How Talkies are Made

The sound film has changed everything—Here is the first complete description of the new film methods

By Al Cohn

SILENCE! That's the loudest, most important word today in the making of what the English euphoniously term "the audible cinema." Just now we call them "talkies" and it is rather paradoxical that the most important requisite in the creation of these noisy shadows is "Silence"; for without absolute quiet during actual production, the talkie would be a rather messy affair.

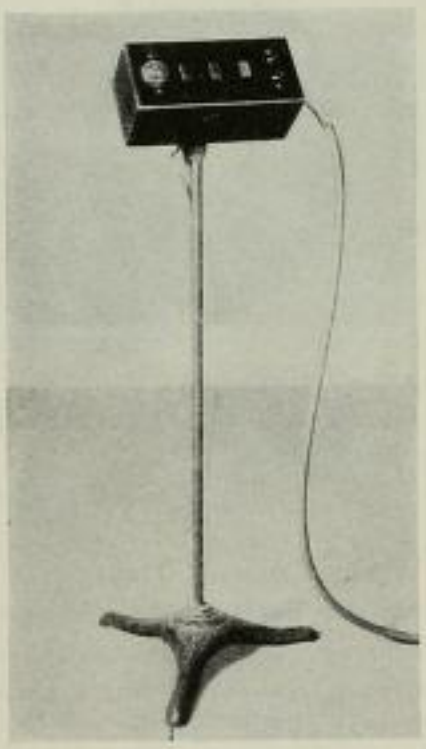
In other days, the magic command was "Lights! Action! Camera!!" and then the director began shouting and his puppets walked or made love, smiled or wept, rolled an eye or heaved a bosom.

Now, after ascertaining if things are all okay in the camera booths, the recording room and the monitor panel, the players take their places, there is the command "Silence" or "Quiet." The director or his technical assistant with phone in hand calls, "Interlock." For a few seconds the proverbial pin, if on the job, could be heard to drop; then comes the faint hum of the synchronized motors from within the almost sound proof camera booths.

THE eye of the director is fastened on the little instrument board which is the medium of communication to other parts of the "system." A blue light and a green light are already glowing and then the larger red crystal becomes illuminated as the director gives the wave of the hand to signal the players to begin.

The red glare says that the system is functioning; that the cameras are moving at a uniform speed of "24"; that the cylinders loaded with film are revolving in the recording room ready to receive a faithful record of voice and other sound; that the huge wax disk just a step away is revolving, needle poised to indent the yellow record; that the monitor (sometimes called "the mixer-man") with hand poised on mysterious-looking knobs, and eyes peering at the scene below through a plate glass sound barrier, is waiting to see the scene played and to hear it, *via* the monitor horns in the room below him.

He is the man who is responsible for the quality of the sound reproduction and he can modulate it as he sees fit.



The director's signal box. The round light at the left—red—is turned on from recording room when equipment is ready for operation. Two switch buttons at right are for the purpose of signalling to recording room. The other lights—green, blue, white—flash on before and after the red to indicate recording stages

The cameraman no longer stands with cap reversed, turning his crank nonchalantly and looking about in a bored manner. He either stands outside his booth, in the case of a fixed camera, or crouches inside twisting or turning his camera to follow a player or moving scene.

EVEN the lowly "juicer" has a white-collar job under the new order. There are no dirty carbons to handle because the Klieg, the Sunarcs and allied illuminants have given way to the huge, noiseless incandescent bulbs—the answer to the humble electrician's prayer. So much for the mechanics of talkie production.

The scene is "shot," the director gives the signal for a "play-back," if one is desired, and players, technicians and any others listen to every sound of the preceding scene as it is run off again. That's where the wax record in the little recording room comes in. In a jiffy the record on the soft wax is being played back. If it is good, there is every reason to believe that the record of the scene on the sound track will also be good. And back they troop for the next scene.

IN only one studio—Warner Brothers—is the wax disc used for a permanent record and film recording not employed, but censorship may compel these pioneers to resort to film reproduction. It is fairly easy to clip a line or speech out of a piece of film but a deleted speech from a Vitaphoned production calls for a new record.

