

STROMBERG-CARLSON
TELEPHONE
SWITCHBOARD
COMPONENTS

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TELEPHONE
SWITCHBOARD
COMPONENTS

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GENERAL INFORMATION

For convenience in ordering replacements or adding to existing equipment, the most generally used parts and sub-assemblies not directly associated with a specific major product, have been given code numbers. Code numbers or stock numbers are plainly stamped on the parts, so that replacements can usually be made by number and name of part. The necessary hardware for mounting is included in all shipments under code number.

For additions or replacements on older installations it is advisable to give the type and number of the switchboard, telephone or other equipment for which the apparatus is needed, as the original parts may have been replaced by more modern equivalents. Many items cannot be described in complete detail in this catalog. Your nearest Stromberg-Carlson representative will help you find the parts best suited to your own needs.

The parts shown here follow a general alphabetical arrangement; cross references are given where there might be alternate locations.

BLANKS

Blanks are available for neatly filling unequipped apparatus spaces of switchboard and other telephone equipment. Many different types are made for stock. Blanks which can be furnished are: Jack Blanks, Key Blanks, Plug Hole Blanks.

JACK BLANKS

Jack Blanks are available in many sizes and styles for a wide variety of uses.

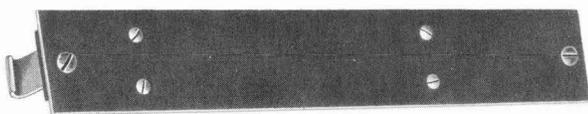
Many of these blanks are faced with black formica in a smooth, satin finish. Others are finished in golden oak, birch, mahogany, or dull walnut to meet specific needs. Some are edged with a white holly strip.

(Jack Blanks listed with Jacks on a following page.)

KEY BLANKS

Key Blanks to fill the space of key mountings. Both flush and surface mounting types can be furnished for Nos. 340 and 170 Type Cam Keys.

(Key Blanks listed with keys on a following page.)



A Typical Key Blank assembled

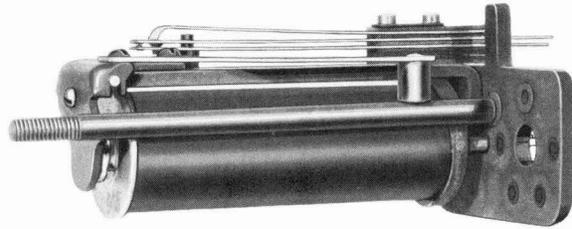
PLUG HOLE BLANKS

Plug Hole Blanks to fill the space of switchboard plugs, of individual lamp sockets, and of individual round barrel keys.

Plug Hole Blanks are made of black composition material or fibre. They preserve the neat appearance of a switchboard, and prevent dust or dirt from settling in unequipped openings.

(Plug Hole Blanks listed with plugs on a following page.)

BUZZERS



No. 50-LL Buzzer

STANDARD SWITCHBOARD

<i>Stock No.</i>	<i>Code</i>	<i>Resist. Ohms</i>	<i>Use</i>
*801861-000	(50-LL)	500	Nos. 102, 106, 120 PBX N.A. Circuits

*Will mount in the space of a casing on relay mounting plates.

MINIATURE TYPE BUZZERS

<i>Stock No.</i>	<i>Code</i>	<i>Resist.</i>	<i>Description</i>
801756-000	(1-B)	15 ohms	Encased Buzzer, 10 volts, D.C.
801757-000	(1-D)	132 ohms	Encased Buzzer, 30 volts, D.C.
801759-000	(0-B)	140 ohms	Encased Buzzer, 8-15 volts, D.C.
212096-000	(0-D)	10 ohms	Encased Buzzer, 6-8 volts, D.C., 8-10 volts, A.C.
212709-000	(0-E)	100 ohms	Encased Buzzer, 9-11 volts, A.C.
45304-000	(2-A)	1000 ohms	Encased Buzzer, 80 volts, 20 cps
211417-000	(2-B)	1000 ohms	Encased Buzzer, 6-8 volts, D.C.
211418-000	(2-C)	1000 ohms	Encased Buzzer, 22-26 volts, D.C.
211419-000	(2-D)	1000 ohms	Encased Buzzer, 44-52 volts, D.C.

IMPEDANCE COILS

Stock numbers, when associated with code numbers, cover completely assembled coils and parts for mounting. The stock numbers of coils indicate coils only, of the resistances specified.

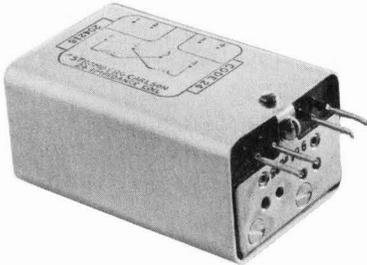
NO. 24 TYPE

The No. 24 Type is designed specifically for use as a retardation coil in light duty composite sets. In this application the use of this coil, with suitable circuit modification, will result in improved inductive balance between the signal legs in the side circuit as compared with the present circuit using Type 20AL Impedance Coils. The method of connecting Type 24 coils in a typical composite side circuit is shown below. The construction and magnetic structure for this coil is similar to that of the Type 21 Repeating Coils. Excellent inductance stability is obtained over a range of from 0-75 m.a. DC in the signal legs. It uses the

2E • COILS

same mounting and shell as for No. 21, No. 11, No. 13 Repeating Coils.

No. 24 Impedance Coils are recommended for use in all new composite circuits. They are recommended as replacements for 20AL coils in present field Composite sets if a pair of coils is to be replaced. In doing this the circuit must be modified as described.



No. 24 Type

Stock No.	Code	Use	Approximate Total DC Resistance (Ohms) Per Coil
204218-000	24	Composite Coil	105

NO. 25 TYPE

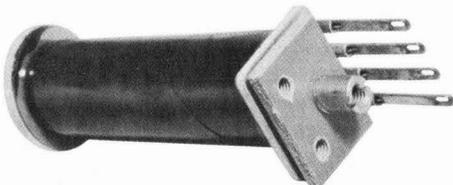
The No. 25 type is designed specifically for use as a retardation coil in filter circuits of vibrator ringing generators. It uses the same mounting and shell as for the No. 21, No. 11 and No. 13 Repeating Coils.

Stock No.	Code	Use
210010-000	25	SA or PA in Filter Circuit of Vibrator Ringing Generator

NO. 27 TYPE

The No. 27 type impedance coil is a shunt feed coil for intertoll dialing trunk circuits. Concentric wound. It uses the same mounting and shell as the No. 11 AL.

Stock No.	Code	Use	Approximate Total DC Resist. (Ohms) Per Coil
211677-000	27	Shunt Feed Coil for Intertoll Dialing Trunk Circuits	60 x 60



"A" Relay Type

TYPE "A" RELAY IMPEDANCE COIL

These impedance coils mount like Type "A" Relays. They are used in XY Systems with Stock No. 36676-000 Bracket which will mount two coils of this type or one coil and one condenser.

The following coils are assembled without armatures and are inductively wound:

Single Wound Coil—One Inductive Winding

Stock No. Coil and Hardware	Ohms Resistance	Stock No. Coil Only
36298-000	1350	36817-000
36299-000	560	36815-000
36300-000	350	36814-000
36302-000	2120	(single) 36818-000
36304-000	27	36808-000
36307-000	220	36813-000
36309-000	2700	36851-000
36310-000	214	36873-000
205350-000	100	36811-000
205351-000	850	36816-000
205353-000	140	36812-000
205354-000	67	36810-000
205355-000	1310	36875-000
205357-000	5500	36820-000
205358-000	250	36847-000
205360-000	8600	36821-000
205361-000	220	36813-000
205364-000	514	36871-000
205366-000	500	36848-000
205367-000	10	208529-000
205369-000	140	208530-000
205370-000	7	36805-000

Concentric Wound Coil—Two Inductive Windings

Stock No. Coil and Hardware	Ohms Resistance	Stock No. Coil Only
36308-000	514 x 2020	36887-000
36291-000	2.5 x 130	36889-000
36292-000	38.7 x 38.4	36890-000
36295-000	0.10 x 200	36898-000
36305-000	200 x 200	200005-062
36301-000	1310 x 2020 (concentric)	36884-000
36303-000	79 x 2020 (concentric)	36893-000
205352-000	200 x 200	200005-072
205356-000	3 x 490	36925-000
205359-000	200 x 200	200005-072
205362-000	1000 x 1000	36958-000
205365-000	332 x 470	36205-000
205368-000	332 x 1200	36886-000
*205363-000	100 x 100	36985-000
205371-000	200 x 200	200005-072

*Equipped with armatures

Parallel Wound Coil—Two Inductive Windings

Stock No. Coil and Hardware	Ohms Resistance	Stock No. Coil Only
36293-000	175 x 175	36961-000
36296-000	1200 x 1200	36969-000
36297-000	280 x 280	36963-000
36306-000	1060 x 1060	36954-000

INDUCTION COILS

INDUCTION COIL AND CAPACITOR ASSEMBLIES

This assembly consists of induction and capacitor units embedded in a sealed plastic housing filled with hydrolene which is a viscous, tar-like compound. This process assures complete protection against moisture and the excessive humidity of hot climates.

Screw terminals, properly numbered, are mounted at each end of the housing for connecting the line and handset cords, and also the wiring from the induction coil and capacitors.

Used with both common battery and magneto equipment, this compact unit will mount in present types of desk set boxes as well as wall and desk type handset telephones. This adaptation for various purposes assures operating convenience and economy, especially in changing instruments from one type of service to another.

Stock No. 200595-000 Assembly is used as follows:

Type of Service	Desk Set	Wall Set	D.S. Box
Common Battery	1243, 1247	1250	1260
Magneto	1248	1258	1268

Stock No. 208359-000 Assembly is used as follows:

Common Battery	1443, 1447	1450	1460
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Stock No. 210558-000 Assembly is used as follows:

Common Battery	1543, 1573	—	1560
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Stock No. 211155-000 Assembly is used as follows:

Common Battery	1575	—	—
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Stock No. 210640-000 Assembly is used as follows:

Common Battery	1543W	—	—
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Stock No. 208669-000 Assembly is used as follows:

Common Battery	1544	—	—
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NO. 45 AND NO. 46 TYPES

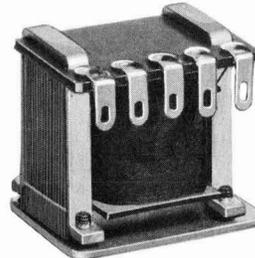
Used in anti-side-tone circuits, to give the best results in transmitting and receiving service. The windings are well insulated and then treated to exclude moisture. The laminations are butted and clamped with their edges in line.

The No. 45-A (23124-000) Induction Coil is used in the anti-side-tone circuits of Nos. 1210, 1211, 1212 and No. 1191 Telephones.

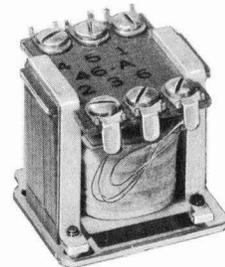
The No. 45-B (25677-000) Induction Coil is used in the circuit of the magneto telephone No. 1207.

The No. 46-A (32943-000) Induction Coil is used in the anti-side-tone circuits of Nos. 1222 and 1223 Telephones.

The No. 46-B Induction Coil is used in magneto telephones or in telephones with local battery talking and common battery signaling.



No. 45 Ind. Coil



No. 46-A Ind. Coil

NO. 49 TYPE

No. 49-A and 49-B Type Induction Coils are used in PBX and Multiple Switchboards, for odd and even busy tests. The No. 49-B coil is equipped for mounting on an XY circuit plate, where the No. 49-A is not.

Stock No.	Code	First Winding	Second Winding
208105-000	(49-A)	150 Turns 4 Ohms	1,000 Turns Non Inductive
208106-000	(49-B)	150 Turns 4 Ohms	1,000 Turns Non Inductive

NO. 50 TYPE

The No. 50-A Type Induction Coils are used in PBX and Multiple Switchboard circuits, replacing the former No. 47-A Induction Coil. The windings on the No. 50-A are electrically equivalent to those in the former No. 47-A, but the difference lies in the fact that the line and receiver windings are unbalanced.

Stock No.	Code	First Winding	Second Winding	Third Winding
212463-000	(50-A)	140 Turns 1.89 Ohms No. 28 DE	582 Turns 27.3 Ohms No. 33 DE	332 Turns 450 Ohms No. 38 DE

Note: Turns Ratio, coils 3-4:1-2 as 4.16:1
4-5:1-2 as 2.37:1

Stock No	Code	Windings Primary	Windings Secondary	Windings Tertiary
23124-000	(45-A)	3 8.0 Ohms 296 Turns No. 32 AWG Turns Ratio, Coils 1-2:3-4 as 1:1.9	29.0 Ohms 579 Turns No. 34 AWG	44 Ohms 405 Turns No. 36 AWG
25677-000	(45-B)	2 .74 Ohms 87 Turns No. 26 AWG Turns Ratio, Coils 1-2:3-4 as 1:4.3	9.5 Ohms 375 Turns No. 30 AWG	None
32943-000	(46-A)	3 536 Turns No. 33 AWG Turns Ratio, Coils 1-2:3-4:5-6 as 2.5:1.8:1	378 Turns No. 34 AWG	213 Turns No. 38 AWG
800432-000	(46-B)	4 70 Turns No. 30 AWG	296 Turns No. 34 AWG	157 Turns No. 36 AWG
				49 Turns No. 36 GAW

STROMBERG-CARLSON

REPEATING COILS

NO. 15 TYPE REPEATING COIL

Number 15 Type Repeating Coils are used to derive Composite, Simplex, and Phantom groups in those cases where 20 c.p.s. ring-through is required. This coil is a very efficient design for the dual purpose of talking and ringing transmission, yielding low transmission loss and high ringing efficiency. The 5-6, 7-8 line windings are made up of twisted pair conductor accurately balanced for resistance.

Stock No.	Code	Description
800447-000	(15-BL)	A 1:1 ratio coil, 600 to 600 ohm or 900 to 900 ohm terminations. Mounts on flat surface for indoor or outdoor use.

NO. 17 TYPE REPEATING COIL

This Repeating Coil is used as a tone coupler, such as for the All Links Busy tone in Relaydial. Mounts uniformly with a pair of 200 type relays under one casing.

Stock No.	Code	Description
800452-000	(17-AL)	Used for Tone Coupler Turns Ratio: 5-6:1-2-7-8 as 16:1

NOTE—Furnished with aluminum casing.

NO. 21 AND NO. 22 TYPE

The No. 21 Repeating Coils are a new series of low loss repeating coils designed particularly for talk through service in Phantom, Simplex and Composite circuits. These coils replace the No. 15 and 18 Type Coils in all applications where 20 c.p.s. ring through is not required; the advantages are lower transmission loss, smaller space requirements, and greater economy. Type No. 21 coils are essentially non-ring through at 20 c.p.s.

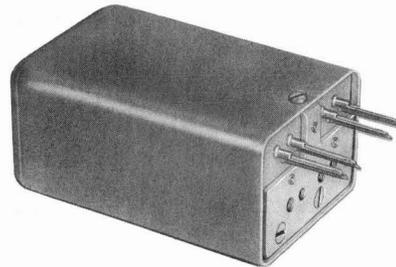
In addition to their low loss features, these coils have been designed to stand up under extreme service requirements. The core is of high permeability nickel steel with controlled air gaps. The windings are on molded phenolic spools, insulated with non-corrosive materials and having all leads individually

brought out through vinyl tubing. Primary and secondary windings are parallel wound and line windings are accurately balanced for resistance.

The coils are enclosed in a cross talk proof aluminum shell.

The No. 22 Type Repeating Coils are structurally identical with the No. 21 Type coils. The No. 21 coils are specially selected to fit extremely close balance requirements for use in deriving phantom and simplex circuits.

The stability of design in both types is such that 100 m.a. may be supplied without adversely affecting transmission.



The No. 21 Repeating Coil

NO. 24 TYPE

The No. 24 Repeating Coils are designed for use as a two coil hybrid in conjunction with telephone voice repeaters. Various winding ratios match the nominal 600 ohm input and output terminations to various line facilities found in the telephone outside plant. Over-all size, 2 1/2" long by 1 5/8" wide.

Stock No.	Code	Impedance Ratio 12-5, 6-11, 10-3, 4-9, 8-1, & 2-7	Line Facility
			Range of Nom. 1000cps Impedance
216919-000	24A	1.20/1	below 465 Ohms
216920-000	24B	2.00/1	465-780 Ohms
216921-000	24C	3.38/1	780-1185 Ohms
216922-000	24D	4.60/1	above 1185 Ohms

Specifications for No. 21 and 22 Types

Stock No.	Code	Impedance Ratio 5-7,6-8/1-3,2-4	Terminations (Ohms)	Balanced	Approximate Resistance	
				Windings Connect to Line	5-7,6-8 Each	1-3,2-4 Each
203925-000	21-A	1:1	900-900	5-7, 6-8	8.3	5.7
203926-000	21-B	1.5:1	1350-900	5-7, 6-8	12.9	5.7
203927-000	21-C	1:1.5	600-900	5-7, 6-8	5.4	5.7
207065-000	21-AS	1:1	900-900	5-7; 6-8	8.3	5.7
207066-000	21-BS	1.5:1	1350-900	5-7, 6-8	12.9	5.7
207067-000	21-CS	1:1.5	600-900	5-7, 6-8	5.4	5.7
207649-000	22-A	1:1	900-900	5-7, 6-8	8.3	5.7
207650-000	22-B	1.5:1	1350-900	5-7, 6-8	12.9	5.7
207651-000	22-C	1:1.5	600-900	5-7, 6-8	5.4	5.7
207632-000	22-AS	1:1	900-900	5-7, 6-8	8.3	5.7
207648-000	22-BS	1.5:1	1350-900	5-7, 6-8	12.9	5.7
207633-000	22-CS	1:1.5	600-900	5-7, 6-8	5.4	5.7

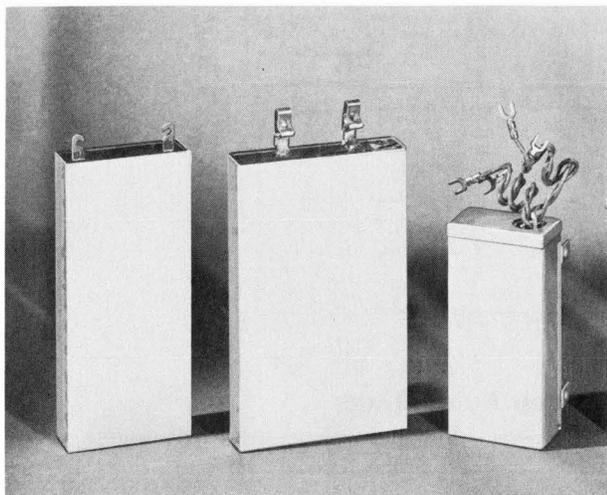
CAPACITORS (CONDENSERS)

Stromberg-Carlson condensers are designed to withstand a working temperature of 140° Fahrenheit. This is a much higher temperature than normally found in actual use.

Tests are made for breakdown, capacitance and insulation resistance before and after assembly. Insulation resistance of all types is 500 megohm-microfarads.

Standard ratings of Stromberg-Carlson condensers are as follows:

	Voltage		Direct Current			
Working	200	350	525	750	1000	
Test	400	700	1050	1500	2000	



Style B Style D Style G

STYLE B—UNMOUNTED TYPE

Have metal clips for mounting. For Booster Circuits of old telephones, desk set boxes. Dimensions: 4⁷/₁₆" x 2¹³/₁₆" x 5/8".

Stock No.	Code	Capacity	Use
800521-000	(21-L)	1 mf.	1155, 1157, 950, Tels. 1156, 1158, Desk Set Box
800522-000	(22-L)	2 mf.	Misc. Telephones

STYLE D—UNMOUNTED TYPE

Has light finished metal case with Fahnestock clips. Dimensions: 4⁷/₁₆" x 2¹³/₁₆" x 5/8".

Stock No.	Code	Capacity	Use
800526-000	(26-T)	0.5 mf.	Sure-Ring (Receiver) Circuit Nos. 896, D-2843 Telephones Nos. 327, 1180 Desk Set Boxes

STYLE G—INTERIOR HANDSET TYPE

Used in the base of desk and suspended type handset telephones and desk set boxes. Has metal case with light finish.

Dimensions: 3¹¹/₃₂" x 1⁹/₁₆" x 7/8".

Stock No.	Code	Capacity	Use
33970-000	(48)	1.85 & 1 mf.	1222, 1223 Telephones; 1230 D.S. Box
34524-000	(49)	1.85 & 2 mf.	1233 Telephone
34917-000	(50)	1.85 mf.	1232 Telephone

STYLE M—RELAY MOUNTING PLATE TYPE

Style M condensers are used in current switchboards and for all new work. These condensers mount the same as No. 200 Type Relays and will fit in No. 25 Relay Casings in which the casing proper is 4 inches long. Style M Condensers replace, but are not interchangeable with, former Style J (Code Nos. 38 to 44-A) which are used in old type Switchboards and mount in shorter relay casings. The terminal boards of these condensers are covered with Mitchell Rand No. 3738 to reduce surface leakage in high humidities.

Can dimensions: 3 3/4" high x 1 21/32" wide x 2 1/32" deep.



Stock No.	Code	Capacity
42370-000	(55M)	1 mf.
42371-000	(56M)	2 mf.
48346-000	(57M)	3 mf.
42372-000	(58M)	4 mf.
42373-000	(59M)	1 mf.—1 mf.
42374-000	(60M)	1 mf.—2 mf.
42375-000	(61M)	2 mf.—2 mf.
42376-000	(62M)	1 mf.—500 Ohms N.I.
49955-000	(63M)	.05 mf.—600 Ohms N.I.
200765-000	(64M)	.05 mf.
202466-000	(65M)	.02 mf.—.02 mf.
202463-000	(66M)	.05 mf.—.05 mf.
202464-000	(67M)	1 mf.—0.5 mf.
203850-000	(68M)	1 mf.—200 Ohms N.I.
203863-000	(69M)	2 mf.—22 Ohms N.I.
204410-000	(70M)	2 mf.—33 Ohms N.I.
204710-000	(71M)	2 mf.—39 Ohms N.I.
205524-000	(72M)	2 mf.—2000 Ohms N.I.
205562-000	(73M)	1 mf.—600 Ohms N.I.
207248-000	(74M)	1 mf.—47 Ohms N.I.
209322-000	(75M)	.5 mf.—150 Ohms N.I.
209323-000	(76M)	.5 mf.—150 Ohms N.I. (2)
211307-000	(77M)	1 mf.—200 Ohms N.I. (2)
213447-000	(78M)	2 mf.—39 Ohms N.I. (2)
214242-000	(79M)	2 mf.—33 Ohms N.I. (2)
214282-000	(80M)	1 mf.—520 Ohms N.I. (2)
216858-000	(81M)	2 mf.—910 Ohms N.I.
212717-000	(82M)	2 mf.—200 Ohms N.I.
211849-000	(83M)	2 mf.—620 Ohms N.I.
216953-000	(84M)	1 mf.—510 Ohms (N.I.) x 2 mf.— 910 Ohms N.I.
217035-000	(85M)	2 mf. x 1 mf.—510 Ohms N.I.
217327-000	(86M)	1 mf.—910 Ohms N.I.
217328-000	(87M)	2 mf.—33 Ohms N.I. x 2 mf.— 39 Ohms N.I.
217840-000	(88M)	1 mf.
218165-000	(89M)	1 mf.—620 Ohms N.I. x 1 mf.— 620 Ohms N.I.
200040-055	(91M)	1 mf.

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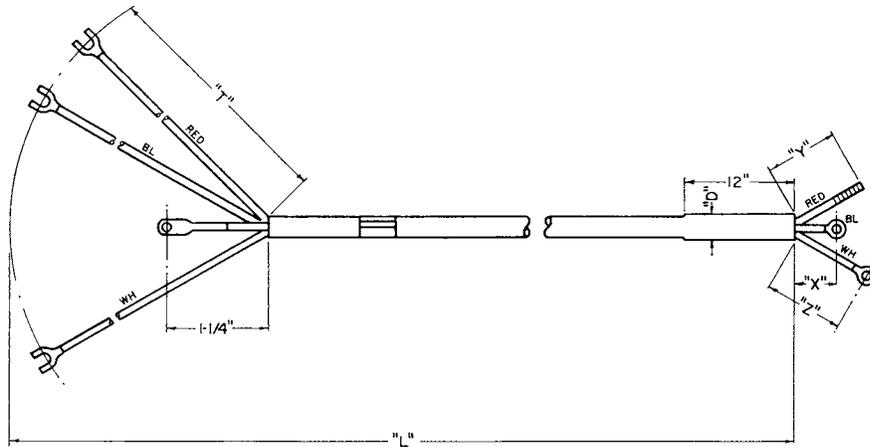
6 E • C O R D S

SWITCHBOARD CORDS

The conductors of Stromberg-Carlson switchboard cords are made in ribbon form from No. 37 AWG hard-drawn bronze alloy wire which is held to strict specifications. Before being used these ribbons are carefully tested for tensile strength, electrical resistance and maximum flexibility to make conductors of high conductivity and long-wearing qualities.

Coding of Switchboard and Patching Cords

The first letter—S, P or O denotes either switchboard, patching or operator's cord. The subsequent numeral indicates the number of conductors in the particular cord.



(24 Carrier Braider)

2 Conductor, Tinsel Type—Outer Nylon Braid

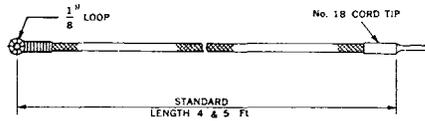
Stock No.	Color	Code	Length	DIMENSIONS					D		Used with Plug No.
				T	X	Y	Z	max.	min.		
212141-000	White	(S-2)	5'	4 1/2"	—	1"	13/16" ± 1/16"	.280"	.260"	56-R, 56-XR	
212142-000	White	(S-2)	6'	4 1/2"	—	1"	13/16" ± 1/16"	.280"	.260"	56-R, 56-XR	
212147-000	White	(S-2)	5'	5"	3/8" ± 1/32"	1"	13/16"	.325"	.315"	61, 62, W.E.'s 27, 32, 47, 53, 65	

3 Conductor, Tinsel Type—Outer Nylon Braid

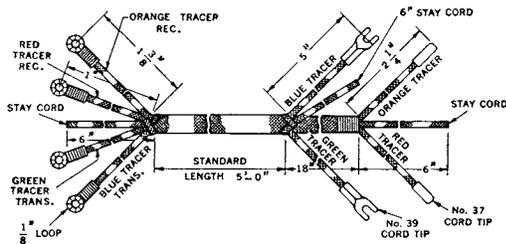
Stock No.	Color	Code	Length	DIMENSIONS					D		Used with Plug No.	
				T	X		Y	Z		max.		min.
212120-000	White	(S-3)	5'	6 1/2"	1/2"	7/16"	1"	1"	15/16"	.280"	.260"	53, 53-X, 54, 54-G, 54-N, 55, 55-N.
212121-000	Green	(S-3)	5'	6 1/2"	1/2"	7/16"	1"	1"	15/16"	.280"	.260"	
212122-000	Red	(S-3)	5'	6 1/2"	1/2"	7/16"	1"	1"	15/16"	.280"	.260"	
212123-000	White	(S-3)	6'	6 1/2"	1/2"	7/16"	1"	1"	15/16"	.280"	.260"	
212124-000	Green	(S-3)	6'	6 1/2"	1/2"	7/16"	1"	1"	15/16"	.280"	.260"	63, 64, 65-R, 65-XR
212125-000	Red	(S-3)	6'	6 1/2"	1/2"	7/16"	1"	1"	15/16"	.280"	.260"	
209784-000	White	(S-3)	3'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209785-000	White	(S-3)	5'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209786-000	White	(S-3)	6'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209787-000	White	(S-3)	7'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209788-000	Red	(S-3)	5'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209789-000	Red	(S-3)	6'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209790-000	Red	(S-3)	7'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209791-000	Green	(S-3)	5'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209792-000	Green	(S-3)	6'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209793-000	Green	(S-3)	7'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	
209794-000	Black	(S-3)	6'	6 1/2"	5/8"	9/16"	1"	1 1/8"	1 1/16"	.280"	.260"	

STROMBERG-CARLSON

OPERATOR'S CORDS



Stock No.	Code	Length	Description
800632-000	(O-1)	5'	Single Conductor Used with operator's suspended type transmitters.



Stock No.	Code	Length	Description
800645-000	(O-4)	5'	4 Conductors Used with No. 4 Operator's Breast Plate Sets that have old style No. 23 Plug.

SWITCHBOARD CORD AND PLUG ASSEMBLIES

The following switchboard cords and plug assemblies are available and are carried in stock as standard items.

Two Conductor Cords and Plugs

Stock No.	Code	Length	Color	Plug
42623-000	(S-2)	5'	White, assembled to	No. 56-XR
42462-000	(S-2)	5'	White, assembled to	No. 42
42463-000	(S-2)	6'	White, assembled to	No. 42

Three Conductor Cords and Plugs

Stock No.	Code	Length	Color	Plug
42936-000	(S-3)	5'	White, assembled to	No. 65-XR
42935-000	(S-3)	6'	White, assembled to	No. 65-XR
44096-000	(S-3)	6'	Red, assembled to	No. 65-XR
44098-000	(S-3)	6'	Black, assembled to	No. 65-XR
44100-000	(S-3)	6'	Green, assembled to	No. 65-XR

Patch Test Cords and Plug Assemblies

Stock No.	Code	Length	No. Cond.	Plug
200323-019	(PT6-2)	10'	6	No. 59 Twin Plug & Cook 3800 Test Plug
200322-999	(PT6-1)	15'	6	No. 59 Twin Plug & Cook 3800 Test Plug

PATCHING CORDS

Duratex Patching Cords for connecting a number of telephones to a trunk for two-way night service are made only as required.

Construction of these cords are such that a plug may be terminated at one end for connection to the trunk multiple. On the other end of this arrangement, as many plugs as desired may be terminated for connection to PBX station multiple.

The following cords have proved so generally applicable that they have been coded and stocked. In ordering, specify stock number, code and length. All Patching Cords are white.

Stock No.	Code	Length	Trimmed for No. of Plugs (Bridged End)	Plugs Used
203805-000	P-3	3'	1	65
203828-000	P-3	3'	3	65
205673-000	P-3	5'	1	65 or 63
207991-000	P-3	6'	1	65
200322-910	P-3	5'	1	59
200322-960	P2-1	6'	1	61
200322-970	P4-1	6'	1	62H

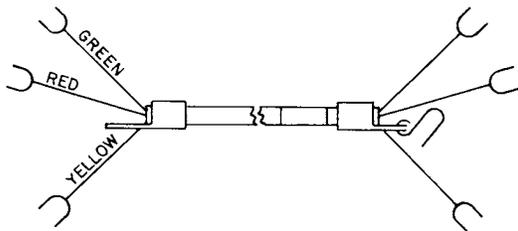
8 E • C O R D S

HANDSET CORDS

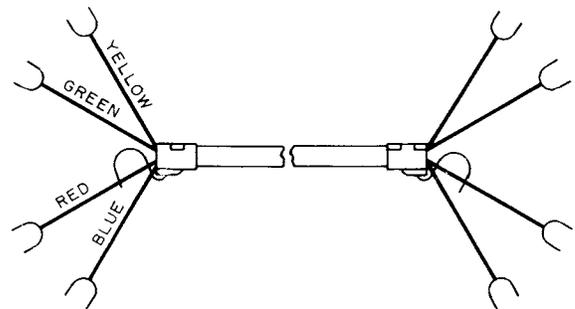
STROMBERG-CARLSON Handset Cords are grouped according to the handset they fit, to make ordering of replacements easier. On older style handsets, any cord order is subject to delay, and where a newer replacement from stock can be substituted, this procedure will be followed.

