

# Centralab<sup>®</sup>

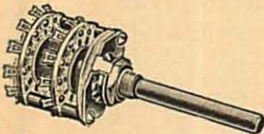
Milwaukee 1, Wisconsin

In Canada: 669 Bayview Ave., Toronto, Ontario

## SWITCHES

### PA-1000 SERIES MINIATURE PHENOLIC ROTARY SWITCHES

A complete line of laminated phenolic insulated rotary switches which will meet rigorous military and commercial applications. Laminated phenolic insulation, type PBE, per MIL-P-3115B. Voltage breakdown 1000 volts AC-RMS. Sections: 1½" diam., ¼" thick. All metal parts except clips and contacts, cadmium plated to withstand 25 hour salt spray test. Bushing: ⅜" — 32 thread, ⅜" long. Shaft: ¼" diameter full-round, 2¼" long from mtg. surface. Rated: 2 amperes at 15 volts DC; 150 milliamperes at 110 volts AC. Indexing: Positive — adjustable stop — in 30° or 60° detents.



#### MINIATURE SWITCHES WITH 30° INDEXING

Total Number Poles	Total Positions	Poles Per Section	Number Sections	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-11	1	1	PA-1000	PA-1001	\$2.50
2	2-5	2	1	PA-1002	PA-1003	2.50
2	2-11	1	2	PA-1004	PA-1005	3.60
3	2-3	3	1	PA-1006	PA-1007	2.50
3	2-11	1	3	PA-1008	PA-1009	4.50
4	2	4	1	PA-1010	PA-1011	2.50
4	2-5	2	2	PA-1012	PA-1013	3.60
4	2-11	1	4	PA-1014	PA-1015	5.30
5	2-11	1	5	PA-1016	PA-1017	6.20
6	2-3	3	2	PA-1018	PA-1019	3.60
6	2-5	2	3	PA-1020	PA-1021	4.50
6	2-11	1	6	PA-1022	PA-1023	7.00
8	2	4	2	PA-1024	PA-1025	3.60
8	2-5	2	4	PA-1026	PA-1027	5.30
10	2-5	2	5	PA-1030	PA-1031	6.20
12	2	4	3	PA-1028	PA-1029	4.50
12	2-5	2	6	PA-1032	PA-1033	7.00

#### SPECIAL CIRCUITS

1 2-10 1 1 PA-1034 ..... \$2.50  
(Nine active contacts, all shorted to common contact in full CCW positions, and progressively opened and dropped with CW rotation.)  
1 2-10 1 1 PA-1040 ..... 2.50  
(Nine active contacts, all open in full CCW position and progressively picked up and shorted to common contact with CW rotation.)

#### 60° INDEXING SWITCHES

1	2-6	1	1	.....	PA-1035	\$2.50
2	2-6	1	2	.....	PA-1037	3.60

#### SEPARATE MINIATURE PHENOLIC SECTIONS

Use with index assemblies No. PA-300, PA-301, PA-302 (except as noted) for assembly of special switches to meet your requirements.

Poles	Positions	Indexing	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-11	30°	PA-30	PA-31	\$1.20
2	2-5	30°	PA-32	PA-33	1.20
3	2-3	30°	PA-34	PA-35	1.20
4	2	30°	PA-36	PA-37	1.20
1	2-5	30°	PA-38	PA-39	1.20

(All unused contacts one side of common connected and shorted out.)

1 2-11 30° PA-40 PA-41 1.20

(All unused contacts connected and shorted out.)

1 2-10 30° PA-43 ..... 1.20

(Nine active contacts, all shorted to common contact in full CCW position, and progressively opened and dropped with CW rotation.)

1 2-10 30° PA-49 ..... 1.20

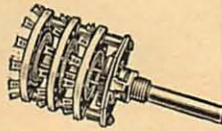
(Nine active contacts, all open in full CCW position and progressively picked up and shorted to common contact with CW rotation.)

1 2-6 60° ..... PA-45 1.20

(Use with 60° Index Assemblies PA-304 or PA-305.)

### PA-2000 SERIES MINIATURE CERAMIC ROTARY SWITCHES

A complete line of ceramic insulated rotary switches offering maximum voltage flashover, high-Q-low-loss steatite insulation and minimum inter-circuit capacity. Grade L-5A steatite insulation. Voltage breakdown 1500 volts AC-RMS. Sections: 1½" diam., .100" thick. All metal parts except clips and contacts, cadmium plated to withstand 25 hour salt-spray test. Bushing: ⅜" — 32 thread, ⅜" long. Shaft: ¼" diam. full-round, 2¼" long from mtg. surface. Rated: 2 amperes at 15 volts DC; 150 milliamperes at 110 volts AC. Indexing: Positive — adjustable stop — in 30° or 60° detents.



