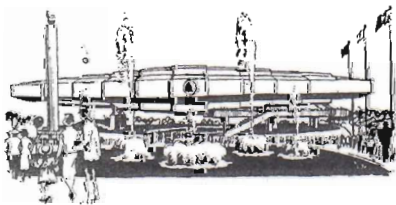


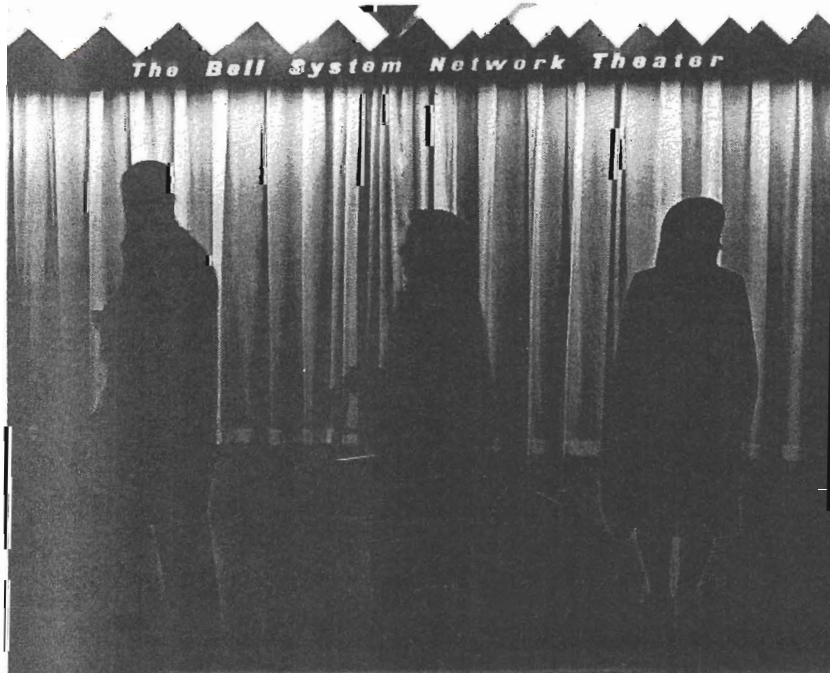


Above: the Bell System Pavilion is a 400-foot "floating wing" which offers a chair ride and series of live demonstrations.



Right: familiar visitors' line awaiting turn along Bell's ride. Crowd control is very good here.

Exterior of small "stand-up" theater in main downstairs exhibit area. Audiences of 80-100 persons see a multi-screen slide presentation on many facets of telephone service; show is repeated every 15 minutes.



# BELL SYSTEM PAVILION

**armchair "sound ride" takes 1,000 viewers  
on film journey "From Drumbeat to Telstar"**

THE "RIDE" in the Bell System Pavilion is one of the most complex and interesting film experiences of the Fair. The 1,000 moving armchairs with built-in speakers in two continuous loops of 500 each on two levels carry spectators through a 15-minute program which involves 65 motion pictures on individual screens.

Titled *From Drumbeat to Telstar*, the program takes us from man's first efforts to communicate — with voice, drumbeats, smoke signals — on through the discovery of symbols, numbers, the written word and modern developments — the telephone and Telstar. The story is told by speakers

synchronized to the action on the screen for each individual chair.

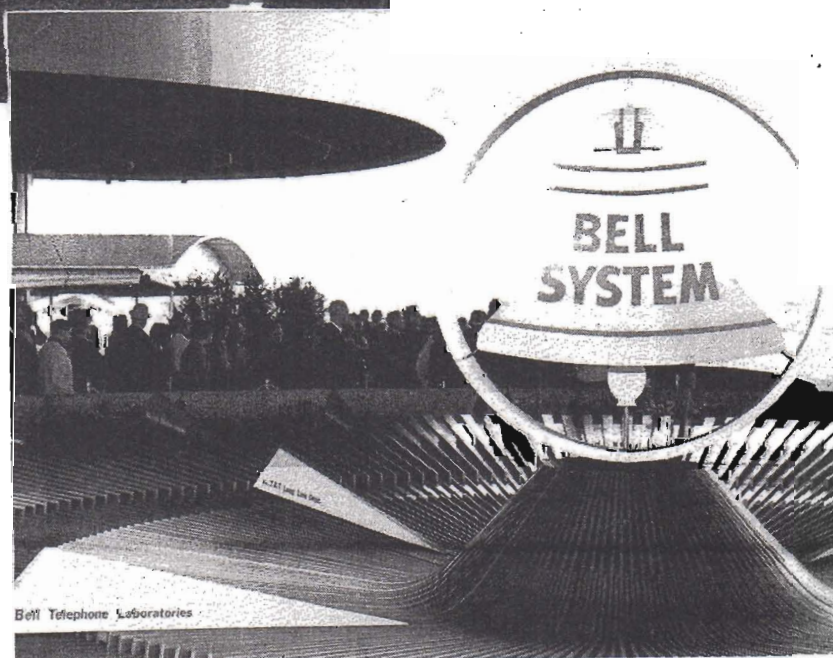
The ride was conceived by the Pavilion's designer, Jo Mielziner, working with architects Harrison & Abramovitch, motion picture engineers — the Reevesound Company, and the film producers, Owen Murphy Productions.

