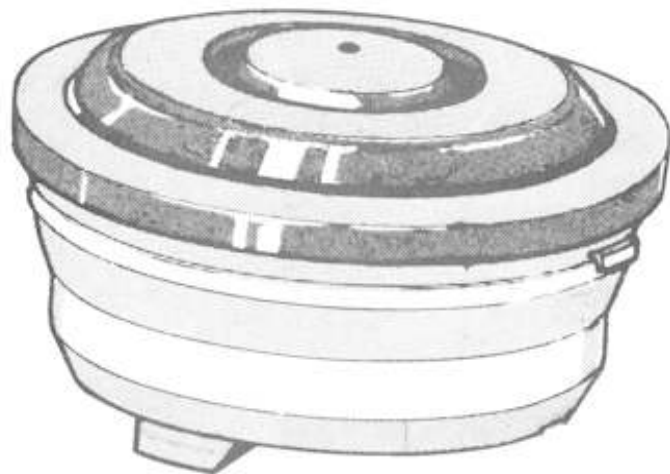


TPH1046

Telephones
Division
Technical
Publication

Electronic Transmitter
No. 20E



Telecom Australia

TELECOM TECHNICAL PUBLICATION

ELECTRONIC TRANSMITTER NO. 20E

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3. TRANSMITTER INSET NO. 20E FOR 800 SERIES TELEPHONES

1. INTRODUCTION

The No. 20E Electronic Transmitter has been developed as a direct replacement for the No. 13 Carbon Transmitter and its associated adaptor (TAA-1: S311/267).

The No. 20E transmitter is designed to have an improved transmission performance, and lower failure rate compared to the No. 13 transmitter. It will also avoid the problems of carbon packing and frying common on the No. 13.

Two manufacturers NEC and AWA are supplying No. 20E transmitters.

Note: There is a difference in the outer plastic case of the 20E transmitters between the two suppliers. Fig. 1 shows the rear of the transmitter supplied by NEC and Fig. 2 shows the rear view of the transmitter supplied by AWA.



Fig. 1: Rear view of Transmitter supplied by NEC

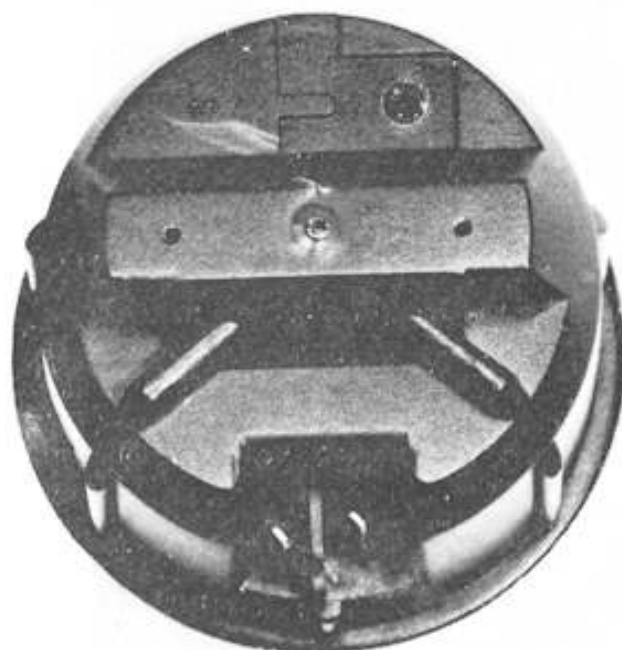


Fig. 2: Rear view of Transmitter supplied by AWA

2. GENERAL DESCRIPTION

The external dimensions of the No. 20E transmitter are such that it will directly replace the No. 13 transmitter and associated transmitter adaptor in all 800 Series telephone handsets.

The main components of the No. 20E transmitter are a dynamic microphone insert, a microphone amplifier and a full-wave rectifier bridge. (See figure 3). Two quick connect terminals are located in small cavities at the rear of the transmitter.

