



For Stepped Lens Signal  
A-B-C-D-E

For Compound Lens Signal  
F-G-H-J-K

Type SA Alternating-Current Signal Mechanism

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### With Stepped or Compound Lenses and Slide Arrangement

**Note:** Mechanisms shown on this plate may be used in either high or dwarf signals.

If other color combinations than those listed are desired or if signals are to operate on voltages other than those listed, same will be furnished when specified.

Lamp Fig. 33 is not included with mechanisms complete and must be ordered separately.

This mechanism may be equipped with plug coupler and resistance unit as shown on Plate H2651 if required.

For other alternating-current mechanism see Plate H2661.

Drawing references are shown for convenience in checking shipping lists and invoices.

Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
A	Type SA Alternating-Current Signal Mechanism Complete, as shown, equipped with cover glass, Fig. 42, for use with stepped lens signals. For 110 volt, line and local, 50 or 60 cycle operation, arranged to give three indications, namely: green, red and yellow.....	53052-10 Gr. 43
B	Type SA Alternating-Current Signal Mechanism Complete, as shown, equipped with cover glass Fig. 42, for use with stepped lens signals. For 110 volt line, 11 volt local, 60 cycle or 110 volt line, 9 volt local, 50 cycle operation, arranged to give three indications, namely: green, red and yellow.....	53052-10 Gr. 15
C	Type SA Alternating-Current Signal Mechanism Complete, as shown, equipped with cover glass Fig. 42, for use with stepped lens signals. For 55 volt line and local, 25 cycle operation. Arranged to give three indications, namely: green, red and yellow.....	53052-10 Gr. 57
D	Type SA Alternating-Current Signal Mechanism Complete, as shown, equipped with cover glass Fig. 42, for use with stepped lens signals. For 55 volt line and 12.5 volt local, 25 cycle operation, arranged to give three indications, namely: green, red and yellow.....	53052-10 Gr. 29

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Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
E	Type SA Alternating-Current Signal Mechanism Complete, as shown, equipped with cover glass Fig. 42, for use with stepped lens signals. For 16.5 volt line, 14.2 volt local, 60 cycle or 15 volt line 12.5 volt local, 25 cycle operation, arranged to give three indications, namely: green, red and yellow. . . . .	53052-10 Gr. 1
F	Type SA Alternating-Current Signal Mechanism Complete, equipped with lens Fig. 66 for use with compound lens signals. For 110 volt, line and local, 50 or 60 cycle operation, arranged to give three indications, namely: green, red and yellow. . . . .	
G	Type SA Alternating-Current Signal Mechanism Complete, equipped with lens Fig. 66 for use with compound lens signals. For 110 volt line, 11 volt local, 60 cycle or 110 volt line, 9 volt local, 50 cycle operation, arranged to give three indications, namely: green, red and yellow. . . . .	
H	Type SA Alternating-Current Signal Mechanism Complete, equipped with lens Fig. 66 for use with compound lens signals. For 55 volt line and local, 25 cycle operation, arranged to give three indications, namely: green, red and yellow. . . . .	
J	Type SA Alternating-Current Signal Mechanism Complete, equipped with lens Fig. 66 for use with compound lens signals. For 55 volt line and 12.5 volt local, 25 cycle operation, arranged to give three indications, namely: green, red and yellow. . . . .	
K	Type SA Alternating-Current Signal Mechanism Complete, equipped with lens Fig. 66 for use with compound lens signals. For 16.5 volt line, 14.2 volt local, 60 cycle or 15 volt line, 12.5 volt local, 25 cycle operation, arranged to give three indications, namely: green, red and yellow. . . . .	

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Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
L	Reflector Unit Complete, comprises parts Figs. 9, 18 to 24 and 34 to 36 inclusive. Does not include lamp Fig. 33 which must be ordered separately. . . . .	53056-1 Gr. 1
M	Contact Block Complete, as shown, comprises parts Figs. 8, 9, 10, 11, 13, 15, 16, 17, 29, 30 and 31. . . . .	53053 Gr. 8
N	Terminal Block Complete, as shown, comprises parts Figs. 7 and 58 to 64. . . . .	53060 Gr. 3
P	Case Complete, includes all parts for housing mechanism. Does not include reflector unit, terminal block, glass Fig. 42 or glass case, Fig. 32. . . . .	53270-1 Gr. 3
1	Front Stop Complete, includes hex. nut, for vane and counterweight. . . . .	55620 Gr. 1
2	Pin, .125" dia. x 1/8" lg., for hinging counterweight to brack . . . . .	2644-5
3	Counterweight Complete, includes link and hinge pin. . . . .	53703-1 Gr. 2
4	Pin, for counterweight. . . . .	730-45
5	Nut, No. 14-40 x 1/8" hex., for screw Fig. 6. . . . .	53084-1
6	Screw, No. 14-40 x 5/8" headless, used as stop for vane and counterweight. . . . .	5100-10
7	Screw, No. 10-32 x 3/4" fil. hd., for fastening contact block to bracket. . . . .	12563-5
8	Screw, No. 10-32 x 1 1/2" rd. hd., terminal post for contact block. . . . .	2438-24
9	Nut, No. 10-32 x 1/8" hex., for terminal posts and contacts also for stud on receptacle. . . . .	40796
10	Washer, for terminal posts. . . . .	40791
11	Terminal Block, only. . . . .	47508-49
12	Armature Complete, with miniature roundels, for three indication unit, giving green, red and yellow indications. Includes spectacles, vane and all riveted parts mounted on shaft. . . . .	53055-5 Gr. 1

