

bx_console SSL 9000 J

Plugin Manual



bx_console SSL 9000 J is part of the growing line of Brainworx TMT console emulation plugins. More details on our patent-pending TMT (Tolerance Modling Technology) inside this manual. Developed by Brainworx in close partnership with Solid State Logic® and distributed by Plugin Alliance.





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Build Your Dream Console - In Your DAW

If you've ever yearned to mix your projects on a large-format analog console, your dreams have just come true! bx_console SSL 9000 J is a rigorous 72-channel emulation of the legendary British J Series mixing console used on countless hit records and by top-tier engineers and marquee artists around the globe. Belonging to our expanding line of mixing-console emulations, bx_console SSL 9000 J uses groundbreaking Tolerance Modeling Technology to precisely reproduce the three-dimensional analog sound of a high-end, large-format console - inside your DAW!

But bx_console SSL 9000 J doesn't stop there. The award-winning Brainworx team tossed in a heap of switchable mods and contemporary features. The resulting turbo-charged plugin goes way beyond a model of the original J Series console, giving you a classic-contemporary hybrid mixer updated with modern controls.

TMT inside: Every Channel Sounds Different - Just Like with Analog

Typical channel strip plugins only model one channel of a mixer. When you apply that same plugin channel across all of your tracks in a mix - even using different control settings - you get flat, narrow, two-dimensional digital sound. bx_console SSL 9000 J is different-and it sounds huge. The plugin uses our proprietary, patent-pending Tolerance Modeling Technology (TMT) to accurately replicate variations in the values of individual components specified by the manufacturer and/or original hardware designer. This creates, in separate instances of bx_console SSL 9000 J, the small channel-to-channel variances in phase and frequency response you would expect to hear in the original J Series analog mixer. bx_console SSL 9000 J's smart interface and extremely low CPU load let you instantly recall up to 72 slightly different sounding channels across all plugin instances on your tracks, giving you the deep and wide "mixed on a big analog console" sound your DAW has been missing.





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Each instance of bx_console SSL 9000 J includes a comprehensive Compressor/Limiter, full-featured Expander/Gate, powerful 4-band Parametric EQ, and wide-ranging High Pass and Low Pass filters - with incredibly flexible signal routing between processors just like in the J Series analog console. But because bx_console SSL 9000 J was designed using TMT, the EQ and Dynamics curves are just a hair different on each and every channel, just like in a real analog console. These slight variations add the complexity, nuance, depth and width that only analog could bring - until now.

As you add bx_console SSL 9000 J to each of your tracks, you can either manually select the channel number you wish to use or click the Random Channel/One button to select the channel number by chance.

Quick tip:

Duplicate one instance of bx_console SSL 9000 J across all your tracks and then click the Random Channel/All button to randomize all the channel numbers at once and instantly create that big-console sound!) Select Digital Mode for any channel pair to bypass TMT and match the two channels' responses exactly - useful when, for example, gating both sides of a stereo track in perfect synchrony.



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Plugin-only features not found in the hardware

bx_console SSL 9000 J adds many mods and new, contemporary features not present in the original analog console, greatly increasing the plugin's power and flexibility. Adjust the Compressor's convenient Mix (Dry / Wet) control to add supersize girth and density to vocals and electric guitar tracks - while fully preserving detail. Raise the Compressor's dedicated HPF control to keep bottom-heavy tracks from getting squashed: on room mics for drums you can let the kick drum thunder while smashing the snare drum to smithereens! Crank the new THD control to lather colorful saturation and density (on a per-channel basis) on vocals, bass, electric guitars and drum room mics. The SSL 9000 series is well known for its SuperAnalogue design resulting in high bandwidth frequency response; we are building on this extraordinary ability by adding multipliers to the EQ/Filtering frequencies. Use the "x3" and "/3" buttons to push the limits of the original filters even further.

bx_console SSL 9000 J also provides two alternate Threshold ranges for the Expander and Gate - covering a whopping 70dB range - making it possible to hush tracks no louder than a mosquito. An innovative Expander Invert button lets you hear only the portion of the signal that will be expanded or gated, helping you set the Threshold quickly and with confidence. And using simple mouse clicks in the plugin toolbar to alternately solo mid and side channels for stereo tracks, you can quickly find the source of undesired distortion and phase problems and get your mix quickly back on track. bx_console SSL 9000 J's potent modern features create a J Series console on steroids!

No, it's not just a channel strip model. bx_console SSL 9000 J is hyper-realistic analog large-format-console sound for your DAW.





