Sound Reproducing Systems—

Monaural, Binaural, Monophonic, and Stereophonic

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A clarification of the definitions of the various types of systems encountered currently, as presented by a recognized authority in both acoustics and sound reproduction.

THE REPRODUCTION OF SOUND is the process of picking up sound at one point and reproducing it either at the same point or some other point either at the same time or some subsequent time. There are many different types of systems employed for the reproduction of sound. In this connection, sound reproducing systems in use today may be classified as follows: monaural, binaural, monophonic, and stereophonic. There appears to be considerable confusion in the proper use of these terms in designating the four fundamental types of sound reproducing systems. The result is an almost indiscriminate application of the terms to unrelated systems. For this reason it appears desirable to define and describe the use of the four terms. Therefore, it is the purpose of this paper to define and describe the characteristics of monaural, binaural, monophonic, and stereophonic sound systems.

Monaural

A monaural sound reproducing system is a closed circuit type of sound reproducing system in which one or more microphones are connected to a single transducing channel which in turn is coupled to one or two telephone receivers worn by the listener, as in *Fig.* 1.

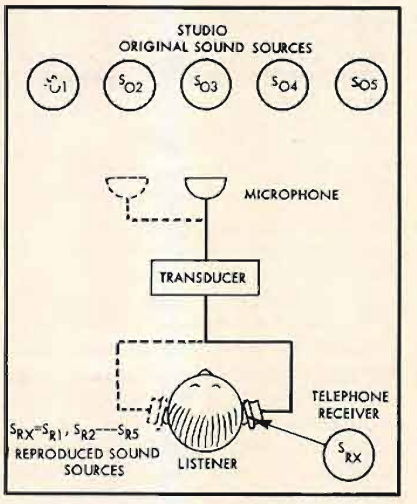


Fig. 1. Monaural.

Binaural

A binaural sound reproducing system is a closed circuit type of sound reproducing system in which two microphones, used to pick up the original sound, are each connected to two independent corresponding transducing channels which in turn are coupled to two independent corresponding telephone receivers worn by the listener, as in *Fig.* 2.

Monophonic

A monophonic sound reproducing system is a field type sound reproducing system in which one or more microphones, used to pick up the original sound, are coupled to a single transducing channel which in turn is coupled to one or more loudspeakers in reproduction, as in *Fig.* 3.

Stereophonic

A stereophonic sound reproducing sys-

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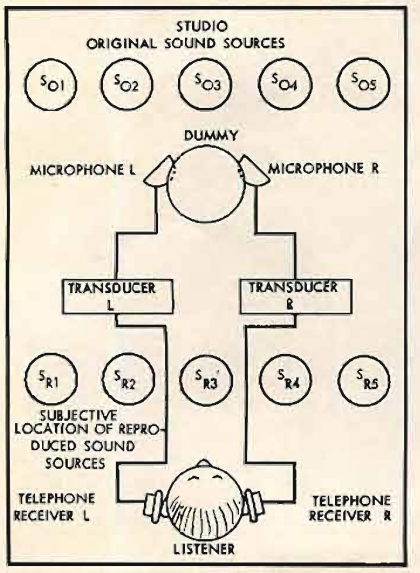


Fig. 2. Binaural.

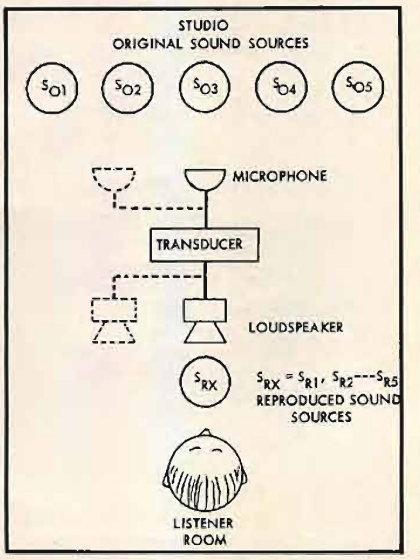


Fig. 3. Monophonic.

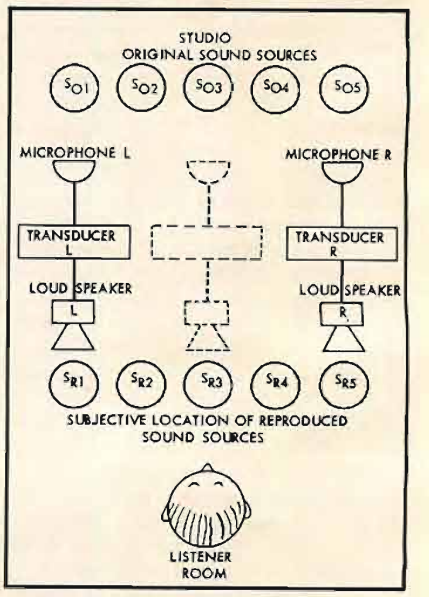


Fig. 4. Stereophonic.

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