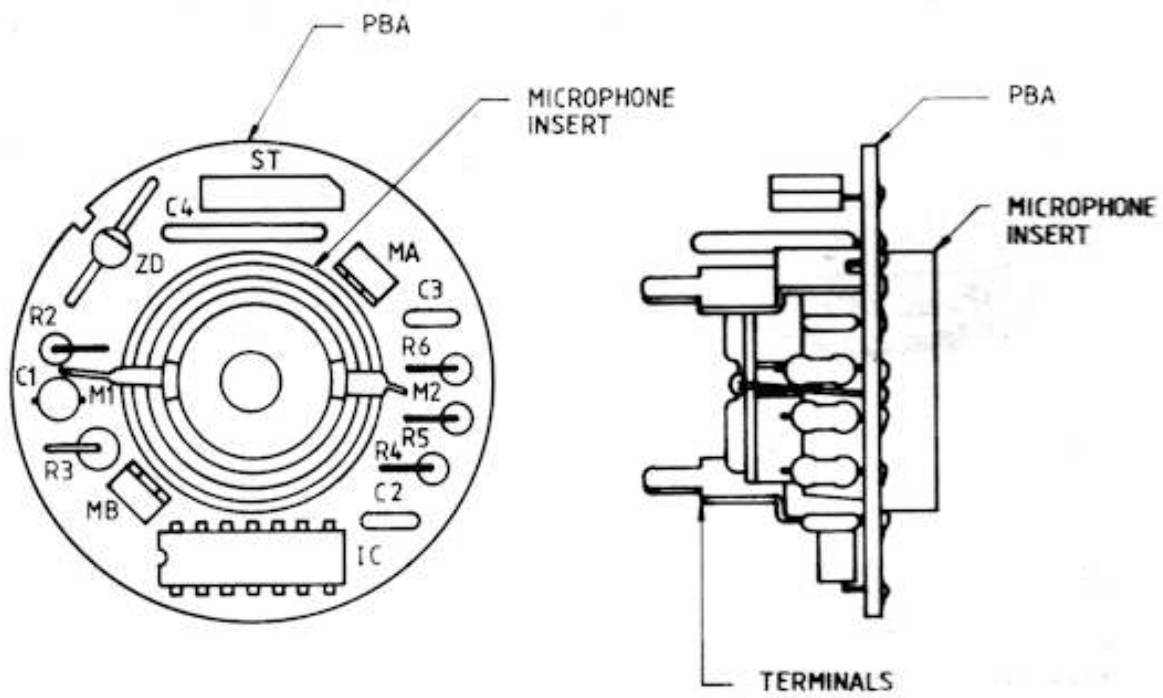
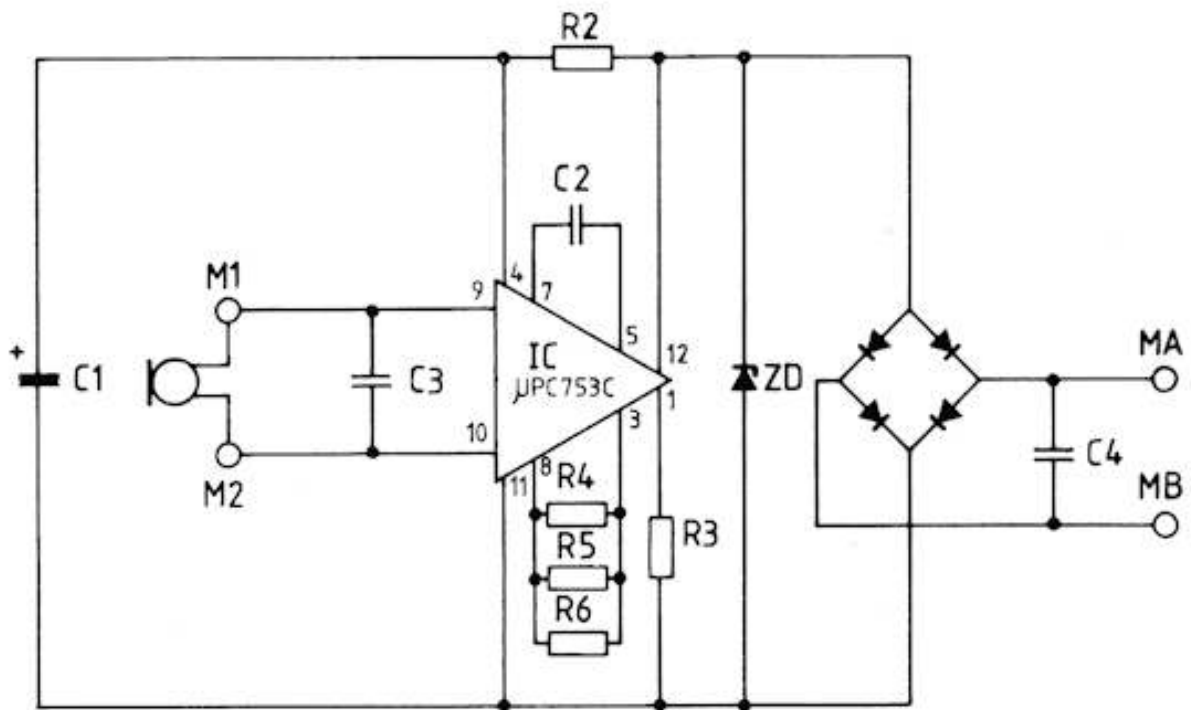


