Solid State Logic

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X-Panda User's Guide

This documentation is intended to be read along side the "X-Panda Installation Guide" which is available for download from our website www.solidstatelogic.com

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Contents

INTRODUCTION

Expand your studio with an SSL!

Solid State Logic are delighted to introduce its latest analogue offering, the X-Panda, built with the very same SuperAnalogue™ DNA as our AWS, Duality and Matrix consoles**.** SSL sincerely hope that you enjoy this compact analogue product.

X-Panda is a 24 Input mixer that can be used for tracking and master mix summing.

The purpose of the X-Panda is to augment ***any*** existing system. Obviously a natural partner would be SSL's own award winning X-Desk. However, X-Panda is designed to work with any analogue audio equipment, the limit is really your own imagination. Remember this is a true expander in the convenient analogue domain.

X-Panda was primarily born out of requirements from existing X-Desk owners for additional inputs for a larger analogue studio system. When used in conjunction with an X-Desk it creates a 44 input SSL studio mixing system.

Initially the X-Panda may appear to be a relatively basic analogue console, however there are a number of design innovations that could significantly enhance your studio's sonic output. If you take a short time to read this guide through, hopefully you will discover a few novelties, which may enhance your recording and mixing sessions.

You may wish to consider exactly how you will integrate X-Panda into your studio along with your existing equipment. Taking time to plan X-Panda's integration can yield sonic benefits later on.

Some example system setups are included in the X-Panda Installation guide included in your package.

X-Panda can be used as an elegant and ergonomically refined desktop mixer or placed in a 19" rack (by virtue of the supplied removable rack ears) in a 7U space.

Like all SSL SuperAnalogue™ products, it is extremely robust, hand-built in the UK with an all-metal chassis and utilises high quality controls and components.

X-Panda combines a 24 input SSL SuperAnalogue™ mixer with the ability to truly "expand" the other equipment in your studio.

The X-Panda Mono Channel Strip

Inputs – Channel Input (CH IP), Alternate Input (ALT)

Each one of the 8 mono channel inputs (**CH IP**) on the X-Panda has a choice of two Line Inputs. The first input is traditionally sourced from the Output of a microphone pre amplifier, D.I box or perhaps even a line level instrument. These connections are labelled "**LINE IN 9-16 (1-8)"** on the rear of the desk. They are so labelled due to the fact that you may be using X-Panda stand alone or in conjunction with an X-Desk or indeed additional audio equipment.

The second Line input is selected via the switch labelled "**ALT**" and is most commonly used for Monitor return playback signals, perhaps from a Digital Audio Workstation (DAW). These connections are labelled "**ALT IN 9-16 (1-8)"** on the rear of the desk.

Once you have selected your Input, it then has a +/- 20 dB gain **Level Trim**, indented in the centre at Unity Gain and a Phase Reverse "**Ø"** button.

The Post gain signal can also then be affected by Insert processing (perhaps an EQ or Dynamics processor.) by pressing the "**INS"** switch. It is worth noting that in SSL tradition the **Insert Send** is always active, which can be creatively utilised if you so wish. Engaging the "**INS**" switch will activate the Insert return. (All Mono Channel Inserts are connected via the "**INSERT SEND/RETURN 9-16 (1-8)"** connections on the rear of the desk)

The Tri-colour Led under the level control is a 3 colour indictor of signal presence and level. By default the following audio levels are indicted by the following LED states:

Green = -24 dBu
Yellow = +4 dBu
Red = +21 dBu

Remember it is possible to rescale the X-Panda's metering to a +18dBu (as opposed to the standard +24 dBu) scale via the rear panel **DIP switch**. This would then provide the following channel meter scale.

Green = -24 dBu
Yellow = 0 dBu
Red = +16 dBu

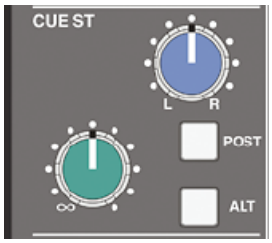
Note: The Red LED will light before actual audio clipping, which can serve as a useful warning when recording.