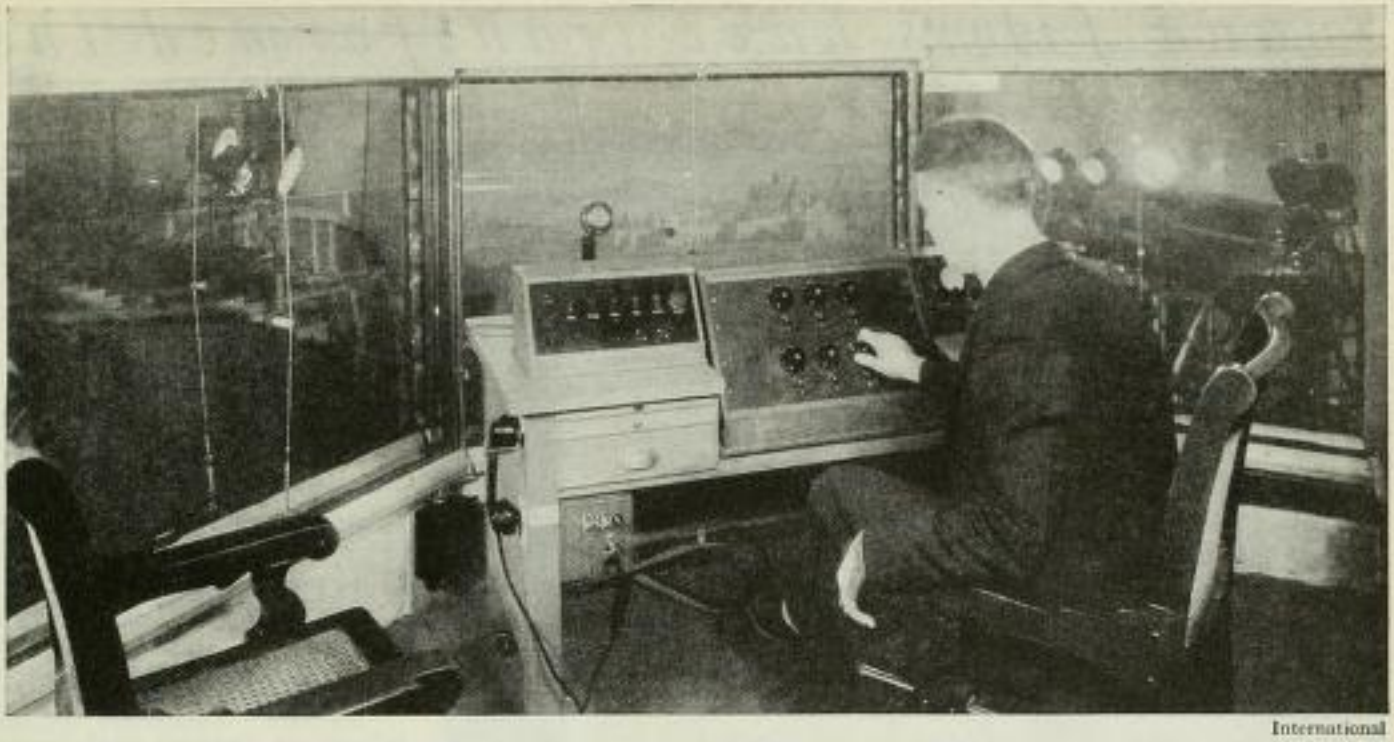
Developments during the past six months, especially along personal lines, have been chock-full of interest. I believe that one of the most significant incidents of the early autumn was the successful test made by Mary Pickford.

It prompted her to undertake the filming of "Coquette" as an all-talkie.

A short time later Harold Lloyd took over one of the Christie sound stages at Metropolitan Studios for a test.

It had been predicted by some of the sound-wise ones that

Now Both Speech and Silence are Golden



International

The monitor room of the United Artists studio in Hollywood. Here you see the monitor—the newest power in celluloidia—at his "mixing table," pulling up and toning down the voices of the stars. Through the observation glass, the monitor watches events out on the studio floor. He observes the vocal tricks of the film folk and has his hand on the proper knob to prevent voice skidding

Harold would eschew the talkie. He won't. His rather high-pitched voice records splendidly and, more than that, he knows how to get the most out of it.

If his material is good, Harold's next picture should be one of his greatest successes, because his voice will add infinitely to his characterization. Harold in a "talkie" should be nothing short of a knockout.

