

Solid State Logic C200 Digital Production Console Product Overview



C200 An evolution of SSL's in-line multitrack consoles, the **C200™** is designed for large format recording, live-to-air and off-line mixing applications, where capacity and 'hands on' access are the paramount requirements.

In a choice of frame sizes, the familiarity of **C200's** discrete control surface is combined with the scalability of SSL's **Centuri™** core. Up to 512 I/O, and 60 GPIs are available from a single 15U core, with fibre connected stageboxes handling remote controlled microphone resource.

The console benefits from redundancy, fault-tolerance and hot-swap features. Full diagnostic support and the security of proprietary design ensure robust long term performance.

- Freelance friendly, 'analogue style' control
- Dual faders (large and small) per channel strip
- Flexible in-line channel configurations
- 12 Main busses for Stereo/5.1 Audio Sub Groups
- 2 Programme outputs (5.1 and Stereo)
- 48 Multitrack busses with individual gain trim
- Independent pre and post fader direct outputs
- 12 Aux busses with odd/even stereo linking
- 12 stereo FX returns
- Sample-independent processing with options for 48kHz or 96kHz operation
- Dedicated processing per channel strip
- EQ and Dynamics DSP emulations
- Full 5.1 facilities for surround mixing
- Comprehensive dynamic automation and integrated 4-port machine control system
- Mobile configuration for space/weight savings

INTRODUCTION

Analogue-Style Control Surface

The **C200**'s dedicated channel strips provide a familiar operational interface to both in-house and freelance audio engineers. The operator has immediate access and an excellent overview of all console's settings. Parameters may be adjusted simultaneously across multiple channels, and mixers can work with the aid of an assistant engineer if required.



Superior Audio Quality

With options for 48 or 96kHz operation, the **C200** delivers superior audio performance. All channels provide 4-band parametric EQ, high and low pass filters, and independent compressor/limiter and gate/expander sections.

Processing is dedicated to every channel so there's no need to assign resources at the start of the setup, and emulations such as the SSL 'E' and 'G' Series EQ, and 'Quad' compressor, provide familiar and great sounding audio tools.

Modular Construction

SSL's proprietary **Centuri** core contains all audio and control processing, I/O options and GPI interfacing within a single, robust chassis.

Up to 512 inputs and outputs, at 48kHz (256 inputs and outputs at 96kHz), may be handled directly from the **Centuri** core. Card options include Analogue, AES/EBU Digital and MADI, all operating at 24-bit with sample rate conversion for digital I/O as standard. A 60-channel GPI card may be fitted to provide programmable machine starts, cue lights, etc.

Maximum Value

Each **C200** console is tailored to meet production and budgetary needs, with all elements scalable: console surface, channel capacity and I/O. Configuration options, such as the **C200** Mobile, enable 48 channel strips (105 faders) to fit across a width of 2.34m (92"). Alternatively, where space is less restricted, customised frame layouts can be used to create impressive real estate.

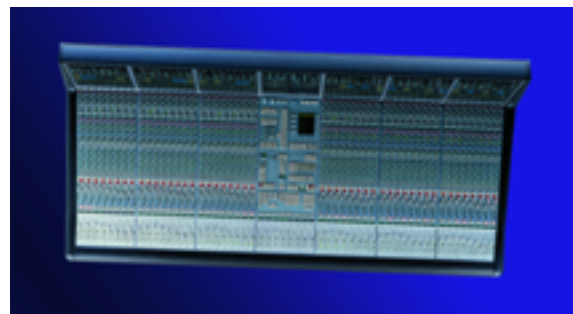
Secure Performance

SSL proprietary technology is used in all hardware and software design, guaranteeing robust and reliable performance.

Self-healing DSP, fast reboot times and power supply redundancy options are among some of the console's fault tolerant features. Local and remote diagnostics provide trouble shooting tools from any location, with SSL's network of offices offering training and service support.

Mic sources are input through separate remote controlled stageboxes, with a choice of 24- or 48-channel variants. Each unit provides mic inputs with split feeds, foldback and PSU/fibre link redundancy options.

All key control surface, **Centuri** core and stagebox elements are easily serviced, with features such as hot-swap fader cassettes and quick-release power supply assemblies fitted as standard.



Fast access to lots of channels

The **C200's** Channel Banking feature provides fast access to two layers of channels with global and individual channel A/B access buttons. For smaller control surface configurations, 'Virtual Bays' provide additional layers; a console as compact as 16 channel strips may access all in-line channels.

Sweet Spot operation for optimum listening

Any bay of 8 channels can be swapped into a designated central master bay, allowing parameters across multiple channel strips to be adjusted from the optimum listening position.

Multiformat Mixing

C200's 12 main busses provide multiple 5.1 and/or stereo groups. A programmable matrix configures the independent 5.1 and stereo Programme outputs. 5.1 and stereo monitoring paths include insertion points for matrix encoders and decoders, and external source selections.



Choice of Servo or VCA-style fader grouping

All large and small faders are motorised providing freely assignable moving fader grouping. Alternatively, choose SSL's unique emulation of VCA-style fader grouping to view the balance and adjust slave positions whilst the group master fader is closed.

Status Lock provides operational peace of mind

The Status Lock option on **C200** disables potentially destructive console functions including Solo-in-place, dynamic automation, console status changes (e.g. Record to Mix) and tone or talkback to Main bus outputs.

Instant snapshot reset

Controls may be reset instantly using static 'Snapshots'. Selective reset enables channels to be reconfigured whilst a production is live to air, for example, when handling an entertainment show with multiple live acts.



Integrated Routing Control

An integrated digital routing matrix removes the need for complex analogue patch bays and allows easy reconfiguration of complex setups.



Channel inputs, bus routing and mic parameters are handled centrally for speed and convenience. Routes may be made individually or in arrays, providing fast setup tools for changing channel source or assigning mix minus/N-1 feeds.

Dynamic Automation

The **C200's** dynamic automation provides another dimension to its capabilities. Comprehensive on and off-line automation tools, an integrated 4-port machine control system, and refined user interface make the console ideal for off-line mixing applications.

