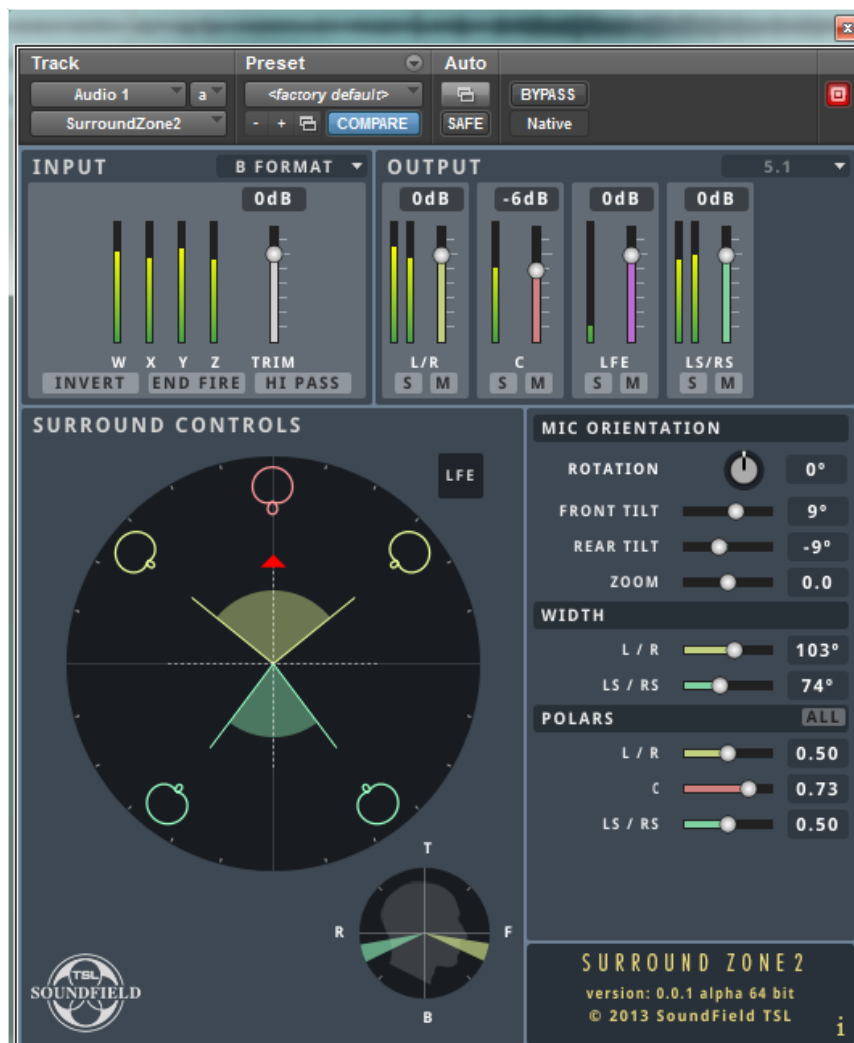




SoundField SurroundZone2

User Guide

Version 1.0



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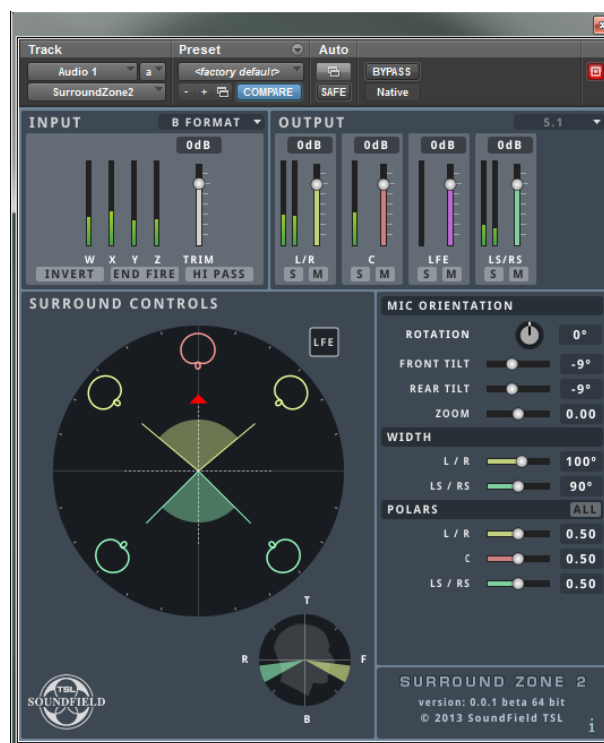
INTRODUCTION

The SurroundZone2 plug-in brings all the benefits of SoundField Technology to post-production and combines the functionality of the original Surround Zone and SPS200 Surround Zone plug-ins as well as add a host of new features.

