APPARATUS FOR USE AT NOISY LOCATIONS

1. GENERAL

1.01 This section furnishes information on the description and use of apparatus which may be used to provide more satisfactory transmission at telephones located in noisy surroundings.

1.02 The instructions contained herein are only for cases where the telephone and the user are unavoidably located in noisy surroundings. Reasonable effort should first be made to avoid installing telephones in very noisy locations. Preference should be given to any quieter location that is satisfactory to the subscriber and the telephone company.

1.03 This telephone equipment should be installed only upon issuance of a service order or other proper authorization.

2. THE GENERAL PROBLEM OF NOISE

2.01 Experience has shown that of the two persons involved in a telephone conversation, the person at the noisy location is usually the first to have trouble because he cannot understand the incoming speech. The principle offending noise is picked up by the transmitter and reproduced by the receiver via the sidetone path.

2.02 In noisy surroundings, the performance of the 500-type equalized telephone set (with or without a resistor across the transmitter) is much better than that of earlier sets. Its improved receiver and better sidetone balance allow this set to be used in noisy locations with relatively small effect on its receiving efficiency. The improvement is so marked that in cases where telephone subscribers object to booths or other enclosures, it should ordinarily be practicable to avoid the use of special arrangements; such as push-to-talk telephone sets with or without receiving amplifiers,,or special devices like the confidencer.

3. EQUALIZED 500-TYPE TELEPHONE SETS

3.01 For most noisy locations, such as the average factory, department store,. noisy office, stenographic room, etc., a 500-type telephone set containing the 425A network plus the 311A equalizer or the 500-type set equipped with the 425B network will generally improve reception over that of earlier types of telephone sets. This also holds true in the case of the 500-type key telephone sets.

4. EQUALIZED 500-TYPE TELEPHONE SET WITH SHUNT

4.01 For extremely noisy locations, such as the generator room of a large power plant, loading ramps at air fields, boiler factories, etc., where the subscriber cannot or will not have booths or other enclosures; the 500-type equalized telephone set equipped with a KS-13491, L1, 1-watt, 39-ohm resistor connected across the transmitter circuit should be used. The shunt reduces the transmitted and sidetone speech levels. Consequently, the sidetone approaches a push-to-talk in performance which greatly reduces sidetone. Because the telephone user naturally tends to raise his voice in a noisy location, the transmitting output for this set is about the same as that of an equalized 500-type telephone set without the shunt when it is used in the less noisy surroundings covered in 3.01. However, the user must be cautioned that he may also need to raise his voice during periods of quiet to compensate for the shunt. This is particularly true for sets installed on longer loops.

4.02 To shunt the transmitter of a 500-type telephone set, connect the KS-13491, L1 resistor as follows:

Type	Connections
500A/B	Between B and RW terminals on the equalizer
500C/D 500E/F 500L/M 500H 500-type key sets	Between R and B terminals on the network

4.03 For the installation and maintenance information pertaining to 500-type telephone sets see Sections C32.537, 500 Series Telephone Sets, Installation, and C32.539, 500 Series Telephone Sets, Maintenance.

Fig. 1—The No. 9797 Confidencer

5. THE CONFIDENCER

5.01 The No. 9797 confidencer shown in Fig. 1 is a noise cancellation transmitter. While the speaking voice enters only at the front, the surrounding noise neutralizes itself by entering and striking the cancellation transmitter from the front and back.

5.02 Since the confidencer is a relatively inefficient transmitter, satisfactory output is critically dependent on its being used correctly. It is designed to be used close to the lips, and its output falls rapidly as the distance between the transmitter and the lips is increased. Furthermore, it is beneficial only during periods of extreme noise and will seriously degrade transmission when used under quiet conditions.

5.03 The confidencer is designed to fit the F-type handset only. To install the confidencer simply replace the transmitter cap and transmitter unit of the F-type handset with the No. 9797 Confidencer.

5.04 When maintenance trouble is encountered replace the complete confidencer.

6. SUPPLIES

6.01 Word the order for the 39-ohm shunt as follows: (quantity) KS-13491, L1 resistor.

6.02 Word the order for the confidencer as follows: (quantity) confidencer, Roanwell Corp. 9797.