Backstop PFL

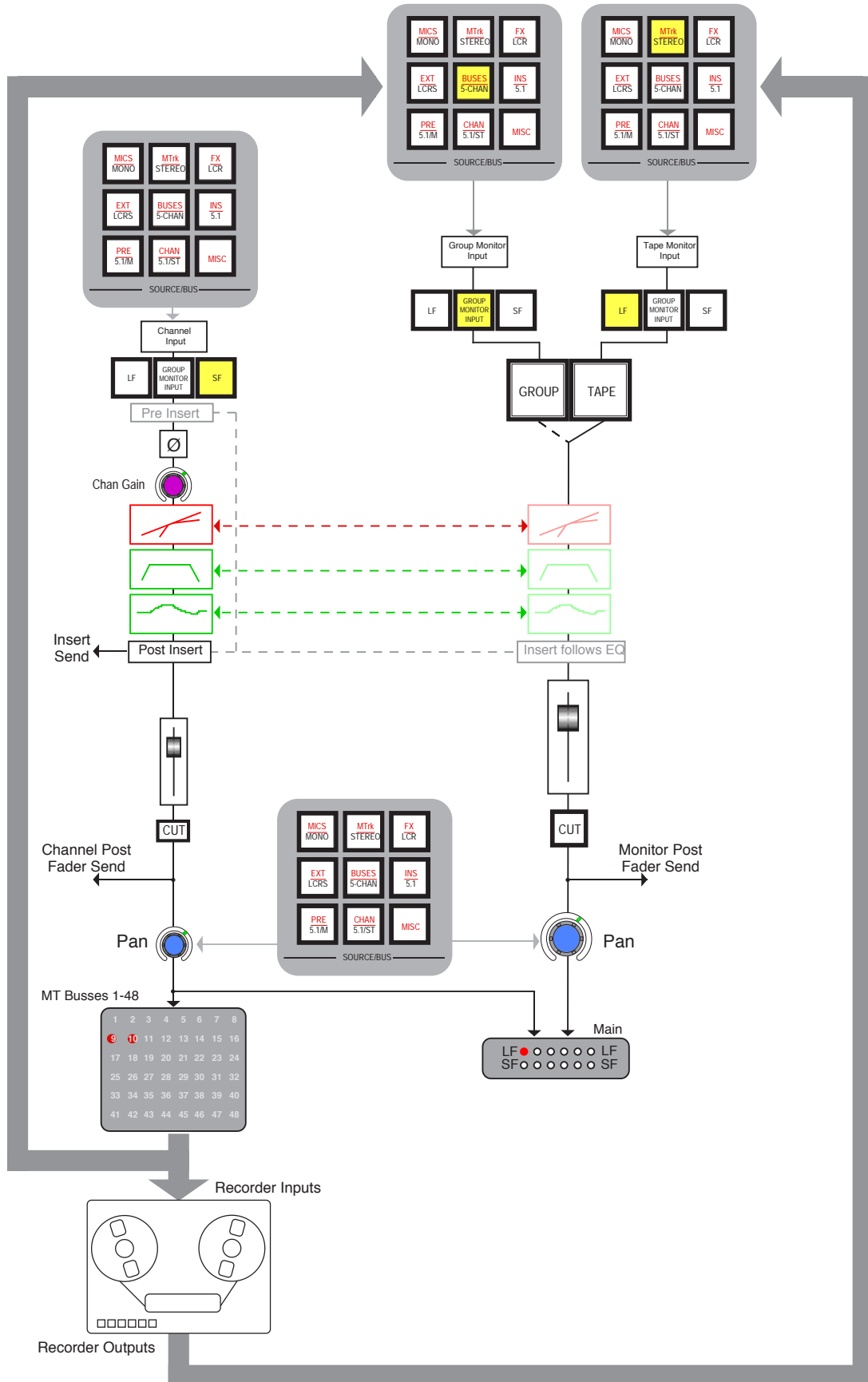
This popular broadcast console feature enables the operator to pre fade listen any input by simply pulling back on the channel fader.



Full system reconfiguration

The **C200** Project Management system enables full reconfiguration for a new type of production. In addition to console parameters, this includes reset of routing, surround formats, GPIs, etc.

SIGNAL FLOW



Flexible In-Line Design

The **C200** console uses a traditional in-line design providing two independent signal paths per processing channel. These are known as the 'Channel' and 'Monitor' signal paths, each with dedicated input, output, motorised fader, cut, AFL/PFL/Solo and multiformat panning controls.

Global console statuses (RECORD, REPLAY and MIX) determine whether the large or small faders control the main Channel or secondary Monitor signal paths, providing fast reconfiguration for Recording, Overdubbing or Mixing.

Most live productions are run in MIX status, with the small faders controlling additional inputs to the mix. Alternatively, a live to tape production may be run in RECORD status allowing small faders to set record levels to multitrack and large faders to feed the main production balance.

12 Stereo FX Returns

12 stereo FX returns are provided for inserting effects devices or external feeds into any of the 12 Main busses. They may be linked for multichannel use as required.

12 Main Busses

Programmable Main busses provide multiple stereo and 5.1 audio sub group outputs, with assignable level control, delay and insert points.



Simultaneous 5.1 & Stereo Programme Outputs

The 12 Main busses combine to form simultaneous 5.1 and Stereo programme outputs. A master 5.1 compressor, dedicated master fader and 8-channel insert point may all be applied to the programme outputs, with presets for easy recall of different format setups.

Flexible Channel Configurations

The **Centuri** core provides a range of channel configurations. Options for either 48kHz or 96kHz operation determine how many DSP cards must be fitted to support each configuration. Regardless of sample rate, the console's mix capacity remains fully featured with no loss of functionality.

Both faders may feed the 12 main busses simultaneously, effectively doubling the mix capacity of the console. Either path may also feed the 48 bus outputs.

A full set of High and Low Pass Filters, 4-band band parametric EQ, Compressor/Limiter, Gate/Expander and external Insert point are available for each in-line channel, and may be switched between the large and small faders as required.

48 Multitrack (MT) Busses

48 MT busses may be used to feed recorders, generate mix minuses, N-1s, and ancillary outputs. The busses may be fed from a choice of large fader, small fader, or a spare aux send (EFX - Extra FX send). The EFX send is floated away from the main aux bus to generate a dedicated level control to the MT busses, leaving both fader paths free to handle primary mix sources. Each MT bus has an independent level trim, and AFL monitoring access is available from the centre section.

12 Aux Busses

The Aux busses may be configured for mono or stereo operation, and are fed from both fader paths with independent send levels from large and small faders. Aux balances may be set quickly and easily using the 'Set Aux to LF' or 'Aux Flip to Faders' functions. In addition, an option for pre fader sends to shadow fader movements, can be used to generate conference style foldback outputs.

Pre and Post Fader Direct Outputs

Three direct outputs per channel strip are provided, with post fader Channel *and* Monitor paths, plus the Pre fader insert send (Channel *or* Monitor path) available simultaneously for maximum flexibility.

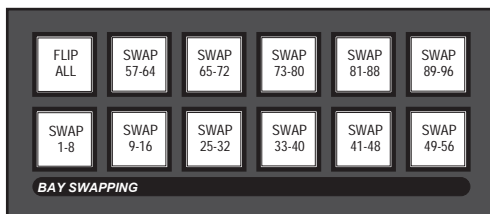
UNIQUE CONTROL FEATURES

Channel Banking

The **C200** may access up to two banks of processing channels providing lots of mixing capacity from a compact control surface. Channel strips can be flipped individually, or with master buttons, and all control settings and displays update instantly without any affect on the audio.