Handsets used with 1200 and 1400 Series Telephones

Handset	Telephones	Handset Cord		Conductors	Type	Outside Cover	Color
		Stock No.	Code				
20R	1234-M, 1234, 1233-M, 1233, 1232-M, 1232	216940-000	WCR-3F	3	Straight	Neoprene	Black
23R	1444-B, 1444, 1443, 1272, 1271, 1270, 1250, 1244 1243, 1233-MK	211305-000	WCR-3J	3	Straight	Neoprene	Black
24R	1447, 1444-P, 1444-K, 1258, 1248, 1247	211745-000	WCR-4J	4	Straight	Neoprene	Black



3 Conductor—Neoprene Jacket



4 Conductor—Neoprene Jacket

Cords for No. 26 Handset—Early and Special Purpose 1500 Series

Handset	Telephones	Handset Cord		Conductors	Type	Outside Cover	Color
		Stock No.	Code				
26C	Early 1543, 1544 Current 1534, 1533, 1532	211305-000	WCR-3J	3	Straight	Neoprene	Black
26D	1573 Two Line and	211300-000	WCK-3J	3	Retractable	Neoprene	Black
26H	1575 Multi-Line Black						
26E	1544-K and 1544-P Operator's Desk Phones	211745-000	WCR-4J	4	Straight	Neoprene	Black
26G	1544 Gray	218819-000	WCK-4JG	4	Retractable	Neoprene	Gray
26I	1573 Two Line	213117-000	WCK-3JG	3	Retractable	Neoprene	Gray
26J	and 1575 Multi-Line Gray						

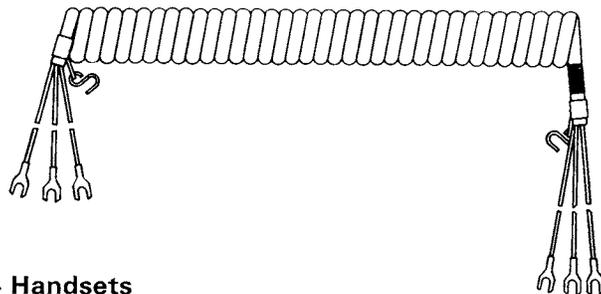
STROMBERG-CARLSON

Cords for No. 27 Handset

High Efficiency, Thermoset, used on early models of 1543-W and 2-1543-W Telephones. (No longer available as complete handsets.)

<i>Handset Cord</i>					<i>Outside Cover</i>
<i>Stock No.</i>	<i>Code</i>	<i>Color</i>	<i>Conductors</i>	<i>Type</i>	
211373-000	WCR-3K	Black	3	Straight	Neoprene
211884-000	WCR-4K	Black	4	Straight	Neoprene
211375-000	WCK-3K	Black	3	Retractable	Neoprene
213119-000	WCK-3K	Gray	3	Retractable	Neoprene
213928-000	WCK-3K	Green	3	Retractable	Neoprene
213929-000	WCK-3K	Ivory	3	Retractable	Neoprene
213930-000	WCK-3K	Red	3	Retractable	Neoprene
213931-000	WCK-3K	Yellow	3	Retractable	Neoprene
213932-000	WCK-3K	French Blue*	3	Retractable	Neoprene
213933-000	WCK-3K	Desert Beige*	3	Retractable	Neoprene
213429-000	WCK-3K	Chestnut Brown*	3	Retractable	Neoprene
218914-000	WCK-3K	Aqua Blue	3	Retractable	Neoprene
218915-000	WCK-3K	Pink	3	Retractable	Neoprene
218916-000	WCK-3K	White	3	Retractable	Neoprene

*Colors no longer current. Orders are special, subject to delay.



Cords for No. 31 and No. 34 Handsets

High efficiency, Thermoplastic, light weight, used on all current telephones. All are vinyl plastic covered retractile cords with strain relief.

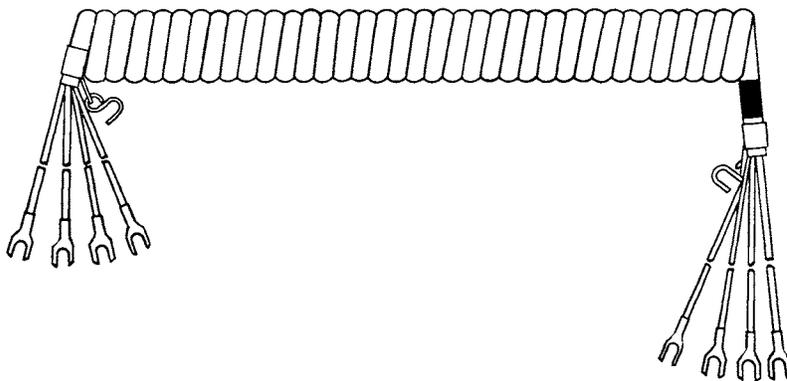
<i>Handset</i>	<i>Telephones</i>	<i>Color</i>	<i>Handset Cord</i>		<i>Conductors</i>
			<i>Stock No.</i>	<i>Code</i>	
31	Present 1543-W, 1553-W 1545-W, 1555-W 1574-W	Desert Beige*	200305-101	PCK-3K	3
		Dove Gray*	200305-104	PCK-3K	3
		Green	200305-105	PCK-3K	3
		Ivory	200305-106	PCK-3K	3
		Red	200305-107	PCK-3K	3
		Yellow	200305-108	PCK-3K	3
		Black	200305-309	PCK-3K	3
		White	200305-310	PCK-3K	3
		Aqua Blue	200305-311	PCK-3K	3
		Pink	200305-312	PCK-3K	3
		Sand Beige	200305-914	PCK-3K	3
		Light Gray	200305-919	PCK-3K	3
		French Blue*	200305-102	PCK-3K	3
		Chestnut Brown*	200305-103	PCK-3K	3

*Colors no longer current. Orders are special, subject to delay.

10E • CORDS

<i>Handset</i>	<i>Telephones</i>	<i>Color</i>	<i>Handset Cord</i>		<i>Conductors</i>
			<i>Stock No.</i>	<i>Code</i>	
31A	1546-W, 1556-W Two Party Identification	Desert Beige*	200307-201	PCK-4S	4
		French Blue*	200307-202	PCK-4S	4
	1579-W, 1559-W Single Line Door Answering 1500-2, 1510-2 Two-Line 1752, 1710-12, 1710-12A 1710-12B 1500-8, 1510-8	Chestnut Brown*	200307-203	PCK-4S	4
		Dove Gray*	200307-204	PCK-4S	4
		Green	200307-205	PCK-4S	4
		Ivory	200307-206	PCK-4S	4
		Red	200307-207	PCK-4S	4
		Yellow	200307-208	PCK-4S	4
		Black	200307-209	PCK-4S	4
		White	200307-210	PCK-4S	4
		Aqua Blue	200307-211	PCK-4S	4
		Pink	200307-212	PCK-4S	4
		Sand Beige	200307-214	PCK-4S	4
		Light Gray	200307-219	PCK-4S	4
		34	1600-W Petite 1603-W Message Waiting	White	200305-810
Aqua Blue	200305-811			PCK-3P	3
Pink	200305-812			PCK-3P	3
Sand Beige	200305-814			PCK-3P	3
Turquoise	200305-815			PCK-3P	3

*Colors no longer current. Orders are special, subject to delay.



<i>Handset</i>	<i>Telephones</i>	<i>Color</i>	<i>Handset Cord</i>		<i>Conductors</i>
			<i>Stock No.</i>	<i>Code</i>	
34A	1602-W Petite with Two-Party Identification 1609-W Single Line Door Answering 1600-2 Two-Line	White	200307-110	PCK-4P	4
		Aqua Blue	200307-111	PCK-4P	4
		Pink	200307-112	PCK-4P	4
		Sand Beige	200307-114	PCK-4P	4
		Turquoise	200307-115	PCK-4P	4

<i>Handset</i>	<i>Telephones</i>	<i>Color</i>	<i>Handset Cord</i>		<i>Conductors</i>
			<i>Stock No.</i>	<i>Code</i>	
34B	1706, 1700-6, 1700-6A, 1700-6B 1712, 1700-12, 1700-12A 1700-12B	Green	200308-105	PCK-4M	4
		Black	200308-109	PCK-4M	4
		Sand Beige	200308-114	PCK-4M	4
		Light Gray	200308-119	PCK-4M	4

STROMBERG-CARLSON

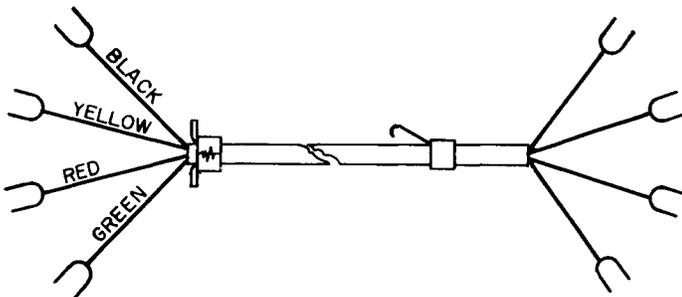
LINE CORDS

STROMBERG-CARLSON Line Cords are made with straight-lay conductors, covered with a Neoprene or Vinyl Plastic jacket in standard telephone colors. For convenience in ordering, these are grouped by the number of conductors and trim.

**3 Conductor—Vinyl Plastic Jacket—
Code WDV-3J—6 Ft. Long**

Stock No.	Color	Telephones
200315-301*	Desert Beige	1543, 1543-W, 2-1543-W
200315-302*	French Blue	1544B, 1545-W, 1574-W,
200315-303*	Chestnut Brown	1546-W (Regular), 1500-8
200315-304*	Dove Gray	
200315-305	Green	
200315-306	Ivory	
200315-307	Red	
200315-308	Yellow	
200315-309	Black	
200315-310	White	
200315-311	Aqua Blue	
200315-312	Pink	
200315-814	Sand Beige	
200315-819	Light Gray	

*Colors no longer current. Replacement cords on special order.



**4 Conductor—Vinyl Plastic Jacket—
Code WDV-4S—6 Ft. Long**

Stock No.	Color	Telephones
200315-901*	Desert Beige	1544,
200315-902*	French Blue	1546-W when "A" Lead
200315-903*	Chestnut Brown	Control is specified
200315-904*	Dove Gray	
200315-905	Green	
200315-906	Ivory	
200315-907	Red	
200315-908	Yellow	
200315-909	Black	
200315-910	White	
200315-911	Aqua Blue	
200315-912	Pink	
200315-914	Sand Beige	
200315-919	Light Gray	

*These colors no longer current. Special order only.

4 Conductor—Vinyl Plastic Jacket—

Code WDV-4P—6 Ft. Long

Stock No.	Color	Telephones
200315-410	White	1600-W, 1603-W
200315-411	Aqua Blue	1600-WT
200315-412	Pink	
200315-414	Sand Beige	
200315-415	Turquoise	

5 Conductor—Vinyl Plastic Jacket—

Code WDV-5S—6 Ft. Long

Stock No.	Color	Telephones
200316-405	Green	1579-W
200316-406	Ivory	
200316-407	Red	
200316-408	Yellow	
200316-409	Black	
200316-410	White	
200316-411	Aqua Blue	
200316-412	Pink	
200316-414	Sand Beige	
200316-419	Light Gray	

6 Conductor—Vinyl Plastic Jacket—

Code WDV-6P—6 Ft. Long

Stock No.	Color	Telephones
200315-710	White	1602-W, 1602-WT
200315-711	Aqua Blue	
200315-712	Pink	
200315-714	Sand Beige	
200315-715	Turquoise	

6 Conductor—Nylon Braid—

Code WDN-6F, WDN-6KG—6 Ft. Long

Stock No.	Color	Telephones
217115-000	Black (6F)	Used with 1544K and
219461-000	Gray (6KG)	1544P Operator's
		Telephones

8 Conductor—Vinyl Plastic Jacket—

Code WDV-8P—6 Ft. Long

Stock No.	Color	Telephones
200316-510	White	1609-W
200316-511	Aqua Blue	
200316-512	Pink	
200316-514	Sand Beige	
200316-515	Turquoise	

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LINE CORDS—MULTI-LINE

8 Conductor—Vinyl Plastic Jacket—

Code D-8A—6 Ft. Long

Stock No.	Color	Telephones
200317-810	White	1600-2
200317-811	Aqua Blue	
200317-812	Pink	
200317-814	Sand Beige	
200317-815	Turquoise	

8 Conductor—Vinyl Plastic Jacket—

Code D-8B—6 Ft. Long

Stock No.	Color	Telephones
200317-906	Ivory	1500-2
200317-909	Black	
200317-910	White	
200317-911	Aqua Blue	
200317-912	Pink	
200317-914	Sand Beige	

18 Conductor—Vinyl Plastic Jacket—

Code WDV-18A—6 Ft. Long

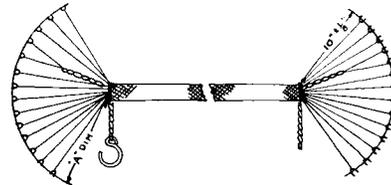
Stock No.	Color	Telephones
200316-805	Green	1700-3 3-Line
200316-809	Black	
200316-814	Sand Beige	
200316-819	Light Gray	

Note: For Line Cords used with other 1700 Series Executive Type Key Telephones (1706, 1712, etc.) refer to the portion of Section A where these telephones are described.

LINE CORDS FOR CONVENIENCE SYSTEMS

Stock No.	Code	Length	Description
202325-000	(D-14)	5'5" Butt to Butt	14 Conductors

Used with new style No. 1270 Telephones in current No. 2-6 Convenience Systems.



"A" Dimensions—7 1/2"

Stock No.	Code	Length	Description
202326-000	(D-18)	5'5" Butt to Butt	18 Conductors

Used with new style No. 1271 and No. 1272 Telephones in current No. 2-10 and No. 3-9 Convenience Systems.

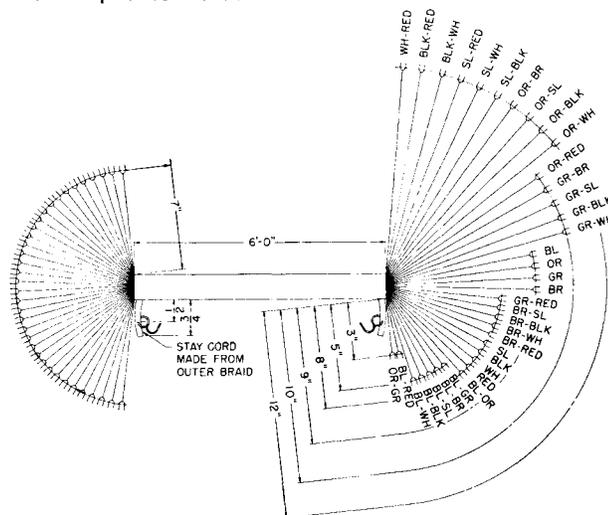
TWO-PIECE SET RECEIVER CORDS

Stock No.	Code	Length	Description
800652-000	(R-2)	36"	2 Conductors

Black Nylon Yarn.

Stock No.	Code	Length	Description
800654-000	(R-2)	36"	2 Conductors

Black Nylon Yarn.



36 Conductor—Vinyl Plastic

Stock No.	Color	Code	Length	No. of Conductors	Telephones Used on
200315-109	Black	(WDV-36A)	6'	36	1575-A, 1575-B
200315-204	Gray	(WDV-36A)	6'	36	1575W-A1, 1575W-B1

STROMBERG-CARLSON

CORD FASTENERS AND TIPS

CORD FASTENERS

Brass punching—designed for drive-fit, through terminal rack, with tinned eyelet for soldering to switchboard cable, and screw terminal for connecting to switchboard cords. No. 36 Cord Tip fits either fastener.



No. 4 Cord Fastener



No. 5 Cord Fastener

Stock No.	Code	For Use On	Length
800667-000	(4)	Terminal Racks	1 ⁹ / ₁₆ in.
800668-000	(5)	Switchboards	1 ³ / ₈ in.

CORD HOOKS

To suspend switchboard cords from tip of stay cord and thereby remove strain from conductors. No. 4 Type mounts hooks on ½ centers.

Stock No.	Code	Description
7921-000	(2)	Standard switchboard cord, single hook
16008-000	(4-A)	Standard switchboard cords, six hooks
16357-000	(4-B)	Standard switchboard cords, four hooks
16358-000	(4-C)	Standard switchboard cords, two hooks

CORD WEIGHTS

A standard Cord Weight for all types of regular switchboard cords, sufficiently heavy to restore cords to their respective places when plugs are withdrawn from jacks. Consists of a brass pulley wheel and a 9 oz. single pulley weight, armoured with steel casing. Dimensions—4 x 1²⁹/₃₂ x ¾". Wheel—⁷/₈ x ¼".



Stock No.	Code	Description
800707-000	(6)	Cord Weight

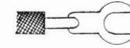
CORD TIPS

Cord tips are used to terminate cord and other conductors in a manner convenient for making electrical connections.

Stock No.	Code	Description
4877-000	(9)	For Nos. 10, 32, 42, 56, and 57 Type Plugs. Uses Stock No. 5729-000 or a No. 2 Screw. Hole Drill—No. 43, Opening— ³ / ₃₂ in.
5171-000	(14)	For Nos. 33, 34, 53, 54, and 55 Type Plugs. Uses Stock No. 8300-000 or a No. 1 Screw. Hole Drill, No. 48. Opening— ⁵ / ₆₄ in.
6916-000	(17)	Used on old style desk set cords. Connects to Magneto Desk Set Boxes using lock nut binding post. Spade opening ³ / ₁₆ in. Fits Screws Nos. 8 or 10.
8312-000	(18)	For Stromberg-Carlson Receiver and Desk Set Cords and on telephone cords of other manufacture. Tip diameter—.081 in.



No. 20

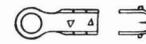


No. 24

Stock No.	Code	Description
8446-000	(20)	For switchboard cord, stay cord. Holds cords on cord hooks. Hole— ⁷ / ₃₂ in.
8898-000	(24)	Transmitter Cord. Clamps under No. 4 Screw in base of desk stand.



No. 35



No. 40

Stock No.	Code	Description
11870-000	(35)	For desk and handset telephone cords. Spade opening— ¹ / ₈ in. Fits No. 4 Screw.
38336-000	(40)	Non-soldering piercing type, used at plug end of switchboard cords. Screw hole drill size ³ / ₃₂ ", length ²⁷ / ₆₄ ". Takes No. 2 screw.

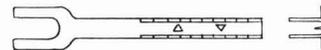


No. 41



No. 42

Stock No.	Code	Description
38337-000	(41)	Non-soldering piercing type, used at plug end of switchboard cords. Screw hole drill size ³ / ₃₂ ", length ¹⁷ / ₃₂ ". Takes No. 2 screw.
38338-000	(42)	Non-soldering piercing type, used at plug end of switchboard cords. Screw hole drill size ¹ / ₈ ", length ²⁷ / ₆₄ ". Takes a No. 4 screw.



No. 43

Stock No.	Code	Description
38334-000	(43)	Non-soldering piercing type, used on switchboard cords at cord fastener terminals. Spade opening slot ⁷ / ₆₄ ", length ¹⁹ / ₃₂ ". Takes No. 4 screw.

Stock No.	Code	Description
33198-000	(46)	Non-soldering type, spade tip, used on line cords, .578" long.
217687-000	(47)	Non-soldering type, spade tip, used on TIE cords, ³³ / ₆₄ " long.
217775-000	(48)	Non-soldering type, eyelet tip, used on TIK cords, .516" long.
211301-000	(49)	Non-soldering type, spade tip, used on handset cords, .578" long.
300970-661	(50)	Non-soldering type, tin plated spade tip, used on handset cords, .542" long.

STROMBERG-CARLSON

SWITCHBOARD CABLE

STROMBERG-CARLSON Switchboard Cable is made from tinned copper conductors with either of two insulations: Mylar polyester film or polyvinyl plastic, each wrapped with single cotton serving. Cover is cotton braid, lacquered.

All paired cable of 10 pairs and over has one spare pair of the same conductor, except as indicated in the tables below. Triplet cable shown has one spare triplet. Dimensions are considered maximum, and given so as to figure space requirements.

Tables show cable carried as stock items; a few other sizes are available on special order. No. 22 AWG cable, used on manual switchboard multiples, is furnished on new work, and may be ordered for additions on a delayed basis.

MYLAR* + COTTON AND LACQUER

Pairs—24 AWG SWB Cable

Stock No.	Code	Pairs	Approx. Diam. Inches
206320-104	105B24	4	17/64
206320-106	106B24	6	19/64
206320-110	71B24	10	3/8
206320-120	66B24	20	15/32
206320-125	84B24	25	17/32
206320-132	108B24	32	37/64
206320-140	109B24	40	21/32
206320-150	90B24	50	45/64
206320-175	110B24	75	55/64
206320-199	91B24	100	1

Triplets—24 AWG

Stock No.	Code	Triplets	Approx. Diam. Inches
206326-110	72B24	10	15/32
206326-120	65B24	20	9/16
206326-220	76B24	20	13/16 X 3/8

Quads—24 AWG

Stock No.	Code	Quads	Approx. Diam. Inches
206328-104	116B24	4	23/64

Singles and Pairs—24 AWG

Stock No.	Code	Singles	Pairs	Approx. Diam. Inches
206322-110	107B24	10	10	27/64
206322-120	113B24	20	20	37/64
206322-220	114B24	20	20	3/8 X 13/16

Singles and Triplets—24 AWG

Stock No.	Code	Singles	Triplets	Approx. Diam. Inches
206324-120	68B24	20	20	21/32
206324-220	69B24	20	20	3/8 X 27/32

Singles—24 AWG

Stock No.	Code	Singles	Spare	Approx. Diam. Inches
206330-106	87B24	6	—	1/4
206330-107	161B24	7	1	5/16
206330-111	162B24	11	1	11/32

* Mylar is a trademark of E.I. DuPont and Company.

NOVELTY BRAID*

24 AWG Pairs

Stock No.	Code	Pairs	Approx. Diam. Inches
206320-304	105NB24	4	17/64
206320-306	106NB24	6	19/64
206320-210	71NB24	10	3/8

* Different braid makes it easy to distinguish these cables when used as supervisory cable from Bay Generator or Supervisory Terminal Block direct to the shelves.

POLY-VINYL INSULATED CONDUCTORS

Pairs—24 AWG SWB Cable

Stock No.	Code	Pairs	Approx. Diam. Inches
200320-204	105BP24	4	5/16
200320-206	106BP24	6	7/16
206320-410	71BP24	10	9/16
206320-320	66BP24	20	11/16
206320-225	84BP24	25	15/32
206320-232	108BP24	32	7/8
206320-240	109BP24	40	15/16
206320-250	90BP24	50	15/32
206320-275	110BP24	75	15/16
206320-299	91BP24	100	17/16

Singles and Pairs—24 AWG

Stock No.	Code	Singles	Pairs	Approx. Diam. Inches
206322-210	107BP24	10	10	11/16
206322-320	113BP24	20	20	13/16

MYLAR AND COTTON, LACQUERED

24 AWG and 18 AWG—Pairs and Singles

Stock No.	Code	Pairs No. 24	Pairs No. 18	Singles No. 18	Approx. Diam. Inches
206320-310	244B24	9	1	2	5/16
206320-116	246B24	15	1	2	3/8

24 AWG—Pairs and 1 Pair 18 AWG

Stock No.	Code	Pairs No. 24	Pairs No. 18	Approx. Diam. Inches
206320-113	102B24	12	1	11/32
206320-115	103B24	14	1	13/32

20 AWG—Pairs and 1 Spare Pair

Stock No.	Code	Pairs	Approx. Diam. Inches
203738-000	111B	5	25/64
203740-000	112B	10	31/64

18 AWG—Toll Cable—Pairs and 1 Spare Pair

Stock No.	Code	Pairs	Approx. Diam. Inches
800179-000	86B	10	15/32
800178-000	85B	20	5/8

STROMBERG-CARLSON

DESIGNATION STRIPS

NO. 5 TYPE

Designation Strips of this type have metal card holders and acetate protectors. They are arranged for screwing directly to the face of a switchboard, plugboard or keyshelf.



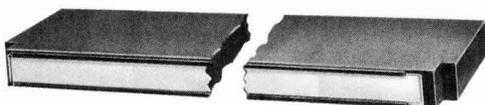
No. 5 Designation Strip

Stock No.	Code	Use	Dimensions		
			Plug Shelf	Length	Width
800710-000	(5)	Keyboard	Specify	½"	Pol. Nickel
800730-000	(24)	Face, 120	Specify	½"	BLK. Japan
33764-000		Swbd.	10 ²³ / ₆₄ "	.373"	Brass

†Dull black finishes will be provided when necessary.

NO. 15 TYPE

These Designation Strips consist of a dull black finished metal holder and celluloid protector, mounted on maple mounting block. The No. 15 Designation Strip is used in 8 panel multiple switchboards, and the No. 17 Designation Strip is used in PBX Switchboards and 6 panel multiple switchboards. Requires No. 17 Jack Fastener.



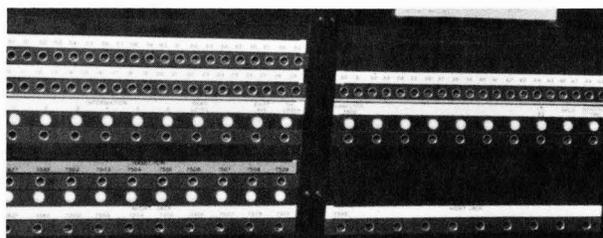
No. 15 Designation Strip

Stock No.	Code	Used With	Dimensions
800716-000	(15)	127 Jack	Face Length—7 ¹⁵ / ₃₂ " Width— ³ / ₁₆ " Mounting Centers—8 ³ / ₁₆ "
800718-000	(17)	130 Jack	Face Length—10 ¹ / ₈ " Width—½" Mounting Centers—11 ¹ / ₁₆ "
800731-000	(25)	127 Jack	Face Length—7 ¹⁵ / ₃₂ " Width—½" Mounting Centers—8 ³ / ₁₆ "
481367-000	(34)	93-A 94-A Jack Mtg.	Face Length—16 ¹⁵ / ₁₆ " Width—½" Mounting Centers—17 ¹⁵ / ₁₆ "

NO. 20 TYPE

This type consists of a metal mounting plate with a car designation strip, and celluloid protector strip, held in place by four nickel plated screws. Used on PBX Switchboards to indicate the operation of the key cams.

Stock No.	Code	Use	Dimensions	
			Length	Width
800736-000	(30-A)	PBX—Cords, Jack Trunk	5 ½"	1"
800737-000	(30-B)	PBX—Cords, Jack Trunk	5 ½"	1"
800738-000	(31-A)	PBX—Cords, Jack Trunk	6 ½"	1"
		2 Pty. Ringing—		
47268-000	(32)	No. 125 Swbd.	5 ½"	1 ⁷ / ₈ "
47269-000	(32-A)	4 Pty. with Hand Gen. No. 125 Swbd.	5 ½"	1"
47270-000	(32-B)	4 Pty. Harmonic— No. 125 Swbd.	5 ½"	1"
47271-000	(32-C)	5 Pty. and Reverse— No. 125 Swbd.	5 ½"	1 ⁷ / ₈ "
47272-000	(32-D)	5 Pty.—No. 125 Swbd.	5 ½"	1 ⁷ / ₈ "
201011-000	(33)	Cord cct. operation— PBX	6 ½"	1"
205059-000	(35)	No. 127 PBX Swbd.		
207252-000	(36)	No. 127 PBX Swbd.	6 ½"	1"



NO. 26 TYPE

These designations consist of a dull black finished holder with a semi-transparent protector. They mount directly in front of No. 121 Lamp Sockets so that only pin points of light show through for trunk signal service. Push fit in face of lamp socket.

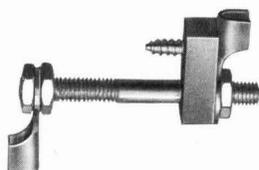
Stock No.	Code	Used with 121 L.S.	Dimensions	
			Length	Width
800732-000	(26)	20 per	7 ½"	3 ¹ / ₆₄ "
800733-000	(27)	10 per	10 ¹ / ₈ "	3 ¹ / ₆₄ "
800734-000	(28)	20 per	10 ¹ / ₈ "	3 ¹ / ₆₄ "
800735-000	(29)	10 per	7 ¹⁵ / ₃₂ "	3 ¹ / ₆₄ "
200045-149	(37)	20 per	7 ½"	3 ¹ / ₆₄ "

DISTRIBUTING BARS

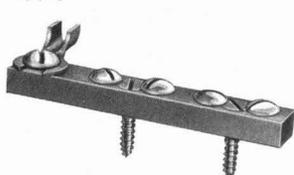
NO. 1-A TYPE

A single point distributing bar with terminal lugs for front and back connections. Used chiefly to terminate power leads in PBX Switchboards.

Stock No.	Code	Points	Used on
800751-000	(1-A)	1	Terminal boards of PBX Switchboard to connect with battery supply.



No. 1-A Distributing Bar



No. 3 Type Distributing Bar

NO. 3 TYPE

This distributing bar is used for connecting a given number of wires to a common source of current or to a common ground. Provides convenient means of opening circuits for testing purposes. Consists of a drawn brass bar, screws, and tinned terminal lug. Used on switchboard terminal boards.

Stock No.	Code	Points	Length
800741-000	(3)	4	2 5/8"
800743-000	(5)	6	3 5/8"
800745-000	(7)	8	4 5/8"
800746-000	(8)	10	5 5/8"
800748-000	(10)	14	7 5/8"
800749-000	(11)	16	8 5/8"
800750-000	(12)	20	10 5/8"

DIALS

TELEPHONE DIALS

For Stromberg-Carlson Dials and Dial Parts, see Telephone Replacement Parts, T-1114.

DIAL MOUNTINGS

SWITCHBOARD TYPE MOUNTING

The simple screw operated clamp plus the cable connection enable this dial mounting to accommodate all standard dials. The mount can also, without any changes, be placed in either the horizontal or vertical plane.

The Stromberg-Carlson Dial Mounting is very simple, small in size, light in weight, and furnished in an attractive black wrinkle finish.

When ordering specify 211205-000, No. 3 Switchboard Dial Mounting Assembly.

Note—On certain switchboards, when fully equipped on the keyshelf, space can be gained by using a simple base block. Consult our representative who can specify the necessary block for your needs.



Switchboard Type Dial Mounting

SUSPENDED TELEPHONE TYPE MOUNTING

For mounting a Stromberg-Carlson Dial on suspended type telephones already in the field, specify No. 200820-000 (143-A) Dial Mounting.

HAND GENERATORS

Parts for Replacing the No. 62-A Generator with the No. 64 Generator

Stock No.	Telephones Used On	Description
208830-000	890	Generator Assembly (Mounting) (Includes No. 64 Generator, one 208832-000 Block, and four 508052-000 screws)
208834-000	890	Package Assembly (Includes two 512700-000 screws, one 207593-000 Crank Assembly, one 207595-000 Gland, one 207596-000 Gland, one 207601-000 washer, two 504052-000 screws and Instruction Sheet 208836-000)

Crank Shafts for Switchboard Generators (Used during Power Failure)

The following generator crank shafts are designed for switchboard use:

Stock No.	Code	Length	Generator	Swbd. No.
800774-000	(2)	18 1/2"	53	102
800775-000	(3)	16"	38	105
203555-000		19 5/8"	64	120, 127, 128, 106
13287-000		17 1/2"	64	125
465-000		1 1/4"	64	121

Specify 201678-000 (64) Alnico Generator and adapter for replacement of discontinued No. 38 Type (5-bar) on the following types of former magneto sets: D-2843, D-2844, 896 Wall Telephones and 1180 Desk Set Box.

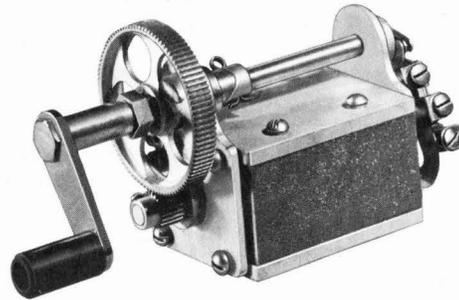
HAND GENERATORS

NO. 64 STREAMLINED TYPE

The No. 64 is a compact Alnico magnet generator used in our magneto telephones and in our switchboards for emergency ringing. While occupying a much smaller space, it is fully as powerful as the bulky, old style 5-bar generator.

The No. 64 is an adaptation of the generator that has been used over a period of years for government requirements and has proved entirely dependable under every possible condition that can be encountered in actual service operation.

This generator furnishes a surplus of ringing current, with ample voltage at all loads. Precision design and accurately made assembly parts have produced a smooth motion that assures long life and economical service.