Outputs - Direct Channel Outs (CH OP), Post Fader

Each Mono channel of the X-Panda has a Direct Output. The Channel Direct Outputs (**CH OP**) are primarily used to feed the inputs of your chosen recorder or DAW. On the rear panel connection panel of X-Panda they are labelled "**CHAN OUT 9-16 (1-8)**".

The operator has a choice of whether the output Signal is sourced Pre or Post fader. By default the output is Pre fader / Post Input Trim but by selecting "**POST**" the Output level will be sourced after, and thus controlled by, the Channel Fader. This is useful if in classic British audio engineering style one wishes to "ride" the signal level to tape or in this modern day and age, the DAW.

Stereo Cue – Post Fader, ALT source



This is the channel send to the **Stereo CUE Bus**. There are separate controls for both Level and Pan, and this is normally used as a Cue audio feed for the recording artist. But this is just the beginning!

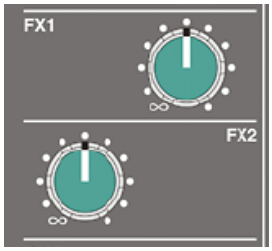
Selecting the **POST** switch will source the Stereo Cue post the channel fader.

A very useful feature of the X-Panda mono channels is that the **CUE ST** can source the **ALT** channel input (even if it has not been selected as the main channel input.) To achieve this simply engage the "**ALT**" switch. This is useful when recording as an entirely independent Cue mix can be built up.

Alternatively if the requirement is for a large analogue summing system (when used in conjunction with an X-Desk), an additional 8 channels could be connected to the **ALT** input, sourced on the **CUE** with independent Level and Pan, and reassigned to the **MIX** bus via the **CUE to MIX** button on the Master section of an X-Desk.

*Note: Selecting **ALT** (on the CUE send) when it is sourced as the Channel Input will result in no change to the Cue source.*

FX Sends 1&2 and Stereo Returns (ST RET)

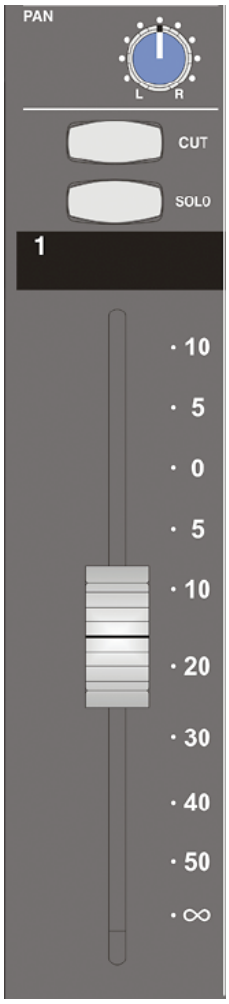


Each Mono Channel on the X-Panda has two mono FX sends (**FX1** and **FX2**)

The Send is permanently ON but rotating it fully counter clockwise will result in no signal being sent onto the FX bus.

Normally the FX sends are sourced Post Fader but they can be globally switched for the whole X-Panda by the **PRE** switches on the last Stereo Channel. (*See next section*)

Channel Pan, Fader Cut & Solo



At the base of the X-Panda Mono channel strip you will find traditional analogue desk functions.

The channel stereo "**PAN"** control, which controls the channels Left/Right positioning on the Stereo Mix bus.

The analogue signal level **FADER,** for feeding the Stereo Mix Bus or controlling the **CH OP** (Direct Channel Output) level.

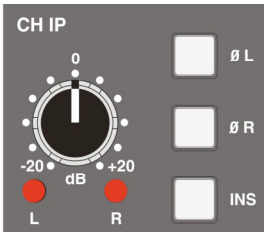
Above the Fader you will find two switches:

The "**SOLO"** button**,** which mutes all other channels and provides an **AFL** monitoring signal, and finally the **"CUT"** button which immediately mutes the channel's output.

THE X-PANDA STEREO CHANNEL STRIP

The X-Panda features 4 Stereo Input Channels that differ slightly from the Mono Channels.