On the 65 screens — which cannot be seen as screens at all since they are veiled in various thicknesses of gauze curtains called scrims — are short pieces of action performed by Hal Holbrook, noted stage actor of "Mark Twain" fame.

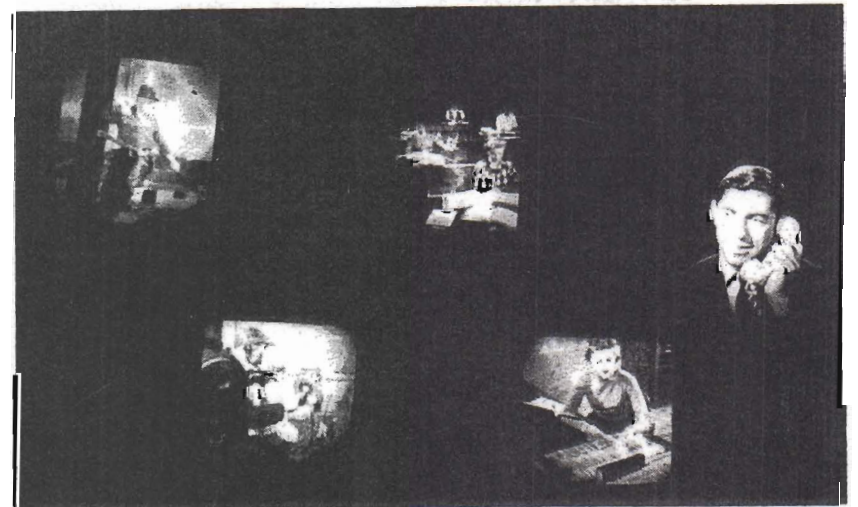
Mr. Holbrook will be seen calling "hello" in an early part of the ride, sending smoke signals, inventing the printing press or the telephone. It takes an average of six seconds for each chair to pass each individual screen (although many of the screens are grouped in a single tableau). On the screens are endlessly repeated actions on looped films which run from six to 15 seconds.

What is amazing about this is that there is no point at which the action can be seen to obviously stop and repeat itself — no jerks at the splices to spoil the smoothness.

Director Paul Cohen, of Owen Murphy Productions, achieved this by working with Mr. Holbrook until he was able to perform an action "forward" and then smoothly continue "backward" to the point of origination of the action. In other words, he would



Inside the "stand-up" theater: the slide show utilizes colorful lighting effects, Technamation techniques. Scenes come up on several panels individually and "en masse" through both front and rear projection.





pick up a pen, write a few words, fold the paper, and lay it aside. Then he would continue right on doing the same thing, but backwards.