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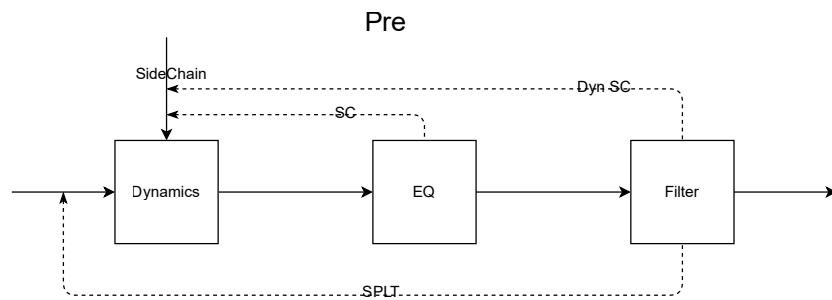
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Routing Options

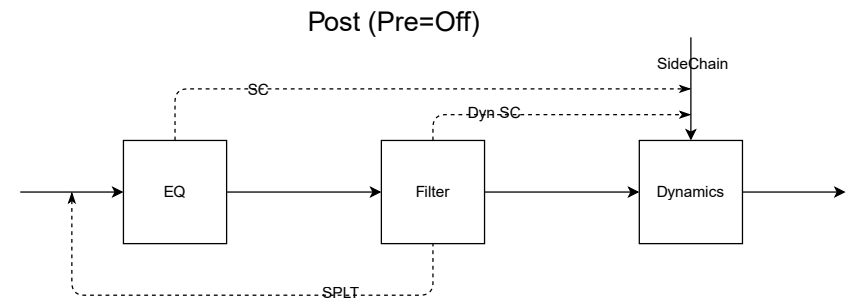
The SSL 9000 J console has many options for routing your audio signals. Some of these would not make sense in a Digital Audio Workstation, so we made sure bx_console SSL 9000 J has all routing options you will need.

The PRE button controls the basic order of processing. When PRE is enabled, the dynamic section is placed before the EQ section in the signal chain. The images below show you the signal flow in case of Pre enabled (left) and disabled (right).



The SPLT, SC and DYN SC buttons allow you to control where in the signal chain your filter section sits and how your sidechain signal is processed. The SPLT button moves the filter section from after the EQ (default / not pressed) to right after the input when enabled - independent of the PRE button.

Please note that the DYN SC overrides the SPLT setting if DYN SC is enabled. When activated, DYN SC moves the filters into the sidechain signal before the signal hits the dynamics section. To move the complete EQ section into the sidechain signal path, just press the SC button. This gives you detailed control and allows you to shape the sidechain signal before it goes into the Dynamics section.



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Filters

1 High-Pass Filter On

Switch the High-Pass Filter On or Off (via LED or Double-Click on knob).

2 High-Pass Frequency

Controls the High-Pass Cut-Off Frequency.

Filter can be switched On and Off via Double-Click or LED.

Pulled = On, Pushed = Off

3 High-Pass Filter x3

Changes the High-Pass Frequency range to 60 Hz - 1.8 kHz if engaged.

4 Low-Pass Filter On

Switches the Low-Pass filter On or Off (via LED or Double-Click on knob).

5 Low-Pass Frequency

Controls the Low-Pass Cut-Off Frequency.

Filter can be switched On and Off via Double-Click or LED.

Pulled = On, Pushed = Off

6 Low-Pass Filter /3

Changes the Low-Pass Frequency range to 20 kHz - 1 kHz if engaged.

7 DYN SC - Filters to Sidechain

If engaged, the HPF and LPF are taken out of the audio path and being moved to the input of the Dynamics sidechain.

This option overrides the SPLT option.

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Compressor Section

1 Ratio

Sets the Ratio at which the signal above a given Threshold is compressed. Turning this fully clockwise switches to limiter mode.

2 Peak

The Compressor normally has an 'over-easy' characteristic. Double-clicking the RATIO switch or clicking the Peak LED changes this to peak sensing, and replaces the 'over easy' characteristic with a hard knee.

3 Threshold

Sets the Threshold level at which the Compressor begins to attenuate the signal, per the ratio setting. The Threshold function includes an automatic make-up gain.

4 Release

Controls the time the signal needs to recover from compression when the level falls below the Threshold.

5 F - Fast Attack

Switches between program dependant (3ms – 30ms) and fast attack (3ms for 20dB gain reduction). Using the Fast Attack with less Gain Reduction can give you an interesting alternative sound, which will be punchier and more aggressive. Great on lead vocals and percussive instruments.

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1 Mix

Controls the amount of unprocessed signal being blended with the processed (compressed) signal, effectively providing the option of parallel compression.