#### MINIATURE SWITCHES WITH 30° INDEXING

Total Number Poles	Total Positions	Poles Per Section	Number Sections	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-12	1	1	PA-2000	PA-2001	\$3.30
2	2-6	2	1	PA-2002	PA-2003	3.30
2	2-12	1	2	PA-2004	PA-2005	4.70
3	2-5	3	1	PA-2006	PA-2007	3.30
3	2-12	1	3	PA-2008	PA-2009	6.00
4	2-6	2	2	PA-2010	PA-2011	4.70
4	2-12	1	4	PA-2012	PA-2013	7.20
5	2-3	5	1	PA-2014	PA-2015	3.30
5	2-12	1	5	PA-2016	PA-2017	8.60
6	2	6	1	PA-2018	PA-2019	3.30
6	2-5	3	2	PA-2020	PA-2021	4.70
6	2-6	2	3	PA-2022	PA-2023	6.00
6	2-12	1	6	PA-2024	PA-2025	10.00
8	2-6	2	4	PA-2026	PA-2027	7.20
9	2-5	3	3	PA-2028	PA-2029	6.00
10	2-3	5	2	PA-2030	PA-2031	4.70
10	2-6	2	5	PA-2032	PA-2033	8.60
12	2	6	2	PA-2034	PA-2035	4.70
12	2-6	2	6	PA-2036	PA-2037	10.00
15	2-3	5	3	PA-2038	PA-2039	6.50
18	2	6	3	PA-2040	PA-2041	6.50

#### SPECIAL CIRCUITS

1 2-10 1 1 PA-2052 ..... 3.00  
(Nine active contacts, all shorted to common contact in full CCW positions, and progressively opened and dropped with CW rotation.)  
1 2-10 1 1 PA-2042 ..... 3.00  
(Nine active contacts, all open in full CCW position and progressively picked up and shorted to common contact with CW rotation.)

2 2-12 1 2 PA-2048 PA-2049 6.50

(Coin silver clips and contacts.)

2 4 1 2 PA-2050 ..... 3.30

(For Switching dual lines.)

#### MINIATURE SWITCHES WITH 60° INDEXING

1	2-6	1	1	.....	PA-2043	3.00
2	2-6	1	2	.....	PA-2045	4.20

(1½" spacing between sections.)

#### SEPARATE INDEX ASSEMBLIES

Indexing	Rear Shaft Length	Suggested No. Sections	Catalog Number	List Price
30°	2"	1 to 3	PA-300	\$1.90
30°	4"	4 to 6	PA-301	2.50
30°	6"	7 to 9	PA-302	3.30
60°	2"	1 to 3	PA-304	2.00
60°	4"	4 to 6	PA-305	2.60

Same for PA-2000 and PA-1000 Series.

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## SWITCHES (Cont'd)

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### SEPARATE STEATITE SECTIONS FOR PA-2000 SERIES

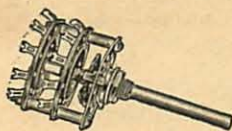
Use with Index Assemblies No. PA-300, PA-301, PA-302 (except as noted) for assembly of special switches to meet your requirements.)

No. Poles	No. Positions	Indexing	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-12	30°	PA-0	PA-1	\$1.65
2	2-6	30°	PA-2	PA-3	1.65
3	2-5	30°	PA-4	PA-5	1.65
5	2-3	30°	PA-6	PA-7	1.65
6	2	30°	PA-8	PA-9	1.65
1	2-5	30°	PA-10	PA-19	1.65
<i>(Unused contacts one side of common connected and shorted out.)</i>					
1	2-11	30°	PA-11	PA-18	1.65
<i>(All unused contacts connected and shorted out.)</i>					
1	2-10	30°	PA-12	....	1.65
<i>(Nine active contacts, all open in full CCW position and progressively picked up and shorted to common contact with CW rotation.)</i>					
1	2-10	30°	PA-13	....	1.65
<i>(Nine active contacts, all shorted to common contact in full CCW position, and progressively opened and dropped with CW rotation.)</i>					
1	2-6	60°	PA-20	PA-17	1.65
<i>(Use with 60° index assemblies PA-304 or PA-305.)</i>					

### COIN SILVER CLIPS AND CONTACTS

No. Poles	No. Positions	Indexing	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-12	30°	PA-16	PA-21	\$2.75
2	2-6	30°	PA-14	PA-23	2.75
4	2	30°	PA-15	PA-24	2.75

### 1400 SERIES PHENOLIC ROTARY SELECTOR SWITCHES



Series 1400 offers compact design and quality construction. Laminated phenolic insulation. Mounting Bushings 3/8" x 32 thd. x 3/8" long. Shafts 2 1/4" long from mounting surface. Positive 30° index with adjustable stop. Rating and applications same as 2500 series.

Total No. Poles	No. Positions	Poles Per Section	No. Sections	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-6	1	1	1400	1401	\$2.90
1	2-11	1	1	1402	1403	2.90
2	2-5	2	1	1404	1405	2.90
2	2-6	1	2	1410	1411	3.60
2	2-11	1	2	1412	1413	3.60
3	2-3	3	1	1406	1407	2.90
3	2-6	1	3	1420	1421	4.50
3	2-11	1	3	1422	1423	4.50
4	2	4	1	1408	1409	2.90
4	2-5	2	2	1414	1415	3.60
4	2-6	1	4	1426	1427	5.30
4	2-11	1	4	1428	1429	5.30
6	2-3	3	2	1416	1417	3.60
6	2-5	2	3	1424	1425	4.50
8	2	4	2	1418	1419	3.60
8	2-5	2	4	1430	1431	5.30

### SEPARATE PHENOLIC SECTIONS

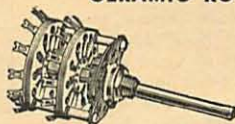
**DELUXE SECTIONS** — .187" rotor slot for use with P-270, P-271, P-272 Indexes. This is strongest, most reliable construction.