Stereo Inputs – Channel Input (CH IP)



The X-Panda Stereo Input channels (**CH IP**) feature a +/- 20 dB gain stereo **Level Trim**, indented in the centre at Unity Gain and a pair of independent Phase Reverse "**Ø"** switch for both the L+R Inputs.

The Post input gain signal can also then be affected by Insert processing (perhaps stereo EQ or Dynamics processing) by pressing the "**INS"** switch. On the Stereo channels on the X-Panda the Insert point is true Stereo.
It is worth noting that in SSL tradition the Insert Send is always active, which can creatively utilised if you so wish. Engaging the "**INS**" switch will activate the Insert return. (All Stereo Channel Inserts are connected via the **INSERT SEND/RETURN ST 1-4** connections on the rear of the X-Panda)

There are independent Level Meters for both Left and Right Signals of your Stereo source.
The Tri-colour LEDs under the level control are 3 colour indictors of signal presence and level. By default the following audio levels are indicted by the following LED states:

Green = -24 dBu
Yellow = +4 dBu
Red = +21 dBu

Remember it is possible to rescale the X-Panda's metering to a +18dBu (as opposed to the standard +24 dBu) scale via the rear panel DIP switch. This would then provide the following channel meter scale.

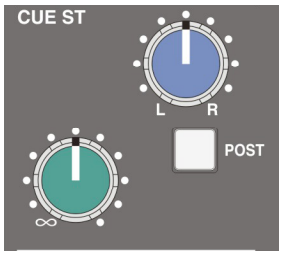
Green = -24 dBu
Yellow = 0 dBu
Red = +16 dBu

Note: The Red LED will light before actual audio clipping, which can serve as a useful warning when recording.

Stereo Outputs - Direct Channel Outs (CH OP), Post Fader

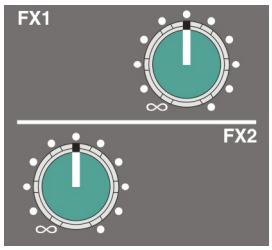
Each X-Panda Stereo channel features a dedicated Channel Output (**CH OP**). This provides a direct Stereo Output.
Normally this is sourced Pre Fader but by engaging the "**POST"** switch that source becomes Post Fader. The Channel Direct Outputs (**CH OP**) are primarily used to feed the inputs of your chosen recorder or DAW. On the rear panel connection panel of X-Panda they are labelled "**CHAN OUT ST 1-4**".
(*Note that there is no "**ALT**" option on the X-Panda Stereo Channels*)

Stereo Cue Send

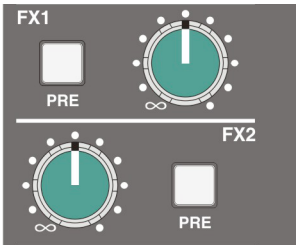


Provides a Stereo Send primarily for Cue purposes. By default the signal is sourced pre fader but additionally it can be sourced after the Channel Fader by selecting "**POST**". It may be worth bearing in mind that if you are using X-Panda in conjunction with an X-Desk and on the X-Desk are using the "**Cue to MIX**" function you may wish to turn this **CUE ST** send off on the X-Panda Stereo channels.

FX Sends 1&2

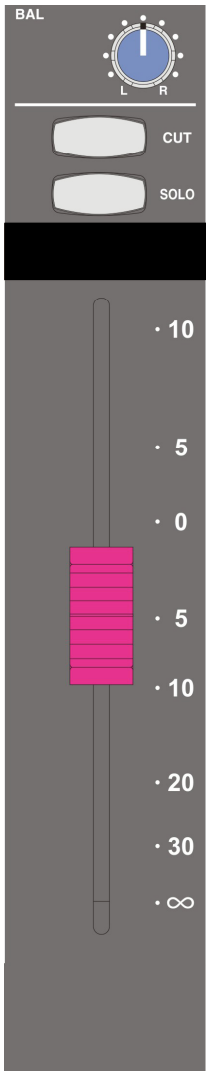


There are two FX sends on the Stereo channels and they take a summed Mono signal of your Stereo Input source. By default the signal is sourced post Fader.