100% = you'll only hear compressed signal.

0% = you'll only hear un-compressed signal

2 LINK - Stereo Link

Links the sidechain signal of two stereo channels. When two Dynamics sections are linked, the control voltages of the two sections are maximized, so that whichever section has the most gain reduction will affect both channels. Note that it is not possible to link two gates so that the signal on one opens the other. If you need to achieve this effect, take a keying signal from one section to trigger the other.

3 Sidechain: HPF - High-Pass Frequency

Input High-Pass for the Compressor Sidechain. Deactivated when set to the minimum value.

Expander / Gate Section

4 EXP / GATE - Expander Mode

Switches between 2:1 Ratio-Expander and Gate mode. Click EXP LED or double-click HOLD knob to switch between modes.

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1 NORM / INV Gate Mode

Switches between Normal Gate mode (NORM) and Inverse mode (INV). When activating the Inverse mode, you hear the parts of the signal that will be attenuated by the gate, which can be used for ducking effects (check some of our presets).

2 Range

Controls the depth of Gating or Expansion. When turned fully anti-clockwise (Range = 0), this section is inactive.

3 Threshold

Threshold defines the input level at which expansion starts. Any signals below this level are processed. Signals above the Threshold are unaffected. Variable hysteresis is incorporated in the Threshold circuitry. For any given 'open' setting, the Expander/Gate will have a lower 'close' Threshold. The hysteresis value is increased as the Threshold is lowered.

4 -30 - Threshold Range

Changes the Expander Threshold range from (-30 to +10 dB) to (-60 to -20 dB) when engaged. (Double-Click on Threshold knob or click LED).

5 Release

Controls the speed at which the Gate/Expander reduces the signal level once it has passed below the Threshold. (Double-click to switch between normal and fast mode).

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1 F - Fast Attack

Switches between auto and fast attack. The attack time is the time taken for the Expander/Gate to 'recover' once the signal is above the Threshold. When enabled, it provides a fast attack time (100µs per 40db), when down, a controlled linear attack time of 1.5ms per 40dB is selected. (Click on LED or double-click on Release knob to toggle between modes)

2 Hold

Determines the time after the signal has decayed below the Threshold before the gate closes. (Double-click to toggle expander/gate mode).

3 Dynamics Routing Section

These three buttons determine the signal routing of the Dynamic module. Please refer to the „Routing Options“ section for additional information.

4 DYN

Switches the Dynamics section On or Off.

5 Pre / Post

Routes the dynamic section either Pre or Post EQ. Please note that this function differs slightly from the hardware – Pre/Post routing is done via Ch In / Ch Out there.

6 KEY - External Sidechain

You can route an External Sidechain signal to the plugin Dynamics if your DAW supports this. When engaged, the Compressor will react to the External Signal instead of the input signal of the plugin.

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High Frequency (HF) Band

1 High Gain

Controls the Shelving / Peaking Gain of the HF Band.

2 High Frequency

Controls the Shelving or Center Frequency of the HF Band, depending on the mode.

3 High Band (Bell / Shelving)

Toggles the HF Band between a Shelving and a Peaking Filter. Unlike the Mid Bands the High and Low Bands can operate in two modes.

High-Mid Frequency (HMF) Band

4 High Mid Gain

Controls the Peaking Gain of the HMF Band.

5 High Mid Frequency

Controls the Center Frequency of the HMF Band.

6 High Mid Q

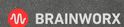
Controls the Quality Factor of the HMF Band.

7 HMF x3

Shifts the center frequency of the HMF band by a factor of 3 to a range of 1,8 kHz – 21 kHz. This is a plugin-only addition and is not present in the original console.

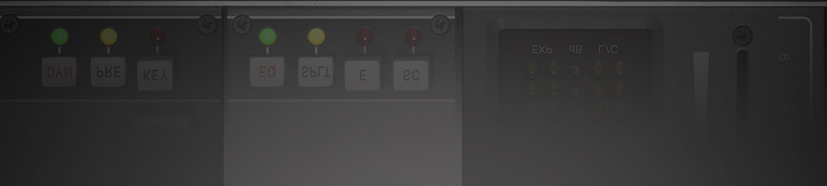
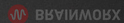
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Low-Mid Frequency (LMF) Band

1 Low Mid Gain

Controls the Peaking gain of the LMF Band.

2 Low Mid Frequency

Controls the Center Frequency of the LMF Band.

3 Low Mid Q

Controls the Quality Factor of the LMF Band.

4 LMF /3

Shifts the center frequency of the LMF band by a factor of 1/3 resulting in a range of 67Hz – 833Hz. This is a plugin-only addition and is not present in the original console.

