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Thank you for purchasing the operative field technologies:  
**SHADOW HILLS INDUSTRIES EQUINOX**  
The following is an overview of its functions and a guide for use.

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At The Shadow Hills Austin Research Facility.  
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# The Equinox Overview

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## INPUT CONNECTIONS

Channels 3-32 summing inputs are received via the D-sub connections Daw 1-8, Daw 9-16, Daw 17-24, and Daw 25-32 on the rear panel. Daw 1+2 inputs are received via the first two channels of the first dsub input (Daw 1-8), on the rear panel.

External input is received via the Left and Right External Input XLRs on the rear panel.

Microphone inputs are received via the microphone One and Microphone Two xlr inputs on the rear panel. The direct inputs are located on the front panel via the direct phono inputs.

## OUTPUT CONNECTIONS

The summing buss Left and Right XLR outputs are located on the rear panel. The microphone outputs XLR are located on the rear panel. The speaker connections are via the speaker D-sub outputs on the rear panel. They are speaker A- (one and two), speaker B- (three and four), speaker C- (five and six). The left and right cue outputs are also made via this speaker output connection and are located on seven and eight respectively.

## MONITOR SECTION

The Equinox has a no compromise, mastering grade monitor section. The control room monitor level is controlled by a twenty-four position discrete attenuator. This insures quality, accuracy, and repeatability. Discrete in this case refers to the twenty-four individual stepped positions

The Speaker Selector selects between left and right speaker pairs A, B, and C which are output through the rear panel speaker output D-sub connector. The pin-out is the industry standard Tascam format. Channel one corresponds to Speaker A left and right, channels three and four to Speaker B, and channels five and six to Speaker C.

Channels seven and eight are the left and right Cue output. See table.

FUNCTION	SPEAKER OUTPUT D-SUB
Speaker A	1 & 2
Speaker B	3 & 4
Speaker C	5 & 6
Cue Output Left	7
Cue Output Right	8

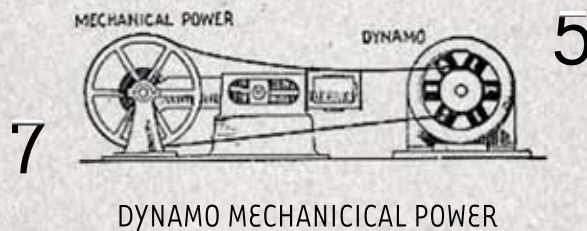
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The Cue output (Cue Out) is meant to drive an external headphone system and is not effected by the Control room volume level or the control room Mono Stereo switch. Just like the speaker output, the Cue Out follows the condition of the input selector, i.e. They hear what you hear. That is unless the talkback switch is engaged, in which case, the signal from the built in talkback mic is substituted. This internal microphone is recessed just behind the front panel in the upper right corner. The level is controlled by adjusting a trim pot, by way of the small hole, just to the left of the talkback mic on the front panel. The rear panel has a 1/16" phono jack labeled, "Talkback". This is a remote for the talkback switch. By connecting a momentary foot switch (sustain pedal) Talkback can be engaged. When Talkback is selected, the Control Room volume is automatically dimmed and is indicated by the red Dim light. The monitor level may also be dimmed manually by engaging the Dim switch. There is a switch to select between mono and stereo for the Control Room monitors (for checking phase correlation).

The Input Selector is a four-position switch that picks the source for the Control Room monitors and the Cue Out. The positions are: Daw 1+2, Mix 3-32, External Input, and Micr phone preamp. Daw 1+2 and summing inputs are received via the rear panel D-sub's labeled: Daw 1-8, Daw 9-16, Daw 17-24, and Daw 25-32.



