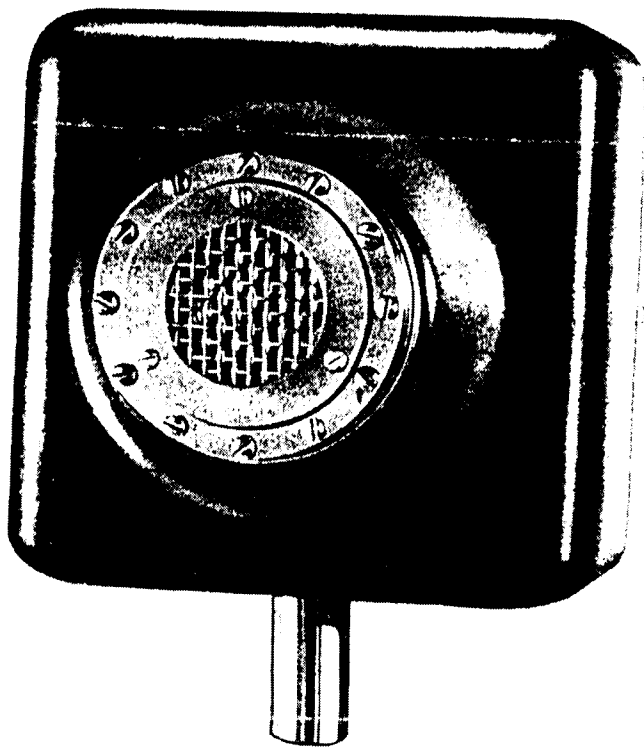


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CONDENSER TRANSMITTER

TYPE C



PATENTS PENDING

For Broadcasting, Power Speaker and Phonograph
Recording Purposes

No Background Noise *No Blasting* *Low Upkeep* *Dependability*

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INTRODUCTORY.

On publishing the fourth edition of this bulletin, we have passed over two years of continuous production of the Jenkins & Adair Condenser Transmitter, and can say without exaggeration that these instruments are in use in practically all parts of the world. Though changes in outward appearance are seldom made, it is our policy to make continuous improvements wherever possible in the internal construction and the performance. A notable instance of this fact was the development a few months ago of a new backplate and breather valve for the transmitter unit, which greatly increased the output level and gave marked improvement in the frequency range. The entire instrument is so designed that all improvements made up to date may be adapted to Condenser Transmitters already in use very promptly and at a low cost to the owner.

DESCRIPTION.

The apparatus in itself is extremely simple. The pick-up consists of a thin stretched duralumin diaphragm and an insulated back plate slightly separated from it, thus forming a small air-dielectric condenser. Sound striking the diaphragm causes it to vibrate, resulting in a variation of distance from the fixed back plate and a similar variation in the capacity of the condenser. The diaphragm and frame are grounded, and the back plate is coupled to the grid of a standard vacuum tube. The change of potential produced on the grid of this tube is very slight, necessitating the additional stage of amplification, which has an output level somewhat higher than a 2-button carbon microphone. The transmitter is kept in a state of charge through a very high resistance leak. The plate circuit of the tube goes through the primary of a special transformer, which reduces the impedance of the output to 200 ohms, making it suitable for direct coupling into any standard amplifier.

The transmitter itself is built entirely of accurately machined parts cut from solid rolled brass stock. These parts are heavily plated and brush finished. The amplifier case and cover are aluminum castings with baked enamel finish. Bolted to the bottom of the amplifier case is a mounting stud $1\frac{3}{4}$ in. long, with a $\frac{5}{8}$ in. hole. This will fit the usual studio stand after the microphone supporting ring has been unscrewed and removed. The cable supplied with each instrument is 20 ft. long, terminating with a multiple plug. A socket with brass flush plate is included, for baseboard or battery box mounting.

The amplifier is contained in a square chassis which is held in position by strips of sponge rubber, and this with its cable attached may be pulled out for inspection, after removing the back cover and disconnecting the ground wire. The transmitter unit is a bayonet fit into the circular hole in the front of the amplifier case. It should be set in place with the number and name at the bottom, pushed in against the spring contact, and rotated slightly clockwise. All circuits are completed in this operation.

ADVANTAGES.

The Jenkins and Adair Condenser Transmitter has a quality of pickup which may be termed practically perfect. There is no background noise whatever, as in the case of the best carbon microphone, which means that the distance of the transmitter from the source of sound makes very little difference. Whereas the carbon microphone shows an average upkeep cost of from \$50 to \$150 per year for renewal of carbon, buttons, etc., the Condenser Transmitter properly cared for might at most require a new tube and new B batteries once a year or so. The Condenser Transmitter may be moved about while in operation without causing noise, and except for its vacuum tube, may be operated in any position. Furthermore, it is extremely durable and ruggedly built, and is not affected by sudden temperature changes, or mechanical shocks.

The output level of the Type C Transmitter and Amplifier is considerably higher than that of the average carbon microphone.