MUCH sympathy has been lavished on the poor "movie" players because of their supposed inability to adapt themselves to the new medium.

Even the easily stampeded producer frantically has signed up stage players for his talking pictures, yet the most signal successes in the "talkies" have been scored by those of the screen, notably Bessie Love, Conrad Nagel (who has almost tripled his salary since Metro-Goldwyn-Mayer unconsciously thrust him into fame by farming him out to the then lowly Warner Brothers) and Richard Barthelmess.

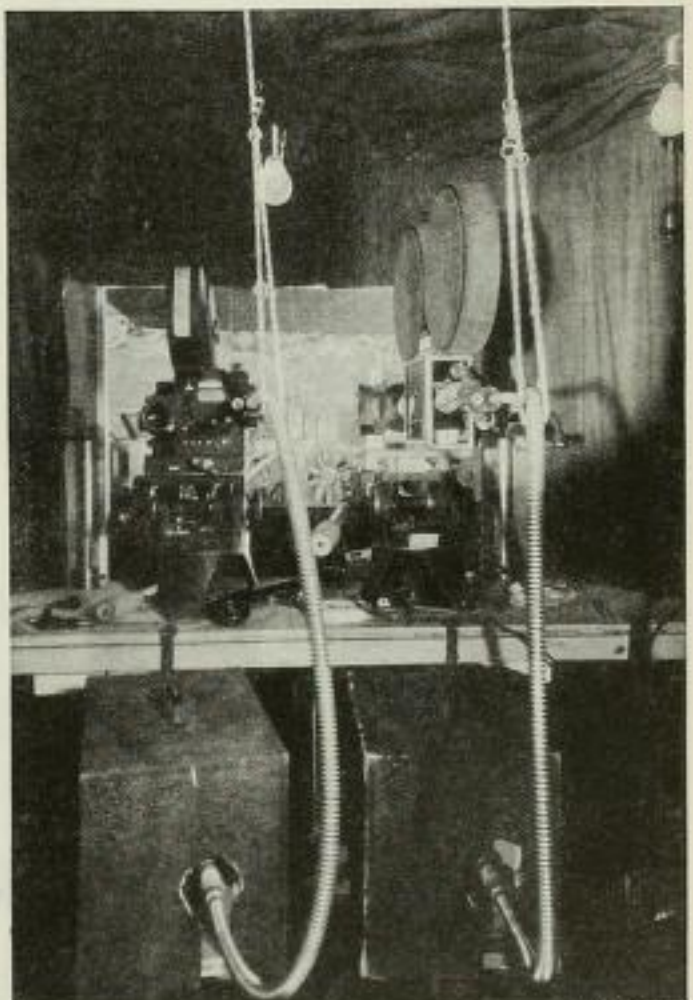
Of course, Conrad had previous voice experience, coming into pictures from the stage and Bessie has been on tour in vaudeville.

Edward Everett Horton, who was regarded as more or less of a "flop" in silent pictures, scored in Warner Brothers' "Terror," as did Louise Fazenda, and both are now in great demand.

Betty Compson and Dorothy Mackaill, of the pictures, were great, I thought, in "The Barker."

There are other evidences of the fact that the capable screen actor will always be pretty sure to have the edge on the stage player who is a stranger to the camera. For after all, we are still making pictures.

ON the other hand, in almost solitary hauteur, Charlie Chaplin, the greatest of all comedians, stands aloof and thumbs his nose at the talkies. He says he will have some sound effects in his next picture and some talk—but not his own. Those who have heard Charlie on the radio can understand why. But there is a much more important reason than the barrier of a London accent. Charlie is essentially a pantomimist. Personally I believe it would be as ill-advised for Charlie Chaplin to break out into speech as it would have been for "Slivers" or any other famous circus clown of another era.