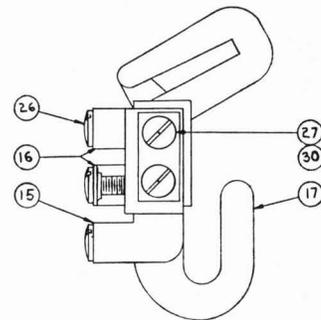
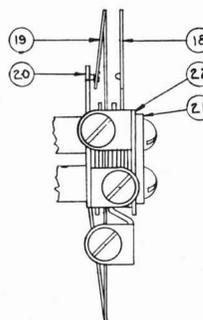
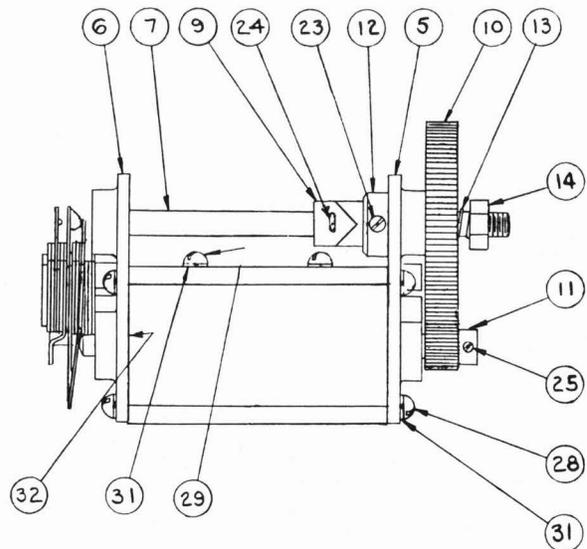
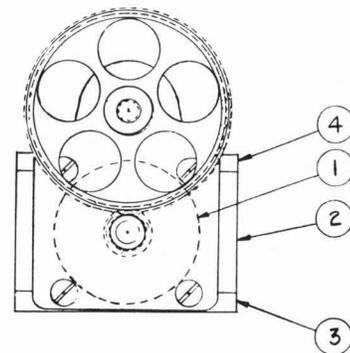


No. 64 Generator

Stock No.	Code	Description	Use
201678-000	(64)	Alnico Generator	No. 1248, 1258 Telephones No. 1268 Mag. Desk Set Box All types of switchboards

Assembly Parts—No. 64 Generator

Drawing Item No.	Stock No.	Description
1	201679-000	Armature assembly
	204859-000	Crank assembled
	203459-000	Crank assembly
	207593-000	Crank assembly
	11730-000	Crank assembly
2	201690-000	Magnets
3	201691-000	Field pole plate (Bottom)
4	201692-000	Field pole plate (Top)
5	201693-000	Bearing plate
6	201694-000	Bearing plate
7	201695-000	Generator Shaft assembly
9	201697-000	Cam (over shaft)
10	201698-000	Large Gear
11	201699-000	Pinion (Small Gear)
12	201700-000	Collar (over large gear sleeve)
13	201701-000	Spiral spring (Next to large gear)
14	201702-000	Spring retainer (Hex nut)
15	201704-000	Terminal (Shunt)
16	201703-000	Terminals (2) Shunt
17	201705-000	Spring (Next to Armature)
18	201706-000	Contact Spring Assembly (Shunt)
19	201707-000	Contact Spring Assembly (Shunt)
20	201709-000	Contact Spring Assembly (Shunt)
21	201711-000	Screw Plate
22	201713-000	Insulations (4) Springs
23	204462-000	Set Screw (Collar)
24	245-000	Cotter pin (Cam)
25	501853-000	Screw (Pinion to shaft)
26	503623-000	Terminal Screws (3)
27	504053-000	Screws (2) Screw plate
28	505453-000	Screws (8) Bearing plates
29	204326-000	Screws (4) Top field plate
30	201712-000	Bushings (2) Shunt
31	526132-000	Split lock washer (12) Bearing and top plates
32	201718-000	Thrust washers (As required)
	204816-000	Complete Shunt Spring Assembly

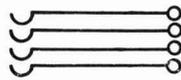
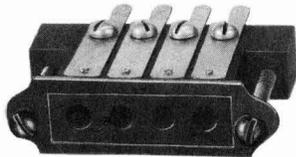


JACKS

The essentials of a good jack are long life and reliable spring pressure that insures low contact resistance in transmission circuits. Whether jacks are furnished individually or in strips, they are equipped with the best nickel-silver springs and are insulated with phenolic fibre of a quality that will not give under pressure. This provides firm spring assemblies which will keep their original adjustment.

When jacks are mounted on strips they are assembled in groups of ten or twenty; and are equipped with dull finished facestrips, either plain, or with white line divisions, or drilled for party line indicators. State the type and code number of the mountings when ordering jacks in strips. Jack fasteners are not included, but must be ordered separately.

OPERATOR'S JACKS

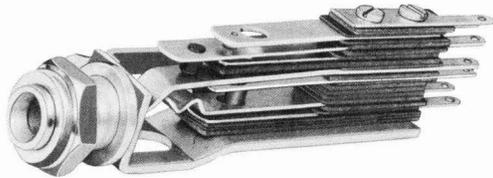


No. 93 Jack Assembly Spring Combination, 93 Jack

Stock No.	Code	Description
801082-000	(93)	Standard operator's cut-in jack for all multiple and non-multiple switchboards. Mounts below key shelf on lock rail. Shape—Oblong Face. Finish—Black Enamel. Takes either No. 23 or newer type No. 66 four-point plug. All four points are used with operator's sets having breast plate transmitters but only two points are required for operator's sets having suspended type transmitters.
801083-000	(93-B)	Similar to 93 except that it has a one break contact.

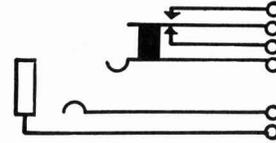
INDIVIDUAL JACKS

No. 140 Jack



Stock No.	Code	Description
49907-000	(140)	Used as a Transfer Jack in three position No. 105 Type Magneto Switchboards to transfer calls from one position to another. Shape—Hexagonal Face. Finish—Nickel Polished. Length— $3\frac{1}{64}$ ". Face Dimensions— $\frac{1}{2}$ ". Mounting Centers—Horizontal— $\frac{15}{16}$ ". Vertical— $\frac{3}{4}$ ". Plug required—No. 42 two conductor, No. 57 two conductor, or No. 55 three conductor plug.

NOTE—No. 140 Jack may be furnished either individually mounted or 5 per strip on No. 84 or No. 85 Mountings. The No. 84 Mounting is drilled for both a jack and a No. 121 Lamp Socket. The No. 85 Mounting is drilled for the jack only. These mountings will mount in place of a strip of 5 No. 11 Type drops.



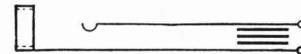
No. 140 Jack Spring Combination

Stock No.	Code	Description
200707-000	(140)	Jacks, No. 84 Mounting—5 per strip, with 121 Lamp Sockets.
801177-000	(140)	Jacks, No. 85 Mounting—5 per strip.

Toll Test Jacks

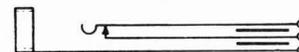
Toll Test Jacks are used primarily for terminating toll lines. They are mounted in pairs or singly in accordance with the circuits. When mounted in pairs a twin type plug is used for test purposes. When mounted singly two or three conductor plugs are used.

No. 144 Jack



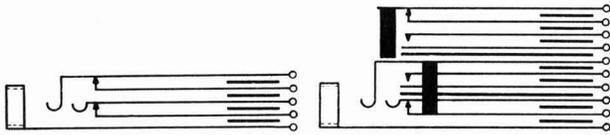
No. 144 Spring Combination

Stock No.	Code	Description
801179-000	(144)	Individual jack. Mounts on panel $\frac{9}{16}$ " thick, requires $\frac{15}{32}$ " drill hole. Used with No. 60 two-conductor plug.
202815-000	(144-A)	Same, except adjusted for No. 61 two-conductor plug.



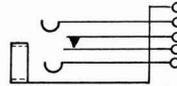
No. 145 Spring Combination

Stock No.	Code	Description
801181-000	(145)	Same type as No. 144 except spring combination. Adjusted for No. 59 three-conductor plug.
801182-000	(145-A)	Same as No. 145, adjusted for No. 61 two-conductor plug.

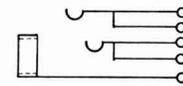


No. 154 Spring Combination No. 155 Spring Combination

Stock No.	Code	Description
801188-000	(154)	Same type as No. 144, except spring combination. Takes No. 59 three-conductor plug.
801189-000	(154-A)	Same as No. 154, adjusted for No. 61 two-conductor and No. 62 twin plugs.
801190-000	(155)	Same type as No. 144, except spring combination. Takes No. 59 three-conductor plug.
800069-000	(155-A)	Same as No. 155 adjusted for No. 61 two-conductor and No. 62 twin plugs.



No. 165 Jack Spring Combination



No. 166 Jack Spring Combination

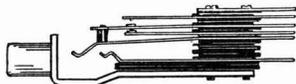
Stock No.	Code	Description
201562-000	(165)	An individual Jack taking No. 53 or No. 65 three conductor Plug.
		Similar to No. 161, with one make contact.
202488-000	(166)	An individual jack. Takes No. 55 or No. 63 three conductor plug.
		Double cut-off type, similar to No. 154. Used in XY Switching Systems.



No. 158 and No. 159 Spring Combination

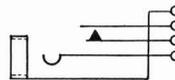
No. 160 Spring Combination

Stock No.	Code	Description
802598-000	(158)	An individual jack of the same general construction as the No. 144. Used in the 120 PBX Switchboards. Takes No. 53 or No. 65 Plug.
802599-000	(159)	Similar spring combination and construction to No. 158. Used in No. 115 Lamp Signal Magneto Switchboards. Takes No. 61 Plug.
802600-000	(160)	An individual double cut-off line jack used in No. 120 PBX Switchboards. Oxidized bronze finish. Takes No. 53 or 65, three-conductor Plug.



No. 161 Spring Combination

Stock No.	Code	Description
802601-000	(161)	An individual jack with tip, ring and sleeve conductors and local break-make. Oxidized bronze finish. Takes No. 53 or No. 65 three-conductor Plug. Used on trunk circuit No. 120 PBX Switchboards.

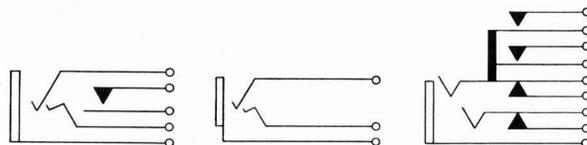


No. 167 Jack Spring Combination



No. 168 Jack Spring Combination

Stock No.	Code	Description
203015-000	(167)	An individual jack taking No. 61 two conductor plug. Sleeve length $\frac{35}{64}$ ".
204251-000	(167-A)	Individual jack. Takes No. 59 three conductor plug. Sleeve length $\frac{35}{64}$ ".
203016-000	(168)	Similar to the No. 167 except for spring combination. Takes No. 61 two conductor plug. Sleeve length $\frac{35}{64}$ ".

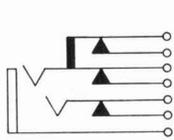


No. 173 Jack Spring Combination

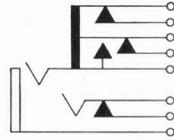
No. 174 Jack Spring Combination

No. 177 Jack Spring Combination

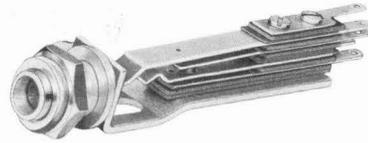
Stock No.	Code	Description
209212-000	(173)	Individual jack. Takes No. 59 three conductor plug. Sleeve length $\frac{35}{64}$ ".
213971-000	(174)	Individual type jack taking a No. 65 three conductor plug. Sleeve length $\frac{1}{2}$ ".
218436-000	(177)	Individual type jack taking a No. 59 three conductor plug.



No. 178 Jack
Spring Combination



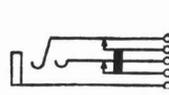
No. 179 Jack
Spring Combination



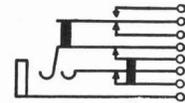
Typical Jack—(No. 147)

Stock No.	Code	Description
218437-000	(178)	Individual type jack taking a No. 59 three conductor plug.
218438-000	(179)	Individual type jack taking a No. 59 three conductor plug.
202680-019	(180)	Individual type jack taking a No. 65 three conductor plug.
202680-079	(182)	Individual type jack taking a No. 61 two conductor plug.
202680-169	(183)	Individual type jack taking a No. 61 two conductor plug or a No. 59 three conductor plug.

Stock No.	Code	Plug Used
801183-000	(147)	No. 59 (3 Cond.) Nos. 60, 61 (2 Cond.)
801186-000	(152)	No. 59 (3 Cond.) Nos. 60, 61 (2 Cond.)
800072-000	(156)	No. 65 (3 Conductor)



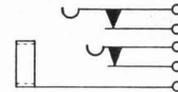
No. 147 Jack
Spring Combination



No. 152 Jack
Spring Combination

Toll Test Jack Mountings

These mountings are used for placing Nos. 144, 145, 154 and *155 Jacks on panels in groups of 24 and 48. The material is black hard rubber, each strip being equipped with one designation strip. Two No. 22 Jack Fasteners are used for mounting. No. 93 Mounting is drilled for 4 No. 19 Number Plates, and No. 94 is drilled for 2 Number Plates.



No. 156 Jack
Spring Combination

Stock No.	Code	Description
200966-000	(93)	Mounting 48 For Toll Test Panels (17 ¹³ / ₁₆ " over-all length)
200967-000	(94)	Mounting 24 For Toll Test Panels (17 ¹³ / ₁₆ " over-all length)
	(93)	Mounting—Less designation strip
	(94)	Mounting—Less designation strip
204271-000	(93-A)	Mounting 48 Toll Test Panel (18 ⁵ / ₁₆ " over-all length)
204272-000	(94-A)	Mounting 24 Toll Test Panel (18 ⁵ / ₁₆ " over-all length)

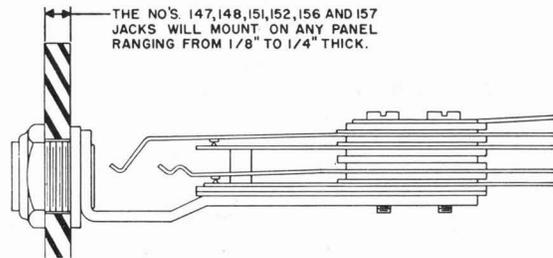
When jacks are mounted at the factory an additional charge is made. Number plates and plug hole blanks are extra.

*No. 155 Jacks require vacant spaces between jacks because of the size of their spring pile-ups. Other jacks mount in adjacent mounting holes of the No. 93 or No. 94 Jack Mounting.

Thin Panel Mounting Jacks

The Nos. 147, 152 and 156 Jacks are of the same general design, with different spring combinations. They are made to mount on panels varying from 1/8" to 1/4" in thickness by proper adjustment of a nut associated with the Jack frame.

The Jacks are held in place on the front of the panel by a hexagon nut. When this nut is fully drawn down, the frame of the Jack is pressed against the panel to make a rigid mounting.



Example of Individual Jack Mounting

Wall Outlet Type

Conveniently mounted in walls for extension telephone service. Uses standard single gang outlet box and plastic wall plate equipped with two conductor jack; escutcheon marked "Telephone." Used to advantage with all Handset Telephones on metallic (two wire) circuits.

Stock No.	Code	Description
25856-000		Telephone Plug-in Jack Assembly, includes outlet plate with jack assembly, outlet box—2" x 2" x 3" and Plate—2 3/4" x 4 1/2".
25960-000		Plug-in Jack Assembly, less outlet box Used with No. 60 Plug

JACKS MOUNTED IN STRIPS

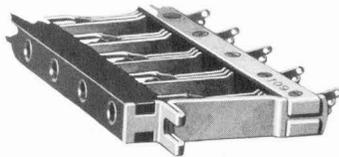
Ordering Note

In ordering jacks mounted in strips be sure to specify number of jacks wanted and the mounting desired. For example: order 20 No. 109 Jacks on No. 61 Mounting.

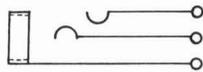
Extra charge is made for numbering of jack strips.

No. 109 Jack

Used as multiple jacks for additions to former standard Stromberg-Carlson Switchboards. Face length— $10^{15}/_{32}$ " , Width— $1/2$ " , Mounting Centers— $10^{15}/_{16}$ " . Uses No. 15 Jack Fasteners and No. 6 Jack Blank. Takes No. 63 three conductor plug. Replaced by No. 130 Jack on all new work.



End View No. 109 Jack



No. 109 Jack Spring Combination

Stock No.	Code	Mounting	No. of Jacks	Group Marking
801090-000	(109)	61	20	Plain Face

No. 127 Jack

Standard for eight panel multiple switchboards. Mounts—10 or 20 per strip. Length of face— $7^{19}/_{32}$ " . Width— $3/8$ " . Depth of Jack from face to tip of springs— $2^{29}/_{32}$ " . Mounting centers— $8^{3/8}$ " .

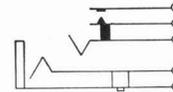


No. 127 Jack Spring Combination

Stock No.	Code	Mounting	No. of Jacks	Group Marking
801137-000	(127)	89	10	Plain Face
42996-000	(127)	90	20	Plain Face
801141-000	(127)	90-C	20	White Line Divisions can be lined on beveled edge for group of jacks.

No. 89 Mounting supersedes No. 82 Mounting.
 No. 90 Mounting supersedes No. 83 Mounting.
 No. 90-C Mounting supersedes No. 83-C Mounting.
 NOTE: No. 127 Jack replaces No. 122 on new work.

No. 128 Jack on 97 Mounting



No. 128 Jack

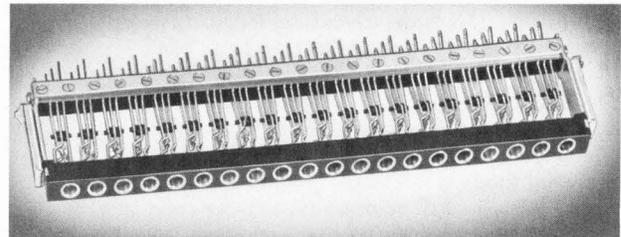
Stock No.	Code	Mounting	No. of Jacks	Group Marking
801143-000	(128)	97	10	Plain Face

No. 130 Jack

For the No. 130 Jack two types of mountings are available—the No. 99 Mounting and the No. 100 Mounting.

In the No. 100 type Mounting the sleeve conductor is made in two parts—the ferrule or sleeve which extends through the face strip of the Jack and the terminating conductor to which the ferrule is joined by a threaded screw connection.

This design makes it possible to easily remove a single sleeve for replacement without disturbing the remaining Jacks or the wiring of the strip.

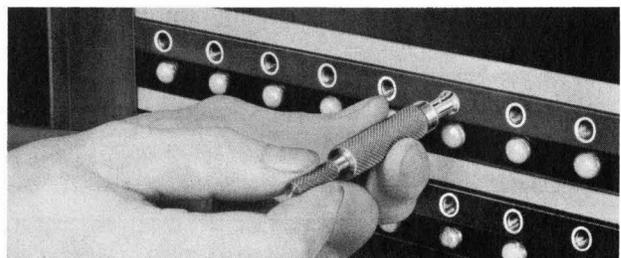


No. 130 Jack

The No. 130 Jack is used in two and six panel multiple switchboards, toll and PBX switchboards.

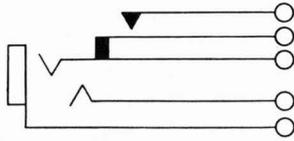
Stock No.	Code	Mounting	No. of Jacks
48368-000	(130)	99	10
48371-000	(130)	100	20
200721-000	(130)	100-A	20
200730-000	(130)	100-B	20

Plugs used—No. 56 Type, two conductor and either No. 53 or 65 Type, three conductor.



No. 130 Jack Sleeves removable from front

**No. 132 Jack
(130 Type)**



No. 132 Jack

Same as No. 130 except spring combination. Used in trunk circuits. No. 132 Jack on 80 mounting only (10 per strip) has been replaced by corresponding No. 134 Jack.

No. 132 Jack

Stock No.	Code	Mounting	No. of Jacks
48372-000	(132)	100	20
200722-000	(132)	100-A	20
200731-000	(132)	100-B	20
218443-000	(132)	99	10

No. 130 Jack Data

Used for two and six panel multiple switchboards. Toll and PBX Boards. This type includes the following jacks:

Nos. 130 to 138 and Nos. 162, 163 and 164

Length of face—10 3/8"

Width of face—3 1/64"

Mounting Strip Centers—11 1/16"

Depth, face to spring tips—3"

Plug used—No. 56 Type (two conductor)

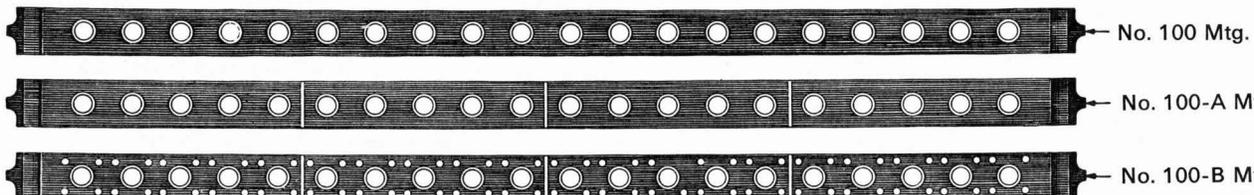
No. 53 or 65 Type (three conductor)

Jack Fastener—No. 17 (2); Jack Blank—No. 52

Standard Mountings for No. 130 Jacks

Selections to meet requirements should be made from the following standard mountings for the No. 130 Jacks which includes Nos. 130, 132 to 138 inclusive and Nos. 162, 163 and 164.

Mounting Codes	No. of Jacks per Strip	Group Markings
No. 99	10	Plain Face
No. 100	20	Plain Face
No. 100-A	20	White line divisions (groups of 5)
No. 100-B	20	White line divisions and drilled for party line indicators

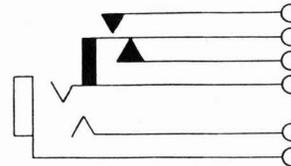


Jack Mountings Used with No. 130 Jacks

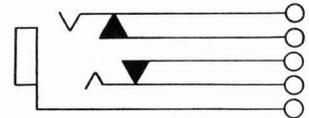
No. 134 Jack

No. 134 same as No. 130 except for spring combinations. Used in trunks and transfer circuits.

Stock No.	Code	Mounting	No. of Jacks
48367-000	(134)	99	10



No. 134 Jack



No. 135 Jack

Plugs used—No. 56 Type, two conductor and either No. 53 or 65 Type, three conductor.

No. 135 Jack

No. 135 same as No. 130 except for spring combinations. Used in Nos. 101, 102 and 106 PBX Switchboards.

Stock No.	Code	Mounting	No. of Jacks
48366-000	(135)	99	10
48374-000	(135)	100	20
200724-000	(135)	100-A	20

Plugs used—No. 56 or 56X Type, two conductor and either No. 65R or 65XR Type, three conductor.

No. 136 Jack

Stock No.	Code	Mounting	No. of Jacks
48365-000	(136)	99	10
48375-000	(136)	100	20
200725-000	(136)	100-A	20
200734-000	(136)	100-B	20

No. 137 Jack

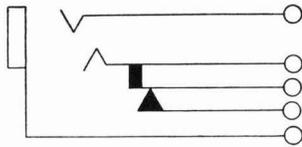
Same as No. 130 except for spring combinations. Used in trunk circuits.

Stock No.	Code	Mounting	No. of Jacks
48364-000	(137)	99	10
48376-000	(137)	100	20
200726-000	(137)	100-A	20
200735-000	(137)	100-B	20

Plugs used—No. 56 Type, two conductor and No. 65 Type, three conductor.

No. 162 Jack

Same as No. 130 except for spring combinations. Used in trunk circuits.



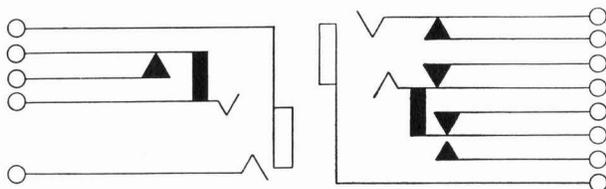
No. 162 Jack

Stock No.	Code	Mounting	No. of Jacks
48360-000	(162)	99	10
48378-000	(162)	100	20
200728-000	(162)	100-A	20
200737-000	(162)	100-B	20

No. 163 Jack

Stock No.	Code	Mounting	No. of Jacks
48361-000	(163)	99	10
48379-000	(163)	100	20
200729-000	(163)	100-A	20
200738-000	(163)	100-B	20

Plug used—No. 56 Type, two conductor and No. 65 Type, three conductor.



No. 163 Jack

No. 164 Jack

No. 164 Jack

Stock No.	Code	Mounting	No. of Jacks
48362-000	(164)	99	10

Plug used—No. 56 or 56X Type, two conductor and either No. 65R or 65XR Type, three conductor.

NOTE—Mounting shown is the only one available for the No. 164 Type Jack.

**No. 169 Jack
(130 Type)**

Double cut-off with local make.

Stock No.	Code	Mounting	No. of Jacks
203851-000	(169)	99	10
203852-000	(169)	100	20
202690-031	(181)	99	10

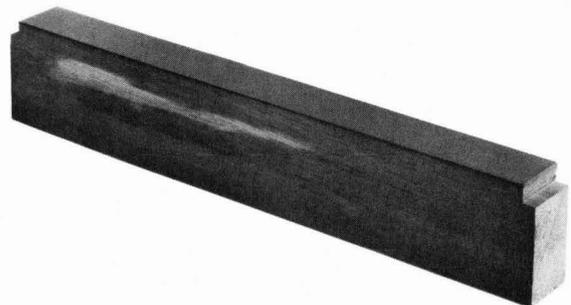
Plug used—No. 65 Type, three conductor.

JACK BLANKS

These blanks may be black formica with satin finish or various woods with and without holly strip edges, depending upon requirements to be met.

In ordering jack blanks the type of jack or lamp socket strip should be specified by its proper code number.

Stock No.	Code	Material	Used in place of Jack	Mtg. Width	Center Length
800030-000	(36)	Oak	127	1 ¹⁵ / ₁₆ "	8 ³ / ₈ "
800031-000	(37)	Mahogany	127	Same as 36 ex. fin.	
800032-000	(38)	Black Formica	127	1 ¹ / ₈ "	8 ³ / ₈ "
800033-000	(39)	Black Formica	127	⁷ / ₈ "	8 ³ / ₈ "
800035-000	(41)	Black Formica	127	³ / ₄ "	8 ³ / ₈ "
800036-000	(42)	Black Formica	127	³ / ₄ "	8 ³ / ₈ "
800037-000	(43)	Black Formica	121 L.S.	¹ / ₂ "	8 ³ / ₈ "
800038-000	(44)	Black Formica	127	⁷ / ₁₆ "	8 ³ / ₈ "
800039-000	(45)	Black Formica	127	³ / ₈ "	8 ³ / ₈ "
800042-000	(48)	Black Formica	130	1 ¹ / ₂ "	11 ¹ / ₁₆ "
800043-000	(49)	Black Formica	130	1"	11 ¹ / ₁₆ "
800044-000	(50)	Black Formica	130	1 ¹ / ₁₆ "	11 ¹ / ₁₆ "
800045-000	(51)	Black Formica	130	1"	11 ¹ / ₁₆ "
800046-000	(52)	Black Formica	130	¹ / ₂ "	11 ¹ / ₁₆ "
800047-000	(53)	Black Formica	130	⁹ / ₁₆ "	11 ¹ / ₁₆ "
800049-000	(55)	Black Formica	121 L.S.	¹ / ₂ "	11 ¹ / ₁₆ "
800050-000	(56)	Black Formica	121 L.S.	³¹ / ₆₄ "	8 ³ / ₈ "
800052-000	(58)	Mahogany	127	1 ¹⁵ / ₁₆ "	8 ³ / ₈ "
800053-000	(59)	Oak	130	2 ⁹ / ₁₆ "	11 ¹ / ₁₆ "
800056-000	(63)	Oak	127	4 ²³ / ₆₄ "	8 ³ / ₈ "
800058-000	(65)	Oak	127	4 ²³ / ₆₄ "	8 ³ / ₈ "
800060-000	(67)	Oak	127	³ / ₄ "	8 ³ / ₈ "
800061-000	(68)	Black Phenolic	127	³ / ₈ "	8 ³ / ₈ "
800064-000	(71)	Maple	121 L.S.	1"	8 ³ / ₈ "
800065-000	(72)	Oak	Mult.	2 ¹ / ₄ "	8 ³ / ₈ "
800066-000	(73)	Oak	T.T.	2 ¹ / ₈ "	18 ¹ / ₈ "
35418-000	(76)	Oak	—	1 ⁵⁷ / ₆₄ "	22 ³ / ₄ "
800070-000	(77)	Birch	127	4 ²³ / ₆₄ "	8 ³ / ₈ "
201188-000	(81)	Oak	127	1 ¹⁵ / ₁₆ "	8 ³ / ₈ "
201189-000	(82)	Oak	127	4 ²³ / ₆₄ "	8 ³ / ₈ "
201190-000	(83)	Oak	127	4 ²³ / ₆₄ "	8 ³ / ₈ "
204622-000	(84)	Oak	T.T.	1 ¹ / ₄ "	18 ¹ / ₈ "
205114-000	(84A)	Oak	T.T.	1 ¹ / ₈ "	18 ³ / ₈ "
213903-000	(85)	Black Formica	130	⁵ / ₈ "	11 ¹ / ₁₆ "



JACK FASTENERS

Jack fasteners are used for mounting jack and lamp socket strips and jack blanks on switchboard stiles. For the proper type to use refer to separate descriptions of standard jacks and lamp sockets which will be found in this section.



No. 17 Jack Fasteners



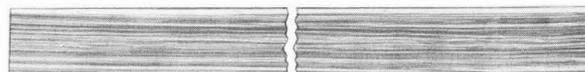
No. 18 Jack Fasteners

Stock No.	Code Used	Jack Mounting	Jack Mounting	Lamp Socket Used	Lamp Socket Mounting
808667-000	(15)	109	59, 60, 61, 62, 63	121	59, 60, 61
801197-000	(17)	127	82, 83, 88	121	82, 83, 88
801197-000	(17)	130	79, 80, 81	121	79, 80, 81
801198-000	(18)	*	—	—	—
801199-000	(19)	*	—	—	—
†801200-000	(20)	109	—	121	—
801201-000	(21)	127	89, 90, 91	121	89, 91, 92
801202-000	(22)	144	93, 94	121	—

*Nos. 18 and 19 used with Jack blanks in unfilled spaces, above multiple, of Nos. 127 and 130 Jacks.

†No. 20 used when stile strips in switchboards are drilled on 1" centers.

HOLLY STRIPS



No. 3 Holly Strip

White Holly Strips mount between jack strips. Used for segregating multiple jacks in banks of 100.

Stock No.	Code	Used With	Dimensions	Material
6984-000	(3)	109 Type Jacks	Length, 10 ¹⁵ / ₃₂ " Width— 1/2" Thickness, 1 ¹ / ₁₆ "	White Holly with Lacquered Edges
13116-000	(15)	No. 127 Jack	Length, 7 ⁹ / ₃₂ " Width— 3/8" Thickness, 1 ¹ / ₁₆ "	White Holly Jack Mounting Centers, 8 ³ / ₈ "
13444-000	(16)	No. 130 Jack	Length, 10 ³ / ₈ " Width— 1/2" Thickness, 1 ¹ / ₁₆ "	White Holly with Lacquered Edges
			Jack Mounting Centers, 11 ¹ / ₁₆ "	

NOTE: No. 15 mounts with 3 No. 22 x 1/4" R.H. Brass Escutcheon Pins.

KEYS

Stromberg-Carlson Keys are furnished in many designs to meet the specific requirements of the circuits in which they are used. Types available include cam lever keys with surface or flush mountings, key units on mountings with ring-off drops and party line indicating keys as well as plunger, twist type and push buttons keys on individual mountings or in strips of standard size. All springs are high grade nickel silver, long and flexible, with contacts of precious metal which effectively prevents corrosion. The assemblies are rigidly mounted and this, together with the use of phenolfibre insulations of the best quality, assures uniformly good performance under all operating conditions.

CAM KEYS

Cam keys have been designed primarily for use in switchboards, attendants' turrets, and test desks. These keys are so constructed as to fit in the least amount of space permitting keys to be mounted adjacent to each other.

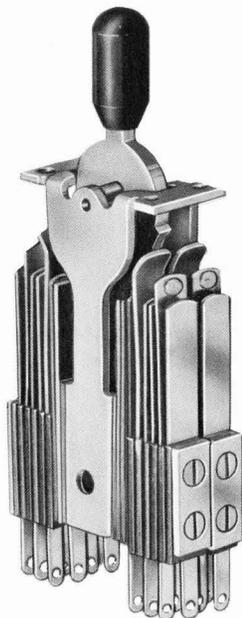
The cam type keys are equipped with free action roller type cams to prevent excessive wear on both the cams and the blade springs which contact the rollers.

Standard spring combinations will meet the requirements of most circuits in which cam type keys are essential, but keys with other combinations can be furnished if ordered in substantial quantities. To avoid specifying special keys it is sometimes possible to use a larger standard key having spring combinations that are not needed, provided, of course, that the remaining combinations will fulfill the requirements to be met.