**FLAT SHAFT SECTIONS** — .064" rotor slot for use with P-121, P-122, P-123 Indexes.

No. Poles	No. Positions	Flat Shaft Shorting	Deluxe Shorting	Flat Shaft Non-Shorting	Deluxe Non-Shorting	List Price
1	2-6	A	AD	H	HD	\$1.20
1	2-11	B	BD	J	JD	1.20
2	2-5	C	CD	K	KD	1.20
3	2-3	D	DD	L	LD	1.20
4	2	E	ED	M	MD	1.20
4	2-3	EE	EED	..	BBD	1.65
1	2-5	F	FD	..	AAD	1.20
<i>(Unused contacts one side of common connected and shorted out.)</i>						
1	2-11	G	GD	..	CCD	1.20
<i>(All unused contacts connected and shorted out.)</i>						
1	2-10	PI	PID	..	....	1.20
<i>(Nine active contacts, all open in full CCW position, and progressively picked up and shorted to common contact with CW rotation.)</i>						
Combine for		{ N	{ ND	..	....	1.20
resistance decade		{ P	{ PD	..	....	1.20
Capacitance decade		Q	QD	..	....	1.20

### SEPARATE INDEX ASSEMBLIES — (See 2500 series)

### 2500 SERIES CERAMIC ROTARY SELECTOR SWITCHES



The 2500 ceramic insulation series are primarily used for band change and general tap switch application where miniaturization is not a necessity. Grade L5 Steatite insulation. Rated 2 amps. at 15 V.D.C., 150 milliamps at 110 V.A.C. Bushing: 3/8" — 32 thd., 3/8" long, shaft 2 1/4" long from mounting surface. 30° indexing — adjustable stop. See "Ham Switches" for 60° and 90° indexing. Indexes and hardware interchangeable with 1400 phenolic series.

Total No. Poles	No. Positions	Poles Per Section	No. Sections	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-6	1	1	2500	2501	\$3.30
1	2-11	1	1	2502	2503	3.30
2	2-5	2	1	2504	2505	3.30
2	2-6	1	2	2510	2511	4.70
2	2-11	1	2	2512	2513	4.70
3	2-3	3	1	2506	2507	3.30
3	2-6	1	3	2520	2521	6.00
3	2-11	1	3	2522	2523	6.00
4	2-5	2	2	2514	2515	4.70
6	2-3	3	2	2516	2517	4.70
6	2-5	2	3	2524	2525	6.00

### SEPARATE CERAMIC SECTIONS

**DELUXE SECTIONS** — .187" rotor slot for use with P-270, P-271, P-272 Indexes. This is strongest, most reliable construction.

**FLAT SHAFT SECTIONS** — .064" rotor slot for use with P-121, P-122, P-123 Indexes.

No. Poles	No. Positions	Flat Shaft Shorting	Deluxe Shorting	Flat Shaft Non-Shorting	Deluxe Non-Shorting	List Price
1	2-6	T	TD	X	XD	\$1.65
1	2-11	U	UD	Y	YD	1.65
2	2-5	R	RD	RR	RRD	1.65
3	2-3	S	SD	SS	SSD	1.65
4	2	V	VD	Z	ZD	1.65
1	2-11	GG	GGD	..	FFD	1.65

*(All unused contacts connected and shorted out.)*

1 2-10 PIS PISD .. .... 1.65  
*(Nine active contacts, all open in full CCW position, and progressively picked up and shorted to common contact with CW rotation.)*

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## SWITCHES (Cont'd)

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Combine for resistance decade	...	NSD	..	....	1.65
Capacitance decade	...	PSD	..	....	1.65
	...	QSD	..	....	1.65

### SEPARATE INDEX ASSEMBLIES

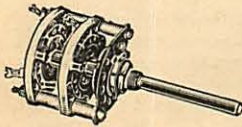
**DELUXE** — 1 piece shaft, .187" thick flat shaft (DD type) through sections, for use with Deluxe 2500 Series steatite or 1400 series phenolic sections AD thru ZD. 30° positive index. Individually cartoned including hardware and knob.

Catalog Number	Rear Shaft	Suggested No. Sections	List Price
P-270	2"	1 to 3	1.90
P-271	4"	3 to 5	2.50
P-272	8"	5 to 10	3.30

**FLAT SHAFT** — 2 piece shaft, 0.64" thick flat shaft through sections, for use with "flat shaft" 2500 series steatite or 1400 series phenolic section A thru Z. Individually cartoned including hardware and knob.

P-121	2"	1 to 3	\$1.90
P-122	4 1/4"	3 to 4	2.50
P-123	7"	5 to 8	3.30

### HAM SWITCHES



Heavy duty deluxe ceramic construction needed for "Ham" application is available in both 60° and 90° indexing for 5 and 4 band application with an adjustable stop. Size and hardware same as 2500 series. Breakdown voltage, 2000 volts, AC-RMS. Rating

150 milliamp at 150 V.A.C.; 4 milliamp at 1500 V.A.C.; 2 amps. at 15 V.D.C. For use with tubes operating at voltages up to 1 KV and inputs up to 150 watts.

