

**Type 7323 Universal Adjustable Track Resistance Unit
5 Ohm 10 Ohm**

The 7323 Universal Adjustable Track Resistance Unit is adjustable in 1/10 ohm steps from 1/10 ohm to 5 ohms. It was specially designed for use in track circuits where storage battery is used, but it is universally adaptable to track circuits fed by either battery or transformer.

The 7323-6 Adjustable Resistance Unit, having a total resistance of 10 ohms, is available. Steps of .02, .02, .05, .05, 1, 2.5 and 5.1 ohms are provided.

Connections should be made to posts either side of space marked 5 or 10 and shunting plates removed from spaces marked with the resistance values desired in the circuit.

The resistance consists of No. 18 enameled nichrome wire in the 2-1/2 and 1 ohm steps and No. 16 in the smaller steps. The No. 18 will carry 5 amperes and the No. 16 will carry 6 amperes without overheating.

Packed one in a carton with one blued wood screw for mounting.

Reference Number	Description	Part Number
A	Type 7323 Universal Track Resistance Unit, 5 ohms	7323
A1	Same as Reference A, but 10 ohms	7323-6
Replacement Parts		
1	Shunting Plate	7323-2

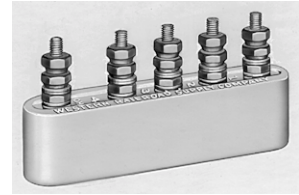


Reference A
3-3/4" dia, 3-1/4" high

Narrow Type E1702 Adjustable Resistance Unit

The resistance of type E1702 resistance unit is accurately measured. A single continuous piece of heavy nichrome wire is used. Each tapped portion is brought to the surface of the porcelain where it is securely fastened to binding posts where it can be seen.

Reference Number	Description	Part Number
B	Type E 1702 Resistance Unit complete, 10 Ohms. (Steps 1, 2, 3, 4 Ohms)	E1702-13
B1	Same as Reference B, but 6 ohms. (Steps 0.5, 1, 2, 2.5 Ohms)	E1702-23
Replacement Parts		
1	Shunting Plate	7323-2



Reference B
5-1/2" long, 1-1/4" wide,
2-3/4" high

Type E1705 Adjustable Resistance Unit 5.0 Ohm

This type of adjustable resistance unit meets any track circuit need where storage batteries or transformers are used.

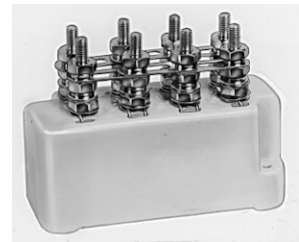
used for .8, 1.5, and 2 ohm steps. The two sides are connected above the base by a copper connector.

The unit was designed large enough so that a very heavy nichrome wire could be used to provide protection against burn-outs due to lightning or accidental high currents. It is compact and occupies very little space. A continuous piece of No. 16 nichrome wire is used for .1, .2, and .4 ohm steps of the unit. A continuous piece of No. 19 nichrome wire is

As in our other types of resistance units, there are no soldered or hidden connections in this 5-ohm unit. Each tapped portion of the resistance is brought to the surface of the porcelain, where it is securely fastened to binding posts so that the wires are visible.

Adjustable in 1/10 ohm steps from 1/10 ohm to 5 ohms.

Reference Number	Description	Part Number
C	Type E 1705 Adjustable Resistance Unit complete with one connecting plate and six shunting plates, 5 ohm	E1705-12
Replacement Parts		
1	Shunting Plate	7323-2



Reference C
4-13/16" long, 1-15/16"
wide, 3-7/16" high

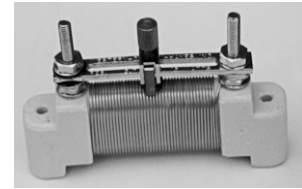
Type 1110 Adjustable Slide Resistance Unit

Standard Type No. 1110 Slide Resistance Units have resistances as specified in the tables below.

The bare nichrome wire used in 21 turn and 42 turn units is wound in grooves in the porcelain.

On Western adjustable Slide Resistance Units, the slider can be loosened, moved and retightened without losing contact with the resistance wire, an exclusive feature.

Two wood screws and leather washers are furnished with each resistance unit for mounting.