Both the cam and spring assembly are attached to a zinc-plated one-piece steel frame which forms a rigid mounting that keeps the assembly in proper alignment.

NO. 170 TYPE CAM KEYS

General Description



Typical No. 170 Type Cam Key, without Key Mounting

These keys are designed for general application in circuits where dependable switching, ringing, or listening service is required.

Provision is made for either one-way or two-way cam levers and either locking or non-locking combinations. Keys are coded to indicate these operational differences; in addition the No. 175 Keys have a bent handle, and the No. 176 Keys provide clickless springs.

Both cam and springs are built on a rigid frame of punched steel with rust-proofed finish.

Cam lever handles are available in black, red, white, brown, and sun-tan.

The 170 Type Keys are coded as follows:

- No. 170—One Way, Locking
- No. 171—One Way, Non-Locking
- No. 172—Two Way, Locking and Non-Locking
- No. 173—Two Way, Locking and Locking
- No. 174—Two Way, Non-Locking and Non-Locking
- No. 175—Two Way, Locking and Locking, Bent Handle
- No. 176—Two Way, Locking and Non-Locking, Clickless
- No. 177—Two Way, Locking and Non-Locking, Bent Handle

Key Mountings

Key mounting is required for all cam type keys and this should be ordered as a separate item.

Flush or surface type mountings are available for keyboards and also for use when the keys are mounted in the switchboard face.

For more detailed information see "Key Mountings."

Method of Ordering Complete Keys

In ordering complete cam type keys the number of the desired mounting should be shown in addition to the stock and code number of No. 170 Type Key that has been selected. Examples:

Two Keys on Flush Mounting

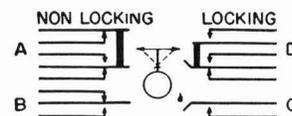
1—802626-000	(170-C)	Key	} mounted on
1—802628-000	(170-D)	Key	
1—801296-000	(93)	Key Mounting	

One Key on Surface Mounting

1—205012-000	(171-B)	Key	mounted on
1—801332-000	(132)	Key Mounting	

For these and other standard Key Mountings see "Key Mountings" further along in this section.

Contact Springs are shown in the non-operated (normal) position.



Typical Key, showing positions of Spring Combinations

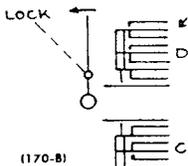
"Z" added to code number indicates brass finished cam for those keys used on No. 120, 121-A Switchboards. See PBX Boards.

One Way, Locking

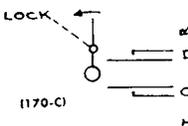
Stock
and
Code

No. Position Contact Description

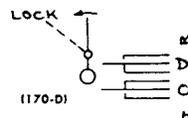
204963-000
(170-B) C One make-before-break
Two break-makes
D One make-before-break
Two break-makes



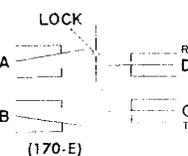
802626-000
(170-C) C One make
D One make



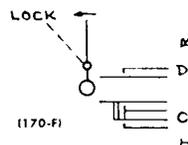
802628-000
(170-D) C One break-make
D One break-make



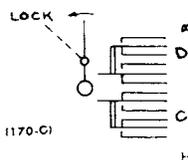
206792-000
(170-E) A One break-make
B One break-make
C One break-make
D One break-make



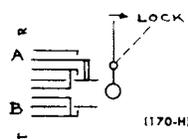
49759-000
(170-F) C One sequence make,
break-make
D One make



802632-000
(170-G) C Two break-makes
D Two break-makes



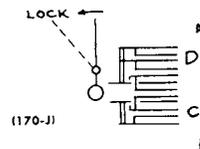
802638-000
(170-H) A One make-before-break,
One make
B One make-before-break



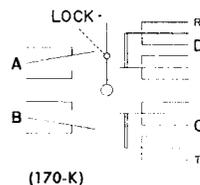
Stock
and
Code

No. Position Contact Description

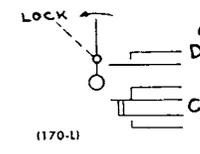
206793-000
(170-J) C One make-before-break,
One break
D One make-before-break,
Two breaks



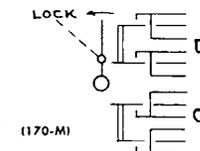
802664-000
(170-K) A One break-make
B One break-make
C Two break-makes
D Two break-makes



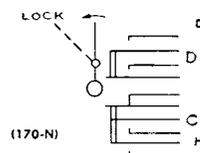
802675-000
(170-L) C One break, one make
D One make



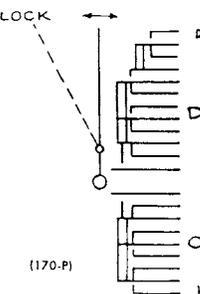
802682-000
(170-M) C Two make-before-breaks
D Two make-before-breaks



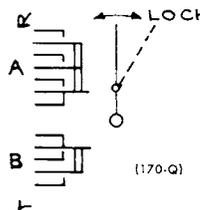
206929-000
(170-N) C One break, two makes
D Two makes



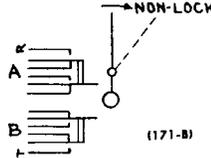
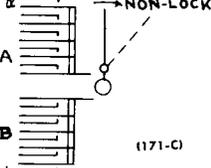
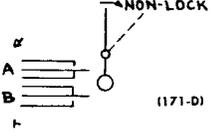
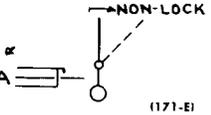
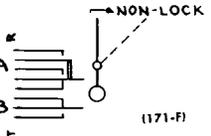
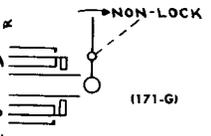
208366-000
(170-P) C One make-before-break,
two break-makes
D One make-before-break,
three break-makes



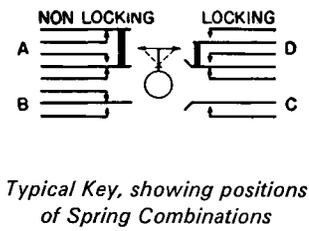
212465-000
(170-Q) A One break-make,
two makes
B One break-make,
one make

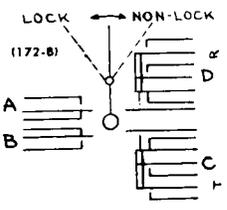
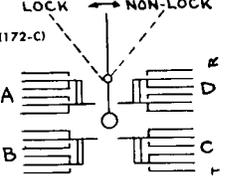
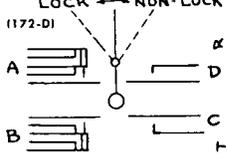
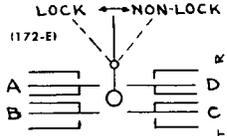
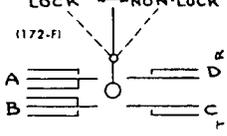
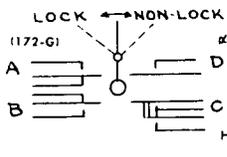
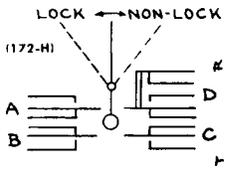
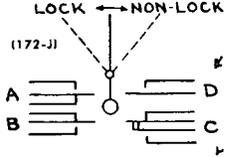


One Way, Non-Locking

Stock and Code		No. Position Contact Description	
205012-000 (171-B)	A B	Two break-makes Two break-makes	
205684-000 (171-C)	A B	Five makes Five makes	
802627-000 (171-D)	A B	One break-make One break-make	
204986-000 (171-DZ)	Same Combination-Brass Cam		
802640-000 (171-E)	A	One make-before-break	
802645-000 (171-F)	A B	One break-make, one make One break-make	
802681-000 (171-G)	A B	One break-make One break-make	

Two Way, Locking and Non-Locking



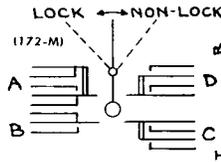
Stock and Code		No. Position Contact Description	
204956-000 (172-B)	A B C D	One break-make One break-make One make-before-break, two makes One make-before-break, two makes	
204957-000 (172-BZ)	Same Combination-Brass Cam		
204964-000 (172-C)	A B C D	Two break-makes Two break-makes Two break-makes Two break-makes	
204965-000 (172-D)	A B C D	One make-before-break, One break One make-before-break, One break One make One make	
802619-000 (172-E)	A B C D	One break-make One break-make One break-make One break-make	
802622-000 (172-F)	A B C D	One break-make One break-make One make One make	
207621-000 (172-FZ)	Same Combination-Brass Cam		
802623-000 (172-G)	A B C D	One break-make One break-make One make sequence with one break-make One make	
802625-000 (172-H)	A B C D	One break-make One break-make One break-make One break-make, One break	
802629-000 (172-J)	A B C D	One break-make One break-make One break, one make One make	

Stock
and
Code

No. Position Contact Description

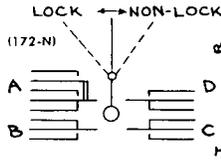
42665-000

- (172-M) A One break-make,
One break
B One break-make
C Two makes
D Two makes



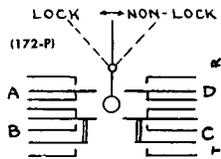
802633-000

- (172-N) A One break-make,
One make
B One break-make
C One break-make
D One break-make



802637-000

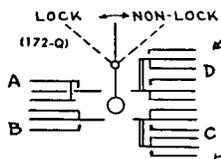
- (172-P) A One break-make
B One break-make,
One make
C One break-make,
One make
D One break-make



209816-000 Same Combination—
(172-PZ) Brass Cam

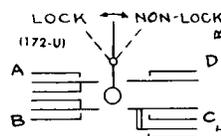
802642-000

- (172-Q) A One make-before-
break
B One break-make
C Two break-makes
D Two break-makes



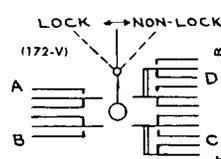
802994-000

- (172-U) A One break-make
B One break-make
C Two makes
D One make



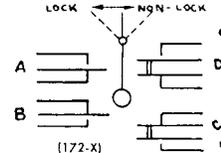
803021-000

- (172-V) A One break-make
B One break-make
C Two break-makes
D Two break-makes



209815-000

- (172-X) A One break-make
B One break-make
C One break, one make
D One break, one make



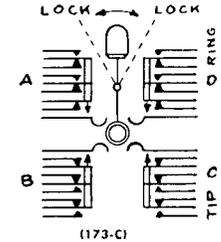
Two Way, Locking and Locking

Stock
and
Code

No. Position Contact Description

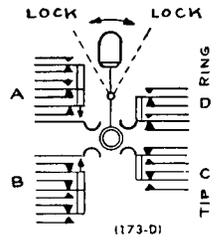
204967-000

- (173-C) A One make-before-
break, Two break-makes
B One make-before-
break, Two break-makes
C One make-before-
break, Two break-makes
D One make-before-
break, Two break-makes



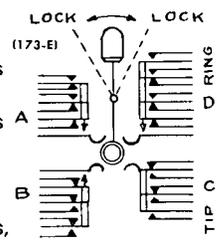
204968-000

- (173-D) A One make-before-
break, Two break-makes
B One make-before-
break, Two break-makes
C Two break-makes
D Two break-makes



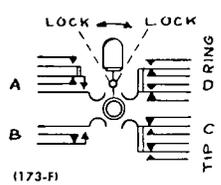
204969-000

- (173-E) A One make-before-
break, Two break-makes
B One make-before-
break, Two break-makes
C Two break-makes,
One make
D One make-before-
break, Two break-makes,
One make



204970-000

- (173-F) A One make-before-
break, One make
B One make-before-
break
C Two break-makes
D Two break-makes

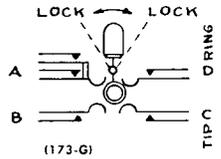


204971-000

(173-FZ) Same Combination-Brass Cam

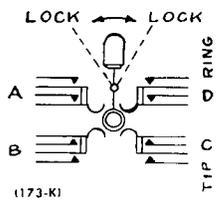
204994-000

- (173-G) A Two makes
B One make
C One make
D One make



205039-000

- (173-K) A Two makes
B Two makes
C Two makes
D Two makes



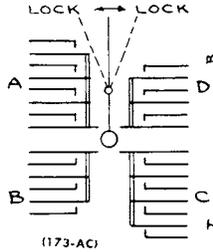
Stock and Code	No.	Position	Contact Description	
205040-000	(173-L)	A	Three makes	
		B	Three makes	
		C	Three makes	
		D	Three makes	
205052-000	(173-M)	A	One make-before-break-make, One make	
		B	One make-before-break, One make	
		C	One break, one make	
		D	Three breaks	
207201-000	(173-MZ)		Same Combination-Brass Cam	
802621-000	(173-N)	A	One break-make	
		B	One break-make	
		C	One break-make	
		D	One break-make	
802624-000	(173-P)	A	Two break-makes	
		B	Two break-makes	
		C	Two break-makes	
		D	Two break-makes	
204987-000	(173-PZ)		Same Combination-Brass Cam	
802631-000	(173-Q)	A	One make	
		B	One make	
		C	One make	
		D	One make	
802644-000	(173-S)	A	One make-before-break, One make	
		B	One make-before-break	
		C	Two break-makes	
		D	Two break-makes	
207343-000	(173-SZ)		Same Combination as 173-S except Brass Cam	
802665-000	(173-T)	A	One make-before-break, One break, one make	
		B	One make-before-break, Two breaks	
		C	One make-before-break	
		D	One make-before-break	

Stock and Code	No.	Position	Contact Description	
802670-000	(173-U)	A	One break-make	
		B	One break-make, One make	
		C	One break-make, One make	
		D	One break-make	
204985-000	(173-UZ)		Same Combination-Brass Cam	
802674-000	(173-V)	A	One break-make, One make	
		B	Two makes	
		C	Two makes	
		D	One break, one make	
206931-000	(173-W)	A	Two makes	
		B	Two makes	
		C	One make	
		D	One make	
207052-000	(173-X)	A	One break-make	
		B	One make-before-break, One break-make	
		C	One make-before-break, Two breaks	
		D	One make-before-break, One break	
207249-000	(173-Y)	A	One break-make, One break	
		B	One break-make, One make	
		C	One break-make, One make	
		D	One break-make, One break	
207250-000	(173-Z)	A	One break-make, Two makes	
		B	One break-make, Two makes	
		C	One break-make, Two makes	
		D	One break-make, Two makes	
207251-000	(173-AA)	A	Two makes	
		B	Two makes	
		C	Three makes	
		D	Three makes	

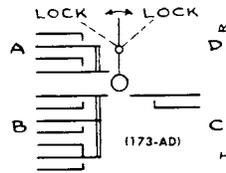
Stock
and
Code

No. Position Contact Description

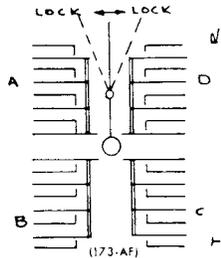
- 207337-000
(173-AC) A Four makes
B Three makes
C Four makes
D Three makes



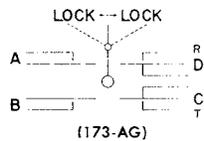
- 207338-000
(173-AD) A Two makes
B Two makes
C Break-make
D -----



- 214039-000
(173-AF) A Four makes
B Four makes
C Four makes
D Four makes



- 200150-143
(173-AH) A One make-before-break
B One make-before-break
C One break, one make-before-break, one make
D One break, one make-before-break, one make

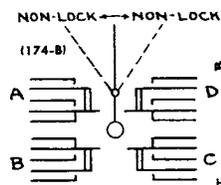


Two Way, Non-Locking and Non-Locking

Stock
and
Code

No. Position Contact Description

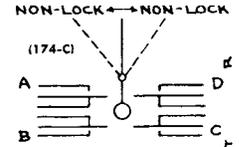
- 204995-000
(174-B) A One break-make, One make
B One break-make, One make
C One break-make, One make
D One break-make, One make



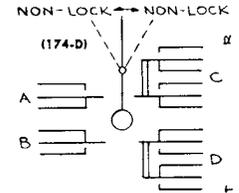
Stock
and
Code

No. Position Contact Description

- 802620-000
(174-C) A One break-make
B One break-make
C One break-make
D One break-make



- 207165-000
(174-D) A One break-make
B One break-make
C Two break-makes
D Two break-makes

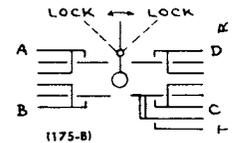


Two Way, Locking and Locking, Bent Handle

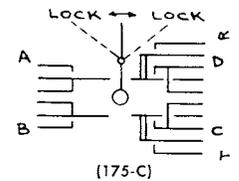
Stock
and
Code

No. Position Contact Description

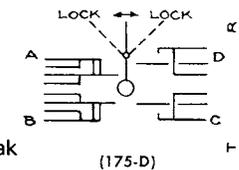
- 206790-000
(175-B) A One make-before-break
B One make-before-break
C One make-before-break, One make
D One make-before-break



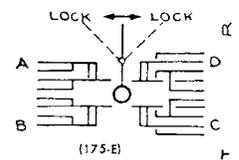
- 206791-000
(175-C) A One break-make
B One break-make
C One make-before-break, One make
D One make-before-break, One make



- 207246-000
(175-D) A Two breaks
B Two breaks
C One make-before-break
D One make-before-break



- 208126-000
(175-E) A Two breaks
B Two breaks
C One make-before-break, One break
D One make-before-break, One break



Stock and Code	No.	Position	Contact Description	
209805-000 (175-G)	A		One break	
	B		One break	
	C		One break-make	
	D		One break-make	
209806-000 (175-H)	A		One break-make	
	B		Two break-makes	
	C		One break-make	
	D		One break-make	
209807-000 (175-J)	A		One make	
	D		One break	
209808-000 (175-K)	A		One break-make	
	D		One break-make	
210969-000 (175-L)	A		Two break-makes	
	B		Two break-makes	
	C		Two break-makes	
	D		Two break-makes	
214045-000 (175-M)	A		One break	
	B		One break	
	C		Break make-before-break	
	D		Break make-before-break	

Two Way, Locking and Non-Locking, Clickless

Stock and Code	No.	Position	Contact Description	
204958-000 (176-B)	A		One break-make	
	B		One break-make	
	C		One make-before-break-make	
	D		One break-make	
			One break-make	
	D		One make-before-break-make	
			One break-make	

Stock and Code	No.	Position	Contact Description	
204959-000 (176-BZ)			Same Combination-Brass Cam	
204972-000 (176-C)	A		One break-make	
	B		One break-make, One make	
	C		One break-make, One make	
	D		One break-make	
204993-000 (176-D)	A		One make, one break-make	
	B		One break-make, One make	
	C		One make-before-break, One make	
	D		One make-before-break, One make	
205037-000 (176-E)	A		One break-make	
	B		One break-make	
	C		One break-make	
	D		One make-before-break-make, One break-make	
205026-000 (176-F)	A		One break-make	
	B		One break-make	
	C		One break-make	
	D		One break-make	
205051-000 (176-H)	A		One break-make, One break	
	B		One break-make	
	C		One make	
	D		One break-make, One make	
207206-000 (176-HZ)			Same Combination-Brass Cam	
205064-000 (176-J)	A		One break-make, One make	
	B		One break-make, One make	
	C		One break-make, One break	
	D		One break-make, One break	

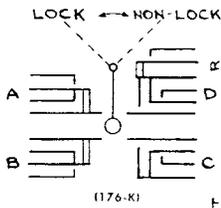
32E • KEYS

Stock
and
Code

No. Position Contact Description

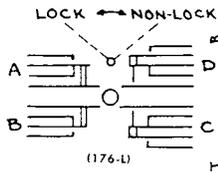
207075-000

- (176-K) A One break-make
 B One break-make
 C One make-before-break-make
 D One make-before-break-make, One make



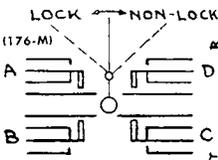
802676-000

- (176-L) A One break-make
 B One break-make
 C One make-before-break, One make
 D One make-before-break, One make



802680-000

- (176-M) A One break-make
 B One break-make
 C One break-make
 D One break-make

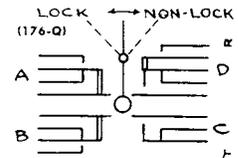


Stock
and
Code

No. Position Contact Description

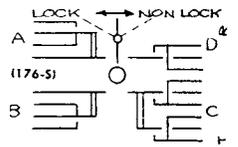
207219-000

- (176-Q) A One break-make
 B One break-make
 C One make-before-break
 D One make-before-break, One make



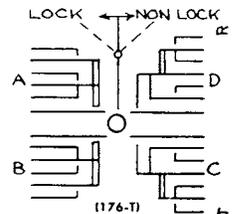
207800-000

- (176-S) A One break-make
 B One break-make
 C Two make-before-breaks
 D One make-before-break



207806-000

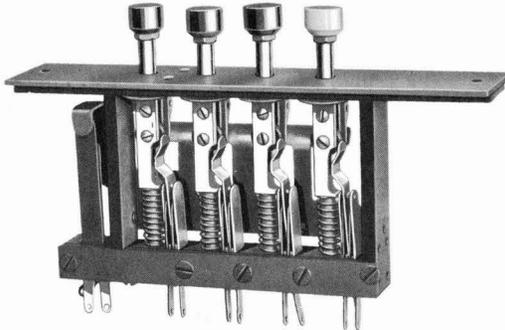
- (176-T) A One break-make, One make
 B One break-make, One make
 C One make-before-break-make, One break-make
 D One make-before-break-make, One break-make



PARTY LINE KEYS

NO. 200 TYPE KEY

A four button, indicating, party line ringing key. Adapted to switchboards that are equipped with either "Manual" or "Machine Ringing" facilities. The buttons are colored blue, red, green and black. Size of key top— $5\frac{1}{2}$ " x 1". Depth of key from surface of escutcheon to the tips of springs— $2\frac{3}{4}$ ". Key top mounts flush with keyboard's surface and is finished in dull black. For keys on other sized mountings see table below.



No. 202 Key Assembly

NO. 210 TYPE KEY

This is a four button, indicating, party line ringing key combined with a cam type listening key. Used in cord circuits which are designed for "Machine Ringing" and "Manual Listening."

The buttons are colored blue, red, green, and black.

Size of key top— $5\frac{1}{2}$ " x 1". Depth of key from the surface of escutcheon to the tips of the springs— $2\frac{3}{4}$ ".

These dimensions are for keys coded 210 to 214. On keys that are coded 215 to 219, the size of the key tops are $6\frac{1}{2}$ " x 1".

The depth of keys coded 210 to 219, as measured from the surface of the escutcheons to the tips of the springs is $2\frac{3}{4}$ ".

NO. 220 TYPE KEY

A four button, indicating, party line ringing key with a one-way locking cam. Adapted to local common battery cord circuits which are arranged for Manual Four Party Harmonic Ringing and Manual Listening.

The buttons are colored blue, red, green, and black.

Size of key top— $5\frac{1}{2}$ " x 1". Depth of key from the surface of escutcheon to the tips of the springs— $2\frac{3}{4}$ ".

NO. 230 WH TYPE KEY

This key consists of a four button, indicating, party line ringing key mounted with two cam keys.

Used in universal cord circuits which are designed for the following features—Four Party "Machine Ringing," "Manual Listening," and with provision for manual toll ringing on either cord end.

Size of key top— $6\frac{1}{2}$ " x 1". The buttons are colored blue, red, green and black.

Depth from surface of escutcheon to the tips of springs— $2\frac{3}{4}$ ".

Code No.	Description	No. of Cam Keys
232-WH	Four Party, Machine Ringing Key	Two

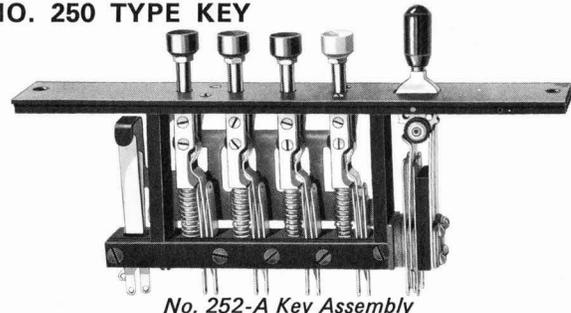
NO. 237-WH TYPE KEY

An indicating, four button, party line key mounted with two cams. Used in universal cord circuits that are designed for—"Manual Party Line Ringing" on the calling cord end, "Manual Party Line Ringing" on the answering cord end, "Manual Toll Ringing" on either cord end and "Manual Listening" bridged across the cord circuit.

Size of key top— $6\frac{1}{2}$ " x 1". Depth of key from surface of escutcheon to the tips of springs— $2\frac{3}{4}$ ".

Code No.	Description	No. of Cam Keys
237-WH	Four Party, Manual Ringing Key	Two

NO. 250 TYPE KEY



No. 252-A Key Assembly

Similar to No. 210 except that it is equipped with a locking cam key which allows ringing over both sides of lines to ground—8 Party. Position of cam indicates whether "tip" or "ring" side of line is being rung. Size of key top— $7\frac{1}{4}$ " x 1".

NO. 260 TYPE KEY

This key is of the four button, indicating, party line type adapted for use as an individual, manual harmonic selective ringing push button key on local to local trunk circuits.

NO. 270 AND NO. 280 TYPE

The following numbers are assigned to party line indicating keys similar in structure and design to those previously described (see code numbers 202 to 262) with the exception that they are arranged for use with No. 340 Type cam keys and therefore are provided with key tops and escutcheons of suitable dimensions to mount properly in switchboard key-shelves.

In ordering the complete party line keys consisting of push button units and cam keys, the cam keys should be specified by their proper code numbers (see No. 340 Cam Type Keys) and the number of the party line key unit also shown.

Example: 1 No. 283 Party Line Key Unit
1 No. 342-FX Cam Key
1 No. 341-A Cam Key

Party Line Indicating Key Units

Code No.	Number of Cam Keys	Type of Ringing	Size of Mounting
279	2	4 Pty. Manual	$7\frac{3}{4}$ " x 1"
280	1	4 Pty. Machine	$6\frac{1}{2}$ " x 1"
283	2	4 Pty. Machine	$7\frac{3}{4}$ " x 1"
290	1	2 Pty. Machine	$7\frac{3}{4}$ " x 1"
291	2	2 Pty. Machine	$7\frac{3}{4}$ " x 1"
292	2	5 Pty. Harmonic	$7\frac{3}{4}$ " x 1"
293	2	5 Pty. Harmonic	$7\frac{3}{4}$ " x 1 $\frac{1}{8}$ "

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When the above party line indicating keys are ordered without cam keys the following code numbers should be used:

Code No.	Number of Cam Keys	Type of Ringing	Size of Mounting
277	None	4 Pty. Manual	7 3/4" x 1"
281	None	4 Pty. Machine	7 3/4" x 1"
285	None	2 Pty. Manual	7 3/4" x 1"
289	None	2 Pty. Machine	7 3/4" x 1"

Party line indicating keys and master keys are furnished with buttons of standard colors as follows:

4 Party Black, Green, Red, Blue

2 Party Red, Blue

If buttons are to be engraved complete information should be given, otherwise plain buttons are furnished.

No. 325—326 Type

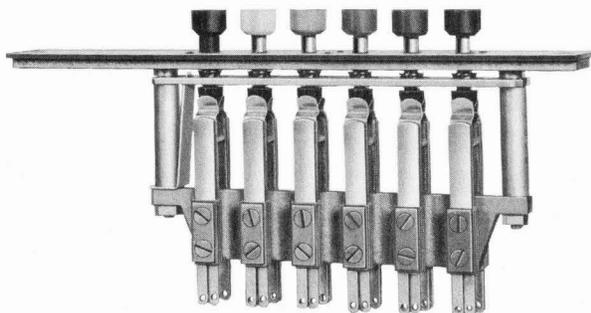
These are 5 and 6 button type master keys adapted for use as an individual master key for either five or six party line ringing. The No. 326 Key is used for six party service as all buttons are operative.

The plungers in both types of keys have two positions: normal (fully restored) and the ringing position in which the keys lock and indicate. Each button remains in the indicating (locking) position until it is automatically restored when another button is depressed. Standard buttons which are black, white, blue, red and green, can be engraved as specified at an additional charge.

Depth of key from surface of escutcheon to tips of spring—3".

Stock No.	Code	Escutcheon		Number of	
		Length	Width	Parties	Buttons
802677-000	(325-A)	5 1/2"	1"	5	5
49956-000	(325-B)	7"	1"	5	5
49892-000	(325-C)	7 3/4"	1"	5	5
200394-000	(325-D)	6 1/2"	1"	5	5
*203588-000	(325-E)	7 3/4"	1"	5	5
802678-000	(326-A)	5 1/2"	1"	6	6
802679-000	(326-B)	7"	1"	6	6
49893-000	(326-C)	7 3/4"	1"	6	6
200395-000	(326-D)	6 1/2"	1"	6	6
*203589-000	(326-E)	7 3/4"	1"	6	6

*The Nos. 325-E and 326-E Keys have provision in the escutcheon for mounting one cam key, which will be specified on the order.



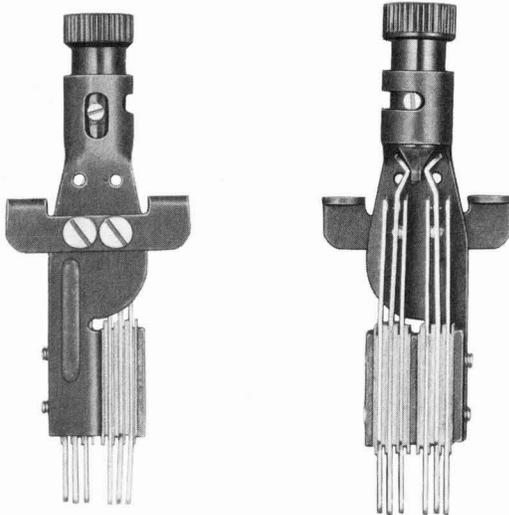
No. 326 Type Key

DIMENSIONS OF PARTY LINE KEYS

Code No.	Width	Length	Esc. Stock No.
200	1 1/4"	5 1/2"	13151-000
201	1 1/8"	5 1/2"	13152-000
202	1"	5 1/2"	13153-000
203	3/4"	5 1/2"	13154-000
204	41/64"	5 1/2"	13155-000
205	1 1/4"	6 1/2"	13156-000
206	1 1/8"	6 1/2"	13157-000
207	1"	6 1/2"	13158-000
208	3/4"	6 1/2"	13159-000
209	41/64"	6 1/2"	13160-000
210	1 1/4"	5 1/2"	13165-000
211	1 1/8"	5 1/2"	13166-000
212	1"	5 1/2"	13167-000
213	3/4"	5 1/2"	13168-000
214	41/64"	5 1/2"	13169-000
215	1 1/4"	6 1/2"	13170-000
216	1 1/8"	6 1/2"	13171-000
217	1"	6 1/2"	13172-000
218	3/4"	6 1/2"	13173-000
219	41/64"	6 1/2"	13174-000
220	1 1/4"	5 1/2"	13165-000
221	1 1/8"	5 1/2"	13166-000
222	1"	5 1/2"	13167-000
223	3/4"	5 1/2"	13168-000
224	41/64"	5 1/2"	13169-000
225	1 1/4"	6 1/2"	13170-000
226	1 1/8"	6 1/2"	13171-000
227	1"	6 1/2"	13172-000
228	3/4"	6 1/2"	13173-000
229	41/64"	6 1/2"	13174-000
230	1 1/4"	5 1/2"	13175-000
231	1 1/8"	5 1/2"	13176-000
232	1"	5 1/2"	13177-000
233	3/4"	5 1/2"	13178-000
234	41/64"	5 1/2"	13179-000
235	1 1/4"	6 1/2"	13175-000
236	1 1/8"	6 1/2"	13176-000
237	1"	6 1/2"	13177-000
238	3/4"	6 1/2"	13178-000
239	41/64"	6 1/2"	13179-000
252	1"	5 1/2"	12697-000
260	1 1/4"	5 1/2"	13151-000
261	1 1/8"	5 1/2"	13152-000
262	1"	5 1/2"	13153-000
263	3/4"	5 1/2"	13154-000
264	41/64"	5 1/2"	13155-000
265	1 1/4"	6 1/2"	13156-000
266	1 1/8"	6 1/2"	13157-000
267	1"	6 1/2"	13158-000
268	3/4"	6 1/2"	13159-000
269	41/64"	6 1/2"	13160-000

INDIVIDUAL PLUNGER KEYS

Push Type and Twist Type Keys



No. 334 Key

No. 338 Key

Individual Push Type Plunger Keys
Nos. 334, 335 and Nos. 336, 337

These Keys are available in both locking and non-locking types and designed for mounting on either $\frac{7}{8}$ " or $\frac{1}{2}$ " panels. The plungers are black with plain buttons but, when specified, engraved letters can be added to meet circuit requirements. Spring contacts, method of mounting and operating features are indicated by letters affixed to the code numbers of Nos. 334, 335 and Nos. 336, 337 Type Keys.