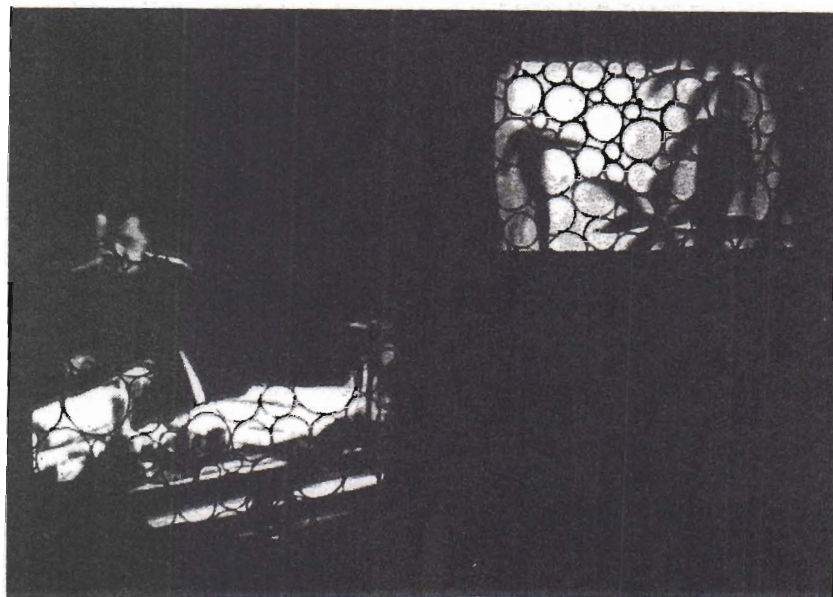
With this forward and backward action on film, editors could then print the "forward" portion straight, reverse print the "backward" portion, and splice almost anywhere in the action without it being noticeable on the screen. If this sounds complicated, it most assuredly is, but it works.

To achieve the effect of having none of the screens visible, Designer Joe Mielziner has used multiple scrims before each one, and the figures in the film are performing entirely with limbo back-

## Design and Engineering of the Bell Show

**D**ESIGN AND ENGINEERING installation in the Bell System Pavilion was a major task in itself, primarily centering on the 1,000 chair "sound" ride which occupies a mobile ramp in the "floating" wing of the wide structure.

Produced by Jo Mielziner of New York, this unusual theatrical presentation has projection and



Scenes for the 65 loop films which carry the story of "From Drumbeat to Telstar" along the chair ride are seen through scrims of varying styles, thickness so that there is no apparent background, no visible frame lines. Resulting fuzziness (at times) doesn't improve quality.

of special two-ear design is built into each of the 1,000 upholstered lounge-type chairs.

This sound system utilizes two tracks on Reevesound's four-track, sixteen-millimeter reproducing system, with like programs being fed through right and left ear speakers, positioned at the upper inside of the chairs. Individuals are provided with a sound program that is synchronized with the ride.

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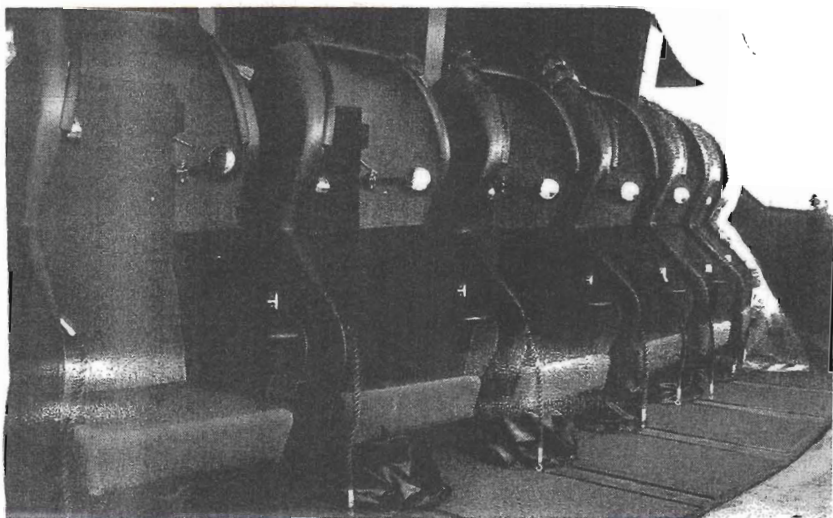
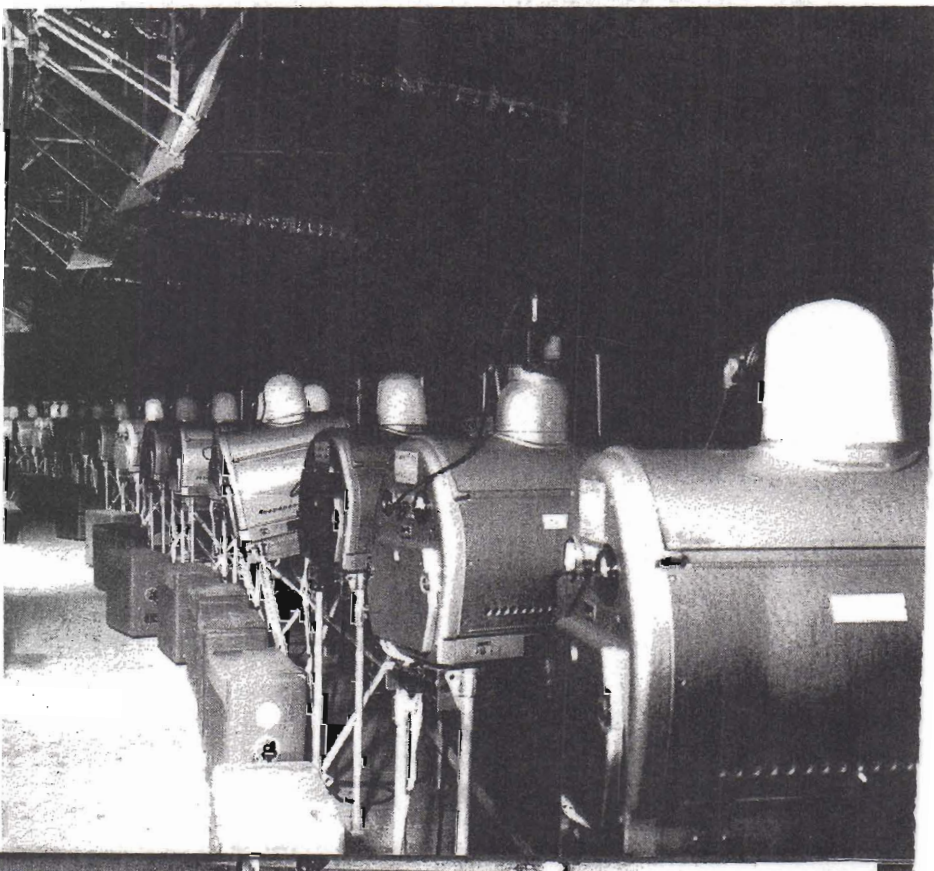
☆ Reevesound's projection system in the cavern includes a battery of sixty-five 16mm Norelco projectors equipped with 1600 watt Zeiss Xenosol II light sources, first-surface mirrors, continuous duty synchronous motors and spe-