### 60° HAM TYPE SWITCHES

Total No. Poles	No. Positions	Poles per Section	No. Sections	Catalog No.	List Price
1	2 to 6	1	1	2550	\$3.00
2	2 to 6	1	2	2551	4.25
3	2 to 6	1	3	2552	5.50
4	2 to 6	1	4	2553	6.75
5	2 to 6	1	5	2554	8.00

### 60° SEPARATE SECTION

1 pole 2-6 position Non-Shorting Deluxe Cat. No. ZZD \$1.65

### 60° SEPARATE INDEX ASSEMBLIES

Ham Type — 60° indexing. Two piece shaft construction, phenolic rear, metal front. Use with "ZZD" Ham Type sections.

(One index, knob; and sufficient hardware to complete switch are included in each index assembly.)

Catalog Number	Rear Shaft	Suggested No. Sections	List Price
P-273	2"	1 to 2	\$1.90
P-274	4 1/4"	3 to 4	2.40
P-275	7"	5 to 8	3.00

### 90° HAM TYPE SWITCHES

Total No. Poles	No. Positions	Poles per Section	No. Sections	Catalog No.	List Price
1	2 to 4	1	1	2542	\$3.00
2	2 to 4	1	2	2543	4.25
3	2 to 4	1	3	2544	5.50
4	2 to 4	1	4	2545	6.75
5	2 to 4	1	5	2546	8.00

### 90° SEPARATE SECTIONS

1 pole, 2 to 4 position, Non-shorting, Cat. No. XX.  
1 pole, 2 to 4 position, Non-shorting, Deluxe, Cat. No. XXD.

### 90° SEPARATE INDEX ASSEMBLIES

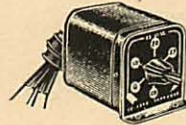
Ham Type — 90° indexing. Use with "XXD" Deluxe Ham type sections. For high voltage operation. Switches using this index will pass 2000 volts AC breakdown to ground test. Individually cartoned including hardware and knob.

Catalog Number	Rear Shaft	Suggested No. Sections	List Price
P-278	2"	1 to 2	1.90
P-279	4 1/4"	3 to 4	2.40
P-280	7"	5 to 8	3.00

Ham Type — 90° indexing. Two piece metal shaft construction. Use with "XX" Ham Type sections. Hardware and knob included.

P-170	2"	1 to 2	\$1.90
P-171	4 1/4"	3 to 4	2.40
P-172	7"	5 to 8	3.00

### TV ANTENNA ATTENUATOR PCH-4 SWITCH



Eliminates "tearing" of image due to high power through use of "H" pads. Proper attenuation also eliminates "ghosting" by reducing signal strength — reduces the weaker signal in a single channel. Useful in matching impedance between antennas and receivers.

Unit has six switching positions: 1 — Regular antenna. 2 — a 10 db signal loss inserted between the antenna and receiver. 3 — a 20 db loss. 4 — a 30 db loss. 5 — a 40 db loss. 6 — a 60 db loss — disconnects antenna for areas of immediate proximity to high power transmitter.

CAT. NO. PCH-4 ..... List Price \$10.00

### SEPARATE H-PADS FOR TV ATTENUATOR

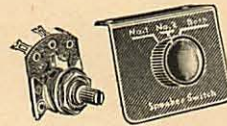
"H" Pads are a combination of 5 resistors on a steatite ceramic plate — Centralab's Packaged Electronic Circuits. Solder lug terminals, phenolic coated and triple wax impregnated. Each unit clearly marked.

Packaged individually, 5 packages per carton.

Atten.	Catalog Number	Atten.	Catalog Number	List Price
10 db	PCH-10	30 db	PCH-30	\$1.50
20 db	PCH-20	40 db	PCH-40	1.50

CAT. NO. PCH-100 KIT — set of 4. 1 of each value of above "H" Pads (in clear plastic box) ..... List Price \$6.00

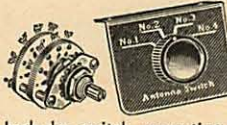
### DUAL SPEAKER SWITCH KIT



The PK-300 Kit is primarily designed for rear seat auto radio speaker applications, however, it is adaptable to many commercial applications where dual switching is desirable. Includes switch, mounting bracket, dial plate, knob, screws and instructions.

PK-300 ..... List Price \$1.75 ea.

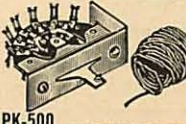
### ANTENNA SWITCH KIT



The PK-400 Kit is primarily designed for UHF-VHF antenna switching. The steatite insulated switch is rated at 2 amps. 15 volts DC, 150 milliamperes at 110 volts AC (make-Break resistive load). Includes switch, mounting bracket, dial plate, knob and screws.

PK-400 ..... List Price \$2.75

### INTERCOM CORD OPERATED SWITCH KIT



The PK-500 Kit is designed for use in PA and Intercom systems where dependable service and low cost is desired. Includes switch, mounting screws, cord and instruction sheet.