The Nos. 336 and 337 Non-Locking Push Type are generally similar to the Nos. 334 and 335 Locking Push Type Keys, except that they have rollers on the actuating springs.

Individual Twist Type Plunger Keys
Nos. 338 and 339

Twist type keys and push type keys are the same with the exception of the plungers. All twist keys are locking. Plain black buttons are standard but red, white or brown can be furnished and engraved letters added when specified.

The Nos. 338 and 339 Twist Type are furnished only as locking keys and used in night alarm, battery and generator circuits.

Multiple Twist-Locking Key
No. 369

Designed originally for operator's switchboard furnishing Hotel-Motel Message Waiting service, this key has many other uses. Black face with white engraved arrow; edges knurled. When operated, it lights the Message Waiting lamp at station instrument, indicating to the station party that a call for him was received during his absence. No. 369 Key mounts 10 per strip on a No. 122 Mounting. Individual key Stock No. 200157-069.

Individual Push Type Plunger Keys

Mounts on $\frac{7}{8}$ " Panel			Mounts on $\frac{1}{2}$ " Panel	
Stock No.	Code		Stock No.	Code
49506-000	(334-A)	Locking	49512-000	(335-A)
49507-000	(334-B)	Locking	49513-000	(335-B)
49508-000	(334-C)	Locking	49514-000	(335-C)
49509-000	(334-D)	Locking	49515-000	(335-D)
49510-000	(334-E)	Locking	49516-000	(335-E)
49511-000	(334-H)	Locking	49517-000	(335-H)

Mounts on $\frac{7}{8}$ " Panel			Mounts on $\frac{1}{2}$ " Panel	
Stock No.	Code		Stock No.	Code
49518-000	(336-A)	Non-Locking	49524-000	(337-A)
49519-000	(336-B)	Non-Locking	49525-000	(337-B)
49520-000	(336-C)	Non-Locking	49526-000	(337-C)
49521-000	(336-D)	Non-Locking	49527-000	(337-D)
49522-000	(336-E)	Non-Locking	49528-000	(337-E)
49523-000	(336-H)	Non-Locking	49529-000	(337-H)
---	---	Non-Locking	211082-000	(337-J)
---	---	Non-Locking	211083-000	(337-K)
---	---	Non-Locking	211132-000	(337-L)
211158-000	(336-M)	Non-Locking	219369-000	(337-M)

Individual Twist Type Plunger Keys

Mounts on $\frac{7}{8}$ " Panel			Mounts on $\frac{1}{2}$ " Panel	
Stock No.	Code		Stock No.	Code
49530-000	(338-A)	Locking	49536-000	(339-A)
49531-000	(338-B)	Locking	49537-000	(339-B)
49532-000	(338-C)	Locking	49538-000	(339-C)
49533-000	(338-D)	Locking	49539-000	(339-D)
49534-000	(338-E)	Locking	49540-000	(339-E)
216548-000	(338-F)	Locking	---	---
201122-000	(338-G)	Locking	49541-000	(339-H)
49535-000	(338-H)	Locking	209018-000	(339-J)
---	---	Locking	211740-000	(339-L)
---	---	Locking	212699-000	(339-M)
---	---	Locking	211760-000	(339-N)
---	---	Locking	211947-000	(339-P)

- A. Two make contacts
- B. Two break contacts
- C. Two break-make contacts
- D. Two make-before-break contacts
- E. Two double make contacts
- G. Three breaks and one make contacts
- H. Four single make contacts
- J. Two break-makes and two makes
- K. Two break-makes, one make and one break
- L. Two break-makes, one break, and two makes
- M. Four break-makes
- N. Three break-makes, two breaks
- P. Four makes and two breaks
- Q. Two breaks, two break-makes, one make-before-break

STROMBERG-CARLSON

KEY MOUNTINGS

No. 55



Surface Keyboard Type

These Key Mountings are generally mounted with two No. 5502 Oval Head Wood Screws on the surface of keyboards. They mount one cam key each. Finish—black enamel.

Stock No.	Code No.	No. of Keys	Face Length	Face Width	Mounting Centers
801264-000	(55)	1 No. 175	2 3/4"	3/4"	2 3/8"
801270-000	(66)	1 No. 170	2 5/16"	3/4"	1 7/8"
801332-000	(132)	*1 No. 340 or 170	2 3/4"	15/16"	2 3/8"
801333-000	(133)	*1 No. 340 or 170	2 5/16"	15/16"	1.880"

*Note: 340 Type Keys are replaced by No. 170 Type.

Flush Keyboard Type

These Mountings have steel tops covered with dull finished phenolic material and mount flush with the keyboard surface. Each mounting uses 2 Stock No. 12908-000 screws and 2 Stock No. 12672-000 clamps for key frame mounting. Finish dull black, except those marked*, which are suntan.

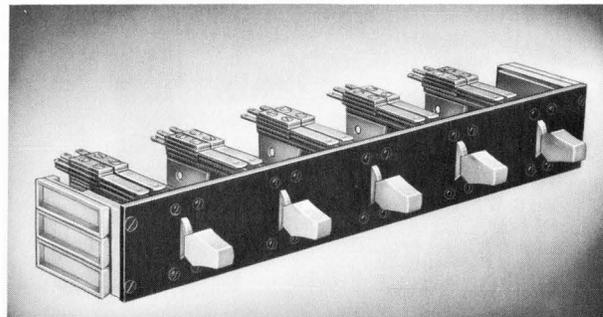
Stock No.	Code No.	No. of Keys	Face Length	Face Width	Mounting Centers
207331-000	(88)	1	5 1/2"	1"	5 1/16"
207332-000	(89)	2	5 1/2"	1"	5 1/16"
207333-000	(90)	3	5 1/2"	1"	5 1/16"
801311-000	(111)	1	6 1/2"	1 1/8"	6 1/16"
801314-000	(114)	1	7 1/4"	1 1/8"	6 3/16"
801315-000	(115)	2	7 1/4"	1 1/8"	6 3/16"
801316-000	(116)	3	7 1/4"	1 1/8"	6 3/16"
801321-000	(121)	1	2 3/4"	1"	2 5/16"
801325-000	(125)	1	7"	1"	6 1/2"
801326-000	(126)	2	7"	1"	6 1/2"
801327-000	(127)	3	7"	1"	6 1/2"
*801328-000	(128)	1	5 1/2"	1"	5"
*801329-000	(129)	2	5 1/2"	1"	5"
*801330-000	(130)	3	5 1/2"	1"	5"
*801331-000	(131)	3	5 1/2"	7/8"	5"
801334-000	(134)	1	5 1/2"	1"	5 1/16"
*205649-000	(138)	1	5 1/2"	7/8"	5 1/16"
*205650-000	(139)	2	5 1/2"	7/8"	5 1/16"
203773-000	(150)	2	6 1/2"	1"	6 3/8"
203774-000	(151)	2	6 1/2"	1"	6 3/8"
203775-000	(152)	1	6 1/2"	1"	6 3/8"
203776-000	(153)	3	6 1/2"	1"	6 3/8"
206771-000	(154)	1	7"	1"	6 9/16"
206772-000	(155)	2	7"	1"	6 9/16"
206773-000	(156)	3	7"	1"	6 9/16"
206774-000	(157)	2	7"	1"	6 9/16"
205651-000	(158)	1	2 3/4"	7/8"	2 5/16"
205652-000	(159)	1	6.496"	.999"	6 1/16"
205653-000	(160)	2	6.496"	.999"	6 1/16"
205654-000	(161)	3	6.496"	.999"	6 1/16"
208444-000	(164)	1	6 1/2"	1"	6 3/8"
208655-000	(165)	1	3 3/16"	1"	3 3/8"
208656-000	(166)	2	3 3/16"	1"	3 3/8"

Mountings Nos. 150 through 157 have clear escutcheons.

*These Key Mountings have Suntan finish escutcheons and use Phillips head brass screws for face mounting.

Switchboard Face Mounting Type

These Key Mountings mount similarly to jacks and lamps in the faces of switchboards. They are held in place by No. 17 Jack Fasteners. Finished in black enamel.



No. 104 Switchboard Face Key Mounting

Stock No.	Code No.	No. of Keys	Face Length	Face Width	Mounting Centers
801294-000	(91)	10	10 3/8"	1 1/2"	11 1/16"
801304-000	(104)	5	10 3/8"	2"	11 1/16"
801320-000	(120)	10	10 3/8"	1 1/2"	11 1/16"
204950-000	(162)	10	11 23/32"	1 3/4"	10 15/16"
205047-000	(163)	15	17 15/16"	2"	

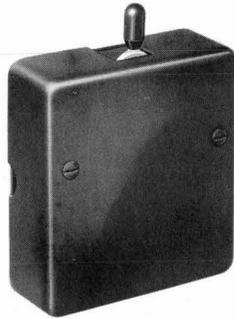
KEY BLANKS

The Stromberg-Carlson key blanks may be of formica or steel and are available in various finishes. In ordering, the type of key being replaced should be specified by its proper code number.



Stock No.	Code	Replaces Key	Mounting Center	Size
3222-000	(7)	No. 16, 25 & 170	1 3/8"	x 4 1/64"
	(68)	No. 170	6 1/10"	6 1/2" x 1"
	(69)	No. 191	6 1/16"	6 1/2" x 1/2"
	(70)	No. 170	6 1/16"	6 1/2" x 3/4"
	(71)	No. 190	5 1/16"	5 1/2" x 1/2"
207334-000	(72)	No. 170	5 1/16"	5 1/2" x 1"
12234-000	(77)	No. 170	6 1/16"	6 1/2" x 1 1/8"
13235-000	(78)	No. 170	5 1/16"	5 1/2" x 3/4"
13236-000	(79)	No. 170	5 1/16"	5 1/2" x 1 1/8"
206767-000	(80)	No. 170	2 5/16"	2 3/4" x 1 1/8"
206768-000	(81)	No. 170	2 5/16"	2 3/4" x 1"
13439-000	(83)	No. 170 or 340	6 13/16"	7 1/4" x 1 1/8"
27255-000	(84)	No. 325 & 326 B	6 9/16"	7" x 1"
207335-000	(85)	No. 170	5 1/16"	5 1/2" x 1"
207336-000	(86)	No. 170	5 1/16"	5 1/2" x 3/8"
32132-000	(87)	No. 170 or 340	2 3/8"	2 3/4" x 15/16"
33992-000	(88)	No. 170 or 340	1.880"	2 5/16" x 15/16"
206770-000	(94)	No. 170 or 340	6.562"	7" x 1"
205655-000	(95)	No. 170 or 340	2.312"	2 3/4" x 7/8"
205451-000	(96)	No. 170 or 340	6.062"	6 1/2" x 1"
208657-000	(97)	No. 170	3 3/8"	3 13/16" x 1"
208658-000	(98)	No. 170	3 3/8"	3 13/16" x 1 1/8"

NO. 13 KEY BOX



No. 13 Key Box

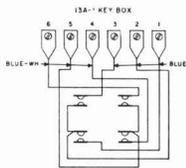
The No. 13 Key Box is made of pressed steel in a dull black finish. It is designed for mounting on the side or end of a desk or table. Each Key Box is equipped with one cam type Key.

All key springs are wired to screw terminals in such a manner that various wiring combinations can readily be made. Dimension—4 1/4" x 3 3/8" x 1 7/8".

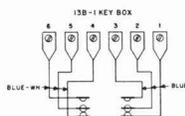
Stock No.	Code	Equipped with	Description
216770-000	(13-1)	173-N Key	2-Way, Locking-Locking
216771-000	(13A-1)	173-Q Key	2-Way, Locking-Locking
216772-000	(13B-1)	170-D Key	1-Way, Locking
216773-000	(13C-1)	171-D Key	1-Way, Non-Locking
216774-000	(13D-1)	170-G Key	1-Way, Locking
216775-000	(13E-1)	173-N Key	2-Way, Locking-Locking
216776-000	(13F-1)	173-U Key	2-Way, Locking-Locking
216777-000	(13FA-1)	173-H Key	2-Way, Locking-Locking
*216778-000	(13G-1)	175-B Key	1-Way, 3 position lock'g
216779-000	(13H-1)	171-C Key	1-Way, Non-Locking

*No. 175-B Key, used in the No. 13G-1 Key Box, has a tilted handle. All other keys have straight handles.

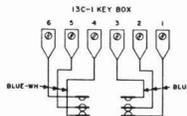
Typical Wiring Diagrams of No. 13 Type Key Boxes



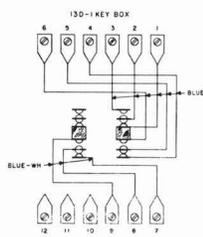
With No. 173-Q Locking Key



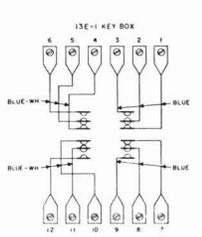
With No. 170-D Locking Key



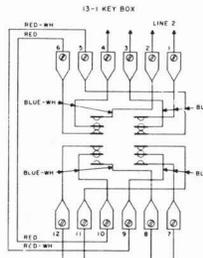
With No. 171-D Non-Locking Key



With No. 170-G Locking Key



With No. 173-N Locking Key

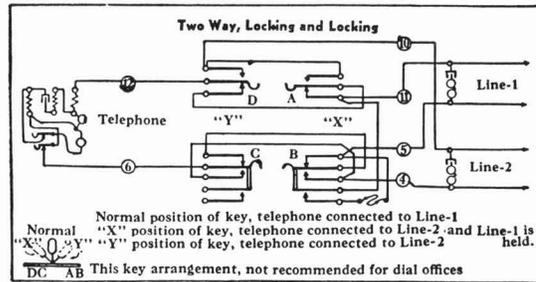


With No. 173-N Locking Key

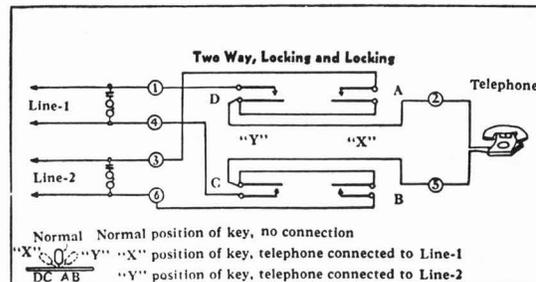
No. 216780-000 Key Box (Less Key and Wiring)

When keys other than those shown in the following codes are required, they may be selected from those listed under "Cam Keys." These keys may be mounted in the (216780-000) Key Box (less key and wiring). Twelve terminals are provided within each Key box.

Typical No. 13 Key Box Applications

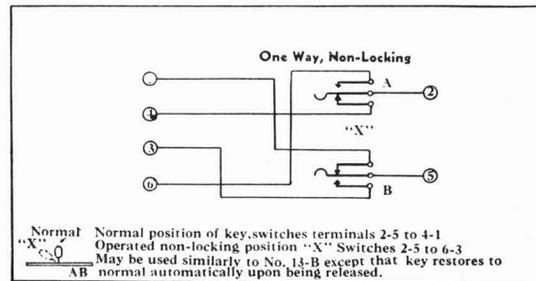


Normal position of key, telephone connected to Line-1
 "X" position of key, telephone connected to Line-2 and Line-1 is held.
 "Y" position of key, telephone connected to Line-2 held.
 DC AB This key arrangement, not recommended for dial offices



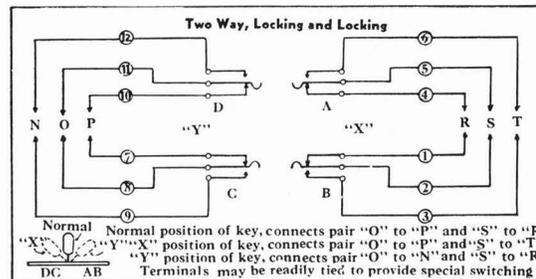
Normal position of key, no connection
 "X" position of key, telephone connected to Line-1
 "Y" position of key, telephone connected to Line-2
 DC AB

No. 13A-1



Normal position of key, switches terminals 2-5 to 4-1
 Operated non-locking position "X" Switches 2-5 to 6-3
 May be used similarly to No. 13-B except that key restores to normal automatically upon being released.
 DC AB

No. 13C-1



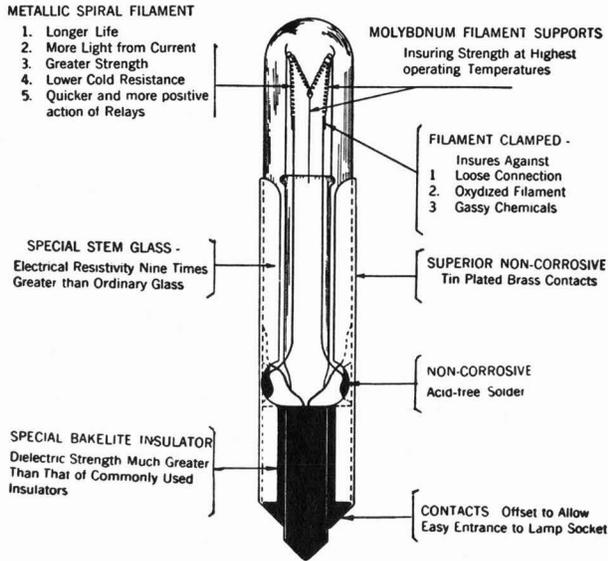
Normal position of key, connects pair "O" to "P" and "S" to "R"
 "X" position of key, connects pair "O" to "P" and "S" to "T"
 "Y" position of key, connects pair "O" to "N" and "S" to "R"
 Terminals may be readily tied to provide special switching
 DC AB

No. 13E-1

LAMPS—SWITCHBOARD

Stromberg-Carlson tipless lamps will fit any standard lamp socket in telephone service.

The over-all length is $1\frac{23}{32}$ " and diameter 0.300". Put up in standard packages of 100 lamps but smaller quantities may be ordered.



Stromberg-Carlson Telephones Switchboard Lamp

Important Advantages

Tungsten filaments clamped to the lead-in wires.

Filament supports of highly heat-resistant material are embedded in the stem.

Base consists of two metal contact pieces on either side of a plastic insulator of extremely high dielectric strength.

Long life and low current consumption is enhanced by using special stem glass that is nine times more resistant to heat than ordinary glass.

The use of acid-free solder and special plating of contacts maintains solid electrical contacts for years.

Ordering Data and Characteristics

Stock No.	Code	Volts	Current in		Approx. Ohms, Cold	Min. *E.F. Candle Power
			Min.	Max.		
801366-000	(12-A)	12	.090	.110	12	110
801368-000	(18-A)	18	.035	.050	46	150
801369-000	(24-B)	24	.035	.050	61	200
801370-000	(24-C)	24	.060	.085	33	750
209569-000	(24-H)	24	.018	.033	135	75
801372-000	(44-A)	44	.060	.085	61	650
801374-000	(48-B)	48	.090	.110	48	360
42201-000	(48-C)	48	.032	.038	160	200
201737-000	(48-D)	48	.012	.021	410	30
801375-000	(55-C)	55	.045	.055	109	500
45271-000	(60-A)	60	.045	.055	120	500

*E.F.C. is the candle power at a distance of one foot from the tip of the lamp.

24 volt lamps may be used on voltage 18-28; 44 volt lamps on voltage 36-48.

STROMBERG-CARLSON

LAMP CAPS

Stromberg-Carlson Lamp Caps are built to combine neatness with durability—the lenses are made of specially annealed glass to resist breakage from impact with plugs, and are mounted in bushings made from seamless metal tubing which is later spun over to retain the lenses—other end of shank is slotted for close fitting in lamp socket.

No. 23 Pilot Type



No. 23 Pilot Lamp Cap

A pilot lamp cap used on common battery multiple, non-multiple, and PBX Switchboards. Designed for use with the No. 9 Individual Lamp Socket. This lamp cap is equipped with an attractive sand-blasted lens. Maximum diameter of face— $\frac{59}{64}$ ", Diameter of shank is 0.811", fits $\frac{13}{16}$ " hole.

Stock No.	Code	Color	Lens Finish	Glass Description
801388-000	(23-A)	White	Glossy	Translucent
801389-000	(23-B)	Red	Sanded	Translucent
801390-000	(23-C)	Green	Sanded	Translucent
801391-000	(23-D)	Amber	Sanded	Translucent
207824-000	(23-E)	Red	Glossy	Translucent
207825-000	(23-F)	Clear	None	Transparent
207826-000	(23-G)	Red	Glossy	Transparent
207827-000	(23-H)	Clear	None	Transparent
209428-000	(23-J)	Red	Glossy	Translucent

No. 27 Supervisory Type

A Supervisory Lamp Cap associated with trunk circuits, with cord circuits, and with miscellaneous circuits where caps are not required to be numbered. Designed for use with the No. 12 Lamp Socket on the keyboard and the No. 121 Lamp Socket on Nos. 79, 80, 81 or 82 Mounting in the switchboard face. This lamp cap is equipped with a non-breakable opal. Maximum diameter of face— $\frac{3}{8}$ ", Diameter of shank—0.340", fits $\frac{11}{32}$ " hole.

Stock No.	Code	Color	Lens Finish	Glass Description
801392-000	(27-A)	White	Glossy	Cloudy
801393-000	(27-B)	Red	Sanded	Clear
801394-000	(27-C)	Green	Sanded	Clear
801395-000	(27-D)	Transparent	Glossy	Clear
801396-000	(27-E)	White	Glossy	Cloudy, Red when lighted



No. 27 Supervisory



No. 29 Line

No. 29 Line Type

Associated with line lamp sockets in 20 per strip mounting on eight panel multiple switchboards. Designed for use with the No. 121 Lamp Socket on No. 83 Mounting only. Equipped with a non-breakable lens. No. 29-A only provided with removable number disc which is held in place by an invisible ring. Disc numbered as specified. Maximum diameter of face— $\frac{3}{8}$ ", Diameter of shank—0.320", fits a $\frac{5}{16}$ " hole.

Stock No.	Code	Color	Lens Finish	Glass Description
801400-000	(29-A)	Trans-parent	Glossy	Clear, number disc
801401-000	(29-B)	Red	Sanded	Clear
801402-000	(29-C)	Green	Sanded	Clear
801403-000	(29-D)	White	Glossy	Cloudy
801404-000	(29-E)	White	Glossy	Cloudy with • Symbol
801405-000	(29-F)	White	Glossy	Cloudy with + Symbol
801406-000	(29-G)	White	Glossy	Cloudy with I Symbol

No. 30 Line Type

A lamp cap used on PBX and Multiple Switchboards over line lamps. Designed for use with the No. 121 Lamp Socket on Nos. 79, 80, 81, 82, or 89 Mountings. Equipped with a non-breakable lens. No. 30-A and 30-L only provided with removable paper number disc which is held in place by an invisible ring. Disc numbered as specified. Diameter of face— $\frac{3}{8}$ " , Diameter of shank—0.340" , fits a— $\frac{11}{32}$ " hole.



No. 30 Line

Stock No.	Code	Color	Lens Finish	Glass Description
801407-000	(30-A)	Trans-parent	Glossy	Clear, number disc
801408-000	(30-D)	White	Glossy	Cloudy with • Symbol
801409-000	(30-J)	White	Glossy	Cloudy with + Symbol
801410-000	(30-K)	White	Glossy	Cloudy with I Symbol
801411-000	(30-L)	Transparent	Flat lens	with number disc.



No. 30-D No. 30-J No. 30-K Lamp Caps

No. 31 Supervisory Type

Standard lamp cap used with both trunk and cord circuits on PBX and Multiple Switchboards. Designed for use with the No. 13 Lamp Socket only. Equipped with a non-breakable lens. Maximum diameter of face— $\frac{13}{32}$ " , Diameter of shank—0.343" , fits $\frac{11}{32}$ " hole.



No. 31 Supervisory Lamp Caps

Stock No.	Code	Color	Lens Finish	Glass Description
801412-000	(31-A)	White	Glossy	Translucent
801413-000	(31-B)	Red	Sanded	Translucent
801414-000	(31-C)	Green	Sanded	Translucent
207177-000	(31-D)	Clear	None	Transparent

LAMP SOCKETS

Stromberg-Carlson Lamp Sockets are furnished in two types: those for mounting individually and those for mounting in strips. Both of these types are provided with all metal frames so as to readily distribute and radiate the heat generated by the lamps. Every Stromberg-Carlson Lamp Socket takes a standard switchboard lamp and lamp cap.

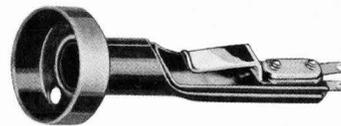
Lamp Sockets which are mounted in strips for use in the face of switchboard align with jacks having the same type of mounting.

Mounting screws, fasteners, lamps and lamp caps are not included with the lamp sockets, but should be ordered separately.

Individual Lamp Sockets

Pilot Type

For pilot lamp service on PBX and Multiple Switchboards. Used with standard switchboard lamps and the No. 23 Lamp Cap. Mounts on the face of the switchboard in any standard panel with two No. 6176 Wood Screws. Consists of steel frame with brass head for lamp cap; equipped with insulating fiber tubing and nickel silver springs. Length overall— $2\frac{15}{16}$ " . Diameter of head— $\frac{7}{8}$ " . Diameter of sleeve— $\frac{7}{16}$ " .



No. 9 Lamp Sockets

Stock No.	Code	Used with
801417-000	(9)	Lamp Socket No. 23 Lamp Cap (Pilot)

No. 12 Supervisory Type

Used on PBX and Multiple Switchboards for supervisory lamp service. Takes standard switchboard lamp and the No. 27 Lamp Cap. Length over springs— $2\frac{7}{16}$ " . Diameter of sleeve— $\frac{7}{16}$ " . Mounting lug— $\frac{11}{16}$ " from face.

Stock No.	Code	Used with
801420-000	(12)	Lamp Socket No. 27 Lamp Cap (Supervisory)

Replaced by No. 13 on all new work

No. 13 Supervisory Type

A standard lamp socket for cord circuits and supervisory lamp service. Replaces the No. 12 and used on all new work. Used on PBX, Multiple, and Super-Service Switchboards. Consists of a steel frame with a fiber tubing, for insulating purposes, and nickel-silver springs. Mounts from the under surface of any standard— $\frac{7}{8}$ " panel with one No. 4 x $\frac{1}{2}$ " R. H. I. W. Screw.

Takes standard switchboard lamp and the No. 31 Lamp Cap. Length over springs— $2\frac{29}{32}$ " . Diameter of sleeve— $\frac{1}{2}$ " . Mounting lug— $\frac{27}{32}$ " from face.



No. 13 Lamp Socket

Stock No.	Code	Used with
801421-000	(13)	Lamp Socket No. 31 Lamp Cap (Supervisory)

Face Strip Type

No. 121 is a Standard Lamp Socket for two, three, four and six panel associated multiple and PBX Switchboards. Used in connection with the No. 130 Type Jacks and mounts the same. Replaces Garford Type. Takes standard switchboard lamp and No. 27 or No. 30 Individual Lamp Cap. Consists of a face plate, lugs, and sleeve sockets—all made of steel with black enamel finish. Equipped with nickel-silver springs. Sleeve sockets insulated from springs with black tubular sheet fiber.



No. 121 Lamp Socket on 80 Mounting

Length of face—10 3/8", Overall length—10 3/4", Width of face—1/2", Mounting Centers—11 1/16", Jack Fastener—No. 17.

Stock No.	Code	Mounting	No. of Sockets	Description
801424-000	(121)	80	10	*Plain Face
801425-000	(121)	81	20	†Plain Face

*Can also be drilled for No. 26 Lamp Cap when specified.
†Can also be drilled for No. 25 Lamp Cap when specified.

No. 121 Eight Panel Multiple Switchboard Lamp Socket, used in connection with No. 127 Type Jacks. Replaces Garford Type. Takes standard switchboard lamp, and the No. 30 Individual Lamp Cap. Similar to the No. 80 Mounting only shorter.

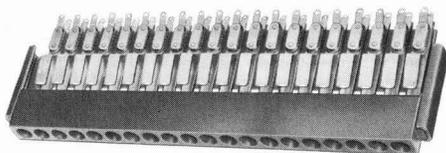
Length of face—7 19/32", Overall length—7 31/32", Width of face—1/2", Mounting Centers—8 3/8", Jack Fastener—No. 17.

Stock No.	Code	Mountings	No. of Lamp Sockets	Caps
801429-000	(121)	Lamp Socket Strip	*89 10	No. 30

*No. 89 replaces No. 82 on new work.

Lamp sockets on above mountings are also drilled for No. 24 Twin Type Lamp Caps.

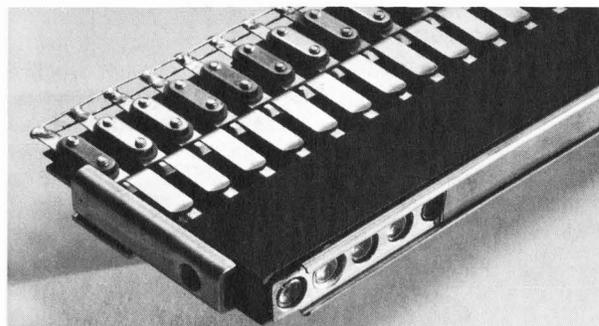
No. 121 Eight Panel Multiple Switchboard Lamp Socket used on all new work in connection with the No. 127 Type Jack. Takes standard switchboard lamp, and the No. 29 Individual Lamp Cap. Consists of black molded face strip with satin finish on face, sheet steel frame for mounting the springs, and the two end lugs. Equipped with nickel-silver springs.



No. 121 Lamp Socket on 83 Mounting

Length of face—7 19/32", Overall length—7 31/32", Width of face—1/2", Mounting Centers—8 3/8", Jack Fastener—No. 17.

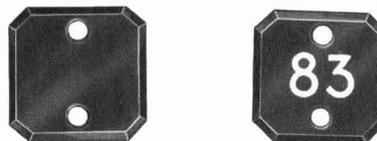
Stock No.	Code	Mtgs.	No. of Sockets	Description
801440-000	(121)	Lamp Socket Strip	91 10	Plain face
801427-000	(121)	Lamp Socket Strip	83 20	Plain face
801439-000	(121)	Lamp Socket Strip	92 20	Takes No. 26 Designation Strip



End View of No. 121 Lamp Strips with Designation

NUMBER PLATES

Number Plates—used on jack stiles to designate subscriber's multiple; on plug boards to designate cord circuits; on keyboards to designate keys; and on power boards to designate switches.

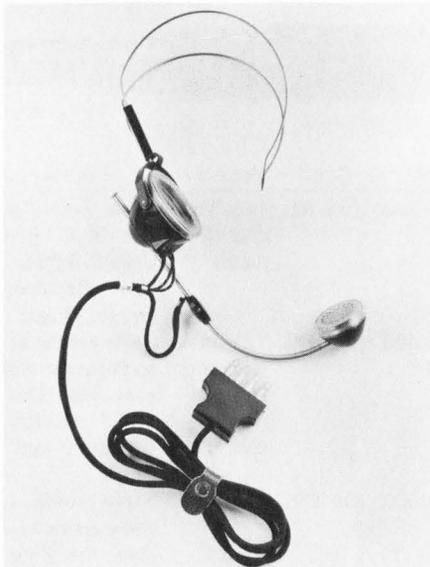


No. 19-A Number Plate

- 7005-000 (13) A round number plate, used on wood drop mounting panels, keyboards, terminal strips, etc. Consists of white opaque celluloid engraved with black figures—1/8" high. Mounts flush—drive fit.
- 9573-000 (17) Diameter—1/4". Thickness—3/16". Round number plate used on plug boards and keyboards, associated principally with the No. 310-E Key on Super-Service Switchboards. White, opaque, plain or engraved with figures or letters—3/16" high. Mounts flush—drive fit. Diameter—7/16". Thickness—5/16".
- 13062-000 (19-A) Square number plate used on multiple finishing stiles. Consists of black with white engraved figures—style to be specified. Three figures or less—7/32" high, four or more 9/64". Mounts with 2 Stock No. 12910-000 O.H.M. Screws. Size—11/16" square. Thickness—7/64".

