

C100 HD-S **Digital Broadcast Console**



Scalable Broadcast Console & Routing System

C100 HD. This is SSL.

Solid State Logic
S O U N D | | V I S I O N

C100 HD-S Digital Broadcast Console

Scale Capacity - Not Performance

Around the world, the highest profile broadcast organisations rely on C100 to deliver reliable, sonically superb performance for mono, stereo and surround productions. Where other consoles might scale functionality and capacity, C100 is different in scaling only capacity to match requirements.

Whether for small-scale fixed installations, mobile solutions or complex multi-studio installations, C100 is a versatile, scalable system that is custom configured to match your particular requirements. SSL's unrivalled end-to-end consultancy, project engineering, installation and service teams ensure that you get precisely the right system, expertly installed, with exemplary training and outstanding ongoing service and support.

By providing the very best in quality, reliability and control, the C100 creates an environment for achieving excellence in all associated fields of work.



Operation

The C100 is an intuitive, adaptable console, which is easy to learn and simple to operate. SSL offers the very best in audio quality, whether working in mono, stereo or 5.1, leaving you free to concentrate on production. 5.1 feeds can be manipulated as one signal or six, with full processing on every channel, presented within a traditional signal-flow architecture.

Engineering

Built and installed entirely by SSL to match your exact specifications, and accompanied by full on-site training and long-term technical support, the C100 is primed for reliability. Robust, virus-proof hardware and software systems, along with automatic self-healing DSP, remote diagnostics and extensive redundancy capabilities, make intrusions into the control room a rarity. Powerful, fully-integrated resource sharing enables seamless reallocation of projects and signal feeds throughout the broadcast facility.

Commercial

The C100 can be scaled and upgraded to meet budget and production demands, without losing the quality of its audio or the power of its leading HDTV surround production capabilities. Each console comes with worldwide support (24 hours a day, 365 days a year) keeping loss of output to a minimum, while SSL's reputation for quality and reliability ensures that the console's value is protected in the long-term.

Scalable, Modular, Expandable

C100 is based around a philosophy of scalability and modularity with each console tailored specifically to match customer need.

- The C100 HD-S console control surface is available in frame sizes from 16 to 64 faders.
- Required console channel count is determined through client consultation - DSP & I/O is then scaled to match.
- Unlike other consoles C100 is designed to ensure that sufficient DSP is available at all times with dedicated bussing and processing. This guarantees all channels are always available to the operator – dramatically reducing the need for resource allocation compromises during system configuration.
- The B-RIO I/O rack is modular, enabling exactly the right combination of connectivity, as specified, to match system requirements.
- The MORSE Stagebox remote I/O option, is also modular and ensures that the right combination of I/O connectivity is available wherever you need it.
- For multi-studio, multi-control room installations a MORSE Router can be added to provide arbitrated Resource Sharing, controlled directly from the C100 control surface.
- SSL's modular scalable philosophy enables systems to grow in steps with client growth and technological change.

Reliability, Robustness, Redundancy

The C100 offers the exceptional level of reliability which the broadcast industry demands, and which SSL customers have come to know. In addition, the powerful routing capabilities and capacity for integration into a broadcast facility, place the minimum burden on the engineer's shoulders.



100% proprietary, robust, virus-proof hardware and software systems

The C100 is manufactured to the very highest standards at SSL HQ in Oxford, England with all of the pride and tradition of UK manufacturing. Unlike other broadcast audio systems, all of the C100's console computer systems are 100% proprietary, so the C100 is extremely stable, robust and 100% virus-proof.

Fully redundant audio and control systems

The C100 comes with a high degree of redundancy as standard, with full redundancy for all elements of the console available as options. C100's unique control surface redundancy software allows individual control surface tiles, or bays, to be switched off during operation without affecting the audio. All PSUs are dual redundant.

Pre- and post-sales support: specification, installation, commissioning, training

Solid State Logic enjoys an unrivalled reputation for outstanding service at every stage of your system's life cycle. During the purchasing process, SSL's Project Engineering team will work with you to ensure that your system precisely matches your requirements. All C100 consoles are delivered, installed and commissioned by highly skilled, experienced Service Personnel, requiring minimal down-time for installation. On-site training and on-going 24/7 support is provided by specialist SSL engineers.

Internal self-testing, error-correcting software

Self-healing DSP provides fast, fault-tolerant processing recovery in under 1/5th second. A portion of the console's code consists of SSL's own built-in self-checking, self-healing software. Conditions which might result in a fault are therefore quickly detected, and resolved before they are ever realised.