International

The camera booth from the inside, looking out. The covered motors are below and drive the cameras *via* flexible shafts. Note the padded walls and thick glass windows

Sound films have transformed the

Left **— a portable monitor booth in the Paramount Long Island studios. By means of the radio horn at the top, the monitor calls out suggestions to the director between scenes. Note the signal box in front**

Microphone fright is rife in every sound studio. However, Jeanne Eagels, instead of letting the strange machinery bother her, proceeded to wreck the machinery. It was not temperament, but intensity of performance. In her emotional scene at the very end of "The Letter," her voice rises and vibrates to its highest pitch. It sends thrills up and down the listener's spine. And the first time it was taken, it smashed the delicate wiring of the recording instrument. It was the same as a lightning flash burning out the electric light fuses. The actress wasn't cramped at all.

Miss Eagels also shattered a microphone with the noise of a pistol shot in the same picture. Simple concussion produced the effect. The next time the scene was taken at the Paramount Long Island studios, a lighter charge was put in the gun and the microphone was placed farther away.

Ethel Barrymore had a screen and voice test made at the same company's Astoria studios. Like many another actor, she could not recognize herself when she saw and heard the record.

"My dear," commented the first lady of the American stage, coming out of the projection room after the showing, "I consider that an excellent imitation of Elsie Janis giving an imitation of Barrymore."

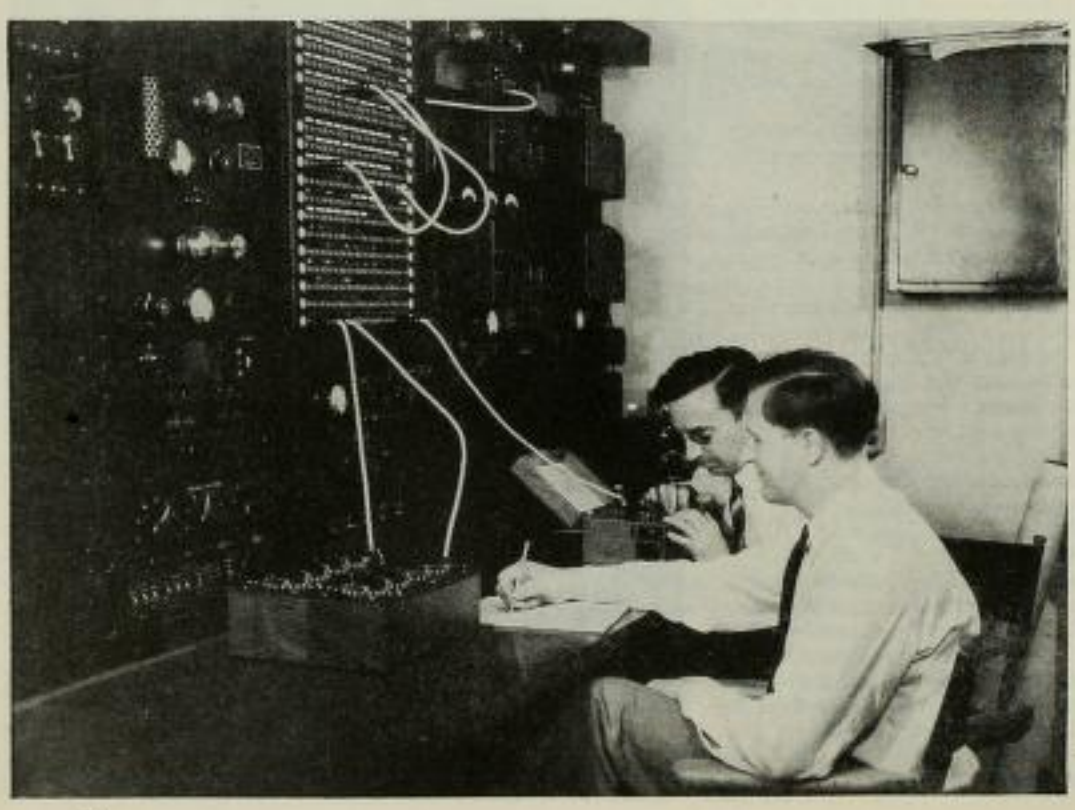
Richard Dix has been seeing himself on the screen for years, with stage experience going back long before that, but his impression of his voice test was startled amazement. He never had heard himself in a talkie until he came to New York just before Christmas.

"IT'S the head kick," he remarked. "I never had such a sensation. It took days to get used to my own voice. You don't know that person on the screen, nor recognize the sounds he makes. I found out things about myself I never knew before—for instance, a hesitating drawl in my speech.

