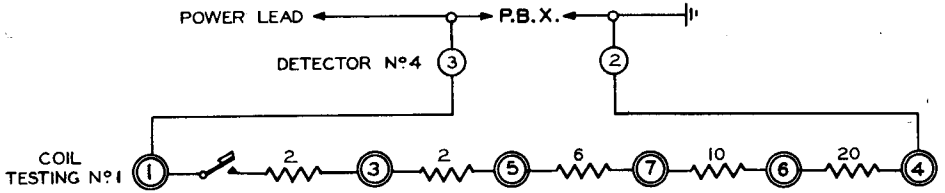
MEASUREMENT OF POWER LEAD RESISTANCE

N 905
4 PANELS – 1
22·3·49

CONNECT DETECTOR AND TESTING COIL TO POWER LEAD AS SHOWN



TAKE DETECTOR READING WITHOUT KEY OF COIL DEPRESSED, CALL THIS V1
" " " WITH " " " " " " V2

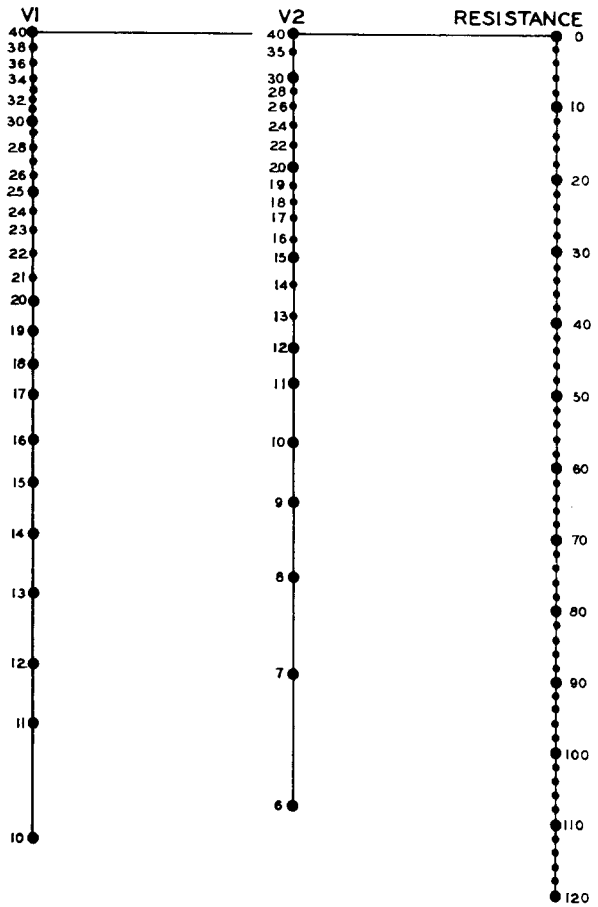
RELEASE THE KEY AND IF OWING TO SOME CHANGE IN THE LOAD ON THE POWER LEAD THE DETECTOR DOES NOT RETURN TO THE PREVIOUS READING FOR V1 THE TESTS SHOULD BE REPEATED UNTIL CONSISTENT RESULTS ARE OBTAINED.

TO DETERMINE THE RESISTANCE OF THE POWER LEAD, SELECT FROM PANELS 2, 3 & 4 THE GRAPH APPROPRIATE TO THE NOMINAL VOLTAGE OF THE MAIN EXCHANGE SUPPLY, PLACE A STRAIGHT EDGE (THE EDGE OF A SHEET OF PAPER OR A LEAD PENCIL) ACROSS THE VALUES OF V1 & V2 MEASURED AS ABOVE AND THE POWER LEAD RESISTANCE WILL BE FOUND UNDER THE STRAIGHT EDGE IN THE RIGHT HAND COLUMN OF FIGURES.

FOR PRACTICAL PURPOSES THE RESISTANCE OBTAINED FROM THE GRAPHS MAY BE USED WITHOUT REFERENCE TO THE ACTUAL BUS-BAR P.D. AT THE MAIN EXCHANGE, BUT WHEN A MORE ACCURATE RESULT IS DESIRED THE FOLLOWING FORMULA MAY BE USED:-