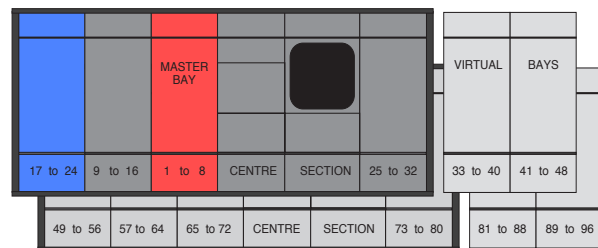
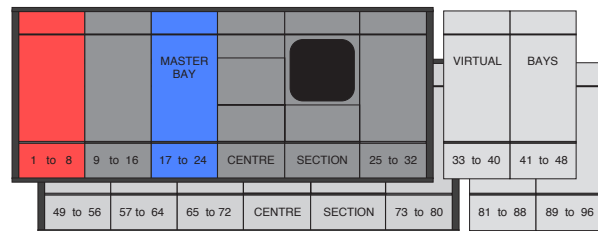
Bay Swapping

Bay swapping allows the operator to adjust any bay of 8 channels from the optimum 'sweet spot' listening position. Simply press any of the dedicated bay swap buttons and that group of 8 channels is instantly swapped into the master section.



Virtual Bays

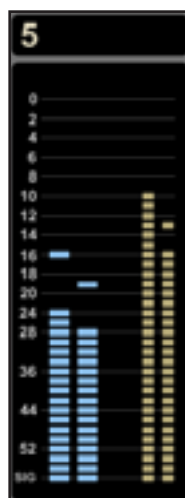
For smaller control surface configurations, 'Virtual Bays' provide access to all processing channels. For example, a 32 channel strip control surface, configured with an additional 2 virtual bays can access 96 in-line channels by swapping any physical or virtual bay into the master sweet spot position.



Freely Assignable Mono and Stereo Channels

Stereo channels can be freely assigned at any physical channel position by linking the upper (A) and lower (B) layers of banked channels. Both large and small fader paths are linked, enabling two stereo sources to be controlled from a single in-line channel.

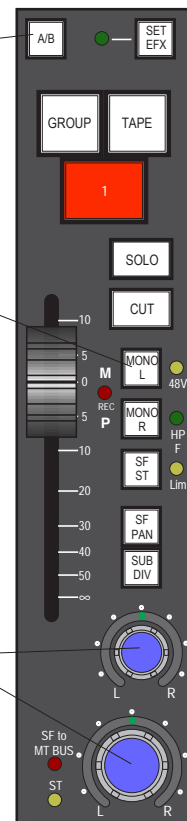
When linked, the Channel Information Display automatically updates to stereo input metering. Stereo channels offer all the facilities of mono channels, with the addition of independent Left and Right input routing, Left/Right input balance control and stereo panning options.



A/B – button is inactive as layers are linked to create a stereo channel.

MONO L and MONO R
Mono's the stereo channel, from either the Left or Right input, for reacting quickly to non stereo sources.

Width – press the **SUB/DIV** button to adjust stereo width for large and small fader paths.



Input Source

Centrally controlled input routing enables any source within the facility (Mic, Line or Digital) to be routed quickly and easily to any large or small fader path.

Bus Routing

The same central control panel is used to assign channels onto the console's Main and Multitrack busses, and channels may be assigned using a variety of pan formats to enable mono, stereo or surround operation.

Routing Arrays

For both input and bus routing actions, assignments may be made to individual channels or across ranges. This can be used to route a range of microphones or assign multiple mix minuses. For example, with channels 1-48 routed to all of busses 1-48, use the INC routing action to incrementally deselect channel 1 from bus 1, channel 2 from bus 2, etc. The result is 48 mix minus assignments in a couple of button presses!

Mic Amp Settings

Parameters are set within the stagebox but are remotely controlled from the console. They include phantom power (48V), a 20dB attenuator (PAD), high pass filter (HPF), protection limiter (LIM), and on the C-SuperPre, optional insert return (INSERT), low impedance (Lo-Z) and 110Hz HPF (S-PRE HPF).

Mic Amp Gain

Gain may be controlled from the channel or centrally, using the SET GAIN button and MISC level control. For example, trimming the levels for a range of audience microphones but keeping any individual offsets intact.

Source Groups and Pan Formats

These buttons are dual function with red engravings selecting a source group and black engravings selecting a pan format.

Sources are arranged into 9 logical groups depending on the number and type within the installation, for example MIC, MTrk, FX, etc. Each group contains up to 5 banks of 32 sources.

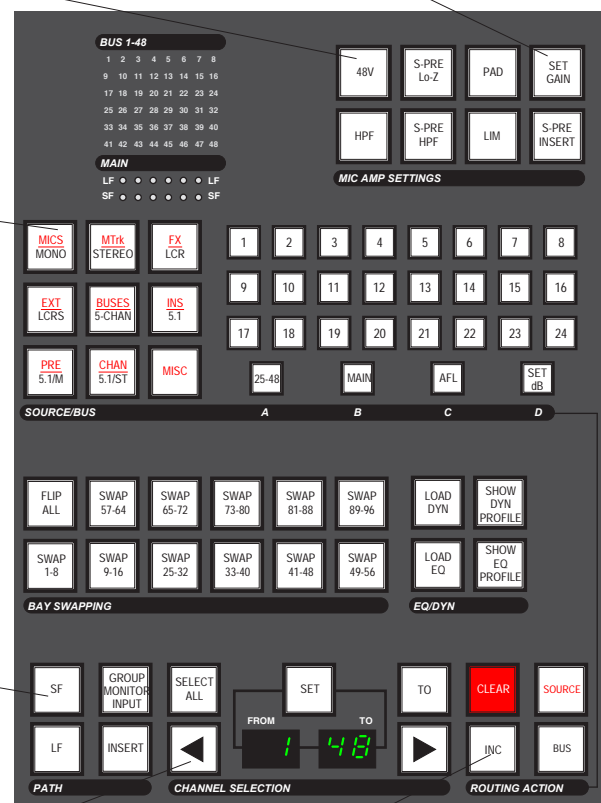
When assigning busses, channels may be routed in MONO, STEREO, LCR, etc.

Path Selection

Selects whether the route acts on the large fader (LF), small fader (SF), insert return (INSERT) or GROUP MONITOR INPUT.

Channel Selection

Selects the channel(s) for assignment. Channel numbers can be modified using the arrow buttons, or by pressing a SEL button on the desired channel's fader cassette.