"The one thing the stage actor must remember in a talking picture is that he doesn't have to throw his voice out to reach the last row in the balcony. He is playing only for the ringside seats, the first row in the orchestra. The microphone is just a few feet away. He must use a conversational tone, restrain his voice, talk naturally."

The monitor room of a talking film studio is the first station on the way from the microphone to the sound recording machinery. The operating staff here sometimes have all the opportunity of a party telephone line subscriber for listening in on secrets.

For the microphone exercises no censorship. Any



In the sound recording room of the Paramount Hollywood studios. Here the film powers can make a fly's footfalls sound like the crash of thunder. Their mission, however, is to get perfect synchronization

sound is grist to its mill. It looks innocent enough as it hangs in the midst of a set while preparations are made for a camera shot, but it is working all the time. Usually it passes on to the monitor room nothing more exciting than a distortion of noises and voices, as actors, props, grips, electricians, assistants of all sorts, get things ready.

But occasionally there are unconscious, confidential whisperings immediately under the "mike." Then the monitor room may hear some official high in the production department suggest to the director: "How is little Helen Hotlips getting along on this picture? I am particularly anxious that she may have a full opportunity to make good." Or a couple of grand dames from the serious drama may lean their heads close together and tell the one about the Pullman car conductor and the artist's model.

NO definite technic has been established for the making of talkies. Most of us are still struggling along trying to develop something approaching that of the stage and screen—a sort of welding of the two but ever keeping in mind that "it's still pictures"; that the sounds and talk must be subordinated to the visual results.

In some of the studios the movie director is assisted by a stage director who rehearses the talking sequences. In others a stage technician actually shoots the spoken scenes. But there has been a noticeable lack of movement in the early talking features and audiences have grown restless, watching—or listening to—them.

Our first talking picture made at the Metropolitan Studios for Paramount release was "The Carnation Kid," starring Douglas MacLean. It had originally been intended as a silent picture and was shot as such while the sound stages were being built.

In shooting the sound picture we learned that three-sided sets produced hollow voice reproduction— [CONTINUED ON PAGE 110]

The old fashioned arc lights have departed to make way for the silent incandescents. Two styles are shown at left and at the extreme right. The one at the left is called a rifle lamp

A Dictionary of New Talkie Terms

In sink—in synchronism; picture and sound perfectly timed together.

Outa sink—not in synchronism.

Phased, or interlocked—all motors of sound and picture recording equipment lined up in readiness to start out in perfect step together.

Monitor man—the person who operates the volume control on talking picture production, modulating sounds as they come through the microphone so as to get a more even and natural tone.

Three bells—the ringing of three bells in a sound picture studio as a signal that a scene is to be taken and that everyone must preserve silence.

One bell—the ringing of one bell to indicate that a picture has been taken and that normal noise may be resumed.

Sound track—the narrow band of space along the left side of picture film on which is printed the ribbon-like strip of light and dark lines which constitute the record from which sound is projected.

Camera booth—the movable sound-proof box with a glass front, in which cameras are enclosed in a talking picture studio in order that the sound of the camera may not intrude in the picture.

Mike—microphone, corresponding to a telephone transmitter, through which the sounds on the set are picked up and sent to the recording machinery.

Inkys—incandescent lights, the silent lights used for talking pictures in contrast to the old noisy arc lights.

Movieola — miniature projection machine with earphones used in the cutting room of a talking picture studio for rapid viewing of pieces of film.

Amplifier—the electrical apparatus similar to that in a radio which magnifies the strength of the electrical current from the microphone before recording.

Tormentor—a large portable wall draped with special material to prevent echo and resonance on the sound set.

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Strange how the galloping ghosts, now and then, emerge to haunt us.

LILY DAMITA, the French beauty, gave New York photographers plenty of workout when she bounded into the metropolis to make personal appearance with "The Rescue," in which she appears opposite Ronald Colman.

The papers were full of shots of the marvelous Damita legs, the Damita reading in bed, the Damita curled up on the floor, the Damita in pajamas, the Damita in ball dresses, the Damita doing practically everything but playing the xylophone.

Interviewed, the Damita said, "I hate the millionaires. And I hate the poor men, because they talk so much of love."

