

OUTPUT IMPEDANCE

As shipped, the AU-7a is strapped for a nominal 200 ohm output impedance. A 50 ohm impedance is also available and may be easily obtained. To change to 50 ohms it will be necessary to open the microphone casing. The procedure is outlined under "Replacing Batteries." With each microphone, as shipped, you will find an envelope containing a miniature patch cord. This patch cord is used in changing to 50 ohm operation.

PHASING

For a positive (inward) sound pressure at the AU-7a diaphragm, a positive voltage will appear at pin E of the connector as opposed to pin D. Pin E is, therefore, the "in phase" terminal. On the connecting cable supplied, the white wire is the "in phase" lead.

DISTORTION, NOISE, AND DYNAMIC RANGE

With a sound level of 120 db (200 dynes/cm²) applied, distortion of the complete microphone system including the generating element is less than 0.5%. This applies over the entire frequency range, 40-20,000 cycles. The AU-7a has an equivalent noise level of 20 db SPL, measured according to the German standard DIN 45-405.

An accepted European method of specifying noise of a condenser microphone is in terms of equivalent input sound pressure, ie: a sound pressure which when applied to a noiseless microphone would produce the same output level as does the noise generated within the microphone in question under test. In the SPL System the threshold of hearing (.0002 dynes/cm²) is taken as the zero db reference point. The equivalent noise level of the AU-7a is 20 db above this point. Since 10 dynes/cm² is the AU-7a reference pressure, and is equal to 94 db SPL, the microphone has a noise level 74 db below this point.

The dynamic range is the actual usable range of the microphone and extends from the noise level, below which signals are masked, to the 3% distortion level which is considered as the limiting point in most audio equipment. The dynamic range of the AU-7a is seen to be equal to 112 db as charged in fig. 1.