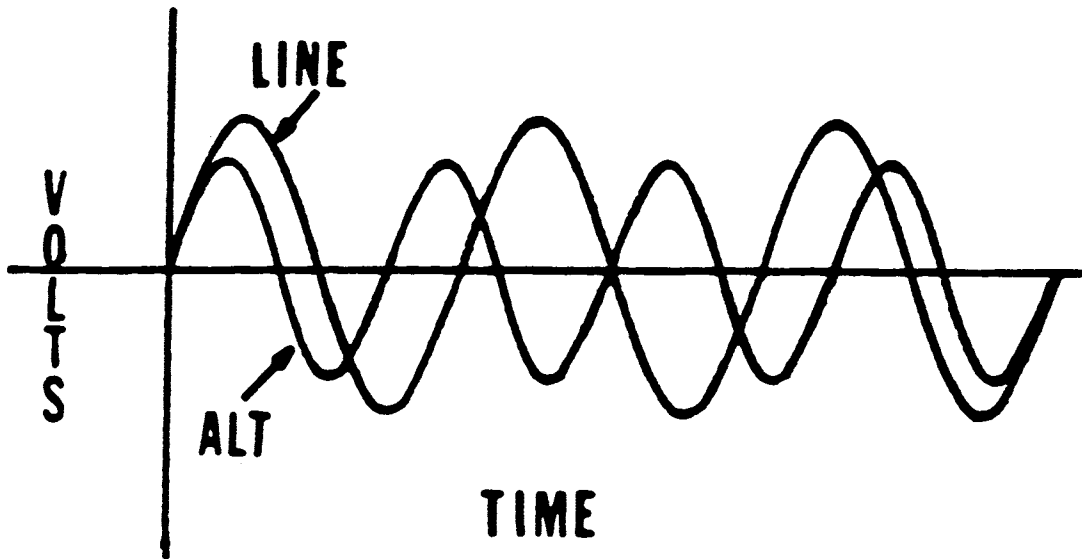
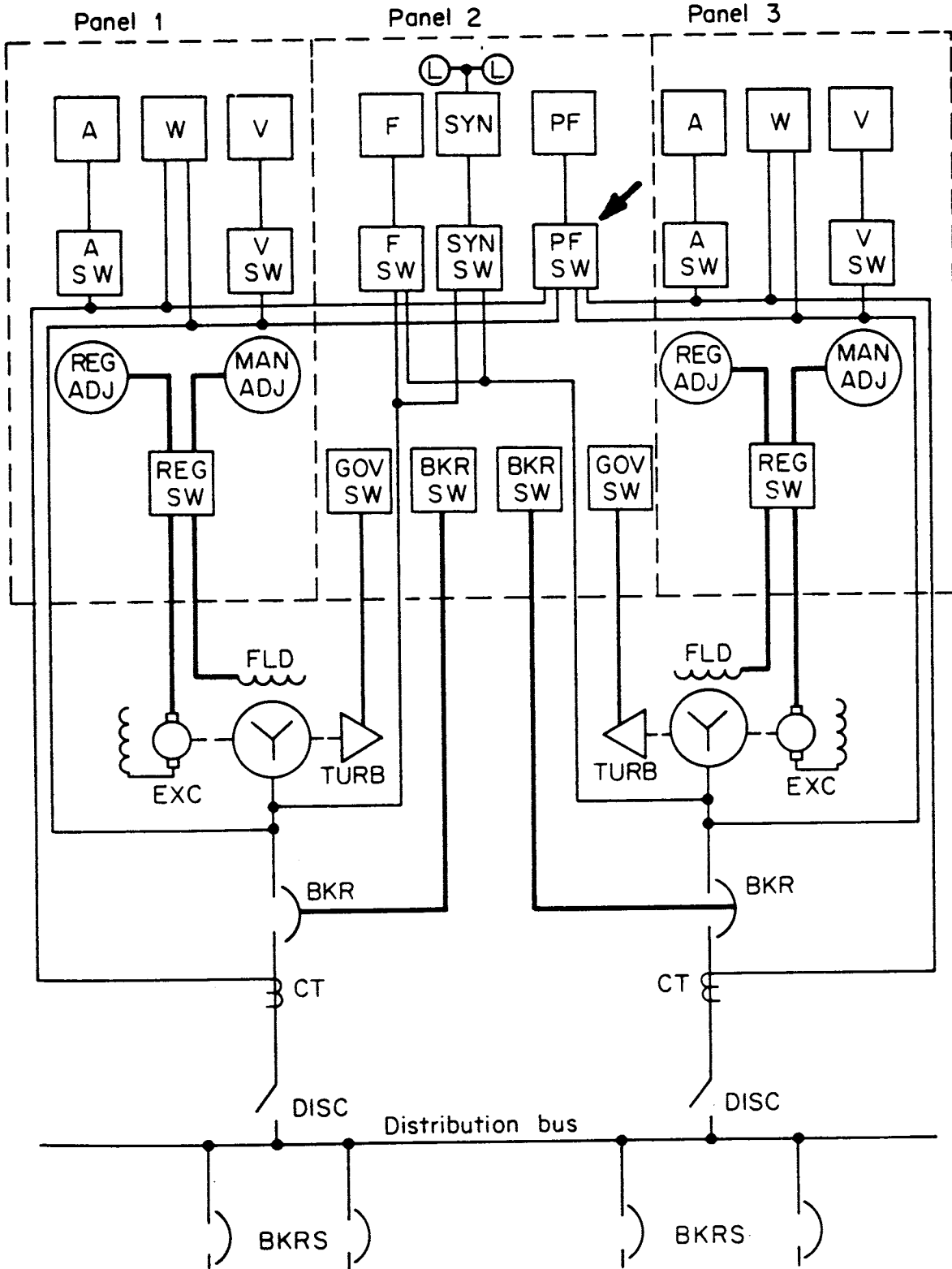