The plug-in is designed to accept four SoundField A-Format (LF, RF, LB and RB) or B-Format signals (W, X, Y and Z) generated by any of the current SoundField microphone models in the range. The unique four capsule array in every SoundField microphone captures three dimensional sound at the same 'central point' thereby eliminating all the time and phase related anomalies created by multiple spaced microphones.

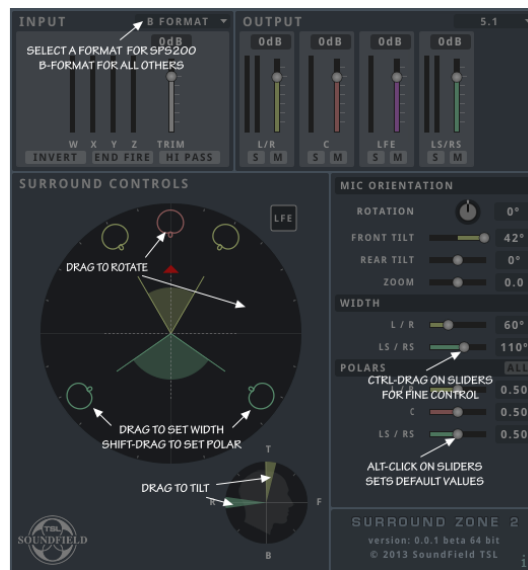
Once in the SoundField B-Format domain the point of acoustic origin is defined and all output variations i.e. mono, stereo, 5.1, 6.1 etc. are derived from this 'central point'. This provides the user with completely phase accurate surround sound and stereo recordings.

All plug-in features can be utilised either retrospectively in the studio after the recording has taken place or 'live' and provides the user with the most powerful stereo and surround sound recording and post-production package available.



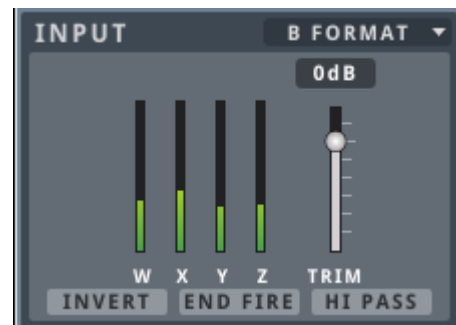
EXPLANATION OF CONTROLS

Pressing the 'i' button located at the bottom right of the SurroundZone2 plug-in will show a QuickStart help "overlay" pointing out some of the less obvious controls.



INPUT SECTION

- Input Format select allows you to choose between an A-Format or B-Format input depending on the signals that need processing. For signals from all SoundField microphones other than the SPS200 use the B-Format input mode, for any A-Format signals derived from an SPS200 microphone use the A-Format input mode.
- The input LEVEL control adjusts the input gain of all four A-Format or B-Format channels simultaneously and ranges from -30dB to $+10\text{dB}$. Metering of the four input channels takes place on four individual bargraphs.
- Enabling the INVERT mode maintains the correct three-dimensional when the microphone is suspended upside down above the sound source. Not selecting this mode with the mic suspended upside down will result in the Left/Right width information and Up/Down height information being inverted.
- Enabling the END FIRE mode maintains the correct three-dimensional perspective when the mic is used in the horizontal position pointing at the sound source 'like a flashlight'. Not selecting this mode when the microphone is horizontally pointed will result in the Up/Down height information and the Front/Back depth information being reversed.



Please note - if INVERT or END FIRE has been applied at the 'live' recording stage on the SoundField hardware control unit do not apply these features again in post-production. This will neutralise the intended effect.

- The Hi-Pass filter is designed to remove any low frequency rumble such as wind noise and has a cut-off frequency of 80Hz and is 2nd order.

