EVOLUTION of the "MIKE" BOOM

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With the advent of sound in motion pictures, there came the need of a new tool in the trade. From the voice to the theater horn, there was one outstandingly weak but all important link; that of properly orienting the microphone to the moving voice source. True, there were the weaknesses of infancy throughout the recording system but no electronic advances could displace the primary need of correct pickup. A recent picture, "Singing in the Rain," featured some of the more comic aspects of the microphone placements in that first hectic era.

Prompted by the success met in the radio studio in placing the microphone on a stand in front of the actor, similar tactics were first employed in pictures. Obviously, unable to use a stand for photographic reasons, the soundman turned to bushes, furniture and other props behind which to hide microphones. This was fairly successful as long as the actor would remain in a fixed position, half hidden by the scene stealing prop, but these were *moving* pictures.

Music recording had proven hest when the microphones were in an over-



FIG. 2—The first Mole-Richardson boom on which is mounted a condenser type microphone.

head position. Why wouldn't it work for dialogue?

Aloft went the "Mike Men" to suspend fixed mikes above the main positions of the actors in each scene. It was common for a mixer to have as



FIG. 3—Dave Moriarty, Republic boom operator, showing comparative size of their new location boom to standard boom.

many as ten mikes hung from catwalks, ceilings, overhead construction, etc. He was required to know the script dialogue and cues as well as the cast knew them. The "Mike Men" handling the microphones dropped on lines from overhead would adjust the height to suit the cameras top frame lines. On certain cues various mikes had to be lowered or raised and as these men were up above the scene, it was almost impossible to keep from occasionally dropping a mike into the picture. Many retakes were made necessary for this reason.

The mike shadow problem was new to the cameramen. Heretofore, the only shadows cast upon the actors' faces were intentional. They were effects desired for photographic purposes. The coming of sound and the hanging mikes which were often swinging caused the cameramen new headaches.

It became obvious to soundmen everywhere that some contraption had to be made to control these mikes and to move them on cues. They were thought to be too sensitive to move but experiments proved otherwise. Soon long poles were used to move the mikes attached to long drop lines. These were the forerunners of the modern boom.

Booms were first built of wood which could be operated from platforms or



from the floor. They were a great improvement although they could be 'panned" only. To go in or out they had to be pushed, so their platforms were mounted on wheels, 3 inches or 4 inches in diameter with hard rubber tires. They weighed from 500 to 600 pounds. From these were developed the mechanical wooden boom (Fig. 1) a clumsy, noisy, creaking affair. There was no counter-balance and Herculean strength was needed to operate them. They left many problems to be solved. The old type condenser mike weighted 10-12 pounds and if the contraptions holding them were inadequate they often toppled over. Several attempts were made at the different studios to construct steel booms that would overcome the deficiencies of the wooden boom. The first successful one this writer every saw was the "Mole-Richardson" (Fig. 2). This boom could follow the actors in the set but no provision was made for facing the mike. The vertical height was stationary and



FIG. 4, above—Paramount light weight boom. Length retracted 12' 6"—length extended 20' $10\frac{1}{2}"$. Total weight 49 lbs. 14oz.

FIG. 5, below—Boom operator Paul Franz of Paramount operating their light weight boom during a process shot for "Alaska Seas." Note tiny German microphone.



no type of movable counterbalance was used. It was impossible to get the boom in many sets unless it was taken apart. The wheels were somewhat larger (6 inches or 7 inches) but still with hard rubber tires and to lift them over cables or up on platforms was quite a chore for several men.

Many refinements in design were made on this boom by the various studios such as mike facing devices, movable counterbalances, adjustable height booms for different purposes, better rollers, pneumatic tires and quieting apparatus. Many of these booms are in operation today.

The location booms during this early era were of many different types. Each studio developed its own and each boom operator had his favorite. Some of these contraptions were fairly light in weight and some required two men to lift them. (They couldn't be too light with a 10 or 12 pound mike at the end.) Some were complicated and some nothing more than large bamboo poles. Some required a man with bulging muscles to operate and some a contortionist.