OPERATOR'S TELEPHONE SETS

No. 52AW Operator's Headset Assembly



No. 52AW Operator's Telephone Set

The No. 52AW operator's headset assembly is lightweight, compact, comfortable to wear and easily adjustable. The molded receiver and transmitter housings are connected by a stainless steel adjustable boom. The headband is of high-grade spring steel. The aluminum adjustment block allows up to 1 1/2" extension on the receiver. A five-foot black, nylon braided, operator's cord terminates in a No. 210327-000 twin plug.

<i>Stock No.</i>	<i>Description</i>
205701-000	Operator's headset with twin No. 62 plug.
205826-000	Operator's headset without twin plug.
205827-000	Operator's headset with No. 66 SC plug.

Parts of No. 52AW Operator's Headset

<i>Stock No.</i>	<i>Description</i>
210320-000	Boom & Transmitter Case Assembly
210321-000	Transmitter
210322-000	Receiver Holder
210323-000	Receiver
210324-000	Headband Assembly
210325-000	Cord Assembly
210327-000	Twin Plug
210328-000	Transmitter Cap
210329-000	Receiver Cap
210330-000	Strap Assembly

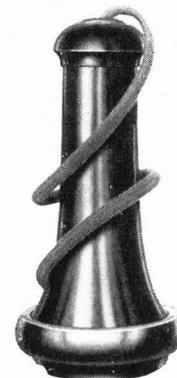
RECEIVERS

SUB-STATION RECEIVERS

No. 30 Type

The No. 30 Type Receiver is encased in a plastic shell and ear cap which covers a capsule unit that is firmly held in place by pressure contacts. The spool is assembled with a non-metallic head to prevent eddy current losses and wound with high grade enameled copper wire.

The construction is simple and durable and years of service will not impair the highly efficient receiving qualities that are assured.



No. 30 Receiver

This receiver is used with old style wall sets and desk stands which have been generally superseded by the more modern handset telephones in either wall or desk types.

<i>Stock No.</i>	<i>Code</i>	<i>Name</i>	<i>Used with</i>
801595-000	(30-B)	Receiver	Iron-Clad Telephones

Assembly Parts

<i>Stock No.</i>	<i>Code</i>	<i>Name</i>	<i>Receiver Used</i>
800627-000	(M-2-1)	22" Cord	No. 30-B
33179-000		Casing	No. 30-A, 30-B
32864-000		Earcap	No. 30-A, 30-B
34230-000		Capsule Unit	No. 30-A, 30-B

HANDSET RECEIVERS

For Stromberg-Carlson Handsets and Handset Parts, see Telephone Replacement Parts, T-1114.



PLUGS

Stromberg-Carlson Plugs are equipped with bronze tip conductors to withstand wear; special alloy steel tip rods for strength; best quality tough, hard rubber for insulation; and heavy black fibre shells for protection. The tip rods are threaded through and spun over the end of the tip conductor.

Three conductor plugs, Type 64 and 65, are equipped with bronze dead rings to protect the insulation between the tip and ring conductors.

Plug screws for both terminals and shells are drilled for pilot screw driver.

Order plugs by stock and code number. If this is impossible, send in a sample plug or state serial number of switchboard on which the plugs will be used.

No extra charge is made for attaching cords to plugs when the order includes both plugs and cords.

Designations

"X" affixed to code number indicates over-all shell covering butt of plug.

Diameters shown in illustrations indicate size of associated jack.

"R" indicates large screw.

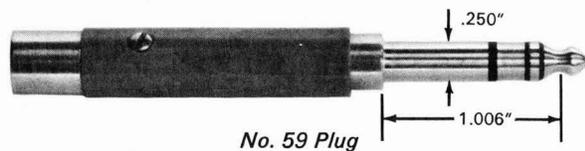
TWO CONDUCTOR PLUGS



No. 61 Plug

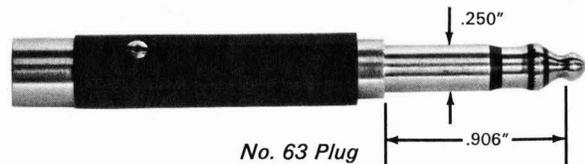
Stock No.	Code	Jack used	Class of Service
801502-000	(61)	144-A, 145-A, 154-A,	Toll test panels. Uses S-2 Two Conductor Cord. Interchangeable with W.E. No. 47

THREE CONDUCTOR SWITCHBOARD PLUGS



No. 59 Plug

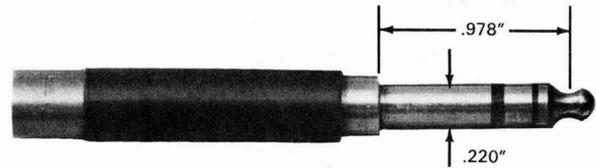
Stock No.	Code	Used with	Class of Service
801500-000	(59)	145, 154, 155	Toll test panels Uses S-33-NS Three Conductor Cord Interchangeable with W.E. No. 110



No. 63 Plug

801504-000	(63)	109 Jack	Same profile as No. 55. Uses W.E. 101 Cord Tips. Uses S-3 three conductor cord. Replaces No. 55 Plug.
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No. 64 Switchboard Plug



Stock No.	Code	Used with	Class of Service
205544-000	(64-R)	156, 157 and 127 Jacks	Same profile as No. 54. Uses W.E. 101 Cord Tips. Uses S-3 three conductor cord. Replaces No. 54 and 64 Plugs.
*205547-000	(64-DR)	127 Jack with large form on ring spring	Same profile as No. 64-R and uses same cord. However, the Ring sleeve is .010" smaller. Replaces No. 64-D and No. 54-D Plugs.
*205550-000	(64-ER)	127 Jack	Same profile as No. 64-R and uses same cord. However, the Ring sleeve is .020" smaller. Replaces No. 64-E and No. 54-E Plugs.
*205553-000	(64-FR)	127 Jack	Similar to No. 64-R except uses a different tip. Replaces No. 64-F and No. 54-F Plugs. Uses S-3 Cord.

*These numbers indicate plugs with black shells; they are also available in grey and red.

No. 65 Switchboard Plug



Stock No.	Code	Used with	Cord Used
*205532-000	(65-R)	130 Jack	S-3 (Three conductor)
*205541-000	(65-XR)	130 Jack	S-3 (Three conductor)

*Used on Stromberg-Carlson PBX and Multiple Switchboards. Black shells are standard but red and gray shells can also be furnished. For Stock Numbers of shells see heading "Plug Parts."

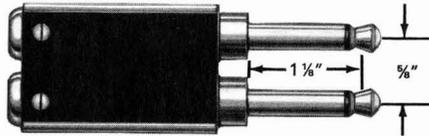
Replaced No. 53 Type Plug

The No. 53 Three-Conductor Plug, formerly used with Stromberg-Carlson No. 130 Jack and Garford No. 3210 and No. 4260 Types, has been replaced by and is interchangeable with the No. 65 Plug. The cords, however, are not interchangeable.

When cords are required for No. 53 Plugs in service, S-C Stock No. 212120-000 of required length should be used instead of the cord for the No. 65 Plug.

TEST PLUGS

These plugs are used in connection with toll test panels and wire chief's testing equipment at the M.D.F.



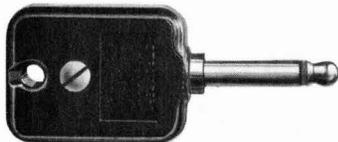
No. 62 Test Plug

Stock No.	Code	Con-ductors	Used with	Class of Service	Cord Used
801503-000	(62)	4	154 Type Jack	Test Panel M-4-C	
209779-000	(67)	6	145 Type Jack	Test Panel S-33-NS	
*218334-000	(62-H)	4	154 Type Jack	Test Panel P4-1	

*Same as Nos. 62 and 67 except have holes in shell for strain relief cord.

NO. 60 OUTLET-BOX PLUG

This is used with wall-outlet jack outfit consisting of outlet box and brass plate with plug-in jack assembly.



No. 60 Plug

For a description of this complete assembly refer to this section under "Individual Jacks" Wall Outlet Type.

Stock No.	Code	Jack Used	Description
801501-000	(60)	2-Point	Used with Stock No. 25856-000 Plug-in Jack Assembly

PLUG AND JACK GAUGES

These gauges should be in every telephone exchange. They indicate when plugs and jacks are worn to an extent that talking connections will be unreliable.

When a plug passes through the slot in the plug gauge it should be replaced.

If the jack gauge fits into the jack, the jack should be replaced.

Each set includes one plug and one jack gauge with a canvas carrying case, Stock No. 52236-000.



Jack Gauge



Plug Gauge

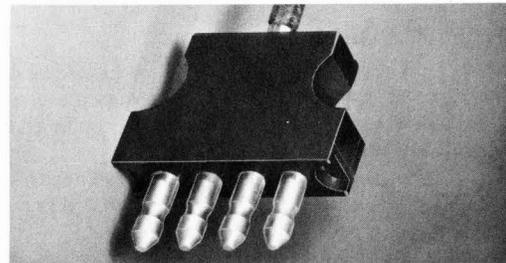
Stock No.	Diameter	Description
13070-000	.246	Plug Gauge
13071-000	.255	Jack Gauge

The equipment listed above is used to gauge Nos. 10, 31, 35, 40, 42, 53, 55, 56, 57, 63, 65 Plugs and Nos. 5, 11, 49, 58, 101 and 130 Jacks, and No. 11 Drop Jack.

Stock No.	Diameter	Description
13114-000	.217	Plug Gauge
13118-000	.226	Jack Gauge

The equipment listed above is used to gauge Nos. 39, 54, 64 Plugs; and Nos. 22 and 127 Jacks.

NO. 66 OPERATOR'S PLUGS



No. 66 Operator's Plug

The No. 66 Plug replaces the No. 23 Plug and is used with the 93 Jack on all switchboards.

Stock No.	Code	Jack used	No. of Points	Cord Used	Operator's Set Used
201839-000	(66)	93	4	O-4-K, 5'	No. 4 B.P.Type
201839-000	(66)	93	2	O-2-J, 4'	Susp. Type

Plug Parts

Plug Code No.	Shell Stock No.	Shell Screws Stock No.	Terminal Screws Stock No.
59	14033-000	14032-000	14693-000
60	15148-000	15147-000	515020-000
61	21421-000	21420-000	21419-000
62	26853-000	26854-000	21419-000
63, 65	202076-000(a)	4836-000	4836-000

(a) These shells are black. Red shell is 34406-000. Gray is 34407-000.

PLUG SEATS

Plug seats are furnished with two wood screws for attaching to the under side of plug boards. The center hole is chamfered to prevent injury to the cords while passing through this opening. The Nos. 5, 6 and 12 Plug seats are the same except for the diameter of the center hole which varies according to the size of the plug that is used.



No. 5 Type



No. 6 Type

Stock No.	Code	Plug Used	Diam. Hole	Material	Mtg. Screws
4637-000	(5)	10, 42, 59, 61	11/32"	Fiber	2-No. 3939
4638-000	(6)	53, 54, 55, 56, 57, 63, 64, 65	5/16"	Fiber	2-No. 4638

PLUG TROUBLE CAPS (SLEEVES)

These are black fiber tubes that are split full length so as to slip over plugs of various diameters. Trouble sleeves are used to designate cord circuits that are temporarily out of service.

Stock No.	Code	Name	Length	Plugs Used
16582-000	(1)	Trouble Cap	1 1/8"	54, 64
16583-000	(2)	Trouble Cap	1 1/8"	10, 42, 53, 55, 56, 63, 64, 65

SERVICE PLUGS

Service plugs are available in standard colors for use as party-line indicators and out-of-service indications to the operator. They are made of brass with spread shanks that can be adjusted to firmly plug into the jack openings.

The No. 7 Type is used to indicate four-party lines by using service plugs of different colors in holes that are drilled around the jack.

The No. 14 and 15 Types (used as out-of-service indicators) are inserted directly into the line jacks in place of plugs.

Stock No.	Code	Stock No.	Code	Stock No.	Code
801526-000	(7-A)	801531-000	(14-A)	801537-000	(15-A)
801527-000	(7-B)	801532-000	(14-B)	801538-000	(15-B)
801528-000	(7-C)	801533-000	(14-C)	801539-000	(15-C)
801529-000	(7-D)	801534-000	(14-D)	801540-000	(15-D)
801530-000	(7-E)	801535-000	(14-E)	801541-000	(15-E)
802769-000	(7-F)	801536-000	(14-F)	204349-000	(15-F)

Above code letters indicate the following colors:

- A—Green C—Blue E—Black
- B—Red D—White F—Yellow

Type No.	Diameter Service Plug	Fits Jack No.	Used as
7	.070	*109-130	Party Line Indicators
14	.195	122-127	Out-of-Service Indicators
15	7/32"	109-130	Out-of-Service Indicators

*When drilled for 4-Party Lines.

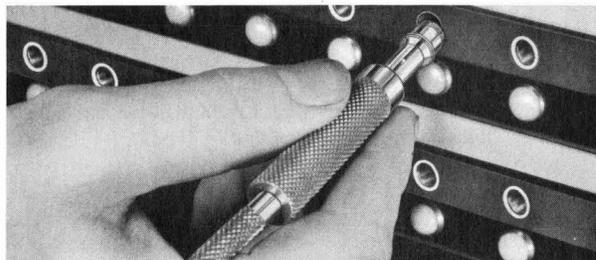
PLUG HOLE BLANKS

Blanks that are used to fill the space of switchboard plugs and individual lamp sockets. This improves the appearance of the switchboard and prevents dust from settling in unequipped openings.



A Typical Plug Hole Blank

Stock No.	Code	Material	Shank Diameter	Blank For
7637-000	(6)	Composition	.406	53, 54, 55, 56, 57, 63, 64, 65
13940-000	(8)	Composition	.453	142, 143, 144 Jacks; 12 L.S., 59 Plug
15323-000	(11)	Rubber	.650	310 Key
32142-000	(13-A)	Brass	.515	10, 15, 24, 25, 42
32143-000	(13-B)	Ox. Bronze	.515	43, 44, 53-X Plugs; 6, 8 L.S.
209398-000	(13-C)	Brass, black	.515	Toll Test Boards
32144-000	(14-A)	Brass	.500	158 Jack
205515-000	(14-C)	Brass, black	.500	120 Swbd.

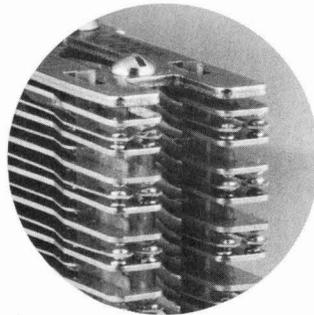


Removing Sleeve of No. 130 Jack

RELAYS

The relays listed in this Catalog are adapted for use in telephone communication, signalling, and remote control circuits. By combining standard spring combinations and coils an endless variety of assemblies may be had, covering a wide range of characteristics, operating voltages, and contact arrangements for both direct current relays and alternating current relays.

In designing Stromberg-Carlson Relays particular care has been taken to incorporate features which will meet specific requirements. Line relays are made compact and sensitive, while cord circuit relays are built to carry several easily adjusted spring combinations with contacts that are plainly visible.



*Twin Contacts
for Greater
Reliability*

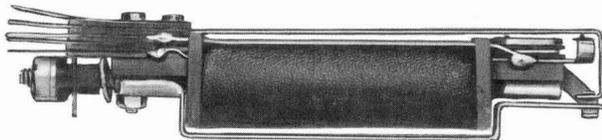
Ordering Information

When ordering relays for Stromberg-Carlson Switchboards, the number of the circuit in which they are used should always be shown. This information is required for adjusting current flow values which should be the same as originally determined to assure uniform operation.

If unable to specify the code number in ordering relays, provide the following information on such points as apply to the particular item you desire. This information is necessary to properly edit factory orders.

1. Kind of operating current—Direct or Alternating—state frequency.
2. Operating voltage or current.
3. Single, tandem, or concentric winding.
4. Resistance, if known.
5. Quick or Slow Acting.
6. Continuous or Periodic Operation.
7. Number and type of spring combinations.
8. Amount of current contacts must carry and whether inductive or non-inductive.
9. Type of mounting and casing desired.

NO. 190 TYPE RELAYS



The No. 190 Type of Relay is used in line circuits—for both PBX and Multiple Switchboards. This type relay's outstanding features are:

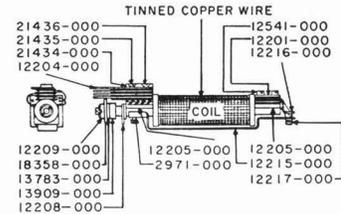
HIGH EFFICIENCY—The very high efficiency of this relay is

obtained by combining the armature and the traveling contact spring into one element. This construction requires less magnetic effort for operating contacts in telephone circuits. The efficiency of this relay is further increased by fastening the armature rigidly and metallicly to one end of the relay's core. **COMPACTNESS**—But one-third to one-half of the space is required for this relay that is required for other types of relays. Obviously, this compactness permits closer mounting centers which means a marked saving of space either in the switch-board section or on the relay racks in the terminal room.

LIGHT WEIGHT—This relay is the lightest in weight of any of the standard relays, which means easier handling during installation and less danger of the relay's breaking loose from its mounting during shipment.

ACCESSIBILITY—All contacts are at the extreme front end, easily inspected, easily adjusted, and easily tested, even when the relays are mounted on the closest possible centers.

*Parts Drawing of
No. 190 Type Relay*



RELIABILITY—Owing to simplicity of construction, the use of high grade materials, and careful manufacture, this relay is unsurpassed for reliable operation. Many exchanges completely equipped with No. 190 Type Line Relays report that relay trouble is negligible and that relay casings are seldom removed. This reliability is due to the following conditions:

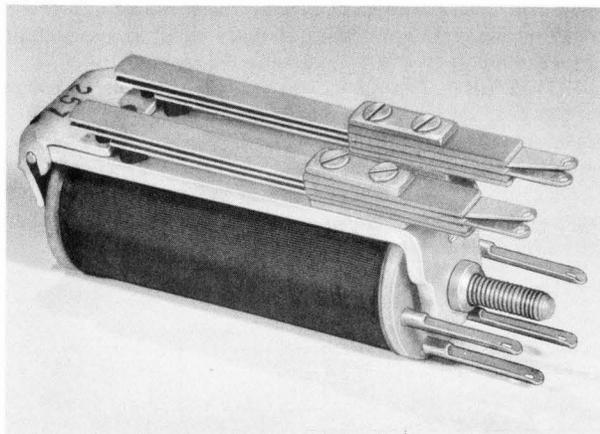
1. The armature construction does not permit binding or getting out of alignment.
2. The phenolic spool heads and spring insulations provide good insulation that is neither hygroscopic nor affected by temperature changes.
3. The windings are of the best grade of commercially pure, heavily enameled copper wire.

Stock No.	Code	Approx. Ohms Resistance	Spring Arrangement	Stock No. Coil only
802772-000	(192-A)	100 x 670	One make	12233-000
802773-000	(193-A)	320	One make	12234-000
802774-000	(193-BB)	320	Two breaks	12234-000
802775-000	(194-A)	800	One make	12235-000
802776-000	(194-C)	800	One-break-make	12235-000
803052-000	(194-1-BB)	800	Two breaks	12235-000
802777-000	(195-A)	320-1000 N.I.	One-make	12265-000
200580-000	(197-BB)	34	Two breaks	19075-000
802950-000	(198-A)	400 x 400	One make	21587-000
802778-000	(199-BB)	320	Two breaks	12234-000

Under the heading "Relay Casings" dust proof covers are shown that will accommodate groups of 20, 40 or 50 No. 190 Type Relays.

NO. 200 TYPE D.C. RELAYS

- This Relay is especially designed for circuits requiring:
1. Several windings
 2. Large winding spaces
 3. High impedances
 4. Timing of relay's action
 5. Diversity of spring combinations



The features of this relay are:
 Efficient Magnetic Circuit.
 Pin-pivoted, definitely located armature of the "L" type.
 Adjustable residual screw in armature.
 Facilities for the quick removal of the relay's coil.
 Visible contacts located at the front end of the relay.
 Phenol fibre spring insulation.
 Coils with formica heads.

How to Order No. 200 D.C. Type Relays

The scheme for coding No. 200 Type Relays provides for assigning group numbers for the various styles of windings, viz.: "single wound," "tandem wound," "concentric wound," "slow release," and "slow operating." These numbers are followed by letters indicating the spring combination desired. (See table of Relays Less Springs for code numbers used and diagrams for spring combinations.)

Examples

Code No. 205-AB Relay

This specifies a single wound relay, 200 ohms resistance, (see table for single wound relays) having springs with one make contact (A) and one break contact (B).

Code No. 242-CC Relay

This specifies a concentric wound relay, 1000 ohms inductive and 100 ohms non-inductive, (see table for concentric wound relays) having two sets of break-make contacts.

The number indicates the resistance and type of winding; the letter or letters indicate the spring combinations.

All Stromberg-Carlson relays use a phenolic head and have no freeze on end of core. (Formerly indicated by letter Z in code.)

The No. 200 Type Relay may be furnished with 1, 2, or 3 sets of spring combinations which will be mounted in alphabetical order from left to right looking at the terminal end of the relay—

except for relays with 3 spring combinations having 2 combinations alike, then the odd combination shall be mounted in the middle.

Spring Designations

Standard spring combinations are designated by affixing the following letters to "200 Type" relay code numbers which indicate style of winding and resistance only. "Y" means light springs.

- *A One make
- *B One break
- *C One break-make
- G One break and make before break
- *H Two makes
- L One make and one break
- M One break-make and one make
- *N One break-make and one break
- O One make before break and one make
- PY One break and double make
- *Q One make and one break (sequence)
- R One break-make, heavy contacts
- SY One make, heavy contacts
- TY One double make, heavy contacts
- U Make before break and delayed break
- D One make before break
- EY One double make
- FY One break and double make
- K Two breaks

Light (Y) Springs

*These combinations can also be furnished with light springs by adding the letter "Y" to the letters of the regular spring combinations, as: AY, BY, CY, HY, NY, QY.

The following Stromberg-Carlson relay parts do not include spring combinations.

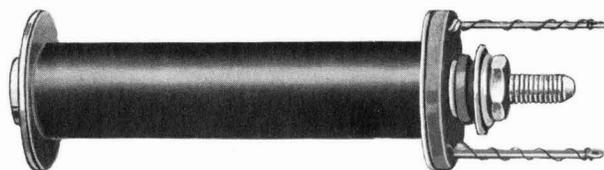
Springs as required must be specified with the Code No. when complete relays are desired. Coils only, are shown under their proper Stock Numbers.

Single Wound Coil
 One Inductive Winding

<i>Code No.</i>	<i>Relays Less Springs Approx. Ohms Resistance</i>	<i>Coil only Stock No.</i>
201	5 Uses AY Spring only	12276-000
202	15	12277-000
203	70	12278-000
204	100	15491-000
205	200	12280-000
206	500	12266-000
207	1000	12267-000
208	800	12281-000
209	1500	12282-000
210	5000	12283-000
212	18-50 N.I.	30005-000
213	320	15435-000
214	2000	15436-000
215	16-75 N.I. Copper Sleeve	32846-000
218	2000 AC	201054-000
219	500 AC	34947-000

Slow Release, Single Coil with Copper Sleeve
One Inductive Winding

Code No.	Relays Less Springs Approx. Ohms Resistance	Coil only Stock No.
261	100	15429-000
262	200	15430-000
263	500	15431-000
264	1000	15432-000
265	50	15433-000
266	23	202167-000
267	5000	202453-000



Single Wound Coils

Tandem Wound Coils

Tandem coils have a rear winding (1-2) which is at the terminal end and an adjacent front winding (3-4) which is at the armature end.

Two Inductive Windings (Tandem)

Code No.	Relays Less Springs Approx. Ohms Resistance		Coil only Stock No.
221	65-65	Balanced Inductance	12286-000
222	100-100	Balanced Inductance	12287-000
223	200-200	Balanced Inductance	12288-000
224	500-500		12289-000
225	1000-1000		12290-000
226	50-50	Balanced Inductance	12291-000
227	100-250		12292-000
228	75-75	Balanced Inductance	12293-000
229	200-2000		12294-000
231	500-1000		12295-000
232	400-400		12296-000

Concentric Wound Coils

The first winding (1-2) of concentric coils is next to the core, and the second winding (3-4) is on the outside.

One Inductive—One Non-Inductive Winding
(Concentric)

Code No.	Relays Less Springs Approx. Ohms Resistance	Coil only Stock No.
241	500-100 N.I.	12297-000
241-1	200-350 N.I.	33856-000
242	1000-100 N.I.	12298-000
242-1	200-1000 N.I.	33857-000
243	100-350 N.I.	15197-000
243-1	1000-500 N.I.	37012-000
244	500-350 N.I.	15198-000
245	500-2000 N.I.	15199-000
246	100-60 N.I.	15200-000
247	100-1000 N.I.	15201-000
248	500-500 N.I.	15202-000
249	1000-1000 N.I.	29743-000



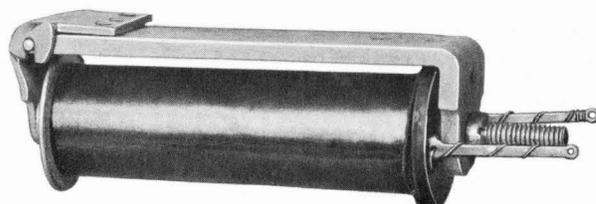
Concentric Wound Coils

Two Inductive Windings (Concentric)

Code No.	Relays Less Springs Approx. Ohms Resistance		Coil only Stock No.
251	500-1000		15203-000
251-1	500-1000	(A.C. Relay)	39351-000
251-2	100-600		211883-000
252	500-100		15204-000
252-1	13-12,000		42782-000
253	200-500		15205-000
254	175-2100		17809-000
254-1	500-5000		202006-000
255	100-10,000	(Takes AY Spring)	15207-000
255-1	250-2000		203192-000
256	250-500		15208-000
257	250-670		15209-000
258	500-500		15210-000
259	100-200		15211-000
295	200-75		28366-000
296	500-75		28365-000
297	1000-75		28367-000
298	340-2000		32845-000
299	1000-150		38507-000

Slow Operating Type Relays With Concentric
Wound Coil, Copper Sleeve
One Inductive—One Non-Inductive Winding

Code No.	Relays Less Springs Approx. Ohms Resistance	Coil only Stock No.
291	500-100 N.I.	15219-000
292	500-450 N.I.	33757-000
293	500-2000 N.I.	33855-000



Slow Release Type Relays With Concentric
Wound Coil, Copper Sleeve

Code No.	Approx. Ohms Resistance	Coil only Stock No.
274	500-500 Both Inductive	15217-000
275	500-1000 Both Inductive	16480-000
276	500-100 N.I.	202007-000
277	500-2000 N.I.	202008-000
278	500-10,000 N.I.	202009-000
279	50-1000 N.I.	201174-000
*281	160-200 N.I.	15218-000

*Ringing Trip Relay Copper Slug on armature end of core.

300 TYPE RELAY



No. 300 Type Relay

This relay which mounts the same as the No. 200 Type, is especially designed for actuating contacts, without vibration, when alternating, pulsating or superimposed ringing current is used.

The No. 300 Type Relay can be furnished either separately as a non-locking relay or as a ring up locking relay when associated with a No. 200 Type Relay having the letter "X" affixed to the Code number.

The following spring combinations for No. 300 Type non-locking and locking relays are standard:

Non-Locking	Locking
A—One make	X—One make lock with armature
B—One break	*AX—One make and one locking armature make
C—One break-make	*BX—One break and one locking armature make
AA—Two makes	*CX—One break-make and one locking armature make
BB—Two breaks	
CC—Two break-makes	

*Locking relays with these "X" springs are used only in connection with No. 200-X Relays.

NOTE: The letter "X" denotes a make contact and locking device actuated by the attraction of the armature which is restored by the operation of an associated No. 200-X Type Relay.

Example

- 1 — No. 306-AX Relay consisting of:
 - 1 — No. 306 Coil (500 Ohms) and frame
 - 1 — "AX" Spring Combination

Associated With

- 1 — No. 204-BBX Relay consisting of:
 - 1 — No. 204 Coil (100 Ohms) and frame
 - 1 — "X" Armature
 - 1 — "BB" Spring Combination

No. 300 Type Relay

Code No.	Relays Less Springs		Coil only Stock No.
	Approx. Ohms	Winding	
306	500	Single	15220-000
307	1000	Single	15221-000
313	400-500	Concentric	15222-000

Above Code numbers cover coils of designated resistances and relay frames only. To make complete relays, springs should be added to meet requirements.

No. 320 Type Relay

This relay has been replaced by the No. 300 Type. It was formerly used as a ring up or drop relay on magneto lamp line circuits and consisted of two interacting relays—one actuated by alternating and the other by direct current.

No. 340 Type Relay

A polarized type relay which is used in cases where reversal of battery polarity is required for signaling purposes. These relays are especially sensitive to low currents.

The No. 340 Type Relay has two coils and mounts the same as two No. 200 Type Relays. Furnished only with the following spring combinations:

Code No.	Resistance		Spring Combination	Coil only Stock No.
	Total	One Coil		
343-CC	500	250	Two break-make	13086-000
*344-C	500	250	One break-make	13086-000
*345-C	20,000	10,000	One break-make	35036-000
*346-C	174	87	One break-make	35405-000
*347-CC	20,000	10,000	Two break-make	35036-000
348-CC	30,000	15,000	Two break-make	201028-000
349-C	—	50-15,000	One break-make	201952-000
		50-15,000		201953-000

*These relays have contacts insulated from the armature. They can be wired for "A" (one make) and "B" (one break), or "C" (one break-make) Spring Combination.

No. 360 Type Relay

This relay, like the No. 300 Type, is adapted for use with alternating, pulsating or superimposed ringing. Unlike the "300" Relay, however, the No. 360 Type has an adjustable armature loaded with a copper weight. This relay is equipped with an "A" (make) spring combination.

Code No.	Spring Combination	Resist. Ohms	Operation	Coil only Stock No.
367-A	One make	1000	Non-Locking	15221-000

No. 370 Type

This type includes the No. 371 Relay which has been discontinued and replaced by No. 372 Type. Designed for toll circuit operation.

Code No.	Resistance		Spring Combination
	Total	Per Coil	
372	3200	1600	Break-make

No. 375 Type Relay

This is a concentric wound relay designed primarily for use with universal cord circuits. A quad coil is used consisting of three inductive and one non-inductive winding of the following resistances:

Code No.	Resistance		Spring Combination	Coil only Stock No.
	Ohms			
375-W	75-175-700-2200	N.I.	—	205103-000
376-WCBY	75-175-700-2200	N.I.	One break-make One break	205103-000

Code No.	Resistance Ohms	*Spring Combination	Coil only Stock No.
377-WCYCY	75-175-700- 2200 N.I.	Two break- make	205103-000
378-W	150-225-700- 2200 N.I.	— —	38506-000
379-WCY	150-225-700- 2200 N.I.	One break- make	38506-000
385-WFYCY	75-175-400- 400 N.I.	One break and double make; One break-make	200575-000

Code No.	Resistance	Stock No.
386-W	100-100, 700-200 N.I.	203405-000 Coil
387-W	200-200, 700-200 N.I.	203404-000 Coil
388-WCY	100-100, 700-200 N.I.	203405-000 Coil
389-WCY	200-200, 700-200 N.I.	203404-000 Coil

NOTE: The letter "W" indicates that these relays are equipped with anti-wear pins.

*Center spring combination should be specified in ordering this type of relay.

No. 380 Type Relay

This type of relay is used in line and supervisory pilot circuits or in any other places where high sensitivity is essential. A micrometer screw adjustment assures accuracy and when used for supervisory purposes the transmission loss is extremely low.

Stock No.	Code	Coil Stock No.	Resistance
803103-000	(381-A)	44356-000	1.7 Ohms
208075-000	(382-A)	208076-000	1000 Ohms
38308-000	(383-C)	211908-000	16.4-36-NI-14 NI
211909-000	(384-C)	211910-000	26-26 Ohms

No. 390 Type Relay

This is a relay having a three winding coil, designed primarily for use in cord circuits.

