

THE MAJOR 'MEGGER' TESTER



The Major Megger Tester (Cat. No. 70154)

WITH the substitution of the Series 2 range of instruments by Major 'Megger' Testers, one might feel that it is the end of an era, but this is not quite so. The Major range of instruments is part of the natural evolution of testing instruments of this type, and in many ways, besides incorporating the technical advances of recent years, also solves, to a considerable extent, production problems associated with the manufacture of Insulation Testing Instruments.

The Series 2 range of instruments were first marketed in 1922, and were designed initially to meet the need of an alternative instrument to the rather heavy teak-cased testers of that time. They were comparatively simple instruments, the testing pressure being directly related to the speed at which the generator handle was turned

—there was no slipping clutch. Gradually the instrument evolved, with the addition of a slipping clutch in 1928, followed at a later date by the addition of a continuity range, a high-range version, and much later, a mains-operated instrument. This meant that finally thirty-two different instruments were being manufactured in this series, all varying to a degree, requiring different parts, different manufacturing techniques, and different calibration.

The popularity of this range has been world wide and the Series 2 instrument is accepted as something of a standard for electrical maintenance engineers, inspectors and contractors; it is always to be seen in plants and workshops. Our own repair department bears evidence to the wide use and abuse to which the range is put, and the age and condition of many of the units

which are returned indicates the inherent strength of the original design.

Basically then, the Major 'Megger' is designed to replace this wide coverage, by incorporating into one instrument as many as possible of the features previously offered. With four instruments in the new range, not only is this coverage achieved, but one instrument is specifically designed for Continental applications.

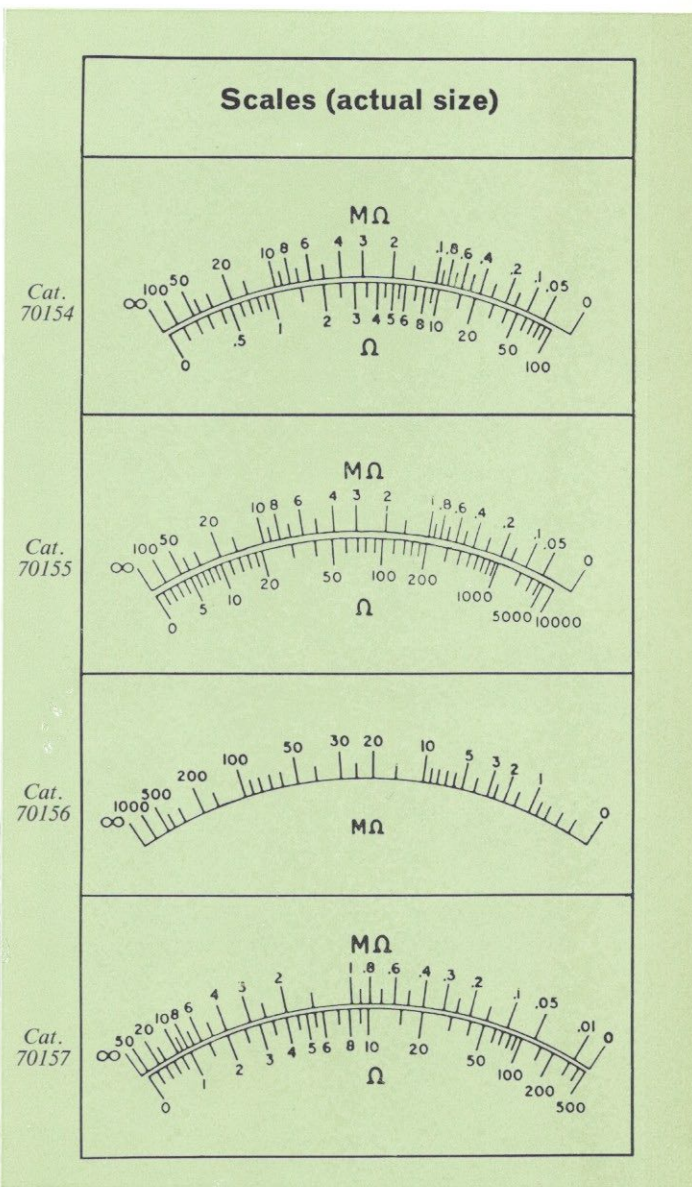
The basic instrument (see photograph) has four testing voltages and insulation ranges, namely 1,000V–200 megohms, 500V–100 megohms, 250V–50 megohms and 100V–20 megohms, with a continuity range of 100 ohms. The pressed-steel case measures $7 \times 4\frac{1}{2} \times 5\frac{3}{8}$ inches ($17.7 \times 11.5 \times 13.7$ cm) and the instrument weighs $5\frac{1}{2}$ lb. (2.5 kgm.). A leather case is available to carry the instrument and a pair of test leads.

The second instrument in this range varies only in having a continuity scale of 10,000 ohms. From the scales for these instruments shown in Fig. 1, it will be noted that the lower end of the continuity scale is open, to give fine readings up to 1 ohm and 20 ohms in the 100 and 10,000 ohm ranges respectively.

The third instrument in the range has the same testing voltages but a high insulation scale of 0–2,000 megohms at 1,000 V. It has no continuity scale but has a 'discharge' switch position, together with guard terminal.

The fourth instrument in the range has the same testing pressures, but slightly lower insulation scales than the basic model. In this case 1,000V–100 megohms, 500V–50 megohms, 250V–25 megohms and 100V–10 megohms, with a continuity scale of 0–500 ohms. A different voltage characteristic is specified to meet the requirements of a number of European countries.

The heart of these instruments is still a hand-driven generator. Use of the modern a.c. armature allows a stable testing voltage to be generated over a reasonably wide range of handle speeds, without the fitting of the slipping clutch which has so long been a feature of this type of instrument.



The use of electrical rather than mechanical stabilisation means that the efficiency of the instrument over the years is maintained and not subject to the ageing that affects the slipping clutch. Attention has been paid to smaller details such as terminals, carrying handle, etc., and the whole range of these instruments has been given modern treatment in style, materials and two-tone finish.