Low Frequency (LF) Band

5 Low Gain

Controls the shelving / peaking gain of the LF band.

6 Low Frequency

Controls the shelving / center frequency of the LF band.

7 Low Band Bell / Shelf

Toggles the LF Band between a Shelving and a Peaking Filter. Unlike the Mid Bands the High and Low Bands can operate in two modes.

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1 EQ Routing Section

These four buttons determine the routing options and modes of the EQ Section. Please refer to the „Routing Options“ section for additional information.

2 EQ

Switches the EQ section On or Off.

3 SPLT

Splits off the Filters to put them in circuit immediately after the Channel Input section (The Filters are post EQ otherwise). Note that the DYN SC setting overrides this switch. Check the “Routing Options” section for more information.

4 E Mode

The E switch selects an alternative set of EQ characteristics, based on the classic ‘242’ E Series card. The mid bands have a constant bandwidth, so Q increases as gain is increased; the HF and LF bands have a shallower slope than in ‘normal’ mode. The bell curves are identical to the normal ones, i.e. without E selected.

5 SC (SideChain)

Routes the EQ section into the dynamics sidechain instead of the audio path. Check the “Routing Options” section for more information.

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Master Section

1 Input Gain

Adjusts the Input Level of the plugin. Altering the Input Level affects the Dynamic section, so you may have to readjust your Compressor or Gate / Expander Threshold settings if you change this parameter.

2 V-Gain

The V-Gain simulates the noise typically present in analog circuits, whether it's from a Microphone Preamp in higher Gain settings or an EQ / Dynamics circuit. To get the most realistic analog sound with bx_console plugins, we recommend you use some noise on all your channels, then use the Expander / Gate to keep the console clean when signals are not present on channels. It makes a difference!

3 THD

Adds colorful Saturation and Density (on a per channel basis). The default setting is off, as the original SSL 9000 J console was known for its clean SuperAnalogue sound. Use higher settings (up to -30 dB) for almost screaming distortion, or dial down the Saturation to -120 dB for ultra-clean channels.

Dirk's Tip:

Some heavier THD settings can make drums, guitars and vocals sound much rougher, which can add a certain vibe that is desirable for many styles of music. I looove screaming consoles...

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1 Random Channel (ONE / ALL)

Whenever you instantiate a bx_console plugin on a channel, it will start with the Default setup, which is Channel 1 in a flat setting. You can now randomize a channel by clicking the RANDOM options in the plugin (ONE or ALL).

2 Random One

Only the plugin instance you click on will switch to any unused channel number in that session randomly.

3 Random All

If you have many channels of bx_console SSL 9000 J running in your mix session, you can make sure to be using different channel numbers for every single instance with a single mouse click now! In most hosts, you can add a copy of the same plugin to every channel with a keyboard shortcut (for example, click ALT on a Mac to put a bx_console plugin on every channel of your Pro Tools session automatically). Imagine opening 48 channels with one click and then randomizing all the channel numbers with a second mouse click. Done.

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Dirk's Tip:

One very cool way of using the RANDOM ALL feature is to finalize a mix and bounce it, then save the whole mix session. Now you can play back the song and click RANDOM ALL a few times on any instance of bx_console, and you will notice that the “timbre” or tone of your mix will change ever so slightly, depending on the use or abuse of the individual EQs and Dynamics, of course. The more processing you apply, the more obvious the differences become.

Now by clicking through different randomized channel combinations, you may actually find one that sounds a bit darker or brighter, a bit punchier or smoother than your original mix. Why not save 1 or 2 alternative mix sessions and bounce them, so your client can choose between 2 or 3 different “flavors” of the otherwise identical mix?



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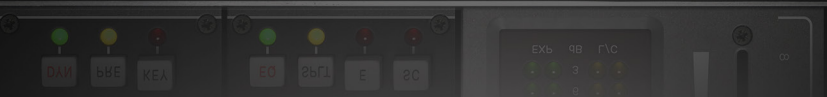
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Meter calibration

The reference value for both level meters can be adjusted via the corresponding text fields in the info screen, which can be accessed by clicking on the Brainworx logo.

By default, the PPM meter reference is set to 0 dBu = -20 dBFS.

The VU Meter is set to 0 VU = -10 dBFS, which in turn corresponds to 0 VU = +10 dBu in the default setting. Using the text fields, you can customize the meters according to the standard you are used to working with or depending on the 'hotness' of your material. Your settings will be stored for all instances and sessions. You can always go back to the default reference levels by clicking on the default buttons.