cially designed film loop supports.

Projectors, lamps, rectifiers and loop racks are located on long platforms behind a series of rear projection screens. A first-surface mirror placed at the front of each projector mechanism receives light from the projector, redirects it to similar, larger mirrors positioned overhead, which transfer light to rear projection screens ahead. This system of mirror optics is used to increase projection distance and image size.

This combination of continuous 16mm film loops, synchronous motors and Xenon lamps gives the Reevesound system long operating life with minimum maintenance requirements on film and projection equipment.

Below: battery of 65 Norelco 16mm projectors lines up along slightly-curved ramp behind the 1,000 chair ride in the Pavilion. Overhead-first-surface mirrors increase projection distance and image size.



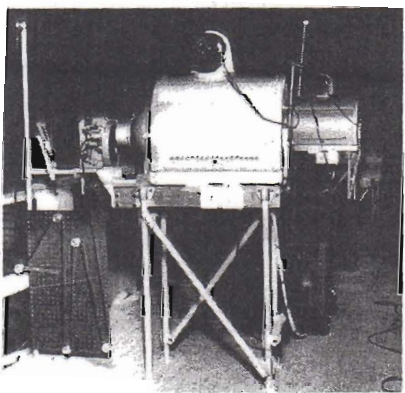
Sound-equipped upholstered chairs which carry visitors along the ride.

grounds. There are no frame lines anywhere visible. This was accomplished by photographing the action on a blue cyclorama set. Then, by printing this through a blue filter, a matte exactly matching the action is obtained. Printing both together produces a film with no background, no frame lines, and the character entirely in limbo.

Each of the 65 loops in the program is changed daily. It is estimated that an average loop goes through 5,000 runs during the 12-hour day before it is discarded. For the producer, this means a regular editing staff constantly preparing new loops for the projectors.

With all these extraordinary complexities, it is a tribute to the designer, producer and engineers that the Bell System ride started operating at 10 AM on the opening day of the Fair and has continued with no breakdowns ever since. The Pavilion's percentage of visitors has steadily increased and *From Drumbeat to Telstar* seems settled into a long, successful run.

sound systems of unique capability which were created by Reevesound. A monaural sound system



Above: closeup of one of the 65 Reevesound-modified 16mm Norelco projectors used along chair-ride in the Bell Pavilion. Each projector is equipped with 1600-watt Zeiss Xenosol-II lighting source, a first-surface mirror and the 16mm film "loop" rack which can be seen at left in scene.