Reference A
21 Turn Resistor
5" long, 1" wide,
3-9/16" high

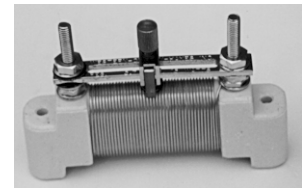
Rating In Watts – 15 Maximum

Ref. No.	Description	Total Resistance In Ohms	Ohms Per Step	Part Number
A	Type 1110 Variable Resistance Unit	1.0	0.05	1110-1
A1	Same as Reference A except	1.5	0.075	1110-2
A2	Same as Reference A except	2.26	0.10	1110-3
A3	Same as Reference A except	2.88	0.13	1110-4
A4	Same as Reference A except	3.56	0.16	1110-5
A5	Same as Reference A except	4.50	0.225	1110-6

Type 1110 Adjustable Slide Resistance Unit

Rating In Watts – 15 Maximum

Ref. No.	Description	Total Resistance In Ohms	Ohms Per Step	Part Number
B	Type 1110 Variable Resistance Unit	5.69	0.133	1110-7D
B1	Same as Reference B except	7.03	0.167	1110-8D
B2	Same as Reference B except	8.90	0.212	1110-9D
B3	Same as Reference B except	11.21	0.267	1110-10D
B4	Same as Reference B except	14.24	0.339	1110-11D
B5	Same as Reference B except	17.84	0.425	1110-12D
B6	Same as Reference B except	22.73	0.541	1110-13D
B7	Same as Reference B except	28.66	0.682	1110-14D
B8	Same as Reference B except	36.31	0.866	1110-15D
B9	Same as Reference B except	45.53	1.084	1110-16D
B10	Same as Reference B except	57.81	1.376	1110-17D
B11	Same as Reference B except	71.89	1.706	1110-18D
B12	Same as Reference B except	91.80	2.186	1110-19D
B13	Same as Reference B except	115.91	2.711	1110-20D

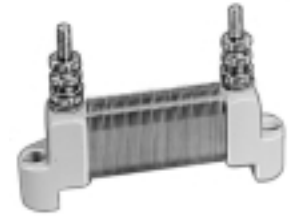


Reference B
42 Turn Resistor
5" long, 1" wide,
3-9/16" high

Type 1120 Fixed Resistance Units

Type No. 1120 Fixed Resistance Units have resistances as specified below. Only the highest quality porcelain and resistance wire are used in their manufacture. The construction of Type No. 1120 is the same as that of the long-proven Type No. 1110 except that the slider-bar and slider have been omitted.

Two wood screws and leather washers are furnished with each resistance unit.



Reference A
21 Turn Resistor
4-13/16" long, 1" wide,
3-9/16" high

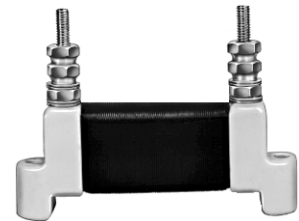
Rating In Watts – 15 Maximum

Ref. No.	Description	Total Resistance In Ohms	Part Number
A	Type 1120 Resistance Unit	1.0	1120-1
A1	Same as Reference A except	1.5	1120-2
A2	Same as Reference A except	2.26	1120-3
A3	Same as Reference A except	2.88	1120-4
A4	Same as Reference A except	3.56	1120-5
A5	Same as Reference A except	4.50	1120-6

Type 1120 Fixed Resistance Units

Rating In Watts – 15 Maximum

Ref. No.	Description	Total Resistance In Ohms	Part Number
B	Type 1120 Resistance Unit	5.69	1120-7D
B1	Same as Reference B except	7.03	1120-8D
B2	Same as Reference B except	8.90	1120-9D
B3	Same as Reference B except	11.21	1120-10D
B4	Same as Reference B except	14.24	1120-11D
B5	Same as Reference B except	17.84	1120-12D
B6	Same as Reference B except	22.73	1120-13D
B7	Same as Reference B except	28.66	1120-14D
B8	Same as Reference B except	36.31	1120-15D
B9	Same as Reference B except	45.53	1120-16D
B10	Same as Reference B except	57.81	1120-17D
B11	Same as Reference B except	71.89	1120-18D
B12	Same as Reference B except	91.80	1120-19D
B13	Same as Reference B except	115.91	1120-20D