Seamless facility integration

The C100's high level of audio and data integration means that resource reallocation, and even console maintenance, can be performed remotely with the minimum of disruption.

Quick reallocation of projects and signals

While B-RIO provides local console IO, the addition of a MORSE Router offers fully integrated Resource Sharing throughout the facility over fibre-optic cable. This enables seamless reallocation of projects and signal feeds without any re-plugging, using no external computer systems or third party hardware.

Automatic diagnostics and fault prevention

The C100 provides extensive SNMP remote diagnostics software which allows the console to be remotely, automatically interrogated, thereby significantly reducing machine-room maintenance visits.

Powerful, Intuitive, Ergonomic



The ultimate fusion of highly evolved hardware control surface, touchscreen interface and powerful, intuitive software environment, the C100 ergonomics provide a simplicity of operation which belies the processing power and comprehensive feature set within.

Compact Control Surface for simple, freelance-friendly operation

The C100 presents the operator with the worlds finest on-air audio control surface. Assignable and dedicated hardware, and touchscreen controls combine to provide an uncluttered work surface to meet the demands of 'on-air' operations. All console functions are accessed directly from the control surface without the need for an external keyboard or mouse. Even the console's colour scheme, is designed to create a pleasant, sustainable working environment for coping with complex and lengthy sessions.

Traditional signal flow – every channel has full processing as standard

SSL consoles scale capacity not performance. Whatever your console's required channel count, C100's operating system ensures there is enough DSP power to provide dedicated EQ, Dynamics and Panorama processing for every channel and bus. Because you are never forced to compromise in terms of available DSP power, you will never need to lose time allocating and re-allocating DSP to audio processing and routing functions.

Highest quality audio leaves you free to concentrate on production

For over 30 years, Solid State Logic consoles set audio quality benchmarks for other manufacturers to follow. All SSL consoles deliver a pristine audio path with exceptionally low noise floor and very high bandwidth, offering legendary depth of tonal quality. With SSL you will never need to question the audio fidelity of your console or its processing, giving you peace of mind that your work will always sound superb.

Powerful 5.1 production tools

SSL consoles are trusted by audio professionals worldwide to deliver the pristine audio signal path required to meet the demands of HD 5.1 audio. While all six components of a 5.1 stem can always be manipulated individually, they are presented on a single fader on the control surface, making them deceptively easy to handle.

Constant total system status feedback via TFT screens

With the C100, you can see your entire environment all the time, without the need to constantly scroll through screens. The center section touchscreen provides audio metering of every output bus signal, along with detailed displays of a wide range of parameters, from signal processing to surround panning, which further enhance the operator's confidence.

C100 HD-S. Hardware Control Surface

Ergonomic Elegance

The advantages of both assignable and dedicated control philosophies are blended on the C100's control surface, with definable Free controls and the dedicated Master Channel and Fader Strip.

- Freely configurable mono, stereo and 5.1 channels with flexible processing order
- Scalable control surface with up to 128 fader strips plus master section
- Master Channel controls may be fitted in each bay, allowing hardware redundancy and multiple points of access
- Simple setups for each show through touchscreen and graphical offline configuration
- Channels arranged in layers, with control of the active layer below the touchscreen
- Rearrange channels or 'clone' a channel to all layers, even while on-air
- Unique graphical front panel management provides redundant access to processing
- Stageboxes with remote-controlled mic inputs, line and split outputs and GPI options on redundant fibre-optic connection

Master Channel Panel

- Dedicated sections for control of inputs, bussing, outputs, EQ, Dynamics, Filters, Delay, Insert and Aux sends
- Colour coded for fast recognition
- Broadcast-specific feature set
- Optional multiple unit hardware redundancy
- Ergonomic design and excellent overview

Free controls

- Dedicated channel controls are assignable to any Master Channel parameter
- May be used for GPI control
- 4-character display for name/value

Traditional controls

- Dedicated AFL, PFL and ON buttons
- Pan control and 8-character fader name

Special access

- Channel Link provides A/B fast channel flip
- 'Expand' button spills multichannel breakouts

Fader Section

- Motorised faders
- Slim 30mm fader pitch
- GPI control
- Reset and layer protection
- User-programmable backstop PFL

Channel meter and status display

- Mono/stereo/5.1 meter on every channel
- Choice of 6 meter points
- Input level and Dynamics Gain reduction
- Process matrix and bus routing
- Dynamics, EQ and Filters graphs
- Aux Send level and Pan status
- Main, Alternate, Insert and Fader names