Routing Action

Selects channel input (SOURCE) or output (BUS) routing actions. INC will assign sources or busses incrementally when working on a range of channels.

Channel Information Display

Each bay of the console is fitted with a high resolution TFT display, providing channel input metering, source names and bus routing assignments:

Four dedicated input meters show large (blue) and small (gold) faders on both the upper (fully lit) and lower (half lit) channel layers. This enables an operator to view all signal inputs simultaneously. On stereo channels, metering defaults to full brightness for Left and Right inputs.

Bus assignments for Multitrack and Main busses are colour coded for clear source indication, with large fader assignments in blue, small fader in gold and EFX in purple.

Input source names for large and small fader paths are displayed simultaneously; the arrow highlights the current active layer and automatically updates as channels are banked or swapped.

Mic gain indicator is momentarily displaced by other channel parameter values (e.g. EQ gain in dB) as they are adjusted

Input Gain

Channel gain control switches between digital input level trim ($\pm 20\text{dB}$) and remotely controlled analogue mic gain (90dB range). On stereo channels, input balance and independent Left/Right mic gain may also be adjusted.

Compressor/Limiter and Gate/Expander

Independent Compressor/Limiter and Gate/Expander sections are provided, with a choice of profiles, optional automatic gain make-up and sidechain keying for multichannel operation.

Gate/Expander

Threshold $-\infty$ to 0dBFS
 Range $-\infty$ to 0dB
 Release 10 to 9970ms
 Attack 0.1 to 997ms

Compressor/Limiter

Threshold $-\infty$ to 0dBFS
 Ratio 1:1 to ∞ :1
 Release 10 to 9970ms
 Attack 0.1 to 997ms

Delay

A feed-forward delay is included with the dynamics section, and may be inserted into the signal path for lip-sync or acoustic delay correction.

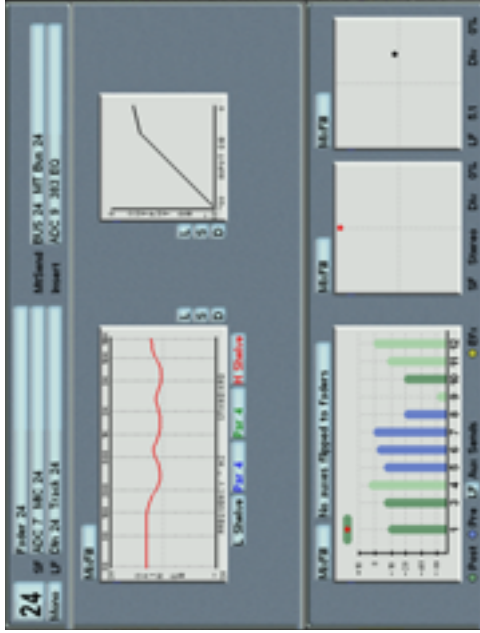
High and Low Pass Filters

Full ranging high and low pass filters normally follow the EQ, but may be **SPLIT** away for independent use, or inserted into the dynamics sidechain.

HPF (24dB/octave) Off to 20kHz
 LPF (24dB/octave) Off to 20Hz

Central Control Screen

Additional channel information may be displayed on the central control screen, providing an overview of EQ, Dynamics, Auxes, Panning and other channel parameters. The display automatically follows where you are working, updating each time you adjust controls on a different channel.



EQ Section

The parametric equaliser section features four wide ranging, overlapping frequency bands which may be set to Parametric, Shelf or Filter characteristics. A choice of EQ profiles is available including SSL G and E Series analogue EQ emulations.

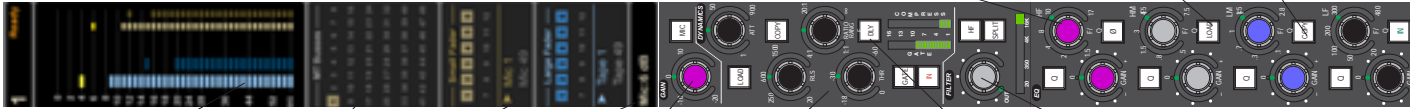
Profiles	Gain Ranges	Q Ranges	Default Bands	Band Options
Standard	$\pm 20\text{dB}$	0.4 to 20.4	HF Shelf	Shelf
20-20k	$\pm 20\text{dB}$	dependent on Profile	HMF Par	LPF/HPF
292 G	$\pm 16\text{dB}$	and Band	LMF Par	Parametric
242 E Series	$\pm 16\text{dB}$		LF Shelf	

EQ and Dynamics Copy

Both EQ and Dynamics settings may be freely copied from channel to channel. Simply select **COPY** (the button flashes) on the source channel followed by **COPY** (both buttons go out) on the destination and the operation is complete.

EQ and Dynamics Preset Libraries

Favourite EQ or Dynamics settings may be stored and instantly recalled during different show setups. Presets are recalled from the central routing panel using the **LOAD EQ** or **LOAD DYNAMICS** buttons.

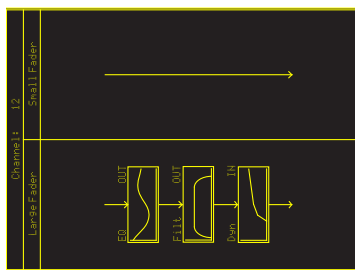


External Insert Point

Each channel features an external insert point which may be assigned to any analogue or digital device, and switched pre or post the channel processing in either the Channel or Monitor signal paths.

Flexible Signal Processing Order

Each section of channel processing (Dynamics, Filters, EQ and external Insert) may be placed in either the Channel or Monitor signal paths. The **Process** matrix provides colour coded feedback, with the **SET** button selecting the order of EQ (Green) and Dynamics (Red).



Master Audio Display

A more detailed overview of signal processing order is provided on the Master Audio Display in the centre section of the console.

Auxiliary sends

12 mono aux busses are available simultaneously from both large and small fader paths, with access in two banks: 1-6 and 7-12. On/Off, Pre/Post and Off to +10dB Gain are provided for each send. Link any odd/even pair for stereo operation. Stereo auxes use one rotary control for level, and the other for panning. Reassign any mono or stereo send away from the main aux bus and to the 48 multitrack busses for controlling the level onto a clean feed output. Use the 'Set Aux to LF' or 'Aux Flip to Faders' functions to quickly set a foldback balance.

Channel Banking

The A/B button provides instant access to upper and lower channel layers.

Monitor Path Input Section

The **GROUP** and **TAPE** buttons may provide fast alternate input selection for the Monitor path, or integrated multitrack monitoring capabilities. The red channel GPI/Track arm key provides access to parallel or serial machine track arming, GPI machine starts, cue lights, etc.