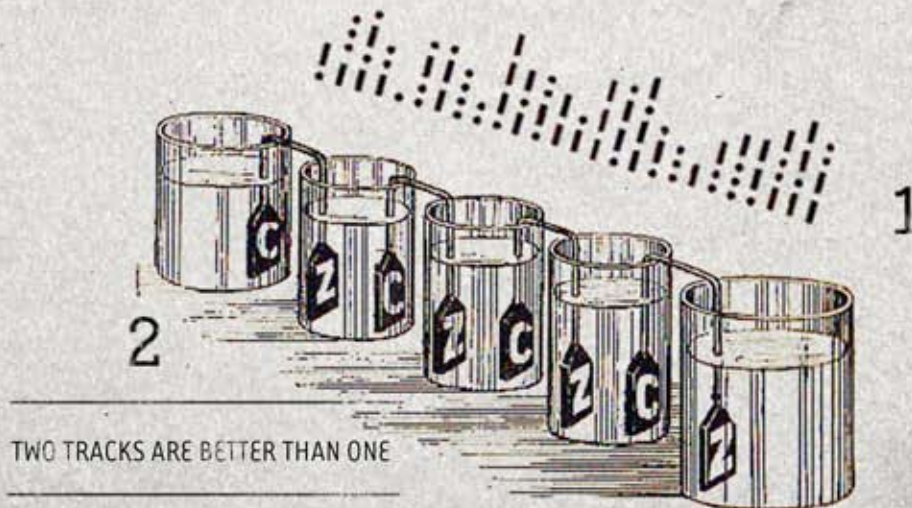
### POSITION ONE: DAW 1+2

The first two channels of Daw 1+2 are the inputs for the Daw 1+2 position on the Input Selector. This input is meant for monitoring the main output of your digital audio workstation before any channels are broken out into stems. It is also intended to be the position used when overdubbing with the built in microphone preamps. When overdubbing, set the Input Selector to Daw 1+2, thus listening to the outputs 1+2 of the Daw. Route the rear panel XLR output or outputs, to the desired converter inputs to be recorded. Monitor the recording, by way of software monitoring in the Daw, while listening to Daw 1+2. Note: While the Input Selector is on Daw 1+2, the Channel One and Two amplifiers act as microphone preamps, and their output is routed to the XLR Microphone outputs on the rear panel. The output transformer select switches are independent of each other. The Phantom, Pad, and Phase switches are active. The level to the converters is adjusted by the Channel One and Two attenuators.

## POSITION TWO: MIX 3-32

In this position the D-sub inputs 3-32 located on the rear panel are summed. Independent left and right gain is adjusted by the Channel One and Channel Two attenuators. Both channels output transformers are changed by the Transformer Select switch of Channel One. The Phantom, Pad and Phase switches are not active. The dedicated rear panel XLR summing outputs are not affected by the Control Room attenuator. So you can change your Control room level, switch speakers, dim the monitors, use the talkback or listen in mono without affecting the XLR summing outputs.

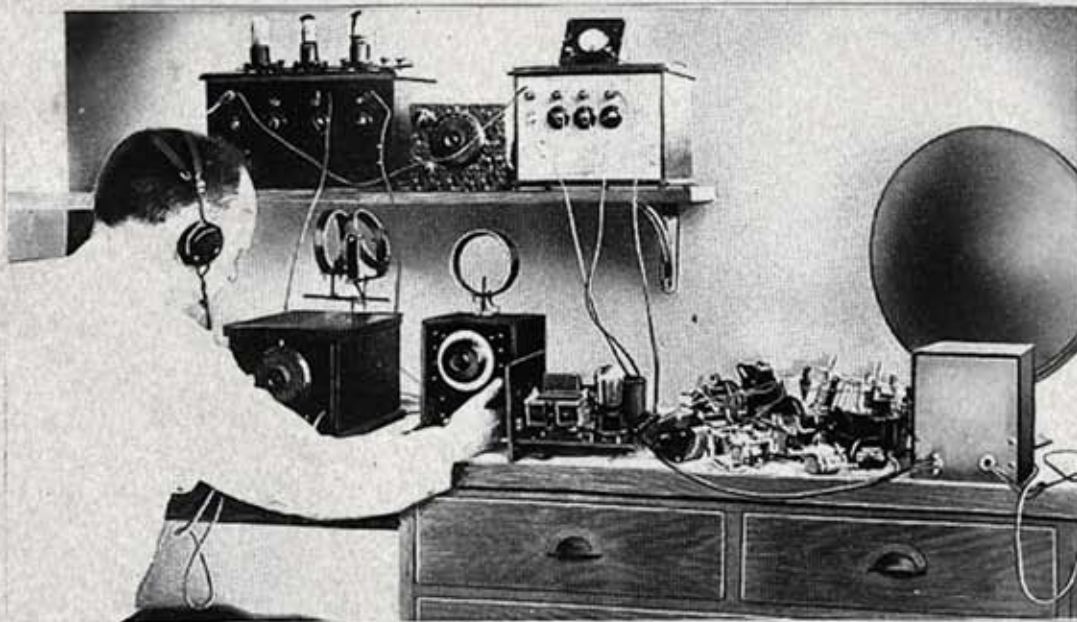
When breaking out your stems it is intended that you simultaneously rout channels one and two in your Daw and your paired stem outputs to the Equinox summing inputs. By doing this you can switch the Input selector from Daw 1+2 to Summing 3-32 and hear the difference between summed and not summed, and to compare the differences of having the transformer switching matrix engaged or disengaged. The more channels stemmed out to the Equinox the more apparent the differences. The ability to monitor the summing switching on and off is beneficial for discerning these differences. It is also useful to have the main mix and stems simultaneously routed in case you find the need to do overdubs after you have started mixing. Simply switch back to Daw 1+2 and software monitor the built in pres without having to change your mix.