Output meters

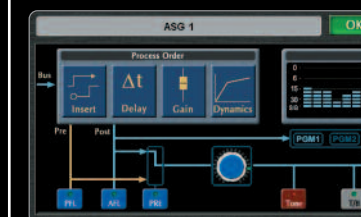
- Choice of electronic and mechanical metering
- 2, 6, or 8-channel phasescope
- VU, PPM, or TPM meters with a choice of scales

System status

- Main and backup PSU status

Touchscreen

- Permanent level and gain displays for all busses
- Colour coded tone and talkback indicators
- 4-way monitor source selector
- Session management functions
- Touch-activated parameter display and adjustment:



Monitor controls

- Main (5.1), Mini (stereo) and PFL (stereo) outputs
- Phase and L/R reverse, monitor flip and mono functions
- 5.1 insert with separate alternate stereo return
- Individual monitor cuts/solos
- Integrated talkback microphone

User Layers

- Customise layouts for instant recall

Bus and layer control

- Access to all channel layers
- Access to group master, ASG, and PGM faders
- Monitoring and communications bus trims

Soft Keys

- 60 (10 x 6) definable buttons may be cloned from touchscreen functions

Control Linking

SSL's unique Control Linking™ feature allows per-channel recall of all default settings for a source when routed to an input. The list of parameters includes:

- Format of the source (mono/stereo/5.1)
- Bussing, and routing of utility and direct/N-1 outputs
- Standard GPI control interfacing for the source (eg. cough switch/fader start)
- Free control definitions
- Audio processing parameters (eg. EQ, Dynamics, etc.)

The use of Control Linking allows engineers to benefit from previously stored setups and results in massive reductions in setup time.

Intuitive Touchscreen Control

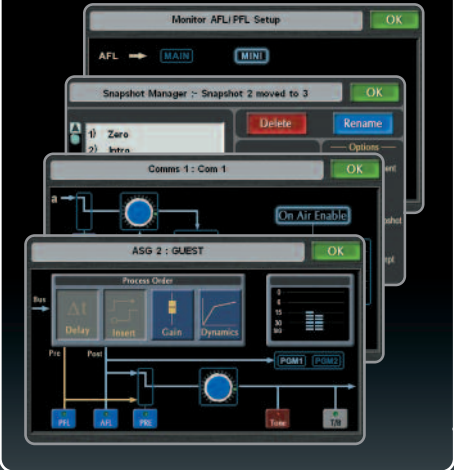
The central touchscreen provides permanent, simultaneous metering of all output feeds and additional input resources, plus access to configuration tools. All outputs have integral tone and talkback injection, with signal level bargraph, output gain indication, and bus name tag for each. In addition, any output bus may be fader-controlled.

ASG busses provide 8 stereo, or twin 5.1 plus twin stereo group busses, with dynamics gain reduction meter, delay and PGM routing indicators