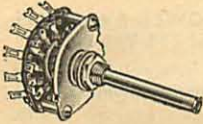
PK-500 ..... List Price \$2.70 ea.

# Centralab<sup>®</sup>

900 East Keefe Avenue, Milwaukee 1, Wisconsin      In Canada: 669 Bayview Ave., Toronto, Ontario

## SWITCHES (Cont'd)

### ROTARY ACTION SWITCHES



Rating 2 amperes at 15 volts DC. 150 milliamperes at 110-volts AC resistive load. Bushing,  $\frac{3}{8}$ " — 32 thd.,  $\frac{3}{8}$ " long. Shaft,  $\frac{1}{4}$ " diam. full round —  $2\frac{1}{4}$ " long from mtg. surface.

**CAT. NO. 1443:** "23 CLIPPER" Single Section Single Pole, 23 active positions; 15° positive indexing requiring only 1" overall behind panel. Fixed stop. List Price: \$3.00

**CAT. NO. 1444:** Same as 1443 except 2 sections, 2 poles. List Price: \$4.00

**CAT. NO. 1445:** Same as 1443 except continuous rotation. List Price: \$3.00

**CAT. NO. 1448:** 6 Pole, 3 Position, Non-Shorting Contacts, Spring Return Index, both sides to center. This switch will replace any unit from 2 pole, 2 position to 6 pole, 3 position. Requires only 1" overall depth behind panel. Ideal for PA and intercom applications. List Price: \$2.75

**CAT. NO. 1449:** 6 Pole, 3 Position, Non-Shorting Contacts, Spring Return Index, one side to center. Positive Index, opposite side to center. Otherwise same as 1448 above. List Price: \$2.75

**CAT. NO. 1450:** "ECONO-SWITCH" — 4 Pole, 2 Position, Non-Shorting, Positive leaf-type spring index. Staked spacer to front plate construction requires only  $\frac{7}{8}$ " depth behind the panel. Can be used as SPST and up to 4 pole, 2 position. List Price: \$1.75

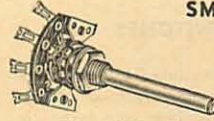
**CAT. NO. 1451:** "PERMA-SWITCH" — 4 Pole, 2 Position, Non-Shorting Contacts, Spring Return Index. Has the same long life coil spring index as 1448 and 1449. Designed particularly for long, hard use in industrial test equipment and simple "press to talk" intercom systems. List Price: \$2.00

### SECTIONS ONLY FOR 1443-1444-1445

**CAT. NO. W:** For replacement on old type 1443 switches having standard flat shaft and .064" wide rotor slot. List Price: \$1.65

**CAT. NO. WD:** For replacement in above 1443, 1444 and 1445 switches having deluxe shaft and .187" wide rotor slot (DD type). List Price: \$1.65

### SMALL GENERAL PURPOSE SWITCHES



Rating 2 amperes at 15 volts DC. 150 milliamperes at 110-volts AC resistive load. Bushing,  $\frac{3}{8}$ " — 32 thd.,  $\frac{3}{8}$ " long except 1484 —  $\frac{1}{4}$ " long bushing.

**CAT. NO. 1460:** Single pole, 2 position, shorting contacts, positive index. Can be used as SPST or SPDT. For phono-radio, tone or sensitivity control. List Price: \$1.50

**CAT. NO. 1461:** Single pole, 3 position, shorting contacts, positive index. Useful in miniature band change, step type tone or sensitivity control, and P.A. channel selector switch. List Price: \$1.50

**CAT. NO. 1462:** Double pole, 2 position, shorting contacts, positive index. Can be used on SPST, SPDT, DPST, DPDT — for meter reversing, P.A. channel, or switching both lines on phono-radio. List Price: \$1.50

**CAT. NO. 1463:** Single pole, 2 position, non-shorting contacts, spring return index. Useful for meter reversing or momentary intercom talk switch. Non-shortng. List Price: \$1.50

**CAT. NO. 1464:** Double pole, 2 position, non-shortng contacts, spring return index. Used as meter switch and momentary line or remote speaker return on intercoms. List Price: \$1.50

**CAT. NO. 1465:** Single pole, 4 position (3 active) with AC-DPST line switch. Shorting contacts, Positive index. Used as replacement for "on-off", 3 step control switch in many AM and FM receivers. List Price: \$2.50

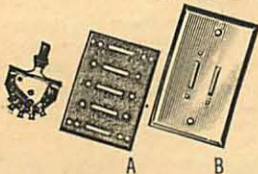
**CAT. NO. 1472:** 2 pole, 3 position, non-shortng contacts, positive index. An economical change switch for AM, FM, phone selector to amplifier in custom installations. List Price: \$1.50

**CAT. NO. 1473:** Same as 1472 except shorting contacts. List Price: \$1.50

**CAT. NO. 1483:** Single pole, 3 position, shorting contacts, positive index. For use with dual or auxiliary rear seat auto radio speakers. Permits operation of either speaker separately or both simultaneously. List Price: \$1.50

**CAT. NO. 1484:** Single pole, 3 position remote speaker switch. Same as Cat. No. 1483 except with  $\frac{1}{4}$ " bushing and  $\frac{3}{8}$ " split knurl shaft.  $\frac{15}{16}$ " black split knurl knob with chrome center, Cat. No. P-401, is furnished. List Price: \$1.50

### LEVER ACTION SWITCHES



Space saving lever action switches can be mounted singly or in groups. Rated 2 amps. at 15 V.D.C.; 150 milliamps at 110 V.A.C. Mtg. — two 6-32 thrd. mtg. holes on  $\frac{1}{8}$ " centers. 30° indexing. Furnished with mtg. screws and knob.