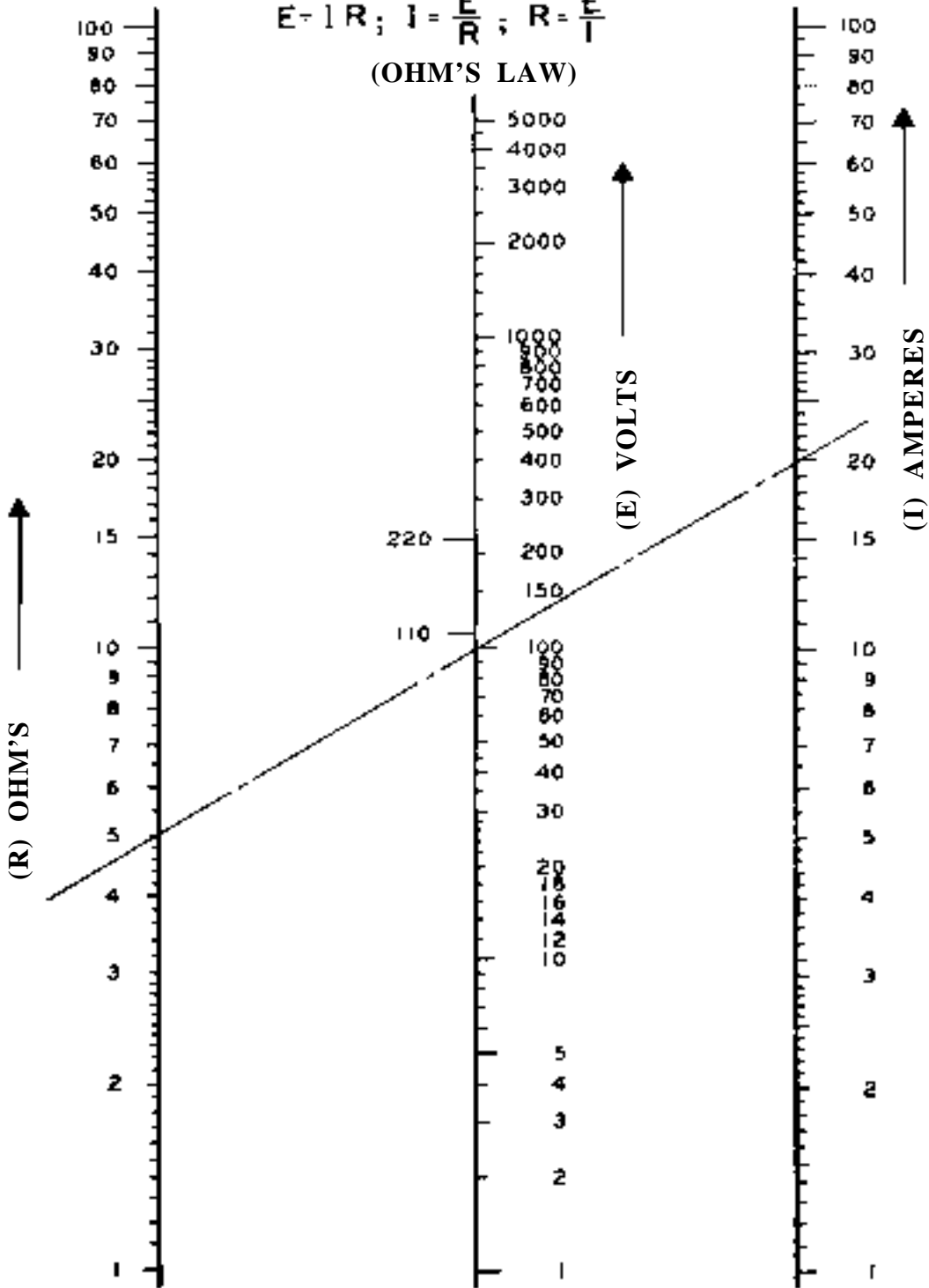


Reference B
42 Turn Resistor
4-13/16" long, 1" wide,
3-9/16" high

Ohm's Law Calculator

$$E = I R; I = \frac{E}{R}; R = \frac{E}{I}$$

(OHM'S LAW)



Directions

Lay Straight Edge On Any Two Known Values And Read Unknown On Third Scale.