Code No.	Resistance	Stock No. of Coil
391-W	100-600-250 N.I.	204471-000

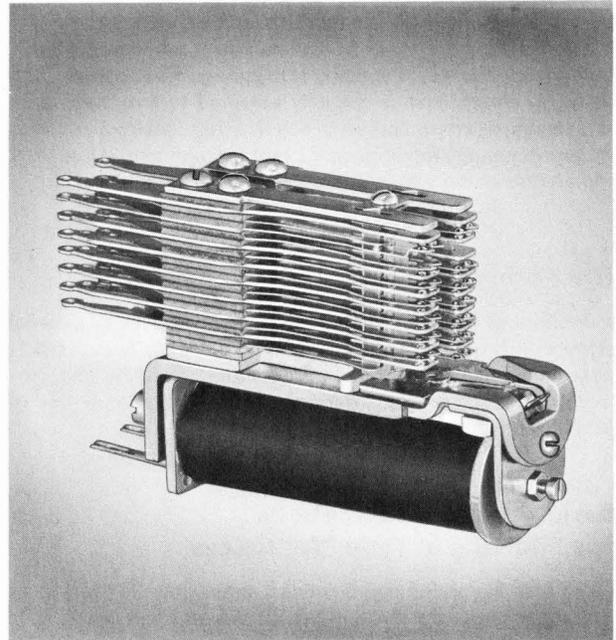
TYPE "A," "B," AND "C" RELAYS

These relays are designed to meet the exacting requirements of telephone switching systems. The "A," "B," and "C" relays were subjected to many severe tests before the complete design was approved and only after it had been actually demonstrated that this apparatus would meet every field condition that might be encountered. In addition, life tests were run over millions of cycles of operation, cycles of temperature ranging from -40° to 150° F and cycles of relative humidity exceeding 90%. Vibration tests were also made, similar to those applied to aeronautical equipment.

New processes of production have been developed which provide maximum spring stability and at the same time easier and more permanent contact adjustment. Spring combinations and coils have been standardized which increase the supply of available parts to facilitate deliveries of these items as well as the complete equipments with which they are used. Although exhaustive tests indicate long life, reliability and trouble-free operation, there may be cause for occasional relay adjustments in the field. Some operating conditions are more severe than average and some relays in a system are subject to considerably more wear than others. For these reasons particular care has been taken to develop a design that permits easy removal of functional parts and any adjustment that may be necessary for perfect operation.

TYPE "A" RELAYS

The Type "A" is a general-purpose telephone relay used in XY Systems or in other places where similar operating conditions exist. This relay will give reliable service under ordinary conditions or in damp climates, due to the use of carefully selected



Type "A" Relay

insulating materials and special treatment to prevent failures caused by electrolysis and corrosion.

The Frame

The plated frame increases bearing life by preventing corrosion and at the same time makes an attractive finish. This

frame, together with the core and armature form an efficient magnetic circuit of the conventional telephone-relay type. The wire, itself, is carefully inspected for quality and uniformly highgrade insulation. The core is threaded and securely attached to the frame of the relay by means of a nut which permits easy removal of the coil.

The Armature

The armature is L-shaped and designed so as to operate on a knife-edge pivot. It is held in place by a non-adjustable spring retainer that is welded to the frame. This retainer rests on the axis of rotation of the armature which permits it to move with the least possible friction without interfering with its easy removal. With this method of construction side play is virtually eliminated. The armature travel is adjusted by means of an armature support which also acts as a stiffener to prevent distortion and any lost motion at the spring contacts. The spring combinations are mounted in two stacks, one on the right side and the other on the left side of the spring mounting plate. The top clamping plate bridges and covers both spring stacks which provides great mounting stability as well as over-all mechanical protection to the springs. Spring combinations of Type "A" Relays may also be mounted in one stack. The equivalent of 12 "make" contacts may be mounted on each Type "A" Relay although this number may be increased to 20 when sufficient mounting space is available. Twin contacts of precious metal are carried by two lines on each spring, which assures un-failing operation. Stability of contact adjustment is maintained by a rigid mechanical arrangement in which the heavy stationary springs are properly located by a stepped phenolic spring stop. This stop and associated springs are supported by a clamping plate which is securely attached to the relay frame by a mounting screw and metal spacer. This construction holds the heavy springs firmly in position at a point near the contact end and gives the whole pile-up greater stability.

The Spring Pushers

A continuous single-piece spring pusher of phenolic material permits each moving spring to operate individually as a cantilever beam. This unimpeded action reduces friction and prevents one spring from interfering with the proper operation of other springs in the pile-up.

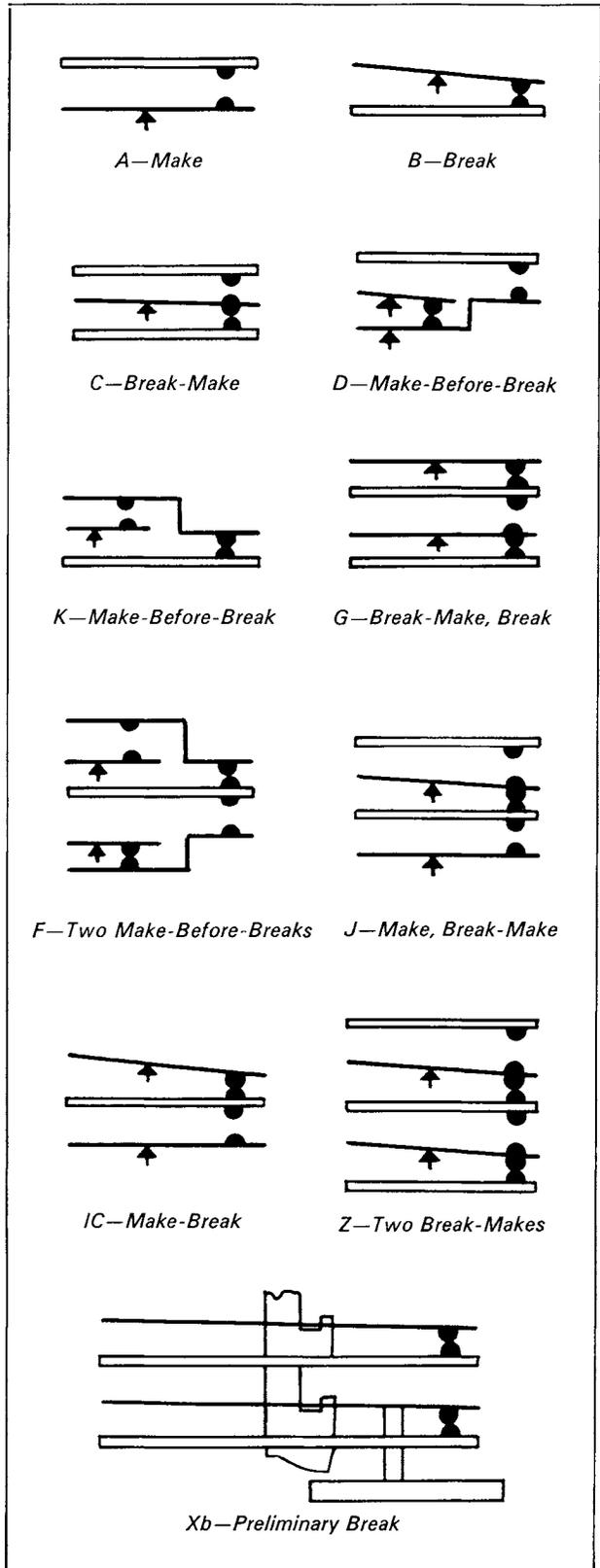
Basic Spring Combinations For Pile-Ups in Type "A" Relays

When ordering spring combinations, simply refer to these illustrations and specify the number of assemblies of each form desired.

Assemblies are always arranged in our standard sequence; therefore special arrangements should not be specified unless required, and will be subject to special ordering.

Under certain conditions a preliminary "make" or "break make" may be required, and these are specified as "Xa" or "Xc."

If heavy duty type contacts are required these are specified as "HA," "HB," or "HC" and will come equipped with a single larger sized contact in place of the twin type contacts.



A few of the most commonly used Spring Combinations

Twin-Type Contacts

Stromberg-Carlson Type "A" Relays are equipped with twin contacts of precious metal as a safeguard against failure. The twin contacts have the advantage in permitting greater reliability over single contacts (figures based on calculated tables show that twin type contacts fail only twice in a million operations). Contact material is precious metal, assuring excellent noise-free contacts of low resistance and long life.

Armatures

Type "A" relays may be equipped with any of the following armature assemblies:

- (1) Standard armature ratio with standard adjustable residual (anti-freeze) screw. This armature is suitable for all general purpose relays requiring an adjustable residual.
- (3) Standard armature ratio with .004" thick welded residual. This armature is suitable for all general purpose relays not requiring an adjustable residual.
- (6) Standard armature ratio with large diameter adjustable residual screw. This armature is used on "pulsing" relays.
- (5) Short-lever ratio armature with standard adjustable residual screw. This armature is used when a longer release delay time is desired than that which can be obtained with standard armatures.

Note—The numbers 1, 3, 6, and 5 preceding the armature descriptions refer to the reference chart B-359, Stromberg-Carlson Engineering Data.

To Order A Type "A" Relay

- (1) Select the desired spring combination from the information given on page 50E.
- (2) Next, specify the armature desired from the various types listed in the section on armatures. For most general applications the standard ratio armature with adjustable residual screw (code 1) is satisfactory, and will be supplied unless otherwise noted.
- (3) Select the coil desired from those listed on pages immediately above and preceding. Special coils can be wound to order if necessary to meet unusual operating conditions. All such orders are subject to delay. Unless the coil resistance is very important, it is better merely to specify the operating voltage and our engineers will select the most suitable coil for your requirements.

Coils for Type "A" Relays

One Inductive Winding

Standard Spool (ST)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
208532-000	.32	36874-000	300
36801-000	1.1	36870-000	320
36802-000	1.7	36814-000	350
36803-000	2.7	36871-000	514
36804-000	4.3	36815-000	560
36805-000	7	36876-000	800
36806-000	11	36816-000	850
36807-000	17	36822-000	1170

One Inductive Winding

Standard Spool (ST) (Continued)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36808-000	27	36872-000	1200
36823-000	32	208527-000	1310
36809-000	40	36875-000	1310
36810-000	67	36817-000	1350
36811-000	100	36878-000	1500
36869-000	135	36868-000	2090
36812-000	140	36818-000	2120
36877-000	180	36819-000	3500
36873-000	214	36820-000	5500
36813-000	220	36821-000	8600

5/8" Heel-End Slug (SR-1)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36824-000	5.25	36833-000	262
36825-000	8.25	36834-000	420
36826-000	12.70	36835-000	638
36827-000	20.2	36836-000	1010
36828-000	30	36837-000	1590
36829-000	50.3	36838-000	2620
36830-000	75	36839-000	4120
36831-000	105	36840-000	6540
36832-000	165		

1 1/4" Heel-End Slug (SR-2)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36857-000	417	36859-000	983
36858-000	660	36860-000	1710

1/2" Armature End Slug (SO-1)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36844-000	262	36841-000	2620
36842-000	1010	36843-000	4120
36845-000	1590	36846-000	6540

1 1/4" Armature End Slug (SO-2)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36853-000	172	208536-000	1525
36854-000	417	36851-000	2700
36852-000	983		

One Inductive Winding

1/2" Diameter Sleeve (SL-1)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36861-000	11.8	208535-000	1210
208533-000	800	36863-000	1330
36864-000	938	36862-000	2400

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1/16" Diameter Sleeve (SL-2)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36866-000	170	36865-000	610

**1/2" Armature End Slug and
1/16" Diameter Sleeve (RT-1)**

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36880-000	61	36879-000	200
		208526-000	1000

Two Inductive Windings—Concentric Wound

Standard Spool (ST)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36898-000	.1 x 200	36882-000	214 x 2020
36889-000	2.5 x 130	36201-000	214 x 3090
36924-000	4 x 1220	36205-000	332 x 470
36206-000	7.5 x 1200	36886-000	332 x 1220
36895-000	10 x 2020	36896-000	332 x 2020
36203-000	16 x 16	36923-000	475 x 530
36899-000	16 x 23	36208-000	514 x 38
36900-000	24.8 x 780	36207-000	514 x 780
36892-000	24.8 x 2020	36883-000	514 x 1220
36890-000	38.7 x 38.4	36887-000	514 x 2020
36202-000	50 x 2020	36905-000	610 x 1017
36897-000	61.5 x 1550	36891-000	800 x 470
36200-000	79 x 1220	36894-000	800 x 780
36893-000	79 x 2020	36881-000	800 x 1220
36885-000	135 x 780	36903-000	800 x 2020
36888-000	135 x 2020	36922-000	1310 x 318
36209-000	140 x 1500	36884-000	1310 x 2020
36901-000	185 x 215	36974-000	1310 x 4500
200005-062	200 x 200	36904-000	2090 x 2020
36902-000	214 x 3.9	36979-000	3000 x 3000
36204-000	214 x 780	36978-000	30000 x 1200

5/8" Heel-End Slug (SR-1)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36949-000	250 x 560	36950-000	1560 x 2300

Two Inductive Windings—Concentric Wound

1 1/4" Heel-End Slug (SR-2)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36942-000	2.2 x 985	36945-000	250 x 595
36943-000	7.7 x 985	36944-000	640 x 985
36946-000	90 x 950	36941-000	1075 x 1650

1/2" Armature End Slug (SO-1)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36939-000	20 x 1525	36934-000	800 x 1160
36940-000	159 x 350	36935-000	927 x 167
36933-000	159 x 909	36931-000	1560 x 2300
36932-000	595 x 909		

1 1/4" Armature End Slug (SO-2)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36938-000	250 x 595	36936-000	640 x 985
36937-000	250 x 985		

Two Inductive Windings—Concentric Wound

1/2" Diameter Sleeve (SL-1)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
209618-000	220 x 250	36928-000	1220 x 1250
36930-000	300 x 600		

Nickel-Steel Sleeve (SL-3)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36925-000	3 x 490	36977-000	*200 x 200

**1/2" Armature End Slug and
1/16" Diameter Sleeve (RT-1)**

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36927-000	150 x 750	36929-000	180 x 980
36947-000	180 x 198	36926-000	220 x 1000
209616-000	180 x 645		

One Inductive—One Non-Inductive Winding

Standard Spool (ST)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36907-000	5 x 500 N.I.	36237-000	1310 x 500 N.I.
36975-000	*24.2 x 700 N.I.	36238-000	1310 x 700 N.I.
36906-000	214 x 800 N.I.	36234-000	1310 x 800 N.I.
36910-000	214 x 1000 N.I.	36229-000	1310 x 1000 N.I.
36218-000	320 x 2000 N.I.	36230-000	1310 x 1500 N.I.
36223-000	332 x 500 N.I.	36224-000	1310 x 2000 N.I.
36221-000	514 x 500 N.I.	36239-000	1310 x 3000 N.I.
36913-000	514 x 1000 N.I.	36235-000	1310 x 4000 N.I.
36917-000	514 x 2000 N.I.	36231-000	2000 x 300 N.I.
36912-000	514 x 3500 N.I.	36219-000	2000 x 400 N.I.
36911-000	514 x 4500 N.I.	36919-000	2000 x 500 N.I.
36918-000	514 x 5000 N.I.	36233-000	2000 x 800 N.I.
36908-000	800 x 500 N.I.	36914-000	2000 x 1000 N.I.
36222-000	800 x 800 N.I.	36220-000	2000 x 1100 N.I.
36226-000	800 x 1000 N.I.	36920-000	2000 x 2000 N.I.
36916-000	800 x 2000 N.I.	36236-000	2000 x 3000 N.I.
36228-000	800 x 3500 N.I.	36232-000	2000 x 3500 N.I.
36225-000	800 x 5000 N.I.	36909-000	2000 x 4000 N.I.
36227-000	1200 x 800 N.I.	36915-000	2000 x 5000 N.I.

*Primary winding consists of a 24.8 Ohm inductive winding in parallel with a 2000 Ohm non-inductive winding.

Two Inductive Windings—Parallel Wound

Standard Spool (ST)

Stock No. Coil	Approx. Ohms Resistance	Stock No. Coil	Approx. Ohms Resistance
36951-000	20 x 20	200005-062	200 x 200
36953-000	34 x 34	36963-000	280 x 280
36955-000	50 x 50	36965-000	425 x 425
36957-000	70 x 70	36956-000	1000 x 1000
36959-000	110 x 110	36954-000	1060 x 1060
36961-000	175 x 175	36969-000	1200 x 1200
36967-000	200 x 200	36952-000	1750 x 1750

Nickel-Steel Sleeve (SL-3)

Stock No. Coil	Approx. Ohms Resistance
200005-072	200 x 200

Three Inductive Windings

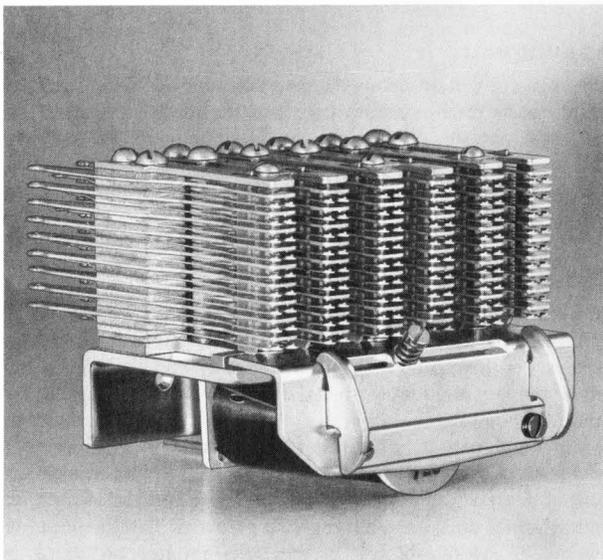
Standard Spool (ST)

Stock No. Coil	Approx. Ohms Resistance
36973-000	.1 x 14 x 3000
36972-000	540 x 740 x 700
36971-000	865 x 1235 x 1400

One Inductive—Two Non-Inductive Windings

Standard Spool (ST)

Stock No. Coil	Approx. Ohms Resistance
36980-000	514 x 4500 N.I. x 1000 N.I.



Stromberg-Carlson Type "B" Relay

TYPE "B" MULTI-CONTACT RELAYS

These are multi-contact units used in switching systems where reliable operation of a large number of contacts is essential. The Type "B" Relay will accommodate six stacks of spring combinations which are the same as the basic combinations used with Type "A" Relays. The use of twin precious metal contacts assures long life and reliable operation.

- A—Make Contact
- C—Break-make contact
- B—Break Contact
- D—Make-before-break contact

The Type "B" Relay has a capacity of 60 "A" (make) contacts or the equivalent in other basic combinations as previously described. Due to special construction, the space occupied by the six-spring pile-ups is unusually small which makes this relay particularly desirable for group mounting.

Other component parts of the "B" Relay are similar to those of the Type "A" with the exception of the L Type armature and spring retainer which are necessarily of different design on account of the heavy spring load which is characteristic of multi-contact units.

The special frame-armature construction design of the Type "B" Relay provides a solid bearing for the armature which prevents "rocking" or bending under the large spring load that has to be carried. Lost motion at the contacts is counteracted by stiffening the armature with a support which is also used for adjusting armature travel. Inasmuch as a greater force is required to hold the armature in place than in the case of "A" Relays, a different type of spring retainer must be used. (See illustration.) This is a screw-and-coil-spring retainer especially designed to reduce the friction which is very small indeed compared with the heavy load that is carried.

Large leverage in the armature has also been retained in the Type "B" Relay and this provides the necessary long motion of the contact springs which permits them to operate individually like canti-lever beams. As in the case of the "A" Relay, a stepped phenolic single-piece spring pusher assures independent spring action so that the operation of one spring does not affect the operation of any other spring in the pile-up.

Types of "B" Relay Coils

Stock No.	Approx. Resistance	Stock No.	Approx. Resistance
36986-000	728 Ohms	36989-000	1070 Ohms
36987-000	175 Ohms	36990-000	2780 Ohms
36988-000	79 Ohms		

Listed below are a few of the commonly used spring combinations with associated stock numbers. There are many other arrangements (not listed) of A, B, C, or D spring combinations that can be used and should be specified when ordering.

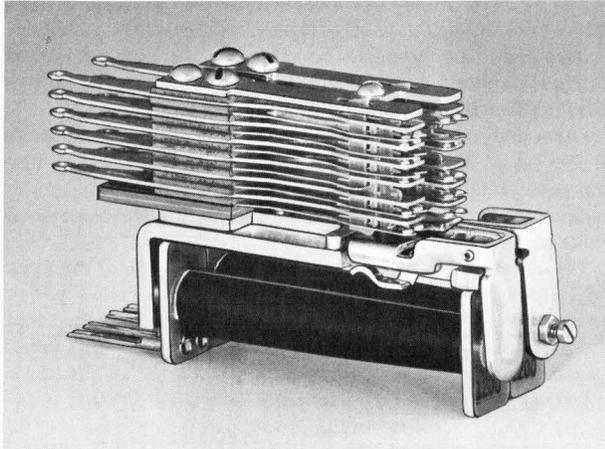
Spring Combinations

Total Make, Break-Make Combinations	No. of Groups	Type per Group	Stock No.
24	3	8-A's	36040-000
30	3	10-A's	36047-000
36	3	12-A's	36048-000
42	3	14-A's	36049-000
48	3	16-A's	36050-000
54	3	18-A's	36051-000
24	3	8-C's	351802-000

STROMBERG-CARLSON

TWIN TYPE "C" RELAY

The Twin Type "C" Relay is designed to mount two coils and their associated spring combinations in the same space and on the same mounting as a standard Type "A" Relay, with 2 No. 8-32 screws. This relay was originally designed for use in line circuits where its small size results in considerable savings in space. Since it has proven so successful in its original application, it has been used wherever its small size is an advantage and where higher resistances are not a factor.



Type "C" Relay

The Frame

Since this relay has been designed specifically to use one frame for two relays, no sacrifice in strength and rigidity was made, as would have been necessary if an individual frame was made for each relay. This heavy frame therefore provides an excellent magnetic path.

Armatures

The hard drawn bearing pins operating in the brass yoke provide excellent bearings of low friction and long life.

Two lever ratios are available. The standard ratio is for quick acting; the "short-lever ratio" is for slow release type relays. Any combination can be supplied: two standard; one standard and one slow release; or two slow release.

Any of these armatures can be supplied with either an adjustable residual screw or a welded residual disc .004" thick.

Spring Combination

The Twin Relay employs the same structure as used on the Type "A" Relay. Similar combinations are available except that the maximum number of springs for each side of the Twin Relay is less. Normally six "makes" (A), or equivalent, can be mounted on each side; or if sufficient mounting room is available, up to a maximum of 10 "makes" or equivalent can be supplied on each relay.

The same highly efficient single continuous spring pusher is used, assuring long life with very little spring adjustment. The contacts are twin type, of the dome design. Contact material is precious metal, assuring excellent noise-free contacts of low resistance and long life.

Twin Relays use the same sturdy clamp plate as the "A" Relay in their spring pile-ups. This covers the entire spring

combination of the Twin Relay and protects the springs from accidental damage.

Coils

The coils are wound with highest grade copper wire with double enamel insulation. Coils are tested for 500 volt AC breakdown between windings and core.

The coils can be supplied with copper "slugs" for delayed action.

Windings up to 1200 ohms are available with standard "quick acting" coils, and up to 830 ohms with slow acting coils having a 1 1/4" copper slug. Due to the limited amount of room for winding is available on each coil.

It is easy to remove and replace coils.

Standard Coils Available

For Twin Type "C" Relays
Single Winding—No Slug

Stock No.	Resistance
36470-000	1200 Ohms
36471-000	785 Ohms
36473-000	8.5 Ohms
36474-000	475 Ohms
36475-000	320 Ohms
36476-000	220 Ohms
36477-000	142 Ohms
36478-000	150 Ohms
211428-000	580 Ohms

Single Winding—1 1/2" Heel and Slug

Stock No.	Resistance
36480-000	820 Ohms

Double Winding—No Slug

Stock No.	Resistance
36479-000	780 x 335 Ohms

Adjustment

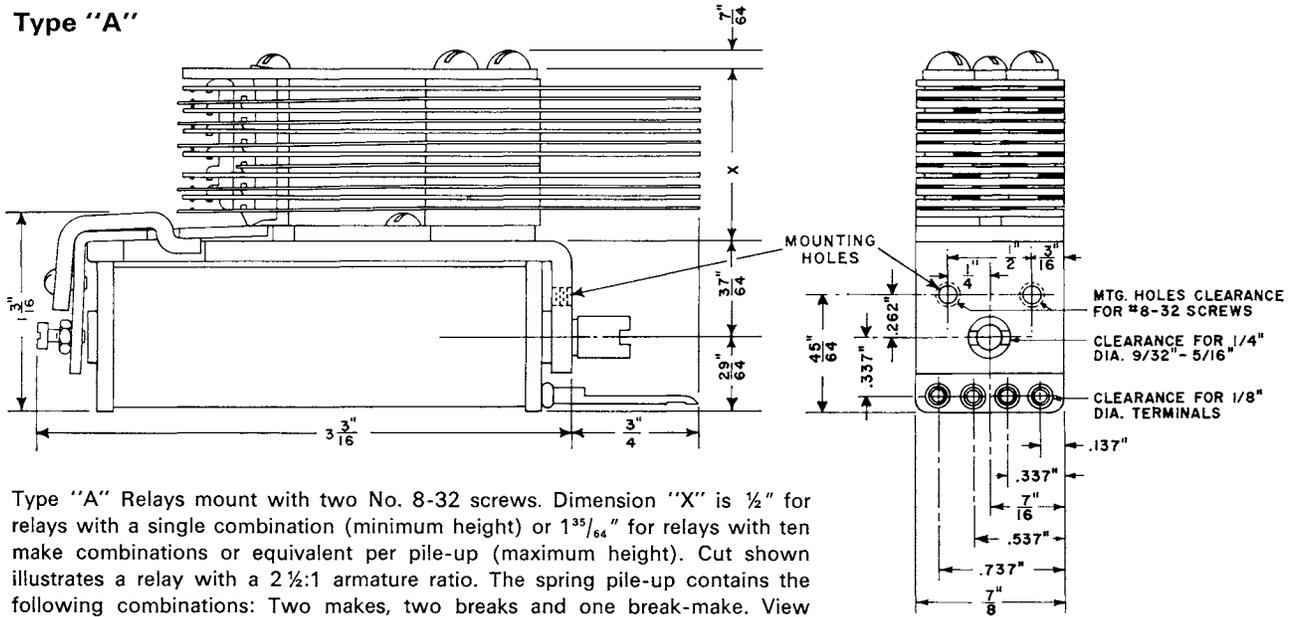
The relays are completely factory adjusted to very exacting limits, ready for immediate use, and during their normal life they will not usually require any readjustment. In extreme cases, some adjustment may be necessary and the relay is designed so that such readjustment may be made easily in the field.

Ordering Information

As viewed from the front, or armature end, with the contact springs up, the armature, coil and combination to the viewer's right is designated as the right-hand relay and the one to his left as the left-hand relay. In ordering a Twin Relay, specify by letter designations for both the right and left sides, exactly what spring combination is desired (see information on page 77f covering "A" Relays); what coil is desired (see information on coils above); whether a "standard" or "slow-release" armature; and whether an adjustable residual screw or fixed residual is desired. If the resistances of the coils are not important, it usually is better to specify the operating voltage and the proper coils for operating the combinations specified will be supplied.

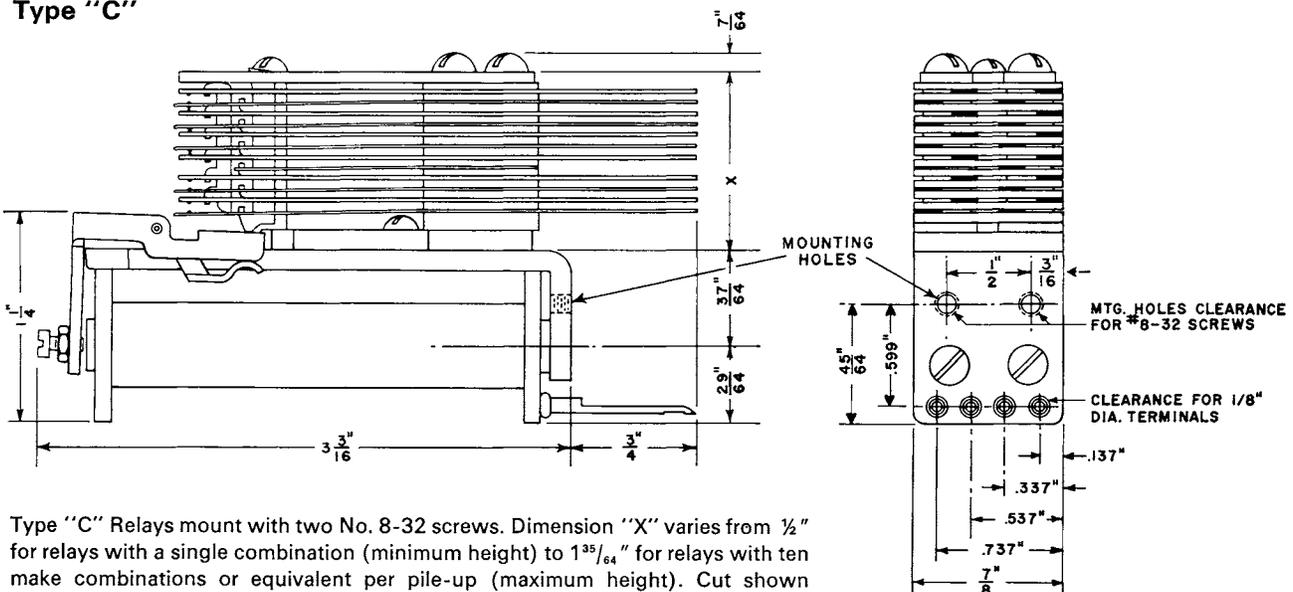
MOUNTING INFORMATION ON TYPE "A," "B," & "C" RELAYS

Type "A"



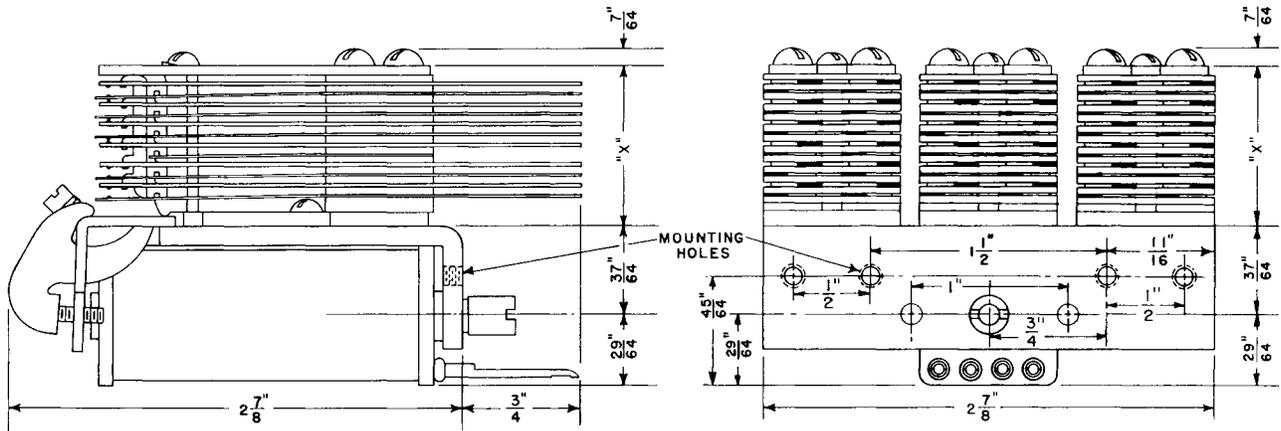
Type "A" Relays mount with two No. 8-32 screws. Dimension "X" is $\frac{1}{2}$ " for relays with a single combination (minimum height) or $1\frac{35}{64}$ " for relays with ten make combinations or equivalent per pile-up (maximum height). Cut shown illustrates a relay with a 2½:1 armature ratio. The spring pile-up contains the following combinations: Two makes, two breaks and one break-make. View shown is actual size.*

Type "C"



Type "C" Relays mount with two No. 8-32 screws. Dimension "X" varies from $\frac{1}{2}$ " for relays with a single combination (minimum height) to $1\frac{35}{64}$ " for relays with ten make combinations or equivalent per pile-up (maximum height). Cut shown illustrates a relay with spring pile-up containing the following combinations: Two makes, two breaks, and one break-make. View shown is actual size.*

*The "X" dimension increases $\frac{1}{32}$ " when a preliminary "Make," "Break" or "Break-Make" combination is used.



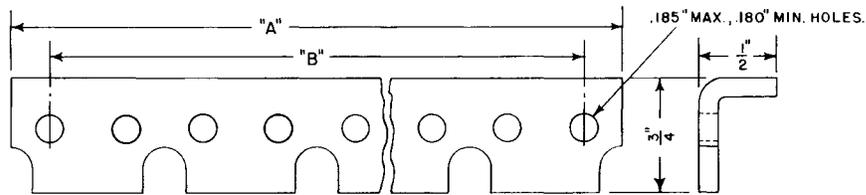
Type "B"

Type "B" Relays mount with two No. 8-32 screws. Dimension "X" varies from $49/64$ " (minimum height) for relays with a total of

24 make combinations or equivalent to $1 13/32$ " (maximum height) for relays with a total of 60 make combinations or equivalent.