24 Utility busses provide additional 5.1, stereo or mono IFB, record and submix capability

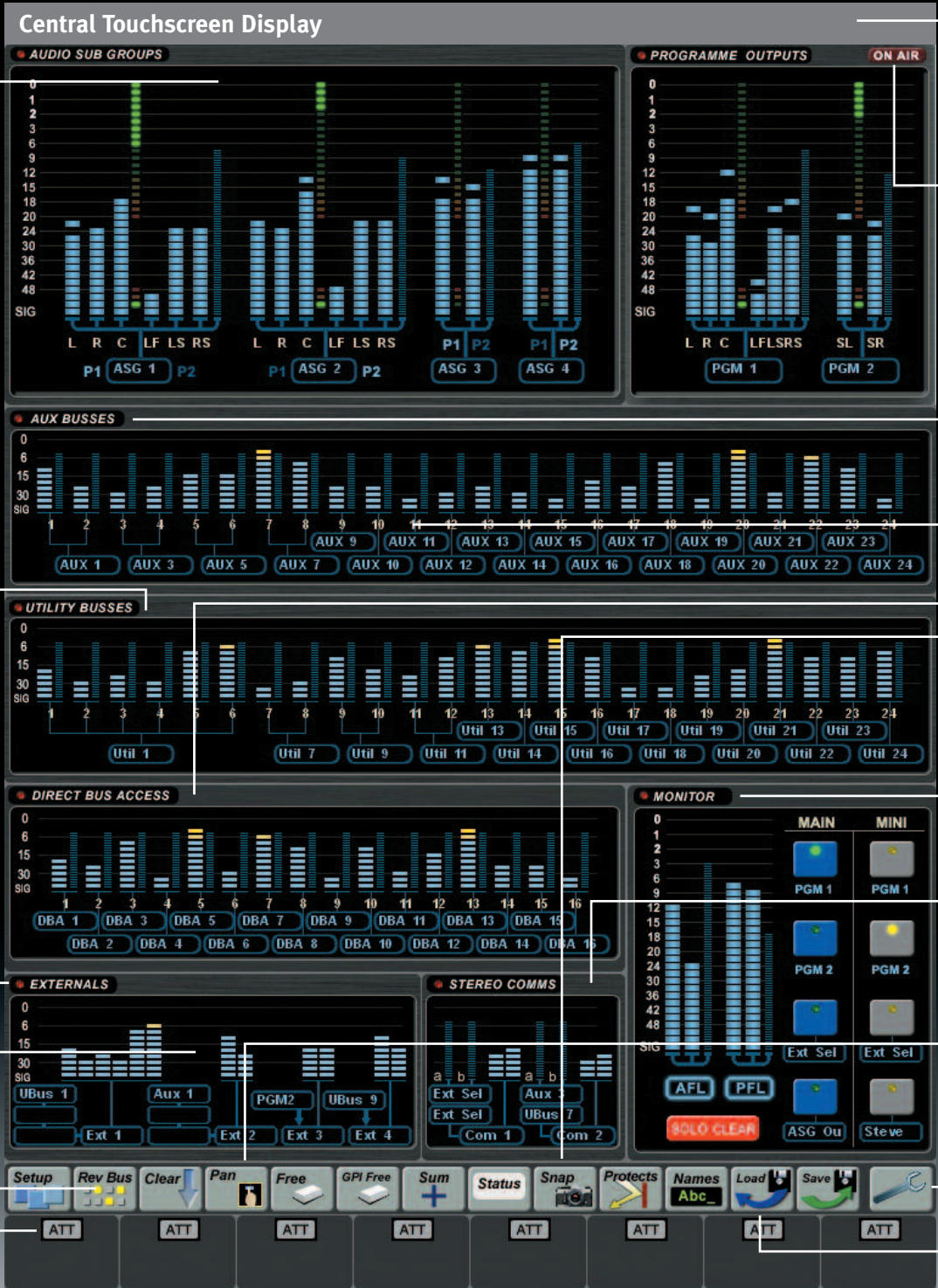
Four external selectors each have 12 inputs and provide fast switching for monitor loudspeakers, headphones etc. in 5.1 and stereo

Dynamic display area changes according to selected function



Reverse Bus feature allows overview and control of channel contribution to selected bus

On-screen attention (ATT) boxes allow the 8 central faders below the touchscreen to be selected for processing or configuration changes



PGM outputs provide 2 outputs in stereo and/or 5.1, with dynamics gain reduction meters and simultaneous stereo and mono downmix feeds

The ON AIR indicator is driven from internal 'Mic Live' logic or triggered externally. It may also be signalled through any GPI output

24 pre/post Aux busses allow stereo linking between pairs, or mono use and advanced aux to fader features

Active talkback is indicated by busses turning green, and active tone is indicated by busses turning red, for immediate visual feedback

16 Direct Bus Access (DBA) inputs allow injection of signal to any and all busses, for submix inputs, FX returns or comms injection

Additional functions including Snapshot reset, bus naming and Free button assignment

The Monitor section shows activity, gain and signal levels for the stereo AFL and PFL busses, plus 4-way source selectors for both main 5.1 and mini stereo loudspeakers

2 stereo Comms mixers combine dual stereo inputs and have an auto-mute function that may be triggered by the On-Air logic, for studio loudspeaker applications

Touch Pan provides fast and precise 5.1 pan positioning

The 'Spanner' icon leads to the diagnostics and system setup

Direct Load and Save functions for the easy access to console set ups

Comcast SportsNet

"We believe that the C100 is the only console capable of real time, live 5.1 production for broadcast."

Mike Giacalone, Digital Audio Consulting Engineer to Comcast, USA

Radio France

Radio France is the foremost music and talk station in France, with a renowned audiophile approach to their productions. Reliability and sonic quality of the C100 were prime deciding factors. After extensive evaluation of the competition, the C100's sonic performance significantly exceeded their critical quality standards.