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Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
12a	as above, except for two indication unit giving purple and yellow indications. . . . .	53055-5 Gr. 2
12b	same as Fig. 12, except for two indication unit giving red and yellow indications. . . . .	53055-5 Gr. 3
13	Nut, No. 8-32 x 1/8" hex., for fastening fingers to counterweight. . . . .	3891-1
14	Contact Finger Complete, as shown, two required. . . . .	53059-3 Gr. 1
15	Back Contact Complete, includes silver contact, as shown, two required. . . . .	13061-52 Gr. 2
16	Contact Complete, as shown, two required. . . . .	42799-7 Gr. 8
17	Terminal, for contact Fig. 16. . . . .	51559-11
18	Holder, for reflector unit Fig. L, includes studs for mounting receptacle. . . . .	53068-2 441-120
19	Washer, for use between pad and holder, for reflector. . . . .	590-25
20	Spring, for receptacle, as shown. . . . .	586-32
21	Lamp Receptacle Complete, for details and order references see Plate H2669. . . . .	53058-5 Gr. 2
22	Nut, 10-32 hex., for receptacle. . . . .	46277-1
23	Nut, No. 10-32, cup shape, for spring. . . . .	20673-2
24	Washer, for use behind reflector. . . . .	1533-32
25	Bearing Bracket, as shown, for supporting one end of armature shaft. . . . .	53063-6
26	Stud, as shown, for bracket. . . . .	49476-24
27	Name Plate, with screws, for mechanism. . . . .	401-222 54392-13
28	Bracket, as shown, for supporting contact block and counterweights. . . . .	53063-7
29	Insulation, for contact block. . . . .	53109
30	Washer, for screw Fig. 31. . . . .	2534-1

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Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
31	Screw, No. 8-32 x $\frac{3}{4}$ " rd. hd., for contact block.....	2553-19
32	Glass Case, for housing lower half of mechanism.....	37380-8
33	Incandescent Lamp, 2 pin candelabra single contact bayonet base, S-8 bulb, single filament, 1000 hour rating, 11.3 volts, 13.3 watts, recommended for operation on 10 volts.....	34866-32
33a	as above, except S-11 bulb, single filament, 1000 hour rating, 8 volts, 10 watts, recommended for operation on 7.2 volts.....	34866-43
33b	same as Fig. 33, except S-11 bulb, major and minor filaments in multiple, 1000 hour rating, 8 volts, 13+3.5 watts, recom- mended for operation on 7.2 volts.....	34866-37
33c	same as Fig. 33, except S-11 bulb, single filament, 1000 hour rat- ing, 9 volts, 15.3 watts, recommended for operation on 8 volts..	34866-34
33d	same as Fig. 33, except S-11 bulb, major and minor filaments in multiple, 1000 hour rating, 10 volts, 13+3.5 watts, recom- mended for operation on 9 volts.....	34866-60
33e	same as Fig. 33, except S-11 bulb, single filament, 1000 hour rat- ing, 10 volts, 25 watts, recommended for operation on 9 volts..	34866-47
33f	same as Fig. 33, except S-11 bulb, single filament, 2000 hour rat- ing, 13.5 volts, 17 watts recommended for operation on 12 volts	34866-25
33g	same as Fig. 33, except G-16 $\frac{1}{2}$ bulb, single filament, 1000 hour rating, 115 volts, 25 watts, recommended for operation on 110 volts.....	34866-45
33h	same as Fig. 33, except S-11 bulb, single filament, 1000 hour rat- ing, 4 volts, 3 watts, recommended for compound lens signals only, for operation on 4 volts.....	34866-35
33j	same as Fig. 33, except S-11 bulb, single filament, 1000 hour rat- ing, 8 volts, 5 watts, recommended for compound lens signals only, for operation on 8 volts.....	34866-55