Note that it is possible to globally switch the FX Sends independently for the X-Panda to source the signal pre fader by engaging the "**PRE**" switch for either of the two FX Send busses on the last X-Panda Stereo Channel.

Channel Balance, Fader, Cut & Solo



At the end of the Stereo Channel there is a Balance control. Note that this is entirely different to the Pan control on the Mono channels. Simply, it controls the channels respective Left/Right Level feed to the Stereo Mix Bus. If you are unfamiliar with this type of control it may be worth playing some stereo material into the channel and experimenting with the control to perhaps give you an idea of it creative potential.

In addition to the usual **Solo** and **Cut** switches along with a long throw Channel fader, all of which function as they do on the Mono channels.

ADDITIONAL INFORMATION

Rear DIP Switch Options

The rear of the X-Panda unit features a 4-way DIP switch which allows you to change the Meter scaling of the signal LEDs on the channels.

Switch number "1" alters the meter scaling between:

0 dbfs= +18 dBu
or 0 dbfs= +24 dbu

Note: that the default factory setting is set to +24 dBu

The Diagnostics 1,2, and 3 switches are for internal SSL factory use only and should not be engaged by the user without dire repercussions on a truly monumental scale. Well perhaps not that bad, but please don't do it!

Cascading X-Panda and X-Desk

One of the most useful features of the X-Panda/Desk is the ability for multiple units to be cascaded together to build a bigger SSL system.

It is possible to connect an X-Panda and X-Desk units together by simply connecting the rear panel connection on the X-Panda "**UNITE"** to the "**X-DESK LINK IN"** on the X-Desk. You should connect your monitor loudspeakers and FX processors to the X-Desk as it will be the main audio **MIX** bus, as well as acting as the master sends for the **CUE** and **FX** busses.

Currently we recommend that you connect no more than 8 X-Desk/Panda combinations in a cascaded array.

As mentioned, once connected the **MIX**, **CUE**, **FX 1&2** and **AFL** solo Busses are combined on the master X-Desk.

So for example:

If you engage **SOLO** on any channel, all other Channels in your cascaded X-Panda/Desk System will mute.

A single FX processing unit can be connected to the **FX 1** or **2** output of the Master Desk yet can be fed audio from sends on any of the cascaded desks.

More advanced users may wish to consider the possibilities of such delights as parallel compression, differing FX destinations, extremely complex Cue sends and a whole host of other creative possibilities

Using X-Panda with an X-Rack Summing System

Although not essential, a natural partner for the X-Panda is an SSL X-Rack. While some of the more obvious X-Rack modules such as the Mic Amp (XR621) or the VHD Input modules (XR627) would be suitable for recording various sources, and of course the X-Rack EQ and Dynamics modules, Superanalogue (XR625) & (XR618) or 4000 series (XR425) & (XR418) would be a natural partner for audio processing duties.

However the real fun begins if you would like to create a "bigger" analogue mixer. Because the X-Rack has a "**Mix Bus Link**", if you have a Master Bus Module (XR622) simply connect the X-Panda's "**XRACK EXPANSION**" to the X-Racks' **"Mix Bus Link"**

*Note: The X-Rack REC BUS (Record Bus) is fed from the X-Panda's **ST CUE** as it has no associated bus.*

Using X-Panda with other audio equipment

While you may assume that X-Panda is designed to only work in conjunction with other SSL equipment, you would be mistaken. X-Panda can be a welcome addition to any existing set up.

Use with another audio mixing console:
Lets assume you have a classic console from the good old days, or a highly affordable offering from a current manufacturer. X-Panda allows you to add additional inputs for this device. Simply connect from the **Unite** socket on the rear of the X-Panda to your audio console. Remember that you can "break out" the 8-way D-sub (Using a commonly available D-Sub to 8x XLR cable for example) into its component audio signal elements. So you can access the Stereo MIX bus, Cue bus the two Mono FX Sends and of course, the AFL bus. You do not have to use all of these of course. SSL are providing you with a set of tools, and as ever you choose the correct one for the job. A simple setup would involve simply connecting the X-Panda MIX bus to a Stereo Input or indeed two mono channels. This would provide many more inputs into your console. A more complex set up might involve the above in combination with the CUE and FX also connected. Useful if you wish to access hardware outboard FX equipment that is connected to the other mixing console. How you accomplish this on your other console will either involve donating a channel for this purpose or some have dedicated summing input often called Bus injects. Consult the documentation that came with your other audio mixer to see what is possible and how it might work best for you in your studio. No two mixers are alike!