She didn't say why she hated the millionaires or what they talked about. And her idea of Gallic sparkle was to come leaping out on the stage shouting "Whoopee!" The audience nearly swooned dead away.

THE Tower of Babel was a deaf and dumb asylum compared to the modern Hollywood, according to Harry Carr, Los Angeles newspaperman. "The other night," writes Carr, "I went to a dinner party given by a belle who is half French, half Spanish.

"An Irish girl and a German baroness began discussing the merits of a scenario writer born in Persia who was preparing a play in which a Cherokee Indian director would make still more famous a Mexican star."

Carr neglects to mention that they were eating American lettuce smothered in Russian dressing, prepared by a colored cook and served by a Japanese house-boy.

THE Stork-by-Proxy notion has a firm grip on Hollywood. Walter Long, the heavy, and his wife have just adopted a five year old boy, and I understand that Mr. and Mrs. Harold Lloyd are about to step-up their family by adopting a little girl about Gloria's age.

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tubby or rain-barrel effects; that walls made of wood caused the voice to "bounce," hence the adoption of composition material for the building of sets. Much surprise has been expressed at the quality of the voice reproduction in Fox's "In Old Arizona," yet it is a well-known fact that the finest sound reproduction is that obtained out-of-doors, where there is nothing to interfere with the capture of the voice or sound effect in its natural state.

WHILE making our first Christie-Paramount talking short, "When Caesar Ran a Newspaper," we learned something about firearms in talkies. The picture is a film version of a famous vaudeville travesty in which Raymond Hatton plays *Julius Caesar* to the *Marc Antony* of Sam Hardy, *Marc* being press agent for one *Cleopatra*, a dancer from Egypt. In the last few feet *Marc* commits suicide by shooting himself. We knew that an actual revolver-shot would ruin the sensitive microphone, so used a toy cap pistol. When the cap exploded it sounded in the monitor room like a sixteen-inch gun and in retaking the scene the mere click of the hammer provided the desired effect.

Perhaps the most interesting experiment, in our studio at least, has been the making of the first two Octavus Roy Cohen "Bummin'ham" stories, with all-negro casts. We discovered very early that the usual colored screen actor was practically useless because it was next to impossible for him—or her—to memorize long speeches. Of course there are exceptions, but very few of them. We went to the legitimate stage for most of our principals—the colored legitimate stage. One of our principals in the first colored talkie, "The Melancholy Dame," is Evelyn Preer, of the LaFayette players, a splendid actress who was Lenore Ulric's understudy in "Lulu Belle." The colored stage players are remarkably quick "studies" and seldom "go up" in their lines. The second colored talkie, "Music Hath Harms," just completed, we are convinced, will prove a sensation.

WE are all trying to find out what sort of talkie entertainment the public wants in abbreviated forms. The Christies believe that the public will tire of the ordinary vaudeville act and so we lean more to the one-act play form, telling a complete story usually in about eighteen minutes. Lois Wilson has appeared in one of these for us, and she is to do another, with Edward Everett Horton. By that time we expect to know something of the public taste—to obtain some hint of the public's verdict.

For after all, the public will decide the ultimate fate of the talking picture, both long and short. In the meantime, don't worry about the fate of your favorite stars—you will find that most of them will do well in the talkies. Jannings? Garbo? Myself, I'd go anytime and pay good money to see Jannings act in silence; and for *my* dough, Greta *never* has to talk!

A Dictionary of New Talkie Terms

(Continued from page 31)

Play-back—the "rushes" in sound recording. The immediate playing of the sound record after the taking of a scene in order that actors and director may hear how it all sounds and see if anything needs to be changed. The play-back is possible only from disc recording, like a phonograph record, as in film recording the film must be developed before the sound can be heard.

Disc—the wax record, like a phonograph record, on which sound is recorded.

Photo-electric cell—the small sensitive vacuum tube which is used in the projection machine of a film record of sound in order to translate the black and white lines of the sound track back into sound, so they may be perceived by the ear instead of by the eye.

Frequency—a term in physics denoting the sound-wave characteristics and range of the electrical sound impulse. Sounds have a "wave length" just as radio impulses, short wave lengths corresponding to high frequency vibrations.

Sound-proof—the quality of preventing the passage of sounds, insulating an enclosed space against outside noises.