Fig. 3: 20E Circuit diagram Top and Assembly lower.

3. INSTALLATION

3.1 Into 800 Series handsets manufactured before February 1982.

- i. Remove the transmitter cap from the handset.
- ii. Remove the No. 13 transmitter from the transmitter adaptor, and disconnect the two pink leads from the transmitter.
- iii. Remove the transmitter adaptor by pushing the handset cord into the handset and detaching the cord from the adaptor by removing the cord clamp screw.

NOTE: The cord clamp is to be used when installing the No. 20E transmitter. The No. 13 transmitter, the transmitter adaptor, the cord clamp screw and nut may be disposed of.



Fig. 4: 800 Series Telephone Handset with No. 13 transmitter

- iv. Secure the handset cord to the rear of the No. 20E transmitter using the cord clamp recovered from the No. 13 transmitter adaptor, and the self tap screw located in the blister pack with the No. 20E transmitter (see Fig. 5).
- v. Connect the two transmitter leads to the terminals of the No. 20E.
- vi. Align the anti-rotation key on the No. 20E transmitter with the keyed guide in the 800 Series handset transmitter cavity and insert the transmitter into the handset.
- vii. Replace the transmitter cap and associated cap gasket.

NOTE: The cap gasket is normally glued to the inner surface of the transmitter cap and should be retained.

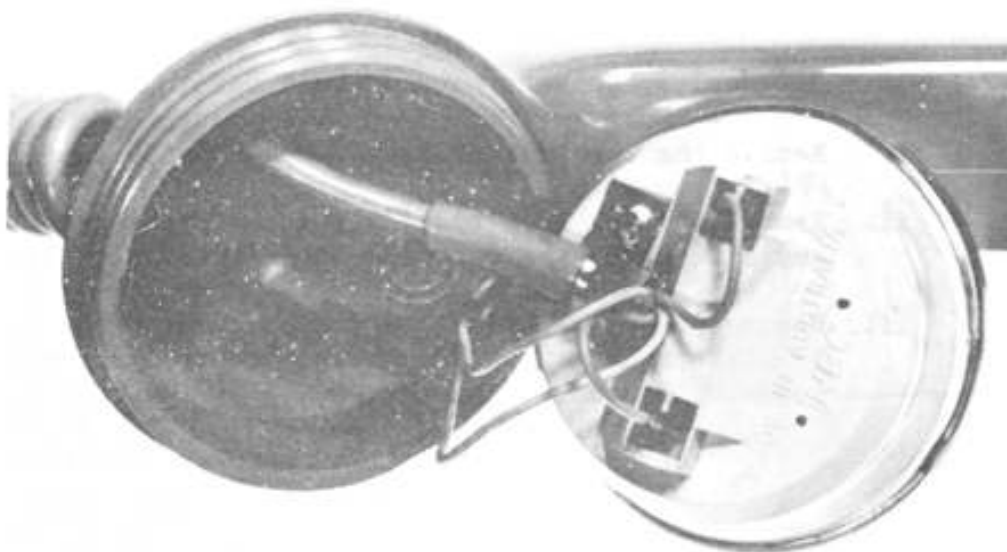


Fig. 5: Cord clamping position and Transmitter Connections, "early type" 800 Series Handsets