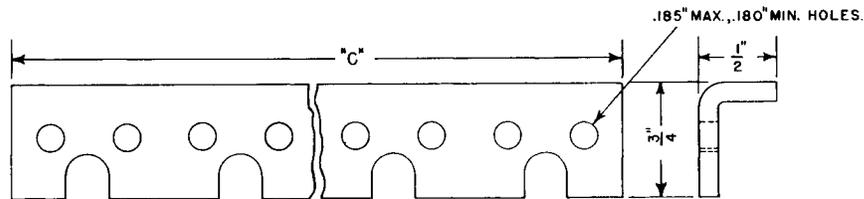
RELAY MOUNTING STRIPS

for Type "A," "B," & "C" Relays



For use when fastening with screws in end holes.

Stock No.	No. of Relays		Length*	Mtg. Centers
	Type "A" or "C"	Type "B"		
206326-000	3	1	4"	3 1/2"
204904-000	6	2	7"	6 1/2"
206437-000	8	2	9"	8 1/2"
209558-000	10	3	11"	10 1/2"
209278-000	24	8	25"	24 1/2"



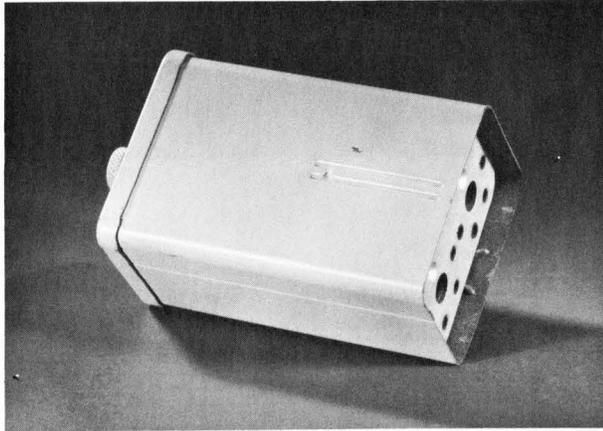
For use with butt welded ends or similar type fastening.

Stock No.	No. of Relays		Length*	Stock No.	No. of Relays		Length*
	Type "A" or "C"	Type "B"			Type "A" or "C"	Type "B"	
204190-000	3	1	3"	480812-000	15	5	15"
480209-000	4	1	4"	483865-000	16	5	16"
204056-000	6	2	6"	484726-000	18	6	18"
204274-000	7	2	7"				
481348-000	8	2	8"				
484921-000	9	3	9 1/2"				
204173-000	10	3	10"				

*Lengths other than listed up to a maximum of 36" may be obtained on special order. The maximum length (36") will hold up to 36 Type "A" or "C" or 12 Type "B" when butt-welded.

RELAY CASINGS

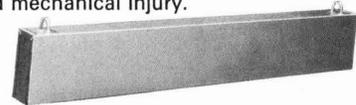
These are light-finished sheet steel casings for covering individual relays or groups of relays. They are used with various



No. 25 Relay Casing

types of standard relay mountings and effectively protect the apparatus from dust and mechanical injury.

No. 23-L Relay Casing



Stock No.	Code	No. & Type Relays Covered	Width Inches	Depth Inches	Height Inches
801597-000	(16-L)	50 No. 190	9 ⁹ / ₁₆	3 ⁵ / ₈	3 1/2
801598-000	(17-L)	40 No. 190	7 3/4	3 ⁵ / ₈	3 1/2
801600-000	(18-L)	20 No. 190	4 7/8	3 ⁵ / ₈	3 1/2
—	(19-L)	Replaced by No. 25 Casing			
801603-000	(20-L)	20 No. 200	11 ¹¹ / ₆₄	3 3/4	3 ⁴¹ / ₆₄
801605-000	(21-L)	10 No. 200	11 ⁶¹ / ₆₄	3 3/4	1 ⁴⁵ / ₆₄
801607-000	(23-L)	40 No. 190	23 ¹³ / ₃₂	3 3/4	1 ⁵⁹ / ₆₄
801609-000	(24-L)	14 No. 200	16 ⁴⁹ / ₆₄	3 3/4	1 ⁴⁵ / ₆₄
*801610-000	(25)	2 No. 200	2 ¹¹ / ₃₂	4	1 ²⁵ / ₃₂
801611-000	(26)	6 No. 200	7 ⁹ / ₆₄	3 3/4	1 ⁴⁵ / ₆₄
205108-000	(27)	1 "A" or "C"	2 3/8	3 3/4	1 7/8

*No. 25 Casing with 4" shell may be used for replacement on all Stromberg-Carlson Switchboards.

RELAY MOUNTINGS

Stromberg-Carlson Type "A," "B," and "C" Relays are usually mounted on circuit plate mountings. These mountings are

grouped as to size and use and are listed in the following tables:

Mountings for Type "A," "B," and "C" Relays

The following is a list of Mountings for Composite CX Equipment

Stock No.	Number and Type of Relays	Cover Assembly	Mounting Centers Inches	Length Inches	Width Inches
480504-000	7 A or C	484505-000	18 3/8	19	1 ¹ / ₁₆
480590-000	14 A or C	480507-000	18 3/8	19	3 3/8
480594-000	21 A or C, or 7 B	484518-000	18 3/8	19	5 1/8
*482869-000	28 A or C	None or †482887-000	18 3/8	19	6 3/8

The following is a list of Mountings for Manual Switchboards

Stock No.	Number and Type of Relays	Cover Assembly	Mounting Centers Inches	Length Inches	Width Inches
448504-000	18 A or C	448704-000	19 3/4	20 1/4	2 ⁹ / ₁₆
448505-000	16 A or C	448704-000	19 3/4	20 1/4	2 ⁹ / ₁₆

The following is a list of Mountings for Testing Equipment

Stock No.	Number and Type of Relays	Cover Assembly	Mounting Centers Inches	Length Inches	Width Inches
448501-000	18 A or C	448701-000	20 1/2	21	1 ¹⁹ / ₃₂

The following is a list of Mountings for XY Shelf Equipment

Stock No.	Number and Type of Relays	Cover Assembly	Mounting Centers Inches	Length Inches	Width Inches
447501-000	10 A or C	447611-000	27	27 1/2	1 ¹³ / ₆₄
447511-000	20 A or C	447612-000	27	27 1/2	3 ¹ / ₁₆
447521-000	30 A or C, or 10 B	447613-000	27	27 1/2	4 ⁴¹ / ₆₄
447541-000	40 A or C	447614-000	27	27 1/2	6 ⁷ / ₃₂
447502-000	15 A or C	447615-000	38	38 1/2	1 ¹³ / ₆₄
447512-000	20 A or C	447616-000	38	38 1/2	3 ¹ / ₁₆
447522-000	45 A or C, or 15 B	447617-000	38	38 1/2	4 ⁴¹ / ₆₄

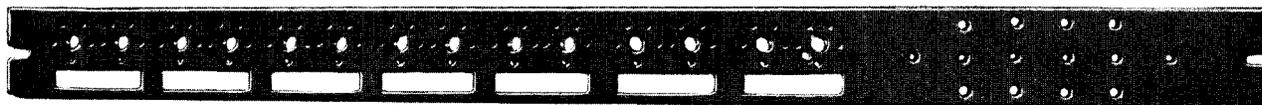
*Terminal Block and Mounting are attached.

†Has one cut-out for make busy and test unit.

Mountings for 190 and 200 Type Relays

These relay mounting strips are light-finished plates of $\frac{3}{16}$ " strip steel designed for mounting relays shown in the following

table, as well as those of our standard condensers which occupy the same space as the No. 200 Type Relays.



Horizontal Type Mountings

<i>Stock No.</i>	<i>Code</i>	<i>Number and Type Relays</i>	<i>Relay Casings</i>	<i>Mtg. Centers Inches</i>	<i>Length Inches</i>	<i>Width Inches</i>
801654-000	(85-L)	40 No. 200	20 No. 25	25 ½	26	3 ¾
801657-000	(87-L)	16 No. 200	8 No. 25	20 ¾	21 ½	1 ¾
801659-000	(88-L)	60 No. 190	3 No. 18	17	17 ½	3 ¾
801661-000	(89-L)	12 No. 200	6 No. 25	17	17 ½	1 ¾
801668-000	(96-L)	40 No. 190	1 No. 17	8 ¾	8 ¾	3 ¾
801671-000	(98-L)	20 No. 190	8 No. 25	17	17 ½	3 ¾
801675-000	(101-L)	12 No. 200 (a)	1 No. 21, 25	18 ¾	18 ¾	1 ¾
801677-000	(102-L)	14 No. 200 4 No. 19 Cond.	2 No. 25 1 No. 21	25 ½	26	1 ¾
801679-000	(103-L)	10 No. 200	5 No. 25	17	17 ½	1 ¾
801681-000	(104-L)	20 No. 200	10 No. 25	25 ½	26	1 ¾
801683-000	(105-L)	40 No. 190	1 No. 23	25 ½	26	1 ¾
801685-000	(106-L)	6 No. 200 (a)	3 No. 25	17	17 ½	1 ¾
801688-000	(109-L)	9 No. 200 (b)	5 No. 25	17	17 ½	1 ¾
801690-000	(110-L)	10 No. 200 (c)	5 No. 25	17	17 ½	1 ¾
801692-000	(111-L)	14 No. 200	1 No. 24	18 ¾	18 ¾	1 ¾
801697-000	(116-L)	60 No. 190	3 No. 18	18 ¾	18 ¾	3 ¾
801698-000	(117-L)	18 No. 200	9 No. 25	23 ¾	23 ¾	1 ¾
801699-000	(118-L)	28 No. 200 20 No. 190	14 No. 25 1 No. 18	23 ¾	23 ¾	3 ¾
801700-000	(119-L)	8 No. 200	4 No. 25	17	17 ½	1 ¾
801701-000	(120-L)	12 No. 200	1 No. 21, 25	17	17 ½	1 ¾

(a) Mounts 2 No. 19 Condensers, (b) Mounts 2 No. 28 Condensers, (c) Mounts 2 No. 35 Condensers.

Vertical Type Mountings

These vertically installed mountings are used in relay cabinets and Stromberg-Carlson PBX Switchboards.

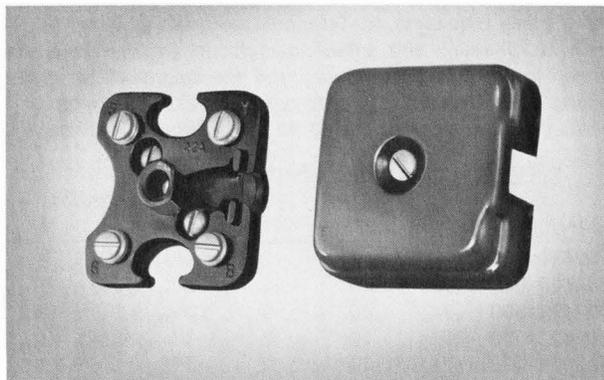
<i>Stock No.</i>	<i>Code</i>	<i>Number and Type Relays Mounted</i>	<i>Relay Casings</i>	<i>Mtg. Centers Inches</i>	<i>Length Inches</i>	<i>Width Inches</i>
801695-000	(114-L)	12 No. 200, 2 No. 190	6 No. 25	18 $\frac{13}{16}$	19 $\frac{9}{16}$	2 ½
801696-000	(115-L)	22 No. 200	11 No. 25	22	22 ½	2 ½
801702-000	(121-L)	40 No. 200		39 $\frac{9}{16}$	39 $\frac{9}{16}$	2 ½

Angle Type Mountings

<i>Stock No.</i>	<i>Code</i>	<i>Number and Type Relays Mounted</i>	<i>Relay Casings</i>	<i>Style Mounting</i>	<i>Length Inches</i>	<i>Width Inches</i>
801665-000	(93-L)	1 No. 200	---	Floor	1 ½	1 ¾
801666-000	(94-L)	1 No. 200	---	Sidewall	1 $\frac{11}{16}$	1
801667-000	(95-L)	2 No. 200	1 No. 25	Sidewall	2 $\frac{19}{32}$	1
801673-000	(100-L)	4 No. 200	2 No. 25	Roof	3 ¾	2 ½

TERMINAL EQUIPMENT

STATION TERMINAL EQUIPMENT



Station Terminal Block—3 or 4 Conductor

Terminal Blocks 202300-106 and 202310-106 are used with handset telephones for connecting the line cord and this terminal block consists of a removable cover and matching plastic base containing an anchor post and four terminal plates with connecting screws.

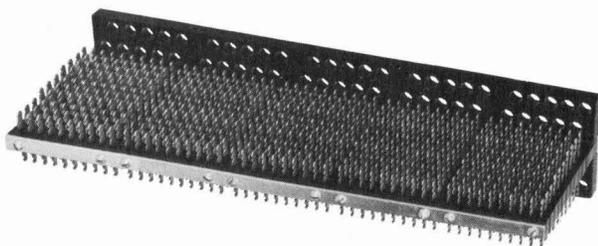
The cover is attached to the base by a screw which threads into the center of the anchor post and notches are provided on opposite sides for the entrance of the line cord and station wires.

Dimensions: 2" x 2" x 3/4" high.

202300-106 No. 17A Connector (4 Terminals)

202310-106 No. 17B Connector (6 Terminals)

CENTRAL OFFICE TERMINAL STRIPS



Terminal Strips—Molded Type for XY Dial Systems—Shelf Type

Similar in style to the wood base type of terminal strips, this molded type combines simplicity and economy both in manufacturing and installing. Composed of high grade general purpose black phenolic, this strip is light in weight and is uniform in thickness, giving maximum strength as well as a refined appearance.

The terminals are grouped to give an advantage in the field of quick location, and, at the same time, eliminate lengthy counting in long strips. The separation is also composed of black phenolic but has Hycar added to give flexibility in assembling. Mounting is accomplished through the use of a steel mounting plate that is attached to the strip and into which screws can be driven from the shelf frame.

Stock No.	Code	Terminals		Dimensions		
		No. of Circuits	Per Circuit	Lgth.	Thick.	Ht.
203311-000	(101)	10	1	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	1 ²¹ / ₃₂ "
203312-000	(102)	10	2	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	2"
203313-000	(103)	10	3	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₃₂ "
203314-000	(104)	10	4	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₁₆ "
203315-000	(105)	10	5	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	3 ¹ / ₃₂ "
203316-000	(106)	10	6	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	3 ³ / ₈ "
203317-000	(107)	10	7	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	3 ²³ / ₃₂ "
203318-000	(108)	10	8	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	4 ¹ / ₁₆ "
203319-000	(109)	10	9	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	4 ¹³ / ₃₂ "
203310-000	(110)	10	10	2 ³⁹ / ₆₄ "	2 ¹³ / ₁₆ "	4 ³ / ₄ "
203361-000	(111)	15	1	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	1 ²¹ / ₃₂ "
203362-000	(112)	15	2	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	2"
203363-000	(113)	15	3	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₃₂ "
203364-000	(114)	15	4	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₁₆ "
203365-000	(115)	15	5	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	3 ¹ / ₃₂ "
203366-000	(116)	15	6	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	3 ³ / ₈ "
203367-000	(117)	15	7	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	3 ²³ / ₃₂ "
203368-000	(118)	15	8	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	4 ¹ / ₁₆ "
203369-000	(119)	15	9	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	4 ¹³ / ₃₂ "

Stock No.	Code	Terminals		Dimensions		
		No. of Circuits	Per Circuit	Lgth.	Thick.	Ht.
203360-000	(120)	15	10	4 ³ / ₃₂ "	2 ¹³ / ₁₆ "	4 ³ / ₄ "
203321-000	(121)	20	1	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	1 ²¹ / ₃₂ "
203322-000	(122)	20	2	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	2"
203323-000	(123)	20	3	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₃₂ "
203324-000	(124)	20	4	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₁₆ "
203325-000	(125)	20	5	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	3 ¹ / ₃₂ "
203326-000	(126)	20	6	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	3 ³ / ₈ "
203327-000	(127)	20	7	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	3 ²³ / ₃₂ "
203328-000	(128)	20	8	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	4 ¹ / ₁₆ "
203329-000	(129)	20	9	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	4 ¹³ / ₃₂ "
203320-000	(130)	20	10	5 ⁷ / ₃₂ "	2 ¹³ / ₁₆ "	4 ³ / ₄ "
203371-000	(131)	26	1	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	1 ²¹ / ₃₂ "
203372-000	(132)	26	2	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	2"
203373-000	(133)	26	3	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₃₂ "
203374-000	(134)	26	4	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₁₆ "
203375-000	(135)	26	5	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	3 ¹ / ₃₂ "
203376-000	(136)	26	6	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	3 ³ / ₈ "
203377-000	(137)	26	7	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	3 ²³ / ₃₂ "
203378-000	(138)	26	8	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	4 ¹ / ₁₆ "
203379-000	(139)	26	9	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	4 ¹³ / ₃₂ "
203370-000	(140)	26	10	6 ⁵⁹ / ₆₄ "	2 ¹³ / ₁₆ "	4 ³ / ₄ "
203331-000	(141)	30	1	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	1 ²¹ / ₃₂ "
203332-000	(142)	30	2	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	2"
203333-000	(143)	30	3	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₃₂ "
203334-000	(144)	30	4	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₁₆ "
203335-000	(145)	30	5	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	3 ¹ / ₃₂ "
203336-000	(146)	30	6	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	3 ³ / ₈ "
203337-000	(147)	30	7	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	3 ²³ / ₃₂ "
203338-000	(148)	30	8	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	4 ¹ / ₁₆ "
203339-000	(149)	30	9	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	4 ¹³ / ₃₂ "
203330-000	(150)	30	10	7 ¹³ / ₁₆ "	2 ¹³ / ₁₆ "	4 ³ / ₄ "
203341-000	(151)	40	1	10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	1 ²¹ / ₃₂ "
203342-000	(152)	40	2	10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	2"
203343-000	(153)	40	3	10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₃₂ "
203344-000	(154)	40	4	10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₁₆ "
203345-000	(155)	40	5	10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	3 ¹ / ₃₂ "

Stock No.	Code	No. of Circuits	Terminals		Dimensions		
			Per Circuit		Lgth.	Thick.	Ht.
203346-000	(156)	40	6		10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	3 ³ / ₈ "
203347-000	(157)	40	7		10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	3 ²³ / ₃₂ "
203348-000	(158)	40	8		10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	4 ¹ / ₁₆ "
203349-000	(159)	40	9		10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	4 ¹³ / ₃₂ "
203340-000	(160)	40	10		10 ⁷ / ₁₆ "	2 ¹³ / ₁₆ "	4 ³ / ₄ "
203351-000	(161)	50	1		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	1 ²¹ / ₃₂ "
203352-000	(162)	50	2		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	2"
203353-000	(163)	50	3		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₃₂ "
203354-000	(164)	50	4		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	2 ¹¹ / ₁₆ "
203355-000	(165)	50	5		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	3 ¹ / ₃₂ "
203356-000	(166)	50	6		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	3 ³ / ₈ "
203357-000	(167)	50	7		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	3 ²³ / ₃₂ "
203358-000	(168)	50	8		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	4 ¹ / ₁₆ "
203359-000	(169)	50	9		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	4 ¹³ / ₃₂ "
203350-000	(170)	50	10		13 ¹ / ₃₂ "	2 ¹³ / ₁₆ "	4 ³ / ₄ "

Terminal Strips—Molded Type For Main Frames

The only difference between this type of terminal strip and the type used on XY Dial System shelves is the method of mounting. This type has four holes, counter-sunk, for bolting it to the main frame. All other features are the same.

Stock No.	Code	No. of Circuits	Terminals		Dimensions		
			Per Circuit		Lgth.	Thick.	Ht.
212800-000	(180)	26	2		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	2 ¹ / ₁₆ "
212801-000	(181)	26	3		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	2 ¹³ / ₃₂ "
212802-000	(182)	26	4		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	2 ³ / ₄ "
212803-000	(183)	26	5		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	3 ³ / ₃₂ "
212804-000	(184)	26	6		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	3 ⁷ / ₁₆ "
212805-000	(185)	26	7		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	3 ²⁵ / ₃₂ "
212806-000	(186)	26	8		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	4 ¹ / ₈ "
212807-000	(187)	26	9		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	4 ¹⁵ / ₃₂ "
212808-000	(188)	26	10		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	4 ¹³ / ₁₆ "
212809-000	(189)	26	11		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	5 ⁵ / ₃₂ "
212810-000	(190)	26	12		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	5 ¹ / ₂ "
212811-000	(191)	20	2		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	2 ¹ / ₁₆ "
212812-000	(192)	20	3		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	2 ¹³ / ₃₂ "
212813-000	(193)	20	4		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	2 ³ / ₄ "
212814-000	(194)	20	5		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	3 ³ / ₃₂ "
212815-000	(195)	20	6		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	3 ⁷ / ₁₆ "
212816-000	(196)	20	7		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	3 ²⁵ / ₃₂ "
212817-000	(197)	20	8		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	4 ¹ / ₈ "
212818-000	(198)	20	9		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	4 ¹⁵ / ₃₂ "
212819-000	(199)	20	10		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	4 ¹³ / ₁₆ "
212820-000	(200)	20	11		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	5 ⁵ / ₃₂ "
212821-000	(201)	20	12		7 ³¹ / ₃₂ "	2 ¹⁹ / ₃₂ "	5 ¹ / ₂ "

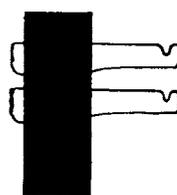
Terminal Strips—Less Base

Used for mounting on wood bases in accordance with distributing frame requirements. Terminals are made of sheet brass, with nickel finish and soldering ends tinned. Terminals are driven into hard rubber blocks and are staggered for ready wiring. The top face of the hard rubber blocks are smooth and allow the strip to be numbered for ready circuit identification.

Stock No.	Code	No. of Circuits	Terminals		Dimensions		
			per Circuit		Lgth.	Thk.	Ht.
802418-000	(68)	25	2		6 ³¹ / ₃₂ "	1 ³ / ₈ "	1 ⁵ / ₁₆ "
802420-000	(70)*	20	1		10 ⁷ / ₃₂ "	1 ¹ / ₈ "	1 ⁵ / ₁₆ "
802421-000	(71)*	20	2		10 ⁷ / ₃₂ "	1 ¹ / ₈ "	1 ¹ / ₄ "
802422-000	(72)	10	2		3 ²³ / ₃₂ "	1 ³ / ₈ "	1 ⁵ / ₁₆ "
802423-000	(73)	10	3		3 ²³ / ₃₂ "	1 ¹ / ₂ "	1 ¹ / ₄ "
802424-000	(74)	10	4		3 ²³ / ₃₂ "	1 ⁵ / ₈ "	1 ⁹ / ₁₆ "
802425-000	(75)	10	5		3 ²³ / ₃₂ "	1 ³ / ₄ "	1 ³ / ₄ "
802426-000	(76)	10	6		3 ²³ / ₃₂ "	1 ⁵ / ₈ "	2 ¹ / ₃₂ "
802427-000	(77)	20	2		6 ³¹ / ₃₂ "	1 ³ / ₈ "	1 ⁵ / ₁₆ "
802428-000	(78)	20	3		6 ³¹ / ₃₂ "	1 ¹ / ₂ "	1 ¹ / ₄ "
802429-000	(79)	20	4		6 ³¹ / ₃₂ "	1 ⁹ / ₁₆ "	1 ¹ / ₄ "
802430-000	(80)	20	4		6 ³¹ / ₃₂ "	1 ⁵ / ₈ "	1 ¹ / ₄ "
802431-000	(81)	20	5		6 ³¹ / ₃₂ "	1 ³ / ₄ "	1 ³ / ₄ "
802432-000	(82)	20	6		6 ³¹ / ₃₂ "	1 ⁵ / ₈ "	2 ¹ / ₃₂ "
802438-000	(88)†	23	6		7 ¹³ / ₁₆ "	1 ⁵ / ₈ "	2 ¹ / ₃₂ "

*No. 70 and No. 71 Terminal Strips are equipped with terminals which have soldering clips on one side only. They are generally used in connection with protector strips on the arrester side of main distributing frames.

†Used in connection with multiple key turret apparatus for terminating six wire circuits, and making connections between turrets.



Terminal Arrangement of No. 70 and No. 71 Terminal Strips

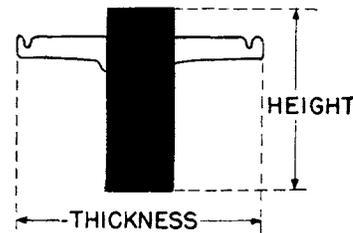


Diagram Showing Application of Dimensions

TOOLS

**FOR SWITCHBOARDS, TELEPHONES,
AND MISCELLANEOUS USE**

<i>Stock No.</i>	<i>Code</i>	<i>Description</i>
802456-000	(2)	Socket Wrench fits the 3/8" hexagonal mounting nut of all visual signals, impedance coils and relays (except the No. 190 Type Relay). Length, 6".
802457-000	(7)	Spring Adjuster used for adjusting springs up to .03" thick, on relays, keys, jacks etc. Length, 7 3/32".
802465-000	(24)	Screwdriver and Socket Wrench, used with 1/4" and 3/16" nuts and residual screws on the Nos. 200, 500 and "A" Relays.
10438-000	(36)	Spring Adjuster for No. 200 Type Relays having three sets of springs. Length, 6 1/16". For smaller pile-ups use No. 268 Spring Adjuster.
12077-000	(42)	Screw Driver for removing both shell and terminal screws from standard plugs except No. 61. One end is pointed and fits in a hole drilled in top of screw, to facilitate starting of screw. Length, 3 7/8".
802474-000	(44)	Jack Fastener Wrench and Screw Driver used with the No. 17 Jack Fastener (Butterfly Type). Consists of a thick metal tubing, the end of which is notched to fit cut-out portion of butterfly jack fastener, and a screw driver which passes through the tubing. The screw driver tightens the screw while the tubing holds the fastener in place. Length, 19".
802475-000	(45)	Socket Screw Driver used for removing the Nos. 190, 200 and 300 Type Relays from the bridge plate. Length, 8".
13372-000	(47)	Flat Wrench used for adjusting No. 47 Type Harmonic Ringers. Length, 3 3/4".
802482-000	(53)	Spring Adjuster used for adjusting contact springs on the No. 360 Type Relays. Length, 3 7/8".
802483-000	(54)	Spring Adjuster used for adjusting No. 24 Gauge Springs on the No. 200 Type Relay. Length, 7 7/32".
802485-000	(56)	Small Screw Driver, for little screws such as those used on drop number plates. Length, 4 3/4".
29372-000	(64)	Flat Wrench to adjust and assemble No. 57, 59, 60 and Stock No. 23365-000 Ringers. Two wrenches required, one for holding, other for drawing nut tight. Length, 3 3/4".
34048-000	(65)	Spring Adjuster for use on moving springs of Nos. 500, 600, "A," "B," and "C" Relays. Length, 5 1/2".
34049-000	(66)	Spring Adjuster for ears of rigid springs of Nos. 500 and 600 Relays, and for heavy springs of the "A," "B," and "C" Relays. Length, 4".
212477-000	(69)	Jack sleeve tool for removing sleeves on Nos. 99 and 100 Jack Mountings. Length, 4 3/8".



No. 2



No. 7



No. 27



No. 42



No. 44



No. 45



No. 47



No. 53



No. 54

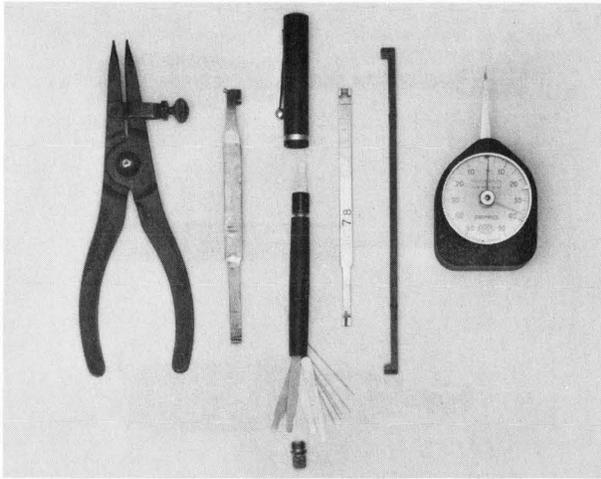


No. 65



No. 66

STROMBERG-CARLSON



No. 83, No. 72, No. CB-54, No. 78, No. 100, No. 103

Stock No.	Code	Description
201092-000	(70)	Lamp Cap extractor for all lamp caps. Length, $4\frac{7}{16}$ ".
36372-000	(72)	Adjusting tool for light moving springs, armature back stop, and spring clamp plate on Type "A" Relays. Length, $3\frac{9}{32}$ ".
36371-000	(73)	Tool for adjusting or removing Type "A" Relay pushers and spring stops. (2-3-4-5-6 steps.) Length, $1\frac{9}{16}$ ".
36377-000	(74)	Adjusting tool. Same as No. 73 only for 6-7-8-9 steps. Length, $1\frac{5}{16}$ ".
203401-000	(75)	Flat Wrench. For adjusting Nos. 61 and 65 Straight Line Ringers. One end ($\frac{3}{16}$ ") is used to adjust armature air gap and the other end ($\frac{1}{2}$ ") for loosening nuts to regulate the armature adjusting screw. Length, $3\frac{1}{8}$ ".
204954-000	(77)	Thickness Gauges. For adjusting springs on the Type "A" or "C" Relays. Length, 3".
205683-000	(78)	Armature and Armature Back stop adjusting tool used on Type "C" Relays. Length, 4".
207625-000	(79)	End Wrench for use on the XY Universal Switch. Length, $2\frac{1}{2}$ ".
207629-000	(83)	Tru-arc pliers used to remove and replace Tru-arc rings on the tubular shaft and pinion of the XY Universal Switch. Length, $5\frac{11}{16}$ ".
209441-000	(85)	Y-Armature adjusting tool for bending the Y-Armature upward on an XY Universal Switch. Length, $8\frac{5}{8}$ ".
209442-000	(86)	X-Armature bending tool for adjusting the armature on an XY Universal Switch. Length, $5\frac{1}{2}$ ".
209444-000	(88)	Foot bending tool used to bend the feet on the X and Y carriage on the XY Universal Switch. Length, 5".
209445-000	(89)	Z-Armature bending tool for adjusting the release magnet armature on XY Universal Switches. Length, 4".
209446-000	(90)	Y-Armature bending tool for bending the Y-Armature downward on an XY Universal Switch. Length, $1\frac{9}{16}$ ".
209447-000	(91)	Knu-vise for holding a magnet operated while making adjustments on an XY Universal Switch. Length, $8\frac{1}{2}$ ".
209449-000	(93)	Slit screw driver for removing and replacing screws that are difficult to reach on the XY Universal Switch. Length, $6\frac{3}{4}$ ".
210187-000	(95)	Cable clip pliers for replacing the cable in the cable clip on the Y-carriage of an XY Universal Switch. Length, 6".
210188-000	(96)	Snap-ring pliers for putting on snap rings on X and Y armatures of an XY Universal Switch. Length, 6".
212013-000	(99)	Special pliers used to adjust the interrupters on the XY Universal Switch. Length, 6".
802498-000	(100)	Spring adjusting tool for springs up to .020" thick on Type "A," "B" or "C" Relays. Length, approximately $5\frac{1}{2}$ ". Replaces former No. 268 tool.
213803-000	(102)	Gram gauge (push-pull) used for measuring contact spring pressure on the XY Universal Switch.
212756-000	(103)	Gram gauge (dial face) used for measuring contact spring pressures on Type "A," "B," or "C" Relays.
213818-000	(104)	$\frac{3}{16}$ " x $\frac{13}{64}$ " x $2\frac{7}{8}$ " lg. offset box wrench used in installation of XY Dial System.
213819-000	(105)	$\frac{5}{16}$ " x $\frac{11}{32}$ " x $3\frac{3}{4}$ " lg. offset box wrench used in installation of XY Dial System.
210195-000	(106)	Test Buzzer Assembly for continuity checking.
218169-000	(107)	Lamp Extractor for removing switch-board lamps from lamp sockets, $\frac{9}{32}$ " diameter, length, $2\frac{7}{16}$ ".
211209-000	(CB-54)	Contact Burnisher for cleaning contacts on all types of relays. In handy pen-like carrying case $4\frac{31}{32}$ " long.

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**STROMBERG-CARLSON
CORPORATION**

ROCHESTER, NEW YORK 14603

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