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Top Toolbar

1 Undo / Redo

You can undo and redo changes you made to the controls of the bx_console SSL 9000 J plugin at any time. The UNDO / REDO will work for as many as 32 steps. This makes experimenting and tweaking knobs easy. If you don't like what you did... just undo it.

2 Settings (A/B/C/D)

The bx_console SSL 9000 J plugin offers four internal settings (A/B/C/D) which will be stored with every preset. So, one preset can contain up to four settings.

You may use similar settings with more or less compression or EQ boost in one setup / preset.

Now, the SETTINGS can be automated in your DAW! This way, it's possible to use different sounds for your lead vocals or drums in various sections of the song. Automate the A/B/C/D settings, and you can still tweak knobs of the individual settings without overriding multiple parameters in your DAW, which would be time-consuming.

3 Copy / Paste

To set up variations of similar sounds you don't have to dial in the settings several times. Let's say you like your setting A and want to use the same sound, just with less compression, as setting B.

- Simply press COPY while you are in setting A.
- Switch to setting B by pressing 'B' in the settings section.
- Press PASTE, now setting B is identical to setting A.
- Reduce the compression on the B setting.

Now you can switch between A & B and decide which one sounds best or automate different settings for various sections of your session.

4 M/S Monitoring (for Stereo Channels only)

- **Solo M:** Solos the Mid (Sum) signal being processed by the plugin.
- **Solo S:** Solos the Side (Difference) signal processed by the plugin.
- **Both disengaged:** Standard stereo (L/R) processing output.

Dirk's Tip:

For more information and videos on M/S Technology for Recording, Mixing and Mastering please visit our web site!



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1 V Gain ALL (-30 dB to +20 dB)

This parameter lets a user add an additional offset to the V Gain parameter of all the same console instances in his current session. Even with the offset, the original range of the V Gain parameter is never exceeded. If V Gain is explicitly set to “Off” (fully counter-clockwise), it will stay Off, even when V Gain ALL adds an offset.

Example 1: The V Gain is set to -95 dB and V Gain ALL is set to +20 dB. The effective V Gain will be -75 dB.

Example 2: The V Gain is set to -75 dB and V Gain ALL is set to +20 dB. The effective V Gain will be -70 dB. It is limited at the upper range.

Example 3: The V Gain is set to “Off” and V Gain ALL is set to +20 dB. The effective V Gain will still be Off.

The parameter only influences consoles of the same type, e.g. if set on bx_console SSL 9000 J, it will not influence bx_console SSL 4000 E and other console plugins.

2 THD ALL (-60 dB to +30 dB)

This parameter lets a user add an additional offset to the THD parameter of all the same console instances in his current session. Even with the offset, the original range of the THD parameter is never exceeded. If THD is explicitly set to “Off” (fully counter-clockwise), it will stay Off, even when THD ALL adds an offset.

Example 1: The THD is set to -60 dB and THD ALL is set to +20 dB. The effective THD will be -40 dB.

Example 2: The THD is set to -35 dB and THD ALL is set to +20 dB. The effective THD will be -30 dB. It is limited in the upper range.

Example 3: THD is set to “Off” and THD ALL is set to +20 dB. The effective THD will still be Off.

The parameter only influences consoles of the same type, e.g. if set on bx_console SSL 9000 J, it will not influence bx_console SSL 4000 E and other console plugins.

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Bottom Toolbar

1 PA Logo

Clicking the Plugin Alliance logo takes you to the Plugin Alliance website via your web browser, that's if your computer is online.

2 License Type

The toolbar displays information about the type of license you're running: Trial licenses will be displayed along with the number of days until expiration; there is no note for full licenses as these are unlimited.

3 \$ (Icon)

If you are using a demo/trial version of our products, you can always click this icon to open a browser that redirects you to the respective product page in the Plugin Alliance store. This is where you can easily purchase a product without having to look it up on our website.

4 Key (Icon)

Clicking on the key icon brings up the activation dialog, allowing you to manually reauthorize a device in the event of a license upgrade or addition. You can also use this feature to activate additional computers or USB flash drives.

5 ? (Icon)

Clicking the ? icon opens up a context menu that links to the product manual PDF, as well as other helpful links, e.g. to check for product updates online. You must have a PDF reader installed on your computer to be able to read the manual.

System Requirements & FAQ (Links)

For latest System Requirements & Supported Platforms

<https://www.plugin-alliance.com/en/systemrequirements.html>

Particular details for your product

<https://www.plugin-alliance.com/en/products.html>

Installation, Activation, Authorisation and FAQ's

<https://www.plugin-alliance.com/en/support.html>





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