Number Poles	Number Positions	Type Indexing	Cat. No.	Non-Shorting	List Price
2	3	Positive	1452	1454	\$1.75
2	3	Spring Return	1453	1455	1.75
2	3	Positive Spring Return	1466	1467	1.75
4	2	Spring Return	1456	1457	2.00
4	2	Positive	1459	1458	2.00
2	3	Positive	2815	....	1.75

(Special model-railroad reversing or turnout and signal switch.)  
 1 3 Positive .... 1475 1.75  
 (Primarily a replacement part for the ganged switches found in tube testers and other testing equipment.)

### MOUNTING PLATES FOR LEVER SWITCHES

**TYPE A** — Made of .035" die cut steel, black crackle finish. Eliminate alignment problems, provide  $\frac{3}{4}$ " spacing between switches. Available for 1 to 5 switch mounting. Height of all plates is  $2\frac{5}{8}$ ".  
**TYPE B** — For mounting lever switches in electrical outlet boxes. Chrome plated. Mounting holes  $3\frac{3}{8}$ " between centers.

MOUNTING PLATE — TYPE A				WALL PLATE — TYPE B		
No. Switches	Length	Cat. No.	List Price	No. Switches	Cat. No.	List Price
1	$\frac{3}{4}$ "	P-1755	\$0.50	2	P-221	\$0.85
2	$1\frac{1}{2}$ "	P-1756	.50	1	P-222	.85
3	$2\frac{1}{4}$ "	P-1757	.50	Size: $2\frac{3}{4}$ " x $4\frac{1}{2}$ " overall. $\frac{3}{4}$ " spacing between switches.		
4	3"	P-1758	.50			
5	$3\frac{3}{4}$ "	P-1759	.50			

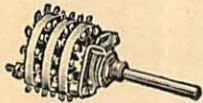
# Centralab<sup>®</sup>

Milwaukee 1, Wisconsin

In Canada: 669 Bayview Ave., Toronto, Ontario

## SWITCHES (Cont'd)

### SUB-MINIATURE ROTARY SWITCHES



Type PS ceramic insulated sub-miniature switches have the same electrical ratings as switches much heavier and larger in diameter. Grade L-5A steatite insulation per MIL-S-3786. Sections—1" diam., 1/8" thick. All metal parts except clips, contacts and index spring, cadmium plated steel. Bushing: 1/4" — 32 thread x 1/4" long. Shaft: 1/8" diameter, 1 1/4" long from mtg. surface. Rated: 0.5 ampere at 6 volts DC; 100 milliamperes at 110 volts AC. Indexing: positive 30° with fixed stop.

contacts and index spring, cadmium plated steel. Bushing: 1/4" — 32 thread x 1/4" long. Shaft: 1/8" diameter, 1 1/4" long from mtg. surface. Rated: 0.5 ampere at 6 volts DC; 100 milliamperes at 110 volts AC. Indexing: positive 30° with fixed stop.

Total Poles	No. of Positions	Poles per Section	No. of Sections	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	11	1	1	PS-100	PS-101	\$ 8.00
2	11	1	2	PS-102	PS-103	10.00
2	5	2	1	PS-104	PS-105	8.00
3	11	1	3	PS-106	PS-107	12.00
3	3	3	1	PS-108	PS-109	8.00
4	5	2	2	PS-110	PS-111	10.00
4	2	4	1	PS-112	PS-113	8.00
6	5	2	3	PS-114	PS-115	12.00
6	3	3	2	PS-116	PS-117	10.00
8	2	4	2	PS-118	PS-119	10.00
9	3	3	3	PS-120	PS-121	12.00
12	2	4	3	PS-122	PS-123	12.00

### SEPARATE SUB-MINIATURE STEATITE SECTIONS

Use with index assemblies P-501 thru P-511 listed below for fixed stop indexing, and switching not supplied in the above completed PS series switches.

No. Poles	No. Positions	Catalog No. Shorting	Catalog No. Non Shorting
1	2-11	PS-20	PS-21
2	2-5	PS-22	PS-23
3	2-3	PS-24	PS-25
4	2	PS-26	PS-27

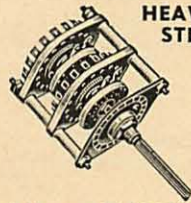
List Price: \$4.50

### SEPARATE SUB-MINIATURE INDEX ASSEMBLIES

All index assemblies listed below are designed for a maximum 3 sections and contain the following: (1) index and shaft assembly, (1) KC-6 pointer knob, (6) 3/32" spacers, (2) 1/16" spacers, (2) 1/8" spacers, (2) 3/8" spacers, (2) 1 1/8" tie bolts, nuts, lockwashers, washers, and (16) plastic spacer washers.