Comprehensive Channel Display

The Channel Information screen provides a wealth of feedback about the signal, routing and processing, laid out in a clear and logical fashion. Each screen displays 8 channels simultaneously, with a more detailed view of the processing across the lower part of the screen, automatically following the channel which has its attention (ATT) button pressed.

Each channel shows the fader number, source name and DSP channel in use, dynamically updated when a change is made

Indicators for the 24 Utility busses are shown, with the 8 ASG, the 2 PGM, and the N-1 bus

The meter may be sourced from one of 6 points in the channel, indicated here above the Dynamics Gain reduction meter

5.1, stereo and mono channels may be arranged in any order, and clearly identified

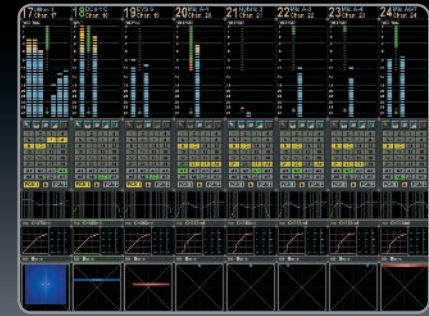
5-way processing order is shown as icons, with bypassed processing 'greyed out'

Indicators for the 24 Utility busses are shown, with the 8 ASG and the 2 PGM busses

Lower section shows details of channel selected, including sources for sidechain, insert etc.

High-res frequency response graph for the 4-band EQ and 2-band Filters

Switchable between single channel and alternate multichannel view



High-res Dynamics (Compressor/Limiter and Gate/Expander) transfer response graph



Multi-purpose display momentarily echoes the last parameter altered on the selected channel

Aux Send gain indicators, showing mono aux level and stereo aux level/pan position, and colour coded pre/post and on/off status

Enlarged process order icons, showing Insert point, EQ and Filters, Fader, Dynamics and Delay sections respectively

NHK Sapporo



"It is very flexible and easy to operate and, because it has a flexible signal router, our engineers don't need to patch regular programs, thus saving an enormous amount of time."

Tetsuo Ueno, Chief Engineer, NHK Sapporo, Japan

NESN Truck



"The C100 certainly is a great board for us, because of its 5.1 capability, its flexibility, and most important, the sound quality. It's been a major benefit."

Michael Narracci, NESN



Sports Production, USA



SBS Radio, Korea



Golf Channel, USA



Comcast, USA



Nippon Hoso, Japan



ITN, UK

Physical and Environmental Specification

	C100 HD-S
Max Height	1006mm (39.61")
Width	40 fader = 1431mm (56.34")
Each bay adds	285mm (11.22")
Contoured end trim adds	72mm (2.83")
Max Depth	926mm (36.46")
Height Adjustment	-0,+10mm (-0",+ 0.39")
Weight	(40 fader) ~190kg (~419lb)
Each bay adds weight	~35kg (~77lb)
Console Power (dependent on frame size)	100-240V AC, 300-700W
Control Surface Cooling Method	Convection (silent)

Solid State Logic

International HQ: Begbroke, Oxford, England OX5 1RU · Tel +44 (0)1865 842300 · Email sales@solid-state-logic.com
 France: 7 bis de la Victoire, 93150 Le Blanc Mesnil, France · Tel +33 (0)1 48 67 84 85 · Email frsales@solid-state-logic.com
 Italy: Via Timavo 34, 20124 Milano, Italy · Tel +39 0392 328094 · Email italiasales@solid-state-logic.com
 New York: 320 West 46th Street, New York, NY 10036 · Tel +1 212 315 1111 · Email nysales@solid-state-logic.com
 Los Angeles: 5757 Wilshire Boulevard Suite 401, LA, CA 90036 · Tel +1 323 549 9090 · Email lasales@solid-state-logic.com
 Japan: 3-55-14 Sendagaya, Shibuya-Ku, Tokyo 151-0051 · Tel +81 (0)3 5474 1144 · Email jpsales@solid-state-logic.com

© 2009 by Solid State Logic. All Rights reserved under International and Pan-American Copyright Conventions. **Solid State Logic** and **SSL** are trademarks of Solid State Logic. All other trademarks are the property of their respective owners. No part of this publication may be reproduced in any form or by any means, whether mechanical or electronic, without the written permission of Solid State Logic, Oxford, England. Solid State Logic has a policy of continual product enhancement and reserves the right to alter specifications without notice. E&OE. 26.03.09.

C100 HD. This is SSL.

Solid State Logic
S O U N D | | V I S I O N