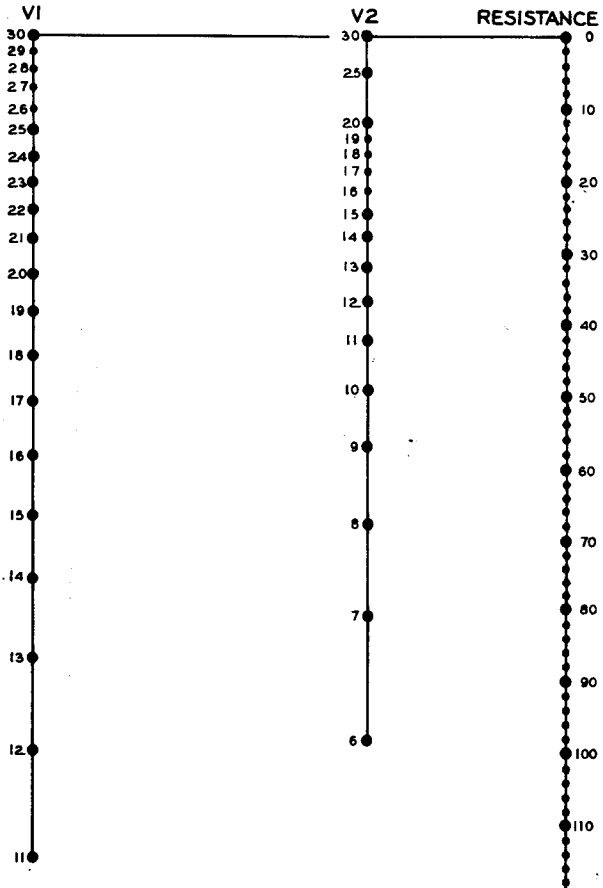
$$\text{POWER LEAD RESISTANCE} = \frac{E r (V1 - V2)}{V1\ V2}$$

WHEN E = P.D. OF MAIN EXCHANGE BUS-BARS
r = RESISTANCE USED ON COIL TESTING N°1
V1 & V2 = READINGS OBTAINED AS ABOVE



CALCULATED ON BASIS OF MAIN EXCHANGE BUS-BAR P.D.= 38 V.

PAPER W | FORMERLY DGMS.T110, 111, 112 & 113 | 22.3.49 | GENERAL



MEASUREMENT OF POWER LEAD RESISTANCE

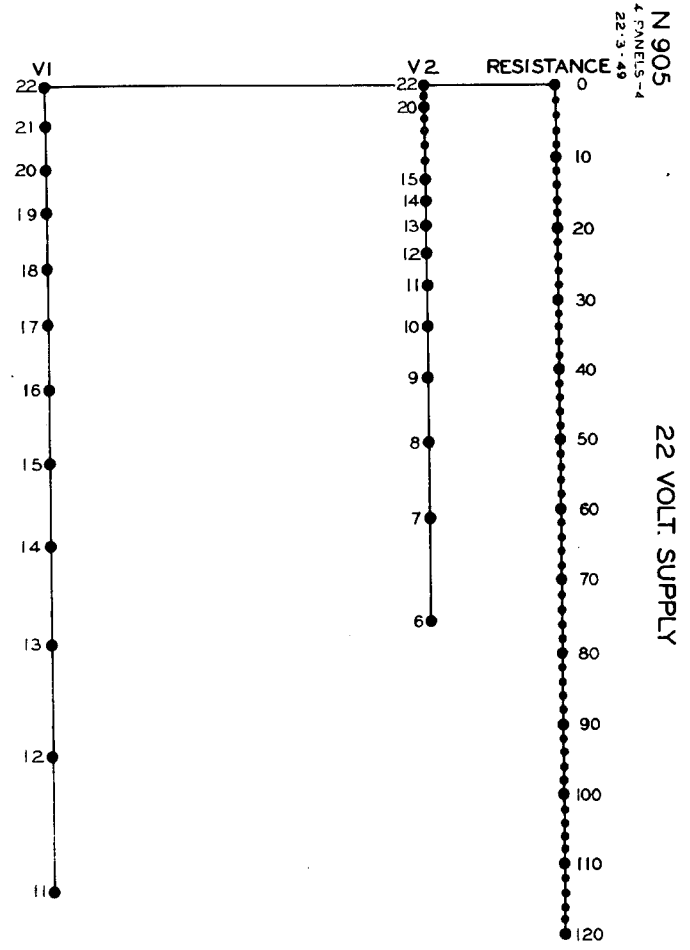
30 VOLT. SUPPLY

N 905

4 PANELS – 3

22·3·49

CALCULATED ON BASIS OF MAIN EXCHANGE BUS-BAR P.D.= 29·5V



CALCULATED ON BASIS OF MAIN EXCHANGE BUS-BAR P.D.=21 V