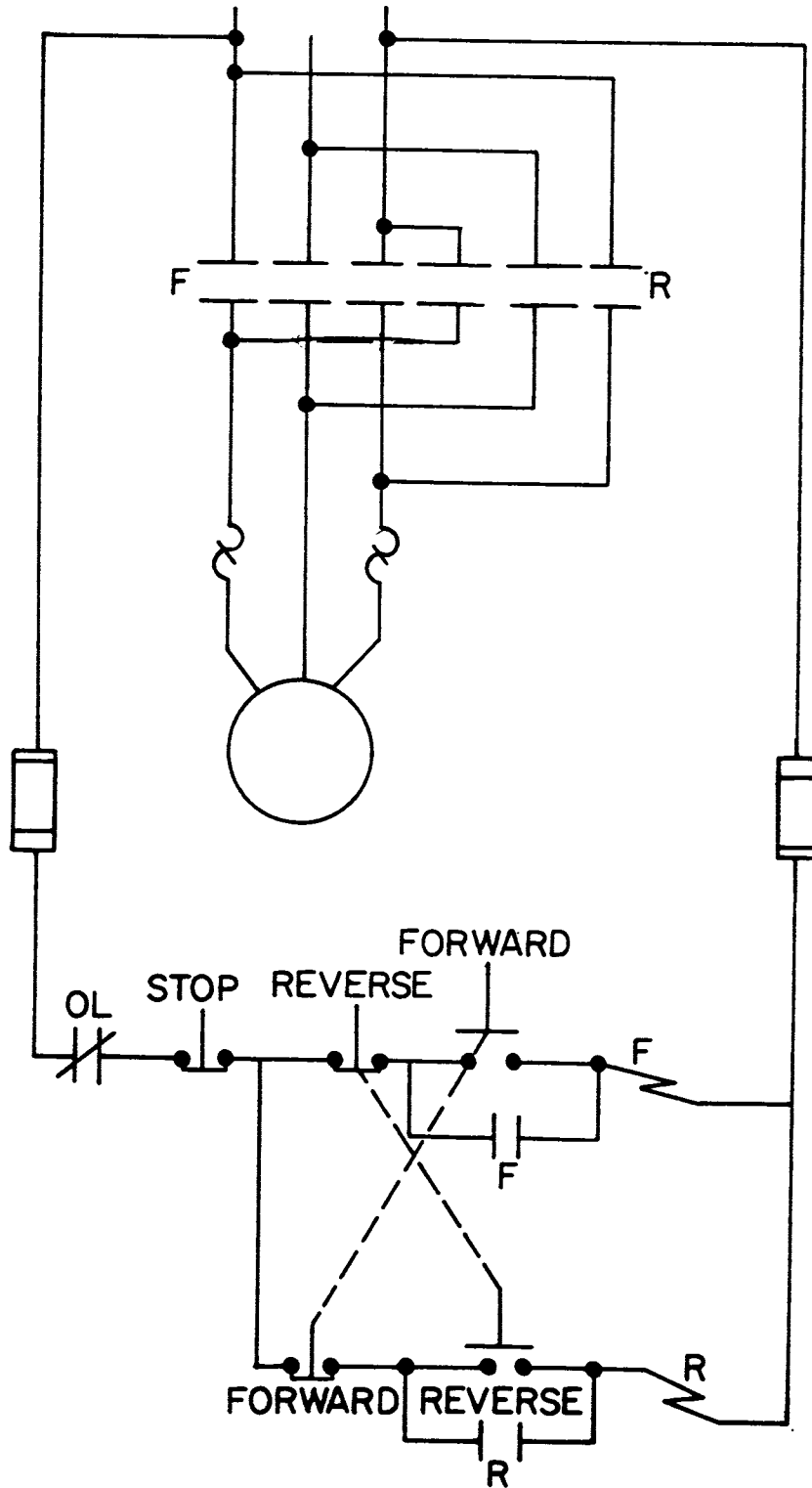
EL-0002



EL-0003



EL-0004



EL-0005

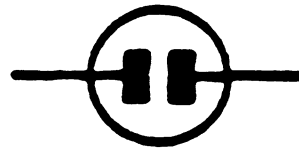
A



B



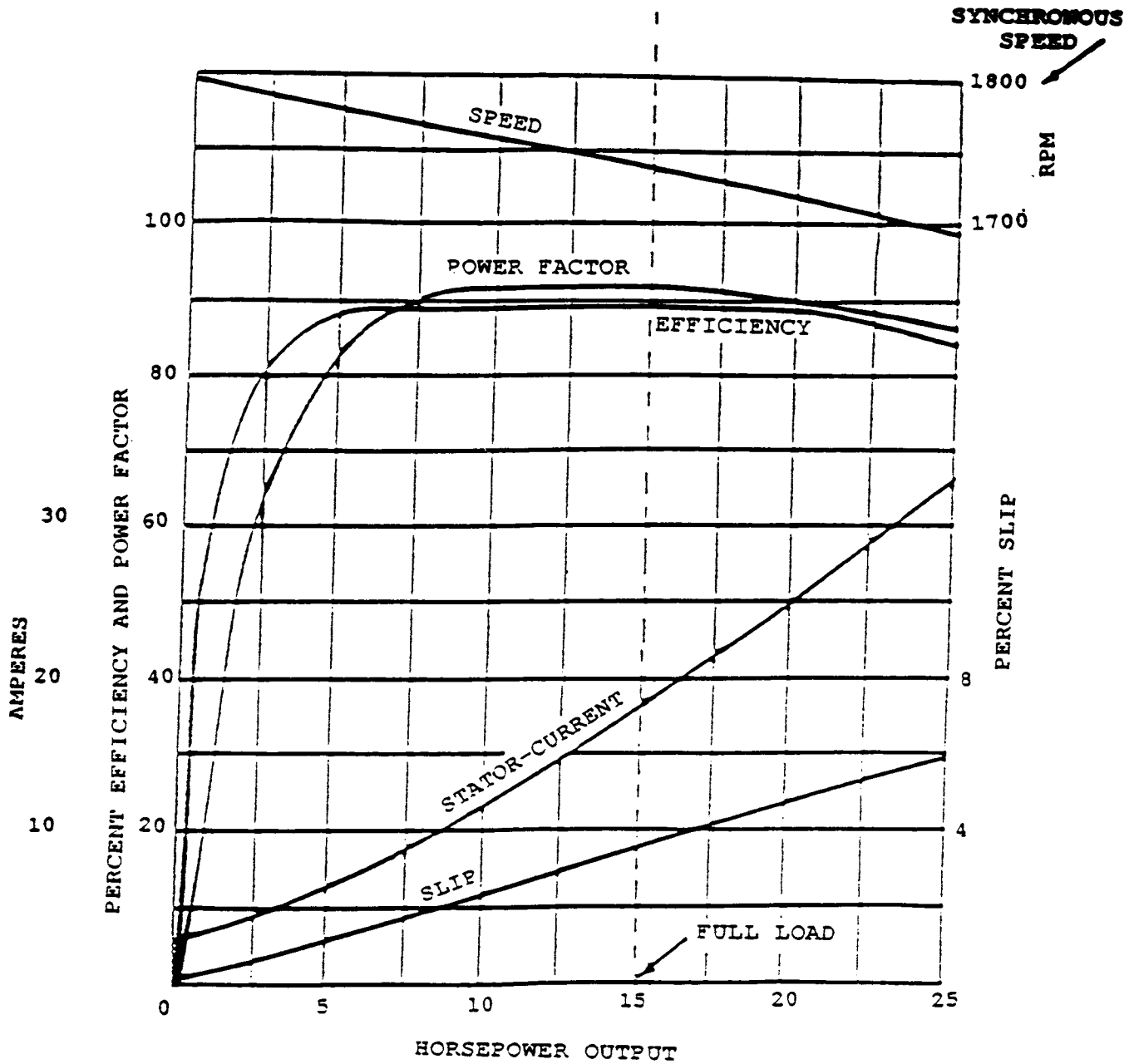
C



D

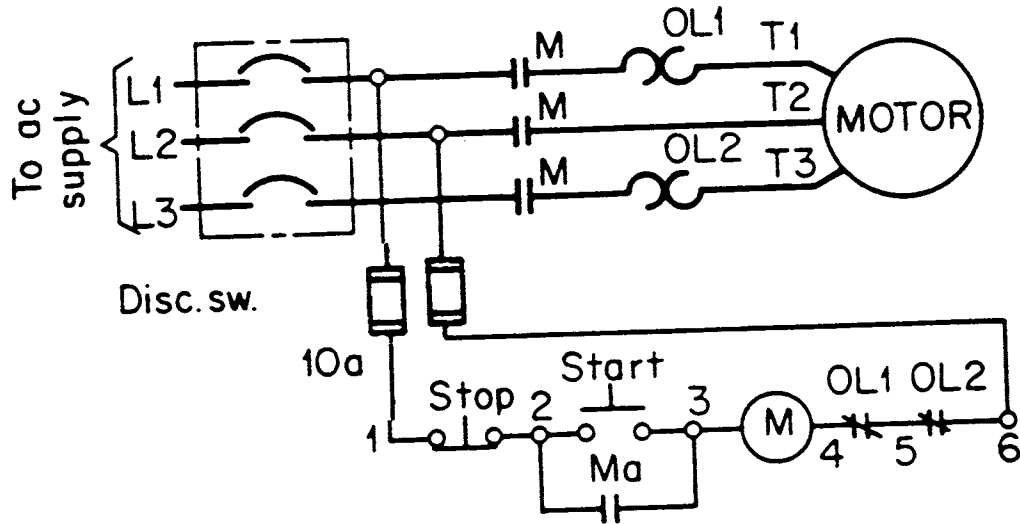


EL-0006

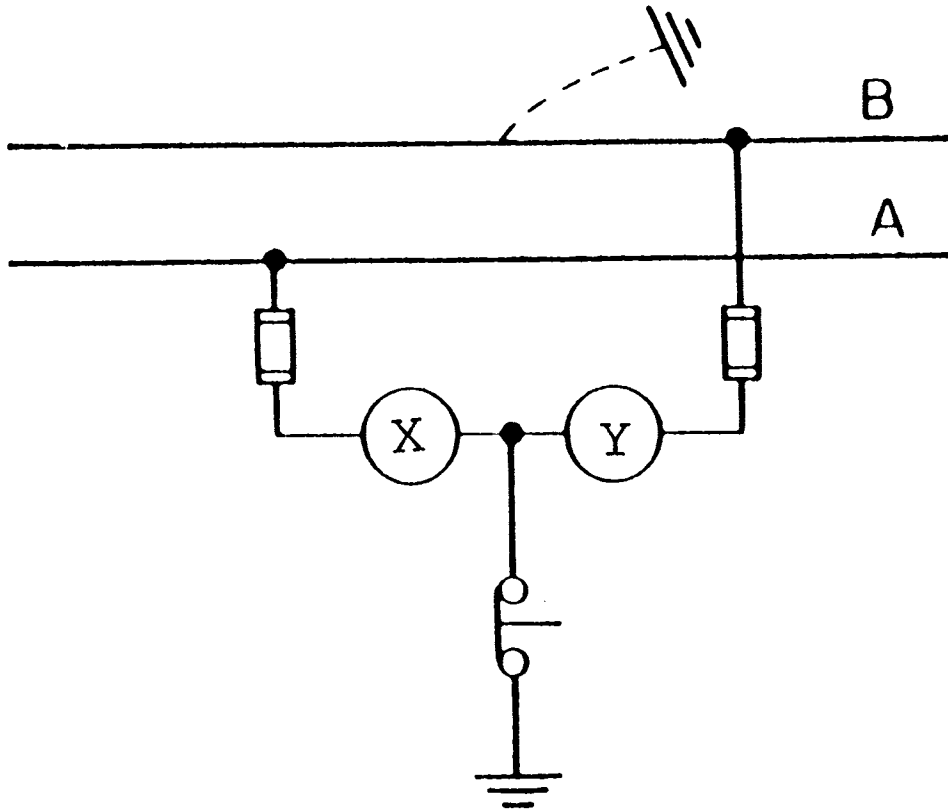


PERFORMANCE CURVES FOR 4-POLE 3-PHASE
440-VOLT 15-HP CAGE-ROTOR MOTOR

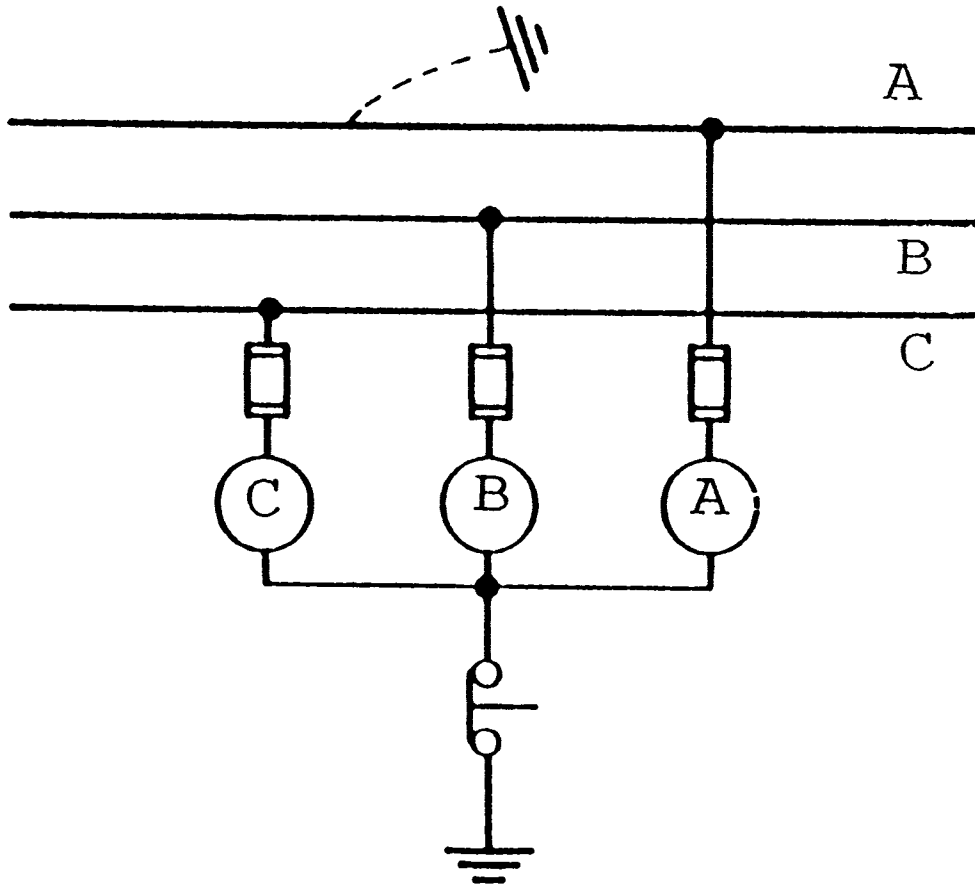
EL-0007



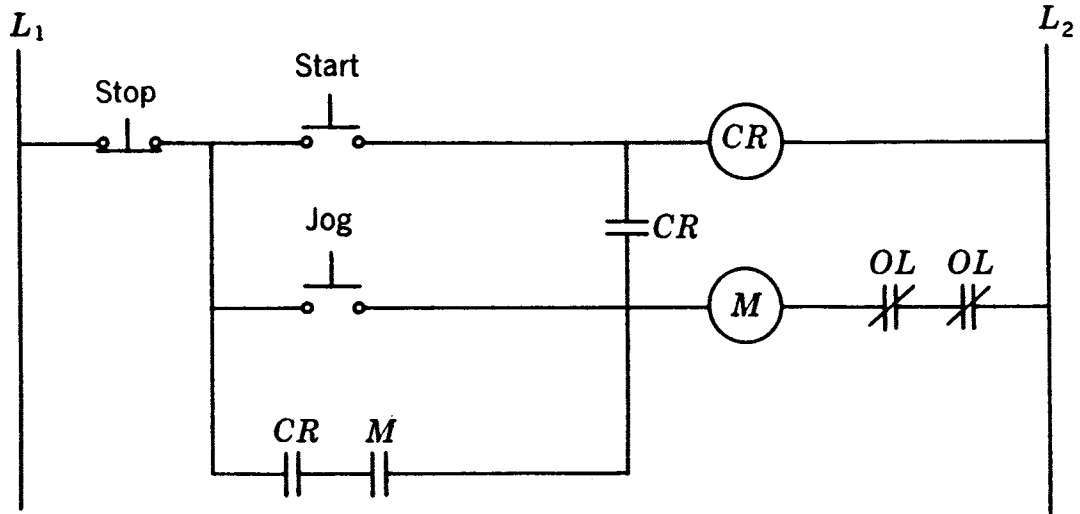
EL-0008



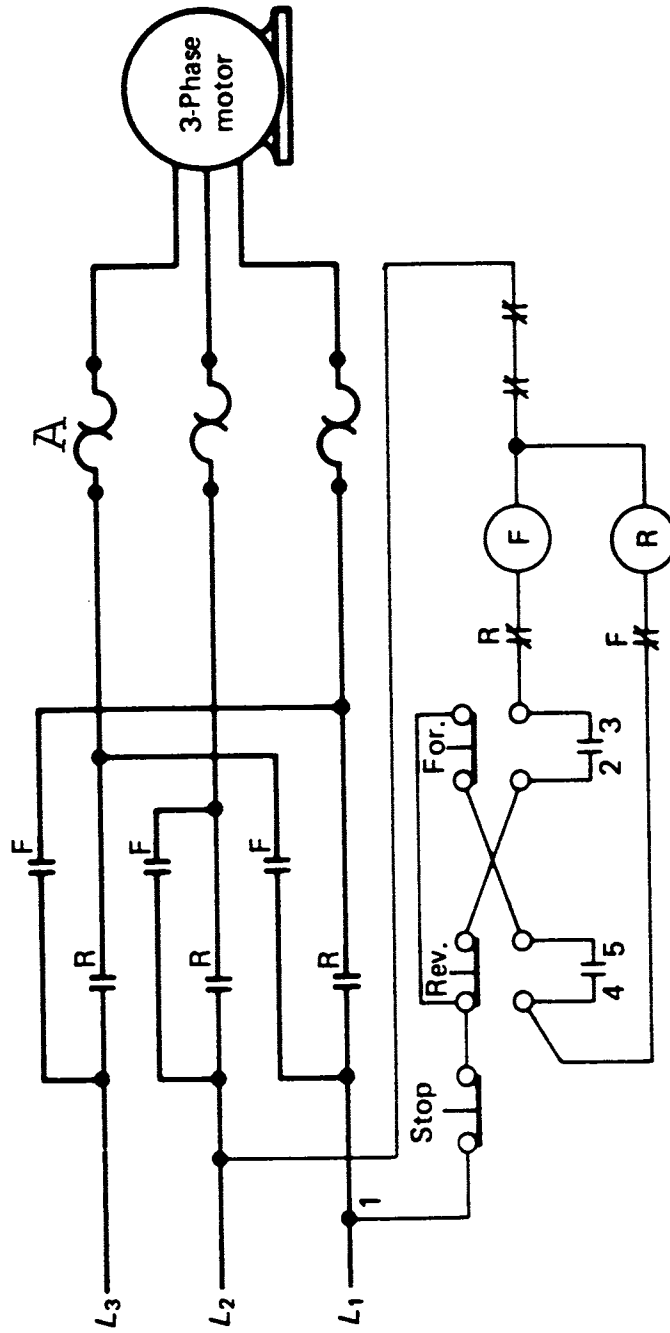
EL-0009



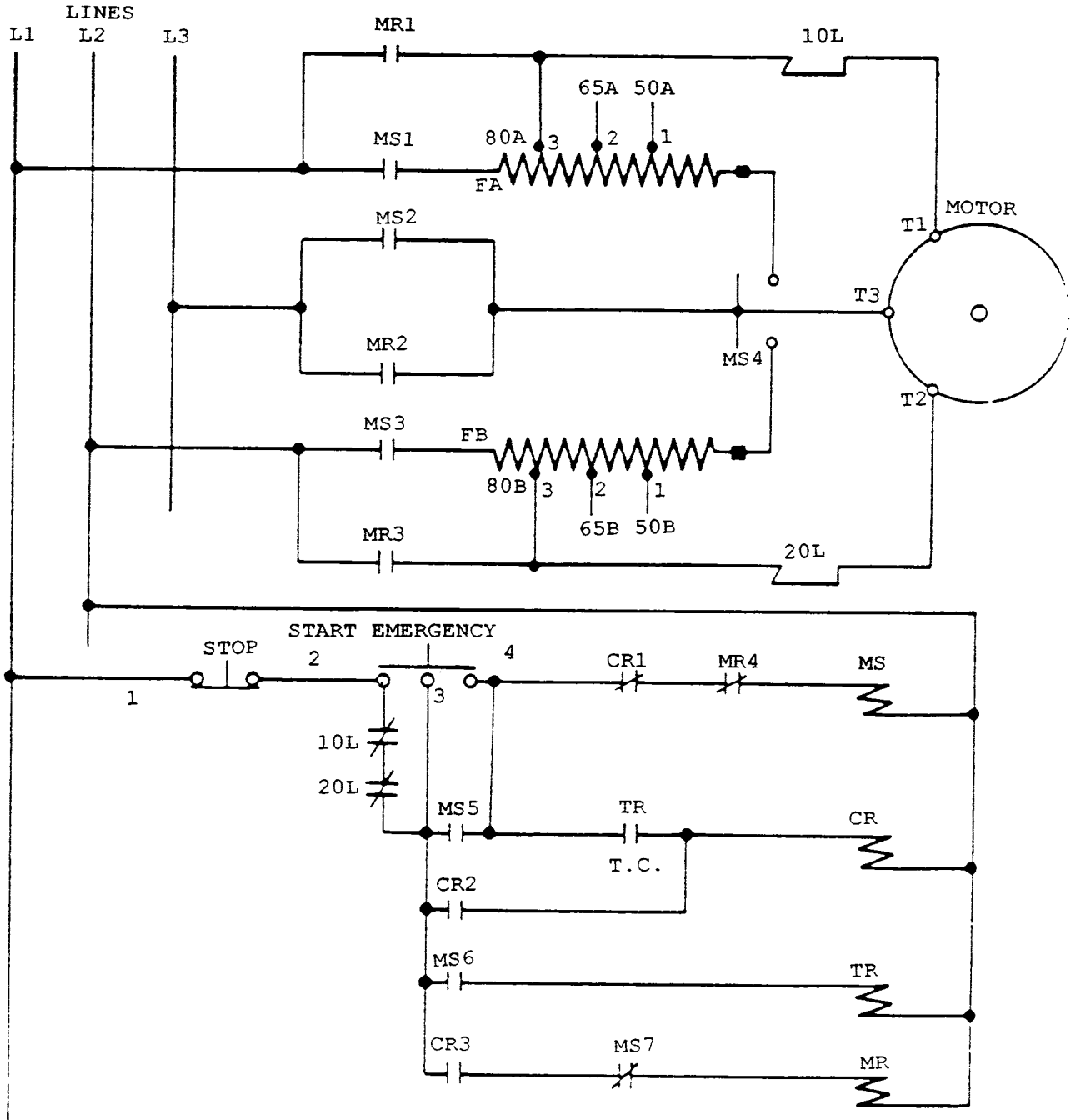
EL-0010

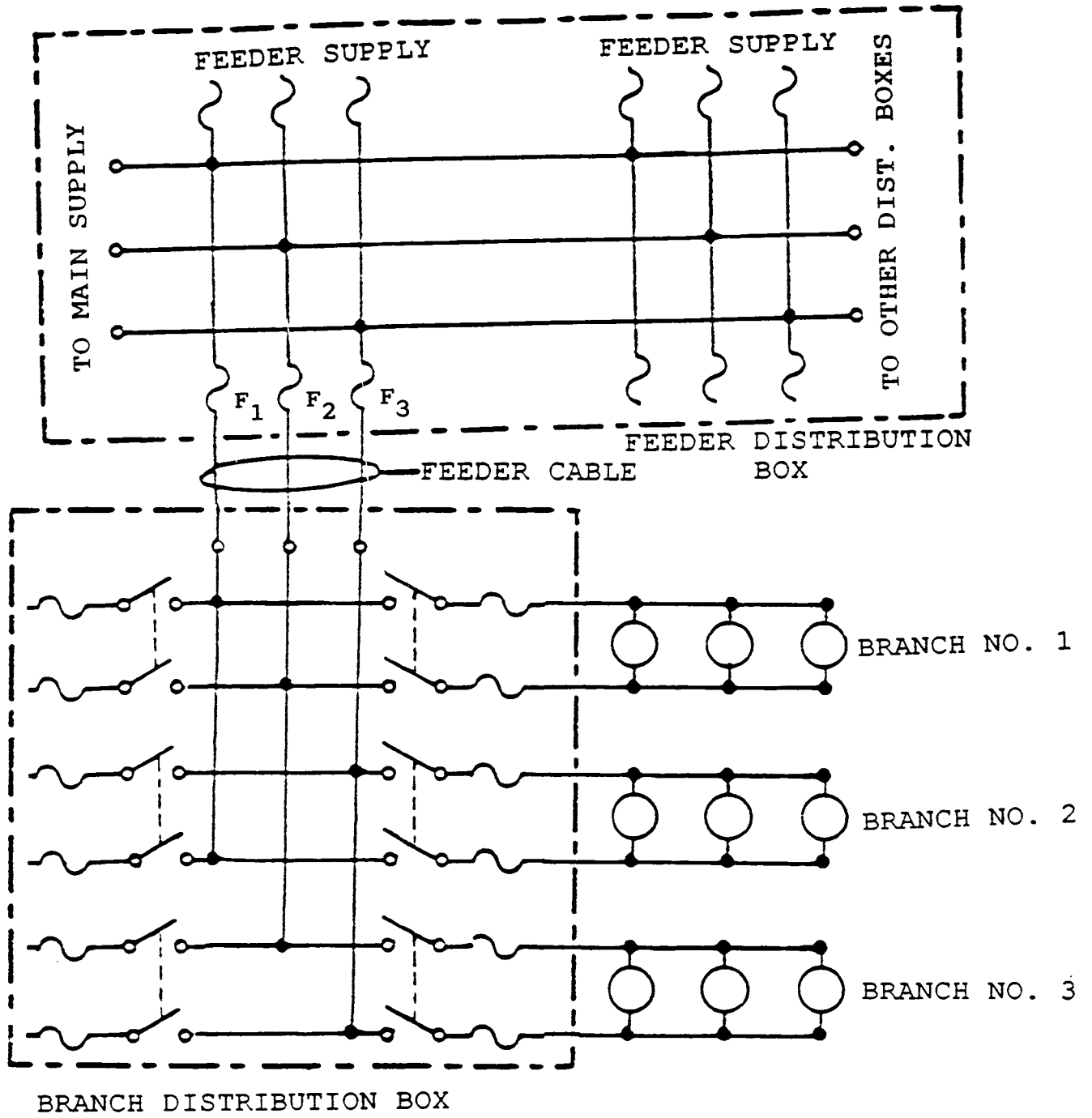


EL-0011

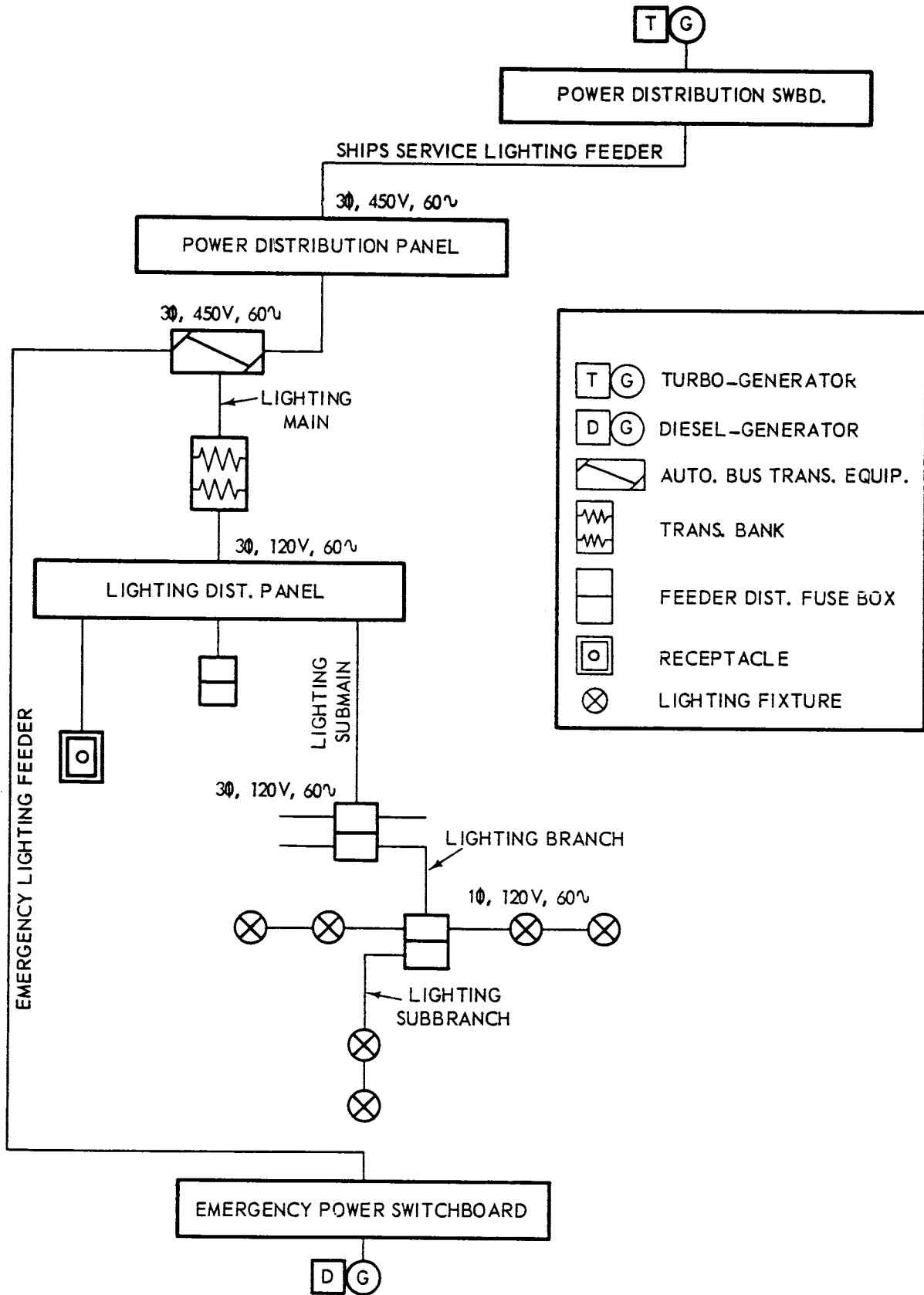


EL-0012

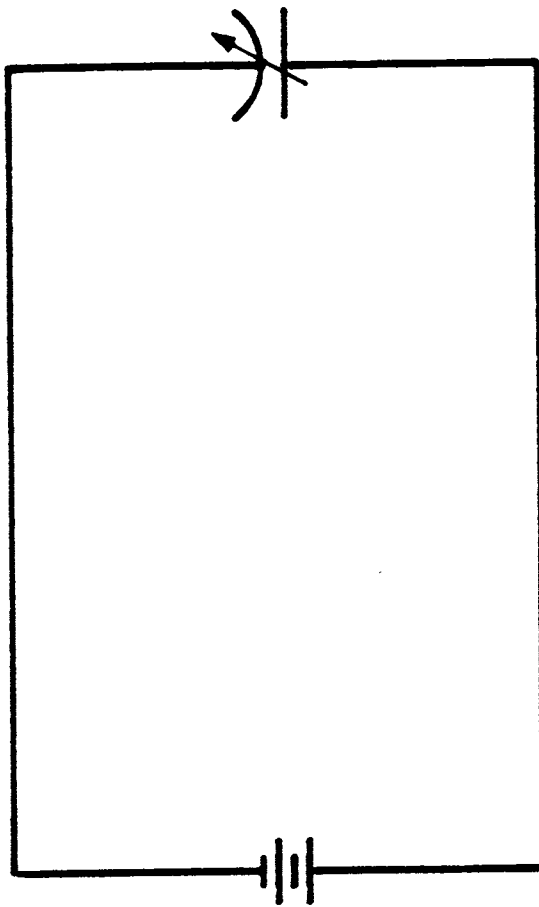


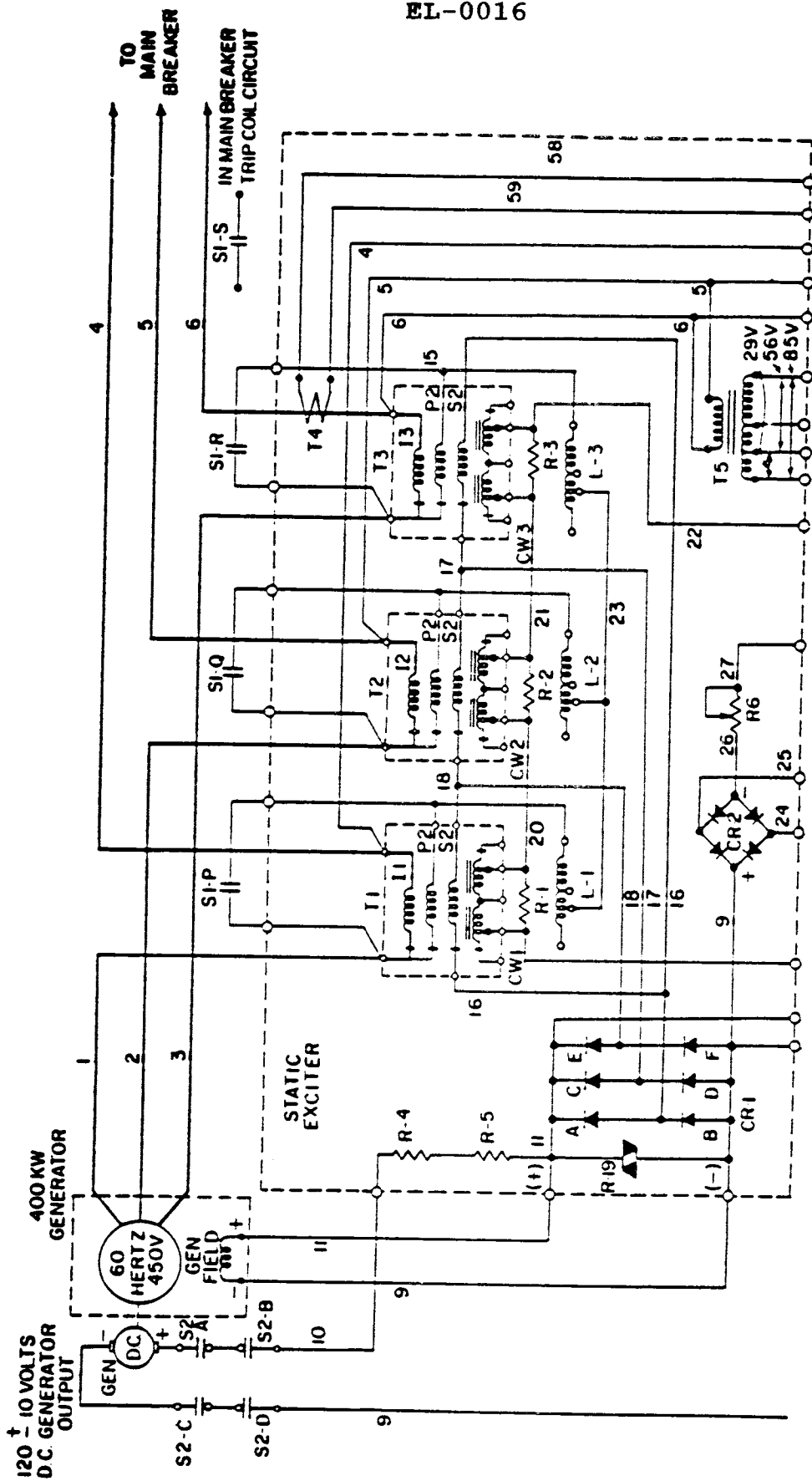


EL-0014



EL-0015





TO
MAIN
BREAKER

IN MAIN BREAKER
TRIP COIL CIRCUIT

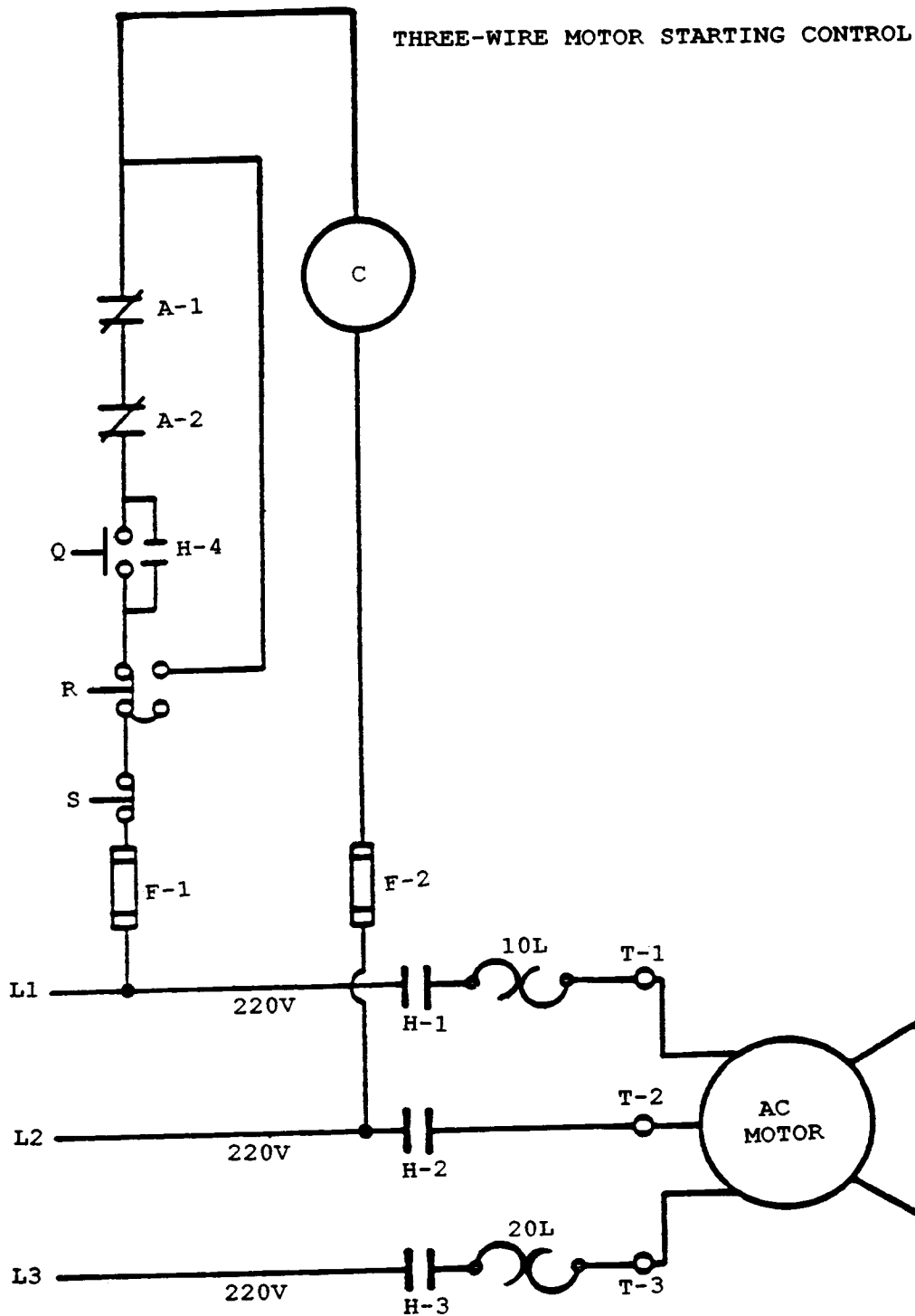
120 ± 10 VOLT
D.C. GENERATOR
OUTPUT

400 KW
GENERATOR

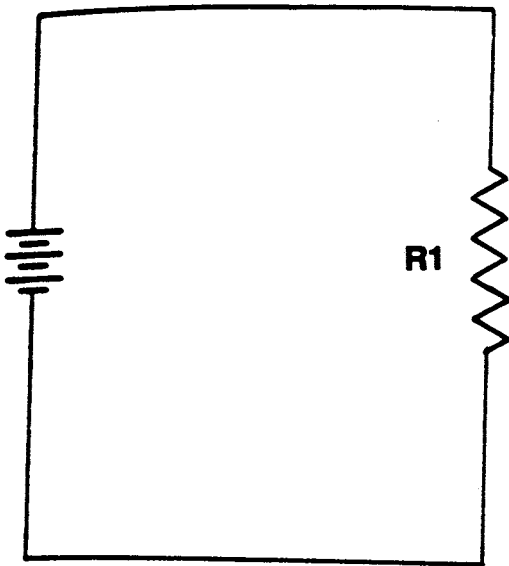
STATIC
EXCITER

EL-0017

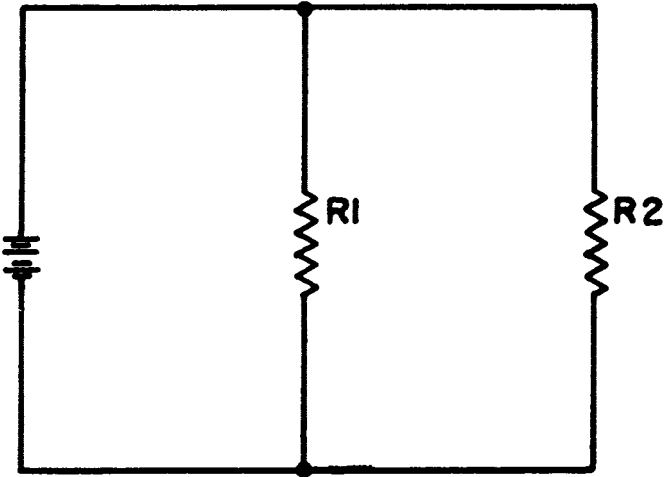
THREE-WIRE MOTOR STARTING CONTROL CIRCUIT



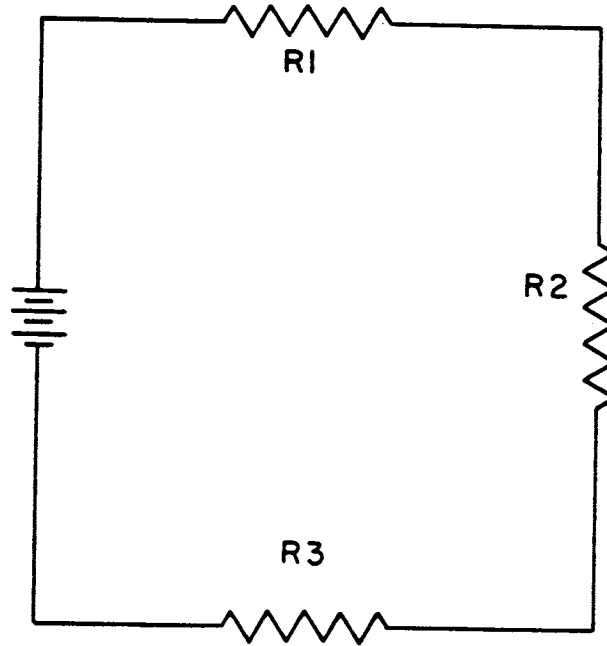
EL-0018



EL-0019

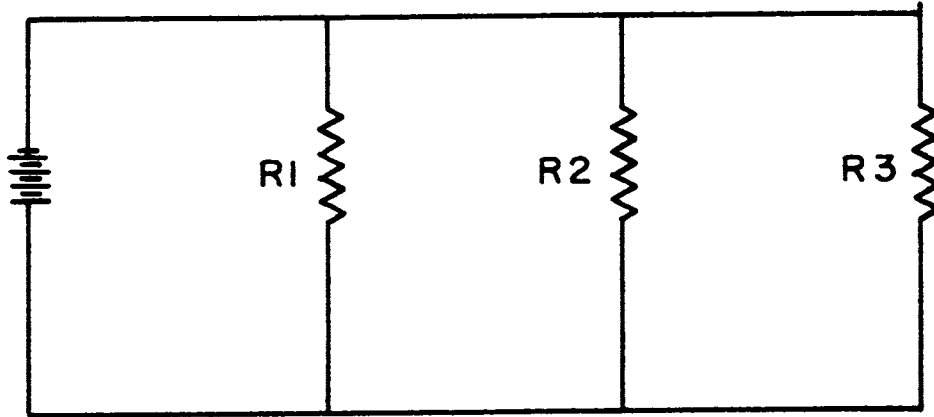


EL-0020

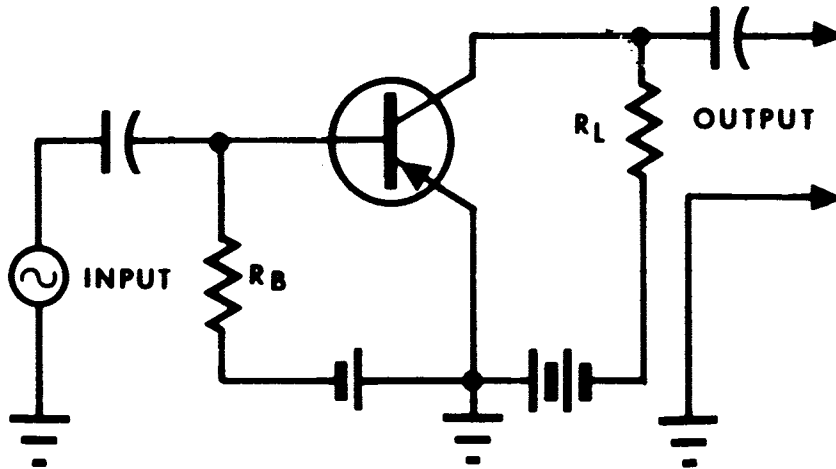


1-16

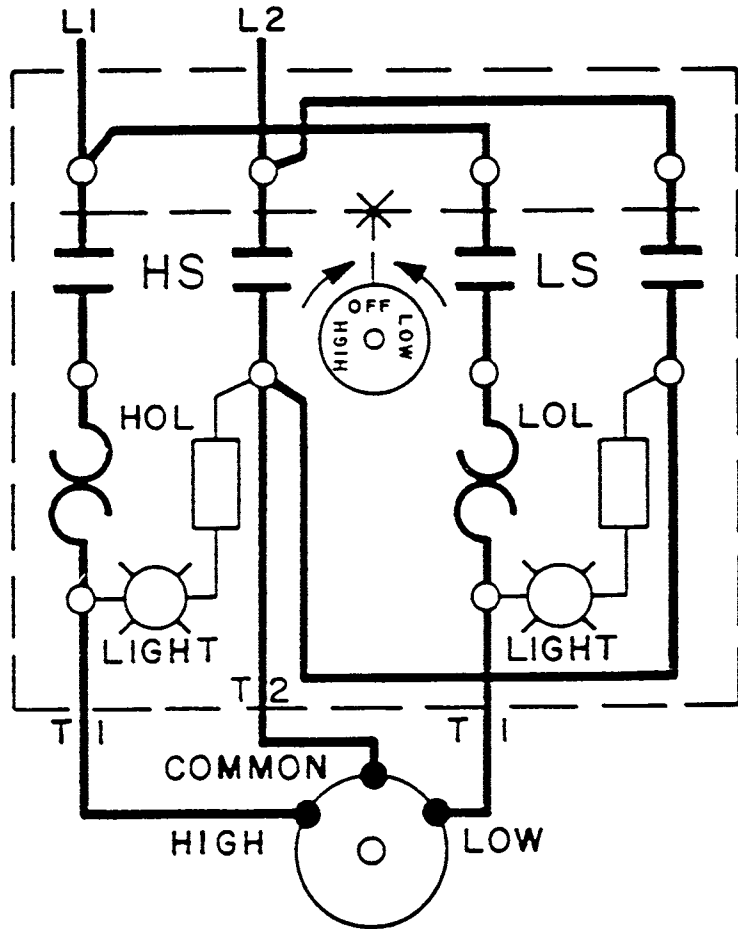
EL-0021

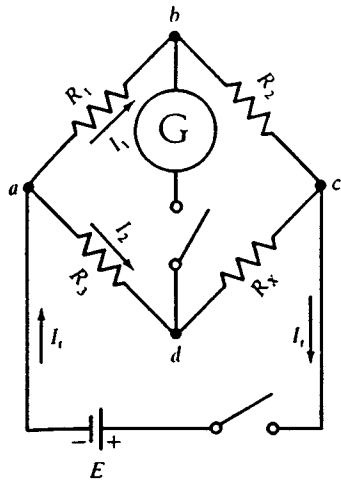


EL-0022

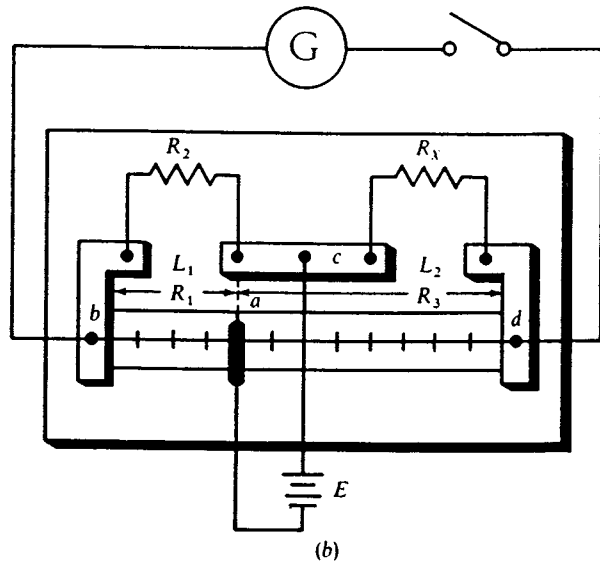


EL-0023



