

TiMax Application Example - “Men in Scarlet” at “The Royal Hospital, Chelsea”

The Premise



In celebration of 4 centuries of military campaigns, this Son et Lumiere event was staged in the courtyard of this landmark building. History is retold through narrative, sound images and the recollections of soldiers who ended their days in the Royal Chelsea Hospital.



The Challenges

The main objectives were to create multiple simultaneous sound images for each of the elements of the mix, in order to maintain the intelligibility of Dame Judy Dench’s narrative and the dialogue of the characters while setting the mood of the scene with underscored music, atmospheric sound and effects of full on battle scenes.

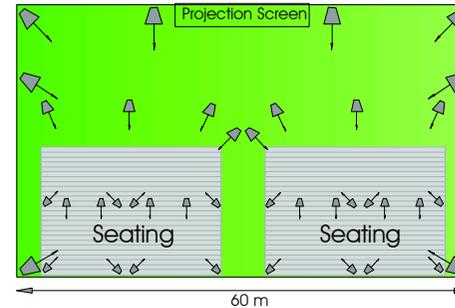
As the production was fully prerecorded, and visuals consisted of lighting effects and still projection, it was identified as important to make the sound-scape as varied and interesting as possible to hold the interest of the audience.

The Approach

All of the audio material was recorded onto a 16 track master tape, with separate tracks for narrative, dialogue, music, atmos and spot effects.

The specification for the loudspeaker placement included a near-field system, used primarily for reproduction of narrative and dialogue. This system was duplicated in the two seating blocks, and consisted of speakers at front left, center and right positions with delays in the seating blocks. In addition a far-field system for reproduction of music and battle scenes consisted of 8 stacks of high powered boxes distributed around the edge of the courtyard. Additional speakers were placed in and near the seating blocks for spot effects and surround use.

The TiMax Solution



The sound track assembly and TiMax programming were carried out entirely in the recording studio, where elements of the mix were placed in a virtual spatial environment on a cue by cue basis with cue triggers from SMPTE time code programmed to ensure correct synchronisation. When this part of the process was complete, the soundtrack was monitored on an 8 channel loudspeaker system for initial verification.

On arrival on site, Image Definitions were set up to establish the right combinations of speakers and relative levels and delays to create the desired localisations and level of immersion.

Cue No	Cue Name	Trigger	Time Code
0018.00	De Saussure	@00:12:33	Hours Minutes Seconds
0019.00	He had served the cro	@00:13:08	-- -- --
0020.00	Here rests William His	@00:13:47	-- -- --
0021.00	Samual Dumalton	@00:15:30	CD1
0022.00	He ran forward...	@00:16:35	CD2
0023.00	Rifleman Harris	@00:17:28	Status
0023.50	Last Cannon	@00:18:58	Notes
0024.00	Sargeant Cotton	@00:20:40	
0025.00	Imagine 70,000 men	@00:21:35	
0026.00	He had also chosen	@00:23:25	
0027.00	Thonton	@00:24:12	
0028.00	Wellington	@00:27:04	

The Tricks

Off line programming dramatically reduced the time required on site. Image Definitions were named and placed on screen, and on a cue by cue basis inputs (tape tracks) are placed on the Image Definitions to apply the relevant localisation or spatialisation to the track at that time.

The approach to sound track assembly in the studio was of great importance to the end result achieved, for example, avoiding recording anything other than music tracks in stereo, as TiMax is all about placing multiple mono sounds in a three dimensional sound field. Often summing music recordings to mono can result in unwanted artifacts while using half stereo will often result in loss of information.

By separating gun shots from the associated ricochet sound it is much easier to have a gun report and its reverberation stationary while the sound of the bullet flying through the air can be made to do just that.