Small Fader Section

The **C200**'s small faders are motorised and may be freely assigned as group masters or slaves. Dedicated **SOLO** (AFL. PFL or Solo-in-Place) and **CUT** buttons are provided, with **MONO Left** and **MONO Right** buttons for use on stereo channels. The section also contains mic amp status LEDs, and provides small fader Status, Match, Play and Record functions when running dynamic automation.

Panning

The global 'Stereo' or 'Surround' pan statuses determine whether the two channel pan controls operate as L/R panners for the small and large faders, or as LCR and Front/Back panners switchable between the two paths. 5.1 specific features include a Subwoofer level trim and \pm Divergence. Width may be adjusted on stereo channels.



Alternatively, panning may be controlled using the console's pen and tablet, or puck, together with the XY pan boxes on the central **CONTROL/CHANNEL** screen.



AFL and PFL

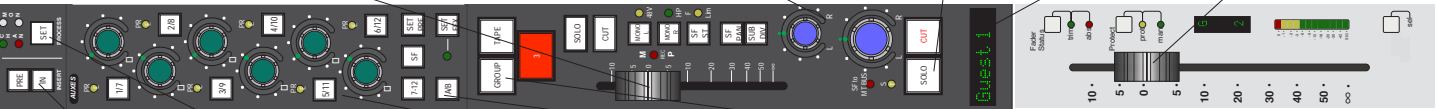
Channel **SOLO** buttons default to AFL operation, with options for PFL (individually selected for large and small faders) or Solo-in-Place. The large fader features optional backstop PFL, and PFL cancel on fader open. Note that Solo-in-Place is disabled for live broadcast work using the centre section's Status Lock facility.

Scribble Strip

An 8-character electronic scribble strip provides user labelling for each channel.

Large Fader

The motorised large fader is hot swappable with no loss of audio during replacement. Features include programmable fader remote starts, 4-character grouping and automation information display, dedicated signal presence indicator and channel Select (**SEL**) button.



Master Metering Display
 Displays the 12 Main Busses, 5.1 and stereo Programme, Follow and AFL Monitor, and the 12 Aux outputs. 24 user-selectable meters are controlled from a 10-way programmable selector.

Oscillator and Talkback Control
 Integrated oscillator, with calibrated level and frequency control, switchable to Main and Multitrack outputs, plus master analogue talkback level control.

Master Audio Control
 Master level, AFL and routing control for the Audio Sub Groups, Aux Masters, FX Returns, Foldback and SLS Outputs, plus control of the 12 Main Bus Delays and external MIDI FX devices. Controls are assigned in banks of four at a time, with the ability to change input and output routing for Aux and FX Return masters.

5.1 Compressor and Main Output Control
 Dedicated master fader, plus 5.1 main output compressor with a choice of dynamics profiles including the SSL 'Quad Bus' analogue emulation. Alternatively, use the 8-channel mix insert to apply external processing.

Console Statuses

- Global console statuses (**RECORD**, **REPLAY** and **MIX**) provide fast reconfiguration of signal flow for different applications.
- Global pan statuses (**SURR PAN** and **STEREO PAN**) switch between simplified channel panning for stereo work, and full 5.1 surround operation.
- **MIX ALIGN** automatically compensates for external processing latency when working in **MIX** status.
- **STATUS LOCK** locks out certain console functions, such as Solo-in-Place, automation replay and master Status, Oscillator and Talkback switching.

Main, Mini and PFL Monitoring

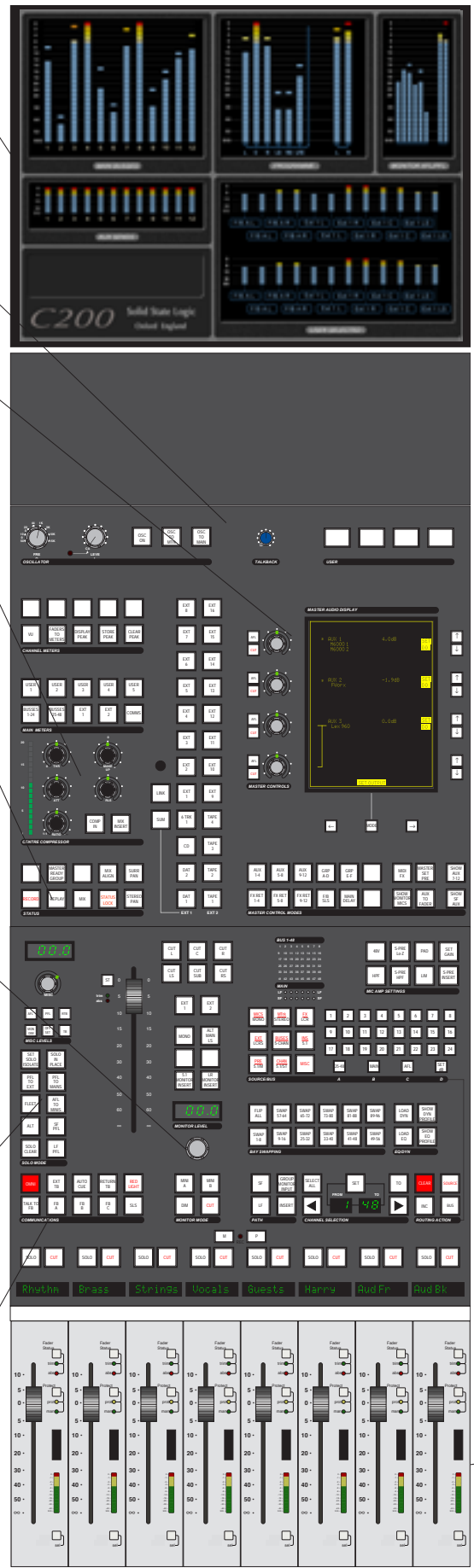
- Two 5.1 Main, two stereo Mini, and an independent PFL monitor output.
- Optional simultaneous Mains and Minis monitoring enables the mixer to monitor Programme continuously, whilst auditioning sources on the Minis.
- Features include master level control in the analogue domain; two 12-way programmable external source selectors; Mono folddown for compatibility checking; separate 6-channel and 2-channel Insert points for 5.1 and LtRt matrix insertion.

AFL, PFL and Solo Modes

- The default Solo mode is non-destructive AFL.
- PFL may be actioned either from the fader backstop on large faders, or from the channel Solo buttons by changing the global Solo mode.
- AFL signals usually feed the Main speakers, with PFL feeding Minis; options are provided to reverse these selections or feed the dedicated PFL output.
- The third Solo option is for destructive Solo-in-Place, ideal for mixing off-line, and disabled by Status Lock for on-air applications.