(See Fig. 6 known as the Bear Trap) These booms, many of them now just memories, are the models for today's assortment of portable location booms. The speed of location setups, the terrain to be encountered and many other factors had to be considered in designing a practical, all around, ideal location boom. Some are mounted on jeeps or pickup trucks, some on dollies



FIG. 6—Stan Cooley seems to be caught in the "Bear Trap," early type portable location boom used at Paramount, designed by Lorin Grignon.

and lamp stands and some just carried as fishpoles. No two boom operators seem to agree on the best type. The early heavy Mole-Richardson booms were carted by some studios to locations and a crew of "grips" moved them from setup to setup. In soft

FIG. 7—Arthur Piantadosi demonstrates the lightness and portability of Republic's location boom designed and built by James L. Fisher.





FIG. 8—New type light weight boom manufactured by "Vode" soon to be placed on the market.

ground the wheels were apt to sink and falling booms were always a hazard.

The modern mike booms are the result of evolution to meet rigid demands and most changes have been made gradually. The new Mole-Richardson eems to be used more than any studio's design. Each studio, however, makes refinements, changes, adaptations, etc. to meet their particular needs. (Smaller booms are being used more and more since the studios are using the smaller, lighter weight mikes.)

The 20th Century-Fox light weight mike boom developed by the late Miles Williams (Fig. 9) is very practical and easily operated. It has many good features. It is sturdy, quiet and for most purposes very efficient. The boys at Fox swear by this one and for a medium size boom it is hard to beat. The use of duralumin instead of steel in many places has contributed to its lightness.

Other studios have built types similar to the Fox boom. Some have platforms that rise with hydraulic lifts and some have adjustable steps. These booms are all satisfactory and are a great improvement over the older ones. They are all equipped with pneumatic tired

FIG. 9—The late Miles Williams standing beside the light weight "Mike" boom which he developed for 20th Century-Fox. Note simple hydraulic lift.





FIG. 10-Republic's portable "Mike" boom mounted on platform over hood of sound truck being used on location.

wheels and are easy to move around the sets.

The Paramount light weight boom (Fig. 4) accommodates the German mike very well. It can be used on a light stand, a regular Mole-Richardson base or on a special support mounted on the camera crane as shown in Fig. 5. The b om weighs 49 pounds. It has a reach of 20 feet 10 inches. These booms are now standard equipment on the Paramount lot.

Republic Studio is rightfully proud of their new light weight boom which was designed and built by James Fisher, one of their sound engineers. (Fig. 10) It is very versatile as can be seen in the accompanying pictures. It can be mounted on a Ford stake body truck with platform over the hood or on a boom base developed by Fisher. This base has a hydraulic elevating mechanism with a minimum spread of 29 inches making it easy to move through narrow spaces, a maximum spread of 66 inches and weighs 220 pounds. (Fig. 11) The boom head without balance or mike weighs 28 pounds and will handle a mike that weighs up to $51/_2$ pounds. It has an extended reach of 131/2 feet. (Fig. 7) A comparison between the standard size Mole-Richardson boom and Republic's Fisher location boom is shown in Fig. 3.

A new type light weight practical boom for most purposes is being manufactured by "Vode" and will soon be available. This boom (Fig. 8) has a minimum height of 6 feet 6 inches and maximum of 9 feet 6 inches. It can pan



FIG. 11-Republic's Fisher boom mounted on hydraulic perambulator extensible base.

360 degrees and has a base minimum width with wheels retracted of 30 inches which extends to 66 inches. The mike facing control is in the handle and it can be turned 360 degrees. The platform height and handle are adjustable. The telescoping tube is square to avoid swinging the mike. The one shown here is for the light weight mikes and a larger tube is used for heavier mikes.

These "light weights" are coming more into use every day. For flexibility of action, portability, and simplicity of operation they represent a decided advancement as a tool in the hands of the expert microphone boom operator.

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