

1.5 kHz AUDIBLE TONE GENERATOR GE1/6

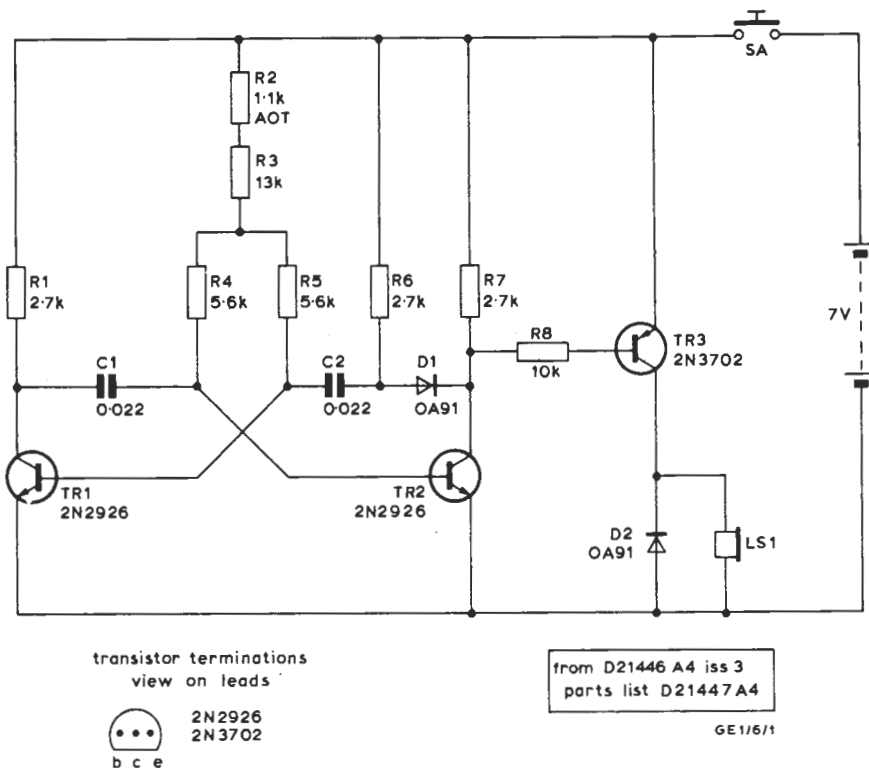


Fig. 1. Circuit of the GE1/6

**Introduction**

The GE1/6 generates a 1.5-kHz tone which is reproduced by a miniature loudspeaker built into the unit. The generator is designed to enable acknowledge signals to be sent to an Automatic Fault Reporter<sup>1</sup> from a public telephone kiosk. The unit is built in a diecast aluminium box.

**Circuit Description (Fig. 1)**

Fig. 1 is a circuit diagram of the GE1/6. The generator comprises a conventional astable multivibrator TR1 and TR2 followed by a common-emitter amplifier TR3. The loudspeaker coil forms the collector load of TR3. The generator is switched on by pushbutton switch SA. Power is drawn from a mercury battery which has a life expectancy of several years.

**Test Schedule**

*Apparatus Required*

- Oscilloscope
- Avometer

*Test Procedure*

1. Check that the battery potential is at least seven volts.
2. Operate switch SA and confirm the audible output.
3. Check that the output, measured across diode D2, is a seven-volt p-p squarewave at a fundamental frequency between 1490 and 1500 Hz. Resistor R2 (with 2 per-cent tolerance) is selected to obtain the required frequency.

**References**

1. Automatic Fault Reporter PA2M/7A.