Communications & Signalling

- Three stereo foldback and stereo SLS outputs with source selection, level controls and individual or 'Talk to All' (**OMNI**) facilities.
- Mono talkback output, for integration with external communication systems.
- Return talkback switched into the Mini monitor path.
- Red Light switching.
- Any large fader, channel GPI button or central macro may be programmed to activate machine starts, cue lights, cough switches, etc. via the **Centuri's** 60-channel GPI card.





Custom Meter Options
 Variants include analogue VU or PPM and digital DK Audio and RTW phase scopes.

Master Control
 The Master Control section consists of the Central Control Screen, infra-red keyboard, pen/tablet and Master Control panel. A wide range of information may be displayed, with ultra-wide viewing angles providing feedback from any console position. Primary screen displays and console functions are driven from dedicated buttons on the Master Control panel. The pen and tablet interface provides access to other setups, and is used for more advanced console features.

Snapshot Reset
 Up to 62 Snapshots per Project version may be used to reset console parameters instantly. Recall may be global or selective, providing the ability to isolate areas of the console, such as presenter or audience microphones, from the reset.

Project Recall
 The Project management system stores and recalls not only channel settings, but everything required to reconfigure the console for different types of production. Each Project is a directory in which individual files are stored for every element of the system. Elements, such as input routing, may be saved and loaded individually saving setup time for shows with common settings. For speed of access, Projects are stored on the processor's internal hard disk. They may be copied onto an external Magneto Optical disk for long term archiving or transfers.

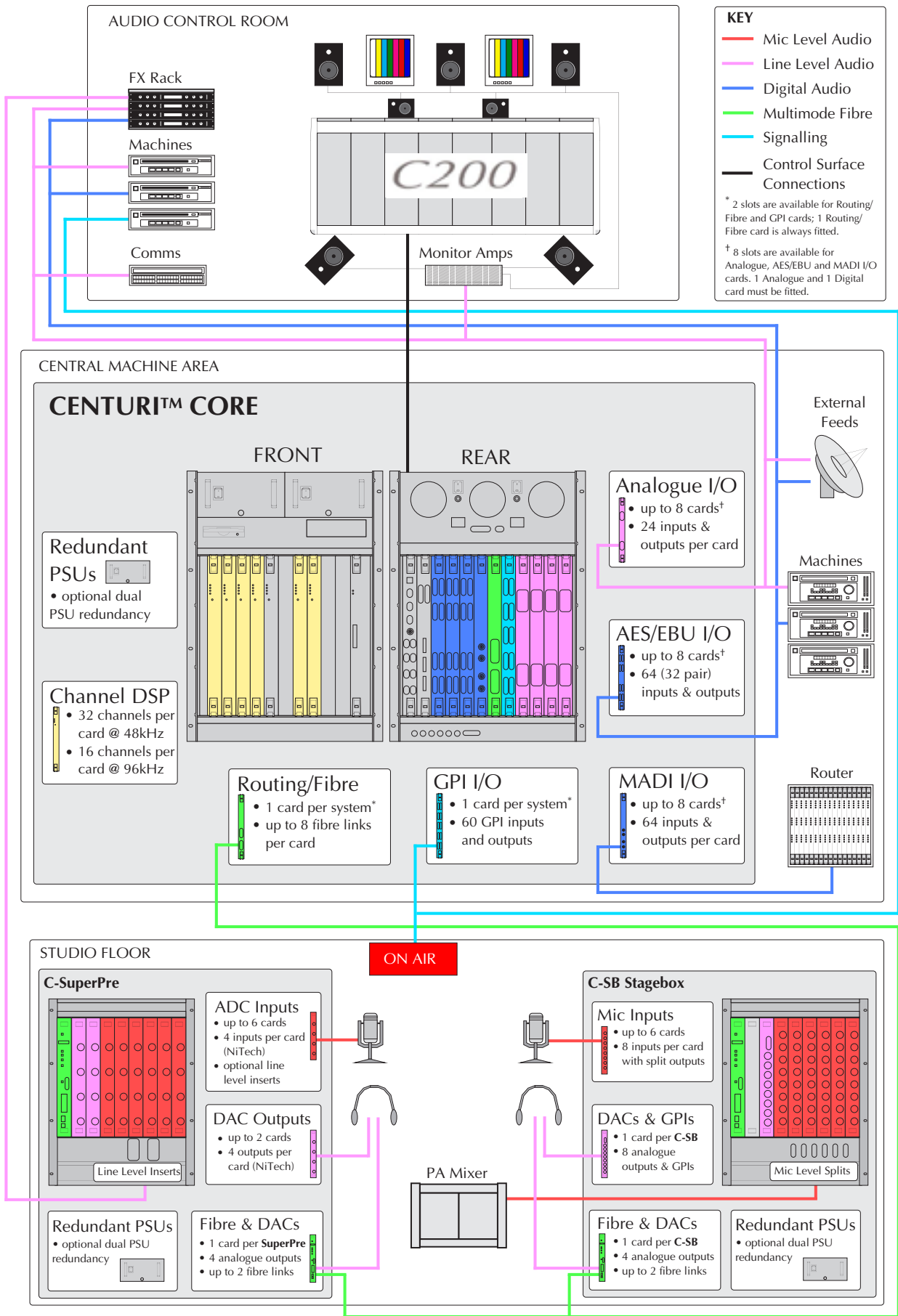
Macros
 20 user-programmable macro buttons may be used for a variety of functions, including advanced mixing functions, GPI control, etc.

Dynamic Automation and Machine Control
 Up to four external machines may be synchronised from the console's integrated machine control system, with dedicated buttons for transport control and autolocation. The C200's automation system is based on familiar SSL session tools with dedicated buttons for selecting statuses and automation modes. The system is non-linear enabling updates to be written at any speed, and includes optional MOTORS OFF operation.

Group Master Faders
 Eight dedicated master faders may control any number of large or small faders, or be assigned to control Audio Sub Group levels, Cut and AFL. Operators may choose between working in 'Servo' (moving fader) or 'VCA'-style mode, according to the type of control they are most comfortable with.

- In Servo mode, the physical position of the fader always corresponds to the actual level, and when faders are grouped, moving the master moves the slaves. Features include 'group lockout', where the master and slave balance is protected when the master is below a certain threshold. This prevents accidental changes to the master/slave relationships when a master is closed.
- Alternatively, SSL's unique emulation of VCA fader grouping allows the mixer to work with master faders, whilst the physical position of the slave faders remain unchanged. This allows the balance between slaves to be viewed and adjusted prior to opening the master.

SYSTEM BLOCK DIAGRAM



Console

The **C200** console front panel provides operational controls and indicators, and communicates with the **Centuri** core via a dedicated high-speed data link.

Centuri Core

The **Centuri** core provides a compact ‘all-in-one’ solution, with access to Audio DSP cards from the front of the unit, and other Audio I/O, Fibre Link and GPI cards from the rear.