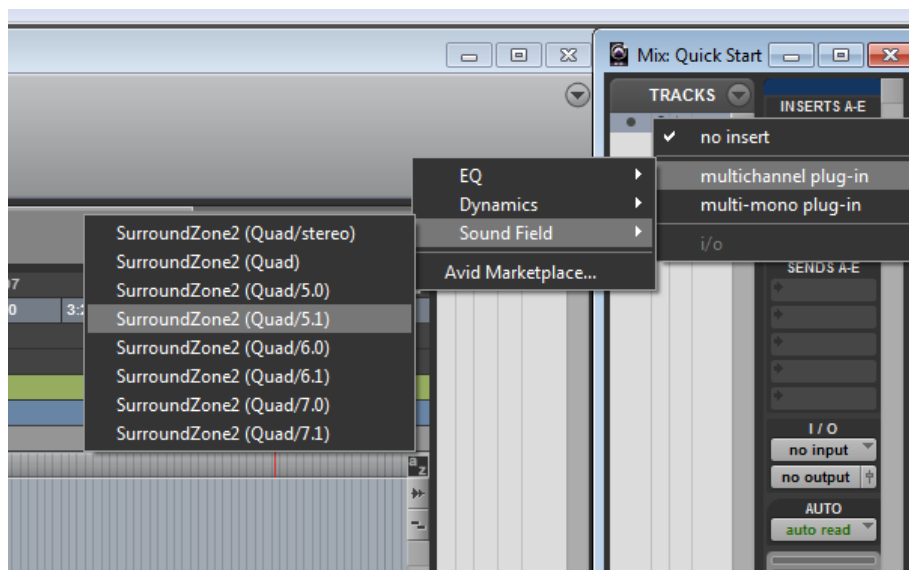
OUTPUT SECTION

The Output Section of SurroundZone2 is an important part of the plug-in as this determines the output mode and as a result the Surround Controls available. For example a 7.1 output has more width and polar pattern controls than a 5.1 output.

- The available output modes are: Stereo, 5.0, 5.1, 6.0, 6.1, 7.0, 7.1 and B-Format (for A-Format input only).

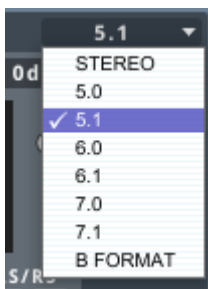
The behaviour of the output section is the only part of SurroundZone2 that is dependent on the actual plug-in format, with the AAX version of the plug-in behaving in one way and the VST and AU versions behaving in another way.

The AAX Plug-In versions comes in eight different output modes and these are selected at the point the plug-in is inserted.



Here is the output routing for the AAX version of the plug-in:

	1	2	3	4	5	6	7	8
Stereo	L	R						
B-Format	W	X	Y	Z				
5.0	L	C	R	LS	RS			
5.1	L	C	R	LS	RS	LFE		
6.0	L	C	R	LS	CS	RS		
6.1	L	C	R	LS	CS	RS	LFE	
7.0	L	C	R	LS	RS	RLS	RRS	
7.1	L	C	R	LS	RS	RLS	RRS	LFE

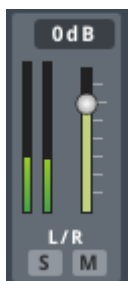


The VST and AU versions also have eight different output modes, but these are selected from within the plug-in rather than at the point of insertion.

Here is the output routing for the VST and AU versions of the plug-in:

	1	2	3	4	5	6	7	8
Stereo	L	R						
B-Format	W	X	Y	Z				
5.0	L	R	C	LS	RS			
5.1	L	R	C	LFE	LS	RS		
6.0	L	R	C	LS	RS	C		
6.1	L	R	C	LFE	LS	RS	C	
7.0	L	R	C	LS	RS	LC	RC	
7.1	L	R	C	LFE	LS	RS	LC	RC

It is important to note that this is the internal routing and most digital audio workstations allow the user to define their own output routing to suit their specific needs.

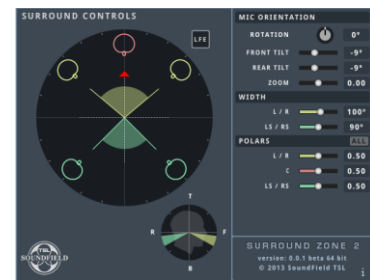


Each output pair (front or rear stereo pairs) or single output (Centre and LFE channels) has an independent output level control with a range from -30dB to +10dB and Solo and Mute buttons. Bargraph meters are provided for level monitoring of each individual output channel.

SURROUND CONTROLS

Mic Orientation

The Rotate, Snap Tilt and Zoom controls are unique to SoundField Technology and give the user a 'you are there' post production experience with the opportunity to re-position the microphone.



Rotate allows the user to rotate a captured three dimensional soundfield a full 360 degrees without losing any spatial information or introducing any artefacts.



Snap Tilt allows the user to individually tilt the front and the rear of a captured three dimensional soundfield by ± 90 degrees without losing any spatial information or introducing any audible artefacts.



Zoom gives the effect of zooming in or further away from the sound source i.e. it alters the front/back balance without introducing any artefacts, audible or otherwise.

Width and Polar Controls

The REAR PATTERN control allows the user to vary the polar pattern of the rear surround channels on all but the 8-channel surround mode. Cardioid or hyper-cardioid may be selected to optimise localisation or figure-of-eights for a more enveloping sound depending on application and personal preference.

These controls allow the front and rear stage width to be varied. For example, a wider front image may be desirable for a large orchestra, whilst for a centre-front positioned soloist a narrower angle may be preferable.