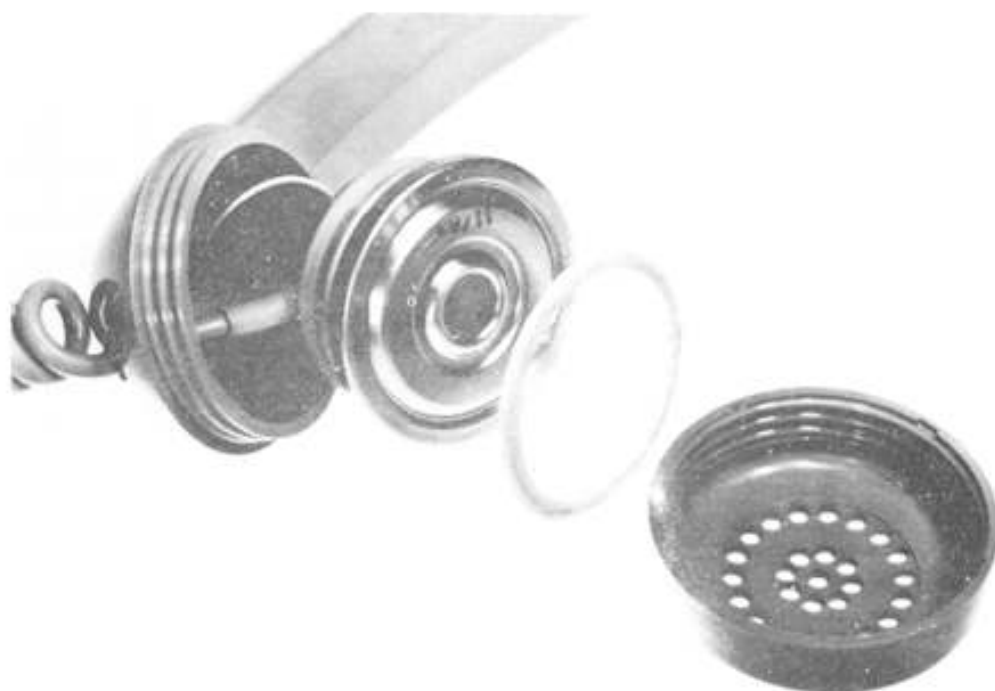


Fig. 6: No. 20E Transmitter Connected in "early type" 800 Series Handset

3.2 Into 800 Series handsets manufactured after February 1982.

- i. Remove the transmitter cap from the handset.
- ii. Remove the No. 13 transmitter from the transmitter adaptor, and disconnect the two leads from the transmitter.
- iii. Remove the transmitter adaptor from the handset.
- iv. Connect the two transmitter leads to the terminals of the No. 20E.
- v. Position the handset cord into the cord anchor bracket, see fig. 7.
- vi. Align the anti-rotation key on the No. 20E transmitter with the keyed guide in the 800 Series handset transmitter cavity and insert the transmitter into the handset.
- vii. Replace the transmitter cap and associated cap gasket.

NOTE: The cap gasket is normally glued to the inner surface of the transmitter cap and should be retained.



Fig. 7: Cord clamping position and Transmitter connections "later type" 800 Series Handsets.

4. TESTING

Check for transmission and sidetone performance.

5. MAINTENANCE

20E transmitters diagnosed as faulty are to be replaced.

The 20E transmitter has no maintenance accessible components, therefore faulty transmitters should be disposed of in a manner similar to other disposable items.

6. SERIAL/ITEM NUMBER

Transmitter Inset No. 20E - Serial 19/Item 68.