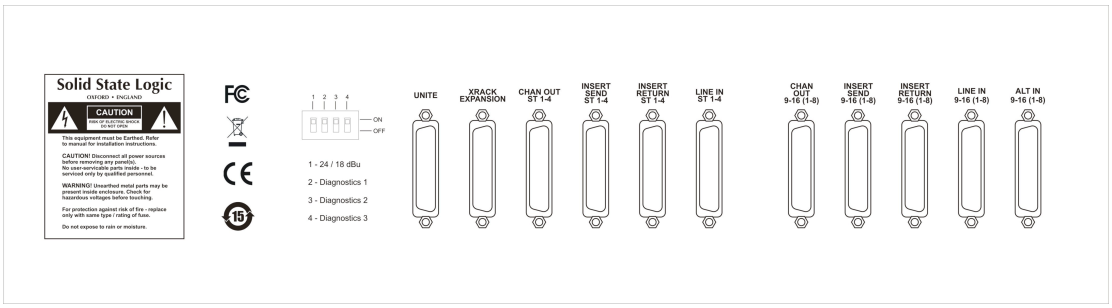
Use with another analogue summing system:
The last few years has seen a growing appreciation for the benefits of analogue mix summing. There are quite a few systems available and X-Panda can work in conjunction with any of them.

Racking your X-Panda

Supplied with the X-Panda are 2x Racking “ears”. These can be simply fitted to the Desk by the use of 3x screws per side (included) thus facilitating 19” rack mounting of the X-Panda. We recommend 4x screws for securing an ear equipped X-Panda into a standard 19” rack.

CONNECTIONS

Rear Panel Connections:



LINE IN 9-16 (1-8) **D-Sub 25 way female**

The Primary Channel Input (**CH IP**) for the Mono Channels

ALT IN 9-16 (1-8) **D-Sub 25 way female**

A secondary Mono Channel Input. Can be sourced as the main Channel Input (**CH IP**) or reassigned via the Cue Bus ALT function.

INSERT SEND 9-16 (1-8) **D-Sub 25 way female**

Insert Sends for the eight Mono Channels (Remember the Send is always active!)

INSERT RETURN 9-16 (1-8) **D-Sub 25 way female**

Insert Returns for the eight Mono Channels

CHAN OUT 9-16 (1-8) **D-Sub 25 way female**

Direct Channel Output (**CH OP**) from the eight Mono channels; selectable either Pre or Post fader.

LINE IN ST 1-4 **D-Sub 25 way female**

The Stereo Channels Line Inputs (**CH IP**)

INSERT SEND ST 1-4 **D-Sub 25 way female**

The Stereo Channels Insert Send (Remember the Send is always active!)

INSERT RETURN ST 1-4 **D-Sub 25 way female**

Stereo Channels Insert Return

CHAN OUT ST 1-4 **D-Sub 25 way female**

Stereo Channels Direct Output (**CH OP**)

UNITE **D-Sub 25 way female**

AFL L+R	Provides AFL Output
MIX L+R	MIX Bus Output
CUE L+R	CUE Bus Output
FX SEND 1	FX 1 Bus Output
FX SEND 2	FX 2 Bus Output

X-RACK EXPANSION **D-Sub 25 way female**

This connection allows X-Rack owners with a Master Bus module (XR622) to utilise that for Master Bus functions and Monitoring control.

It is also compatible with X-Racks loaded with any combination of the Four Channel Input module (XR623) and Eight Channel Input module (XR624) in addition to the Master Bus Module. This creates a large compact analogue summing system.

Note: For all D-Sub Pin-outs please consult the Installation guide included with your X-Panda

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E&OE