Channel Options

At 48kHz, each Channel DSP card provides 32 in-line channels of processing. At 96kHz, the number of cards is doubled to support similar channel configurations without loss of functionality.

Audio I/O Options

Up to eight audio Input/Output cards of any type may be fitted in the **Centuri** core:

24-channel ADC/DAC card:

High quality 24-bit conversion for line level analogue inputs and outputs, supporting a range of line-up levels for different broadcast environments.

64-channel (32 AES/EBU) DIO card:

AES/EBU inputs and outputs with 24-bit SRCs on every input and output pair as standard.

64-channel MADI card:

Convenient and cost effective multichannel interfacing to existing plant infrastructure.

Remote Diagnostics

The **Centuri** core includes a RS232 terminal port for local processor diagnostics. Alternatively, diagnostics may be accessed using **NetBridge**, SSL’s secure interface into standard IT networks. **NetBridge** provides secure log-in facilities enabling trained staff or SSL engineers to remotely access diagnostic functions from any location worldwide.

Fibre Link and GPI Options

Two card slots hold routing and GPI cards:

Routing and Fibre Link expansion cards:

The **Centuri**’s internal routing card may be fitted with up to 4 fibre expansion cards; each daughter card handling up to 4 fibre links. This provides capacity for 16 (4x4) **C-SB** or **C-SuperPre** fibre links. (*Redundant connections use 2 links*).

60-channel GPI (General Purpose Interface) card:

60 relay closures and opto-isolated inputs for machine starts, cue lights, cough switches, etc.

96kHz Operation

At 48kHz, the **Centuri** core handles up to 512 inputs and outputs. For 96kHz operation, this number is halved to 256.

PSU Redundancy

Optional dual redundant PSUs may be fitted for added resilience.

C-SB Remote Mic Stagebox

Purpose-designed **C-SB** Stageboxes provide cost effective remotely-controlled mic resource. Each Stagebox may be fitted with up to 48 mic inputs. The unit may be fan-less for location within the live production area, and the standard multimode fibre optic connection allows each Stagebox to be sited up to 550m from the **Centuri** core. With dedicated split outputs and remarkable resilience to common mode voltages, the **C-SB** addresses the challenges of even the harshest environment.

Options (per C-SB Stagebox)

8-channel Mic Card	max. 6 cards (48 mics)
8-channel FB & GPI	max. 1 card (in addition to 4 internal DACs)
Redundant PSU	1 (2 PSUs total)
Redundant Fibre	1 (2 Fibre Links total)

C-SuperPre™ Remote Pre-Amplifier

Designed for high quality mic/line signal acquisition, the revolutionary **C-SuperPre** offers an alternative to the **C-SB** Stagebox. Using the same chassis and fibre connection system as **C-SB**, the **C-SuperPre** is fitted with SuperPre analogue pre-amp components and high-speed 96kHz NiTech™ conversion system. Each unit may handle up to 24 mic/line inputs, and optional insert points for analogue processing prior to conversion make this an ideal solution for high quality audio recording.

Options (per C-SuperPre)

4-channel Mic Card	max. 6 cards (24 mics)
4-channel FB	max. 2 cards (in addition to 4 internal DACs)
Redundant PSU	1 (2 PSUs total)
Redundant Fibre	1 (2 Fibre Links total)

Proprietary Design

SSL's proprietary technology is used in all aspects of hardware and software design. Freedom from reliance upon third party materials and complete control over all elements of the system, guarantees robust and reliable performance.

Fault Tolerant Control Surface Connections

Each bay of 8 channels connects separately into the master front panel interface card. This reduces the impact of a control surface failure such that a fault is localised; the remainder of the console continues to function, and with the ability to bay swap any bay into the sweet spot, full operation of all channels can continue.

Power Supply Redundancy

Optional dual redundant PSUs may be fitted to both the **Centuri** core and front panel. If the main supply fails, the system automatically changes over to the backup supply without interruption. LED displays on the control surface give continuous status feedback of all PSUs.

Self Healing DSP

SSL's 'self healing' DSP provides fault tolerance without the need for additional hardware. On board diagnostics software constantly monitors and repairs any DSP failure, providing near instantaneous and automatic recovery from a DSP error.

Fast Recovery Times

The **Centuri** core reboots from cold in seconds. This is a full reboot, which includes reloading code into memory and loading the latest Project version at the end of the reboot sequence.

Airflow Mapped Chassis Design

Cooling within the **Centuri** core is designed with optimum air flow characteristics, enabling all components to run well below their specified temperatures. This ensures minimal thermal stress and results in long term reliability for internal components.

Quick Fit Assemblies

All **C200** assemblies are serviced from the front of the console providing fast, simple replacement access. Dual redundant power supplies are accessed from beneath the console, whilst the flip-up top trim provides fast access to the TFT Channel Information displays.

Easy access is also provided for all **Centuri** core assemblies. Power supply units are fitted to the front of the **Centuri** core and may be replaced quickly by ejecting the unit.



All processing and utility cards fitted in the core can be replaced quickly and easily using the robust Telecomms card ejector mechanism.

Hot Swappable Spares

Each fader cassette is an independent, 'hot swappable' unit which may be exchanged without interruption to the channel's audio. Simply remove the existing fader, fit the spare, and the new fader automatically resets to the correct level for that channel.



Centuri Core

Physical and Environmental Specification:

- Height15U
- Max Depth (*no cables*) . .635mm (25")
- Mounting19" rack mount
- Weight (8 cards fitted) .~40kg (~88lbs)
- Power (100-240V AC) . .300W - 1kW dependent on options
 - Cooling Method . . .Front-to-back fan assisted
- Timing ReferenceBlack & Burst/Composite Video

Technical Specification:

24-channel ADC/DAC card

- Input impedance>10kΩ
- Max input+24dBu
- Input trim, 0dBFSadjustable in 0.5dB steps
- Output impedance<30Ω
- Max output+24dBu
- Output trim, 0dBFSadjustable in 0.5dB steps
- Resolution24-bit
- BreakoutsDL

64-channel MADI card

- Input sample rate64-channels 48kHz fixed rate
 -56-channels 48kHz +/- 12.5%
- Output sample rate32, 44.1, 48kHz, or clocked from input
- Sync inputWordclock, AES (75Ω), int. or MADI
- Resolution24-bit
- MADI breakoutBNC, coaxial

64-channel (32-pair AES/EBU) DIO card

- Impedance110Ω
- Input sample ratevariable with 24-bit SRC
- Output sample rate32, 44.1, 48, 96kHz, or clocked from input
- Resolution24-bit
- Breakouts25-way D-type

Fibre Link expansion card

- Fibre connectionsmultimode (up to 550m)
 -single mode on request
- Breakout optionsFischer/Lemo connector panel

