750A and 751B Loud Speaking Telephones are intended for use in public address and music reproduction systems, and for radio monitoring of speech or music over limited areas where high quality reproduction and low cost are essentials. They introduce a single direct radiator type of loud speaker with moderate power handling capacity, capable of covering a frequency range that heretofore required a multiple device.

The 751B consists of a 750A permanent magnet Loud Speaking Telephone mounted in a specially constructed box.

**PERFORMANCE**

**Frequency Range**

The 751B has a frequency range of 60 to 10,000 cycles. The 750A has the same range when mounted in a box such as that described below.

**Impedance**—8 ohms

**Efficiency**

With the full speech power of a 20-watt amplifier, it will produce an intensity level of 88 db above $10^{-16}$ watt per square centimeter at a distance of 10 feet on the axis.

**Coverage Angle**

30° for highest quality.

45° for good quality.

**Power Capacity**

The 751B will safely handle speech or music with a maximum peak power of 20 watts.
PHYSICAL CHARACTERISTICS AND SUGGESTED METHODS FOR MOUNTING

750A Loud Speaking Telephone
The 750A measures approximately 9½" in diameter, 3¾" in depth, and weighs about 9 lbs.

It should be mounted in a rigidly constructed box, preferably made of 11/16" plywood with an enclosed volume of 2½ to 3 cu. ft. The box should be proportioned so that its depth is at least 9" with an inside dimension of not more than 24" for the width or height.

The inside surfaces of the box should be lined with sound absorbing material 1" thick. Hair felt or cellulose absorbent material is satisfactory.

If a grille cloth is used for covering this speaker, it should be light silk or open mesh material, which has no audible effect on the high frequency response.

751B Loud Speaking Telephone
The 751B measures approximately 24" high by 17½" wide, by 13½" deep, and weighs about 42 lbs. The box has a plain gray lacquer finish, which permits of a more decorative treatment when required to harmonize with surroundings.

The 751B will also mount in many existing loud speaker cabinets. It is also particularly suited for recess mounting in ceilings or walls where it can best be permanently installed from an acoustic standpoint for a given service and room treatment.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The speakers shall be the Western Electric 750A or 751B permanent magnet Loud Speaking Telephone or equivalent.

When properly assembled, the loud speaking telephone shall have an axial frequency response substantially uniform over the range 60 to 10,000 cycles. It shall be capable of good quality reproduction, over an angle of 45°, and of the highest quality reproduction over an angle of 30°.

The efficiency of the loud speaking telephone shall be such that when the full speech power of a 20-watt amplifier is imposed, it will produce an intensity level of 88 db above 10⁻¹⁰ watt per square centimeter at a distance of 10 feet on the axis.

The speaker shall be capable of handling speech or music reproduction with maximum peak powers of 20 watts.