**FIG. 4.245.** *Features:* Pristine sound quality main mix and stems simultaneously routed in case you find the need to do overdubs.

### POSITION THREE: EXTERNAL INPUT

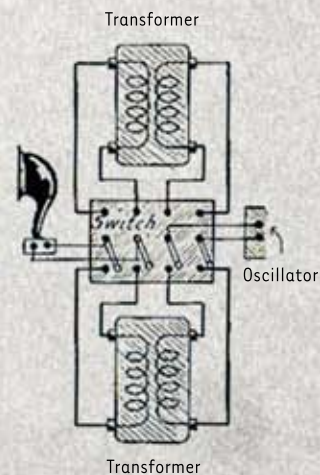
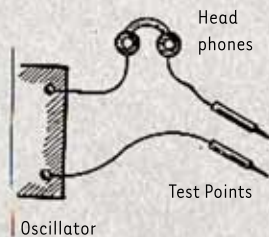
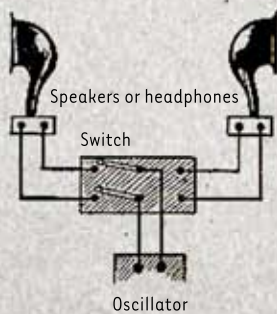
When this position is selected on the Input Selector, the summing buss and xlr Summing Outputs are active, but the Control Room monitor is listening to the input of the rear panel XLR External Inputs. This position is meant to monitor the output of your two-track mix down deck, be it a half-inch machine, a Masterlink, or the like. The two-track input is fed by the Equinox's XLR Summing Outputs, and the two-track outputs are received via the rear panel xlr External Inputs. It is possible to monitor two-buss compression and processing in this position. The XLR summing outs are fed to the compressor inputs, and the compressor outputs are fed to the two-track inputs, and the twotrack outs to the Equinox External inputs. In the case where the twotrack is the Daw, we suggest that you mult the output of the compressor, with one output pair going to the Daw input and the other pair going to the External Input of the Equinox. With this setup, by switching the Input Selector, it is possible to monitor: not summed, summed, or summed and compressed.



## POSITION FOUR: MICROPHONE PREAMPLIFIER

When the Input Selector in the fourth position, the Control Room monitors the output of the Microphone Preamps. The rear panel microphone XLR outputs are active as are the XLR inputs, and the front panel phone jack direct inputs. The Phantom switch provides 48-volt phantom power for condenser mics. When using ribbon mics, the Phantom should be switched off, so as not to damage the ribbon. Note: All the Channel One and Two toggle switches are engaged when down, and disengaged when up. This is the opposite convention of a light switch and takes some get used to. The reason for this is to use the biggest knobs possible under normal conditions, i.e. toggles disengaged. The Transformer Select switch selects the output transformer for each channel. The differences are subtle, but reveal themselves depending on the program material that they are fed.

- The Nickel position has a flat low end, and an accentuated high end. About 3/4ths of a dB at 10 KHz. Think of this position as 70's HiFi.
- The Iron position has a flat high end and a 1 dB boost around 110 Hz in a slightly saturated musical way. This position has an additional Class-A output stage, allowing only even-ordered harmonic distortion.
- The last position is Steel. This position has a 3/4 dB low-end boost at 40 Hz, with a very tight cue. The fundamental frequency is lower and tighter than the Iron position but at a slightly lower level.





# SHADOW HILLS INDUSTRIES

Feel free to call with any questions

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