

TSC Samuel Goldwyn Theater Alignment Report

December 2021

A year and a half ago, during the normal time spent maintaining and improving our theater systems, the academy personnel and theater standards volunteers had to walk away from work in progress on a major upgrade to the projection and sound systems of the Samuel Goldwyn Theater due to the Covid 19 pandemic. Out of an abundance of caution, no one was allowed to return to the SGT for over a year! Fast forward to Q4 of 2021 and we are beginning to pick up this important work. The scope of this uplift includes the addition of a Barco laser projector, a new screen, all new Crestron control infrastructure, a reconfiguration of the DSP boxes and room tuning, and the introduction of a large Creston NVX system which provides AV routing over IP, allowing picture and sound from any source or computer to be routed to any other location within the theater for events. We have been informed that the theater will reopen for nomination screenings and bake-off events for the 94th Academy awards. In response the Theater Standards Committee (TSC) has spent a total of 3 days working on verification and alignment of the Samuel Goldwyn Theater.

The screen and surround loudspeaker systems had all their individual speakers swept with sine waves for vibration and general performance. A single handful of surround speakers were found to have potential issues and a scaffold crew was hired for day 2 of our alignment to give our crew access to the problem areas. 2 speakers were replaced, and others had their cabinet mounts tightened.

After frequency sweeps the entire system was checked for frequency response and conformance to the industry accepted X-Curve. Minor adjustments were made that are consistent with normal driver aging and duty cycle.

The film projector analog optical A-Chains have been verified and aligned for both the Norelco AA2 35/70 projectors.

Calibration and alignment of the Dolby Digital reader heads and processors were confirmed. Overall operation of the DTS 70mm readers and processor was also confirmed.

SPL was set and verified for all playback formats.

Thanks, and acknowledgement go to the following people who support the work of the Theater Standards Group and played a vital role during this busy time. They are:

From The Academy

Ryan Carpenter – Chief of Projection Jay Palmer – Chief Engineer Projection Staff – Michelle & Chris The Admin Staff – Moray Greenfield, Nancy Aubry & Lauren Martin

From Dolby	TSC Members other affiliations
Andy Potvin	Douglas Greenfield – Vice Chairman TSC
Jim Wright	Gordon Stroud – Digital Bel Air
Dustin Hudson	Jim Deas - WB
Bryan Pennington	
Gary Meisner	
Dan Sperry	

Thank you all, for your dedication and efforts to improve the standard of picture and sound at the Academy's facilities. It's been my pleasure to share this journey with you.

Km Dlank

Kevin Collier, Chairman

As a reminder of its' compliment, the SGT with its' Atmos capable sound system, is equipped with 44 full range, high powered surround speakers of three different types. The side and rear surrounds are dual 12" LF with 4" compression driver and horn HF, in two different configurations—one vertically oriented, and one horizontally oriented, custom designed to fit into the actual space available behind the fabric panels. The overhead surrounds are single 15" LF with 3" compression driver and horn HF. There are two dual 18" surround bass management subwoofers, one in each of the two public address bays above the stage exits. These are used for the first and second positions of side and overhead surrounds in Dolby Atmos mode. BSS BLU DSP processors are used to integrate the Atmos A-chain with the existing film and digital cinema signal flow. Main digital projection source is now a Barco





Left Channel 1/3 Octave Trace



Right Channel 1/3 Octave Trace



Center Channel 1/3 Octave Trace



LFE Channel 1/3 Octave Trace



LSS Channel 1/3 Octave Trace



RSS Channel 1/3 Octave Trace



LSB Channel 1/3 Octave Trace



RSB Channel 1/3 Octave Trace



Left Extra Channel 1/3 Octave Trace



Right Extra Channel 1/3 Octave Trace







Right Channel 1/12 Octave Trace







LFE Channel 1/12 Octave Trace



LSS Channel 1/12 Octave Trace



RSS Channel 1/12 Octave Trace



LSB Channel 1/12 Octave Trace



RSB Channel 1/12 Octave Trace



Left Extra Channel 1/12 Octave Trace



Right Extra Channel 1/12 Octave Trace