No. Positions	Catalog No.	No. Positions	Catalog No.
2	P-501	7	P-506
3	P-502	8	P-507
4	P-503	9	P-508
5	P-504	10	P-509
6	P-505	11	P-510
		continuous rotation	P-511

List Price: \$4.50



### HEAVY DUTY ROTARY POWER SWITCHES STEATITE — 7 1/2 Amps at 115 Volts A.C.

Designed for high accuracy, long life in transmitters and power supplies. Steatite insulation. Bushing: 3/8" — 32 thread, 3/8" long. Shaft: 1/4" diam. double flat, 2 1/4" long from mounting surface. Rated: 7 1/2 amp. @ 115 volts AC, 25 amps. @ 6 V.D.C., 0.75 amps. @ 500 volts AC, 0.4 amps. @ 1000 V.A.C. 20° positive indexing. Adjustable stop. Dial plate and knob included.

0.4 amps. @ 1000 V.A.C. 20° positive indexing. Adjustable stop. Dial plate and knob included.

Total Poles	Number Positions	Number Sections	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-17	1	JV-9000	JV-9001	\$16.00
2	2-8	1	JV-9032	JV-9033	16.00
2	2-17	2	JV-9004	JV-9005	26.50
3	2-5	1	JV-9002	JV-9003	16.00
3	2-17	3	JV-9008	JV-9009	37.00
4	2-8	2	JV-9034	JV-9035	26.50
4	2-17	4	JV-9012	JV-9013	47.50
5	2-17	5	JV-9016	JV-9017	58.00
6	2-5	2	JV-9006	JV-9007	26.50
6	2-8	3	JV-9036	JV-9037	37.00
6	2-17	6	JV-9020	JV-9021	68.50
8	2-8	4	JV-9038	JV-9039	47.50
9	2-5	3	JV-9010	JV-9011	37.00
12	2-5	4	JV-9014	JV-9015	47.50
15	2-5	5	JV-9018	JV-9019	58.00

### SEPARATE SECTIONS

#### For new "DD" type rotor shaft

Poles	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-17	JV-8	JVN-8	\$10.50
2	2-8	JV-10	JVN-10	10.50
3	2-5	JV-9	JVN-9	10.50

#### For square rotor shaft

	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-17	KV-8	KVN-8	10.50
2	2-8	KV-10	KVN-10	10.50
3	2-5	KV-9	KVN-9	10.50

### SEPARATE MULTIPLE FINGER SECTION

#### For new "DD" type rotor shaft

Poles	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-18	JV-18	JVN-18	\$11.50

(Rotor has 17 fingers, making contact with 17 contacts on stator leaving one contact open.) By cutting off unwanted fingers, this section can be adapted for many special circuits. For example, can be adapted to a one off, nine progressively shorting position, pick up and hold each progressive position.

#### For square rotor shaft

Poles	Positions	Cat. No. Shorting	Cat. No. Non-Shorting	List Price
1	2-18	KV-18	KVN-18	11.50

### SEPARATE INDEX ASSEMBLY

#### For new "DD" type rotor shaft

Indexing	Shaft Length	No. Sections	Catalog No.	List Price
20°	7"	2-6	JV-7	\$7.00

(Includes all necessary hardware.)

#### For square rotor shaft

Indexing	Shaft Length	No. Sections	Catalog No.	List Price
20°	7"	2-6	KV-7	7.00

(Includes all necessary hardware.)

# Centralab®

Milwaukee 1, Wisconsin

In Canada: 669 Bayview Ave., Toronto, Ontario

## SWITCH KITS



### KIT NO. 1000

#### PA-1000 Series Phenolic Switch Parts

This kit contains 68 miniature phenolic sections, 15 complete index assemblies, plus hardware. All specifications are identical to PA-1000 Series units.

#### Sections — 30° Indexing

Quantity	Cat. No. Shorting	Cat. No. Non-Shorting
8	PA-30	PA-31
8	PA-32	PA-33
8	PA-34	PA-35
4	PA-36	PA-37
2	PA-38	PA-39
2	PA-40	PA-41
2	PA-49	.....

#### Sections — 60° Indexing

2	.....	PA-45
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#### Index Assemblies

Quantity	Cat. No.	Indexing
7	PA-300	30°
4	PA-301	30°
2	PA-302	30°
1	PA-304	60°
1	PA-305	60°

#### Miscellaneous

Quantity	Cat. No.	Description
5	PA-320	Intersection Shields

(Kit packed in 4 drawer metal cabinet 9½" x 11½" x 9¾")

List Price: \$117.60

### KIT NO. 2000

#### PA-2000 Series Ceramic Switch Parts

This kit contains 39 miniature steatite sections, 12 complete index assemblies, plus hardware. All specifications identical to PA-2000 Series units.

#### Sections — 30° Indexing

Quantity	Cat. No. Shorting	Cat. No. Non-Shorting
3	PA-0	PA-1
3	PA-2	PA-3
3	PA-4	PA-5
3	PA-6	PA-7
3	PA-8	PA-9
2	PA-10	.....
2	PA-11	.....
2	PA-12	.....