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Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
33k	same as Fig. 33, except S-11 bulb, major and minor filaments in multiple, 1000 hour rating, 8 volts, 5+3.5 watts, recommended for compound lens signals, for operation on 8 volts. ....	34866-58
33m	same as Fig. 33, except S-11 bulb, single filament, 1000 hour rating, 10 volts, 5 watts, recommended for compound lens signals only, for operation on 10 volts. ....	34866-38
34	Reflector, glass, as shown. ....	53122
35	Retaining Ring, for reflector. ....	45647-5
36	Screw, No. 4-36 x 1/4" fl. hd., for fastening retainer to holder. ....	35699-2
37	Gasket, for use between glass and case. ....	52983-1
38	Spring, with sleeve, for fastening glass in case. ....	51107-3 15284-17
39	Glass, for reflector unit compartment. ....	924-11
40	Gasket, rubber, for use with glass Fig. 42. ....	52983-3
41	Spring, with sleeve, for fastening glass Fig. 42 in case. ....	51107-6 15284-17
42	Outer Cover Glass, for use in position shown. ....	924-17
43	Resistor Complete, 1500 ohms, includes connector, washer, nut and insulator, for 110 volt operation. ....	31160-1 Gr. 1 42760-13 Gr. 4 40791 40796 42792-3
43a	as above, except 62 ohms, for 55 volt operation. ....	31160-1 Gr. 2 42760-13 Gr. 4 40791 40796 42792-3

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Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
44	Bracket, for supporting one end of armature shaft, for use when resistor is not used. . . . .	53063-3
44a	as above, except for use with resistor. . . . .	53063-5
45	Bearing, upper half, for armature shaft. . . . .	53828
46	Ball, for use at ends of armature shaft. . . . .	36126-4
47	Gasket, for use between glass case and cover. . . . .	13014-126
48	Shim, .005" th., for use between upper and lower halves of armature shaft bearing. . . . .	53879
48a	as above, except .003" th. . . . .	53879-1
49	Bearing, lower half, knife edge, for armature shaft. . . . .	53828-1
50	Support, Complete, includes magnets, for mechanisms Figs. A and F	53129 Gr. 6
50a	as above, except for mechanisms Figs. B and G. . . . .	53129 Gr. 3
50b	same as Fig. 50, except for mechanisms Figs. C and H. . . . .	53129 Gr. 5
50c	same as Fig. 50, except for mechanisms Figs. D and J. . . . .	53129 Gr. 4
50d	same as Fig. 50, except for mechanisms Figs. E and K. . . . .	53129 Gr. 2
51	Screw, 1/4"-20 x 1/8" fil. hd., for fastening brackets Figs. 25 and 44 to case. . . . .	45048-8
52	Screw, No. 8-32 x 1 1/2" collar hd., for fastening bearing to bracket	53829-2
53	Dowel Pin, .128" x 1/2" lg., for fastening support to bracket. . . . .	504-103
54	Wire Clip, as shown. . . . .	53114-1
55	Screw, No. 10-32 x 1/2" fil. hd., for fastening bracket to support. . . . .	12563
56	Leather Washer, for use between glass case and stirrup on case. . . . .	4553
57	Sleeve, for springs Figs. 38 and 41. . . . .	15284-17
58	Block, only, for terminal block Fig. N. . . . .	47508-66
59	Carborundum Plate, used as lightning protection between terminals of control windings. . . . .	41786-2
60	Connector, for carborundum plate. . . . .	4906-40
61	Screw, No. 14-24 x 1 1/2" sq. hd., used as terminal post. . . . .	350-3

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Fig. No.	Name	Drawing Reference
<b>Order by plate, figure number and name</b>		
62	Nut, No. 14-24 x $\frac{5}{16}$ " th. hex., for terminal posts.....	42843-1
63	Washer, for terminal posts.....	1225-2
64	Nut, No. 14-24 x $\frac{3}{16}$ " th. hex., for terminal posts.....	42839-1
65	Color Disc Complete, red, A.A.R. Standard, assembled in retaining cup.....	53073 Gr. 2
65a	as above, except yellow with one side depolished, A.A.R. Standard	53073 Gr. 12
65b	same as Fig. 65, except green, pre-cracked, A.A.R. Standard....	53073 Gr. 3
65c	same as Fig. 65, except purple, A.A.R. Standard.....	53073 Gr. 7
66	Lens, $4\frac{1}{2}$ " dia., $6\frac{1}{2}$ " focus, for compound lens signals.....	54249-3