking individual channels and groups of channels quickly by routing only the 'soloed' channels either to the monitoring system (normal operation) or to the main mix outputs (Solo In Place - SIP).



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MIXER MODE: SOUNDCRAFT MIXER

AUDIO VISUAL CONTROL SYSTEMS: STANDARD OPERATING PROCEDURE

Soundcraft Si manual: select the following link.**SOUNDCRAFT Si IMPACT** (downloads/soundcraft/SiImpactUserManual_V1.6_screen.pdf)

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