#### Sections — 60° Indexing

3	.....	PA-17
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#### Index Assemblies

Quantity	Cat. No.	Indexing
5	PA-300	30°
3	PA-301	30°
2	PA-302	30°
1	PA-304	60°
1	PA-305	60°

#### Miscellaneous

Quantity	Cat. No.	Description
5	P-320	Intersection Shields

(Kit packed in 4 drawer metal cabinet 9½" x 11½" x 9¾")

List Price: \$94.05

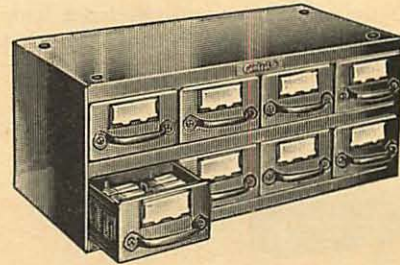
#### KNOBES

	Cat. No.	List Price
1¼" Black Pointer Knob (set screw).....	P-120	\$0.25
2" Black Pointer Knob Brass Insert, 2 set screws (power)..	P-168	.55
Lever Switch — Black.....	P-193	.25
Lever Switch — Red.....	P-194	.25
1½" Paddle — Walnut (PA and Intercom.).....	P-198	.40
15/16" Round, Split Knurl (Push on), Black with Chrome Center.....	P-401	.40
Dual Concentric — Inner — .187" Flatted .156".....	KC-1	.30
Dual Concentric — Outer .265" Slotted.....	KC-2	.30
JP Control — Black — (Set Screw) for 1/8" Shaft.....	KC-3	.30
JP Control — White — (Set Screw) for 1/8" Shaft.....	KC-4	.30
JP Control — Red — (Set Screw) for 1/8" Shaft.....	KC-5	.30
PS-Switches (Black Pointer) (Set Screw) for 1/8" Shaft.....	KC-6	.30
T & L Pads — 1" Round with Pointer — Black (Set Screw)..	KC-10	.30

#### INTERSECTION SHIELDS

Miniature — .035" thick cadmium plated steel. Use with PA-1000 or PA-2000 Series Switches to reduce coupling effects.  
CAT. NO. P-320.....\$ .30

Standard — .035" cadmium plated steel. Use with 1400 or 2500 Series Switches between sections to reduce coupling effects.  
CAT. NO. P-200.....\$ .30



These Switch Kits afford a convenient ready source of stock sections, indexes and hardware. All four kits packed in heavy gauge steel, shelf size cabinets, 23¼" wide, 9½" high, 12" deep.

**KIT NO. PA-410** — PA-1000 series miniature phenolic switch parts. Kit contains 106 — 1½" diam. phenolic sections, 32 index assemblies including spacers, washers, nuts, knobs and dial plates . . . enough to assemble 32 regular or special switches.  
List Price: \$218.65

**KIT NO. PA-420** — PA-2000 series miniature ceramic switch parts. Kit contains 102 — 1½" diam. steatite sections, 32 index assemblies including spacers, washers, nuts, knobs and dial plates . . . enough to assemble 32 regular or special switches.  
List Price: \$259.75

**KIT NO. 414D** — 1400 series phenolic switch parts. Kit contains 100 — 1⅞" diam. phenolic sections, 30 index assemblies including spacers, washers, nuts, knobs and dial plates . . . enough to assemble 30 regular or special switches.  
List Price: \$212.20

**KIT NO. 419D** — 2500 series ceramic switch parts. Kit contains 100 — 1⅞" diam. steatite sections, 29 index assemblies including spacers, washers, nuts, knobs and dial plates . . . enough to assemble 29 switches. Both 30° and 60° indexes and sections included.  
List Price: \$252.70

#### DIAL PLATES

Etched aluminum, black background. 1⅞" diameter.

1-2-3	30°	P-178	1 to 23	15°	P-173
1 to 5	30°	P-115	1-2-3-4	90°	P-162
1 to 6	30°	P-116	10-20-40-80	90°	P-163
1 to 10	30°	P-117	1 to 5	60°	P-402
1 to 11	30°	P-118	10-15-20-40-80	60°	P-404
1 to 12	30°	P-112	Min.-Max. (T-L Pads)		P-406

2¾" diameter, etched aluminum, 20° marking for power switches.

1 to 5.....	20°.....	P-230	1 to 17.....	20°.....	P-231
			1 to 8.....	20°.....	P-232

DIAL PLATES — List Price: \$0.30

#### MOUNTING BRACKETS

For 1400 and 2500 series. .065" cadmium plated steel. Use to mount, between sections for rigidity, or at rear of long switch assemblies for more accurate indexing. "H" dimension is from base to shaft center. Footed, with slotted mounting holes (1" centers) to chassis.  
All 1⅞" wide.

Bracket 1¼" "H".....	Cat. No. P-210
Bracket 2¼" "H".....	Cat. No. P-212
Bracket 3¼" "H".....	Cat. No. P-214

Bracket-Dial Plate — dual speaker  
Etched aluminum.....Cat. No. P-216

Bracket-Dial Plate — 4 channel dual lines  
(PA-2050 switch).....Cat. No. P-218

MOUNTING BRACKETS — List Price: \$0.35