60-channel GPI card

- Breakouts50-way D-type

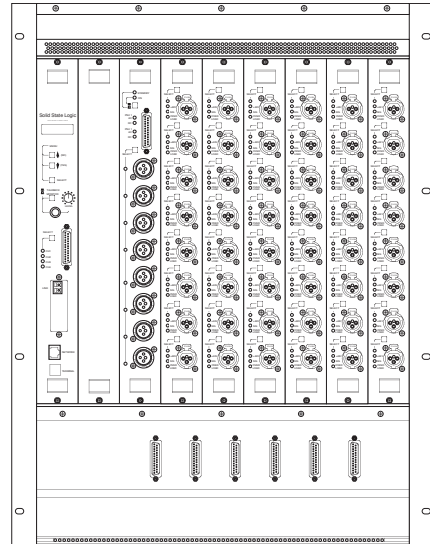
C-SB Remote Mic Stagebox

Physical and Environmental Specification:

- Height14U
- Max Depth (*no cables*) . .460mm (18.1")
- Mounting19" rack mount
- Weight (48 Mics fitted) .~27kg (~59lbs)

Technical Specification:

- Impedance1.2kΩ
- Phantom Power48V
- PAD+20dB
- High Pass Filter-3dB at 30Hz
- Protection LimiterThreshold -2dbFS, Headroom = 17dB
- Input Range, 0dBFS = . .-60dBu to +23dBu (with PAD & Lim)
- Mic Split Outputsprior to the variable-gain stage
- Resolution24-bit
- Audio BreakoutsXLR (Mics), Varicon (Splits)
 -& 25-way D-type (DACs)
- Fibre Breakouts*see Centuri Fibre Link Specification*



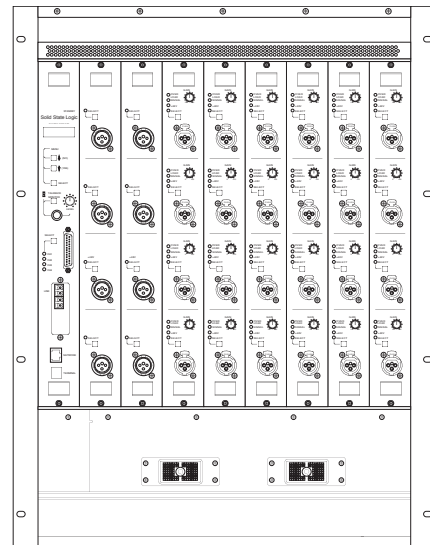
C-SuperPre Remote Pre-Amplifier

Physical and Environmental Specification:

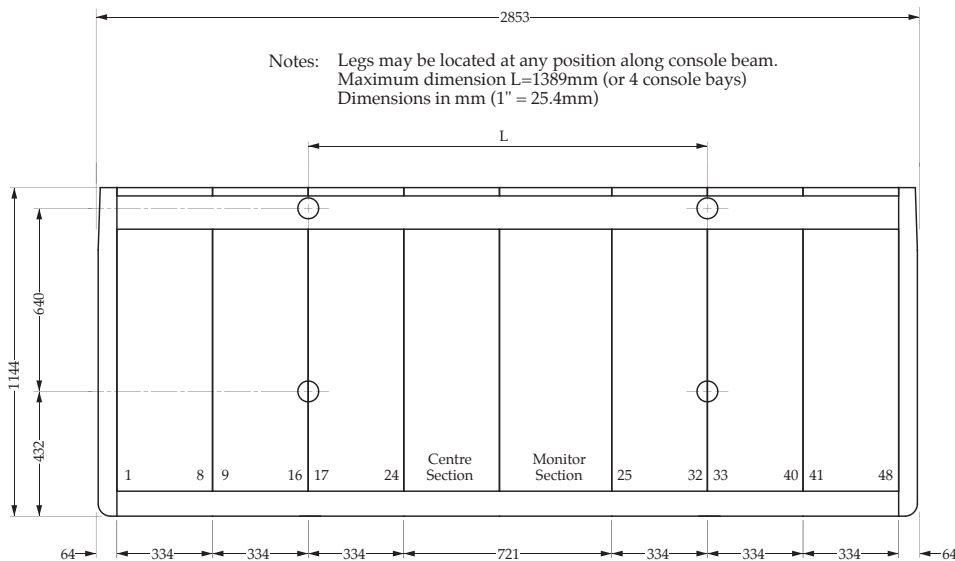
As for C-SB Stagebox.

Technical Specification:

- ImpedanceSwitchable 715Ω or 10KΩ
- Phantom Power48V
- PAD+20dB
- High Pass FilterSwitchable: -3dB at 20Hz or 50Hz
- Protection LimiterThreshold -2dbFS, Headroom = 17dB
- Input Range, 0dBFS = . .-60dBu to +20dBu (with PAD)
- Insert Send/Returnpre ADC, 0dBFS = +18dBu
- Resolution24-bit
- Audio BreakoutsXLR (Mics), Varicon (Splits)
 -& 25-way D-type (DACs)
- Fibre Breakouts*see Centuri Fibre Link Specification*



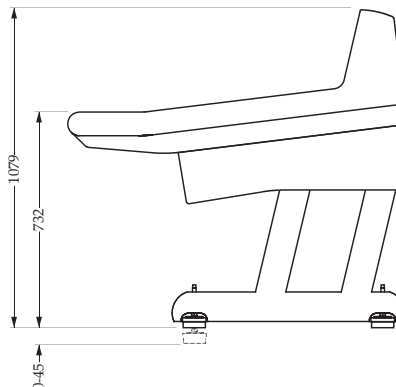
CONSOLE SPECIFICATION



The **C200** console is constructed in bays of 8 channel strips, providing flexible frame options. The position of the centre section may be located at any bay boundary, and a variety of frame options, including producer sections, angles, split points for shipping and installation, and a script tray, may also be specified.

Physical and Environmental Specification

- Max Height1124mm (44.25")
- Max Width (see diagram above)
 - Dual width centre section721mm (28.39")
 - Each channel bay adds334mm (13.15")
 - End trim adds128mm (5.04")
- Max Depth1144mm (45.04")
- Height Adjustment±22.5mm (±0.9")
- Weight (48 channels)~354kg (~780lbs)
 - Each bay (inc centre) adds~40kg (~88lbs)
 - Legs add~33kg (~73lbs)
- Power (40ch with 100-240V AC)<1.2kW Continuous (dependent on frame size)
- Cooling Method Convection



The C200 'Mobile' Configuration

Where space and weight restrictions apply, an alternative version of the console frame is available. The single width centre section of the **C200 Mobile** configuration enables a 48 channel strip (105 fader) console to fit across a width of 2.34m (92"). Please refer to the **C200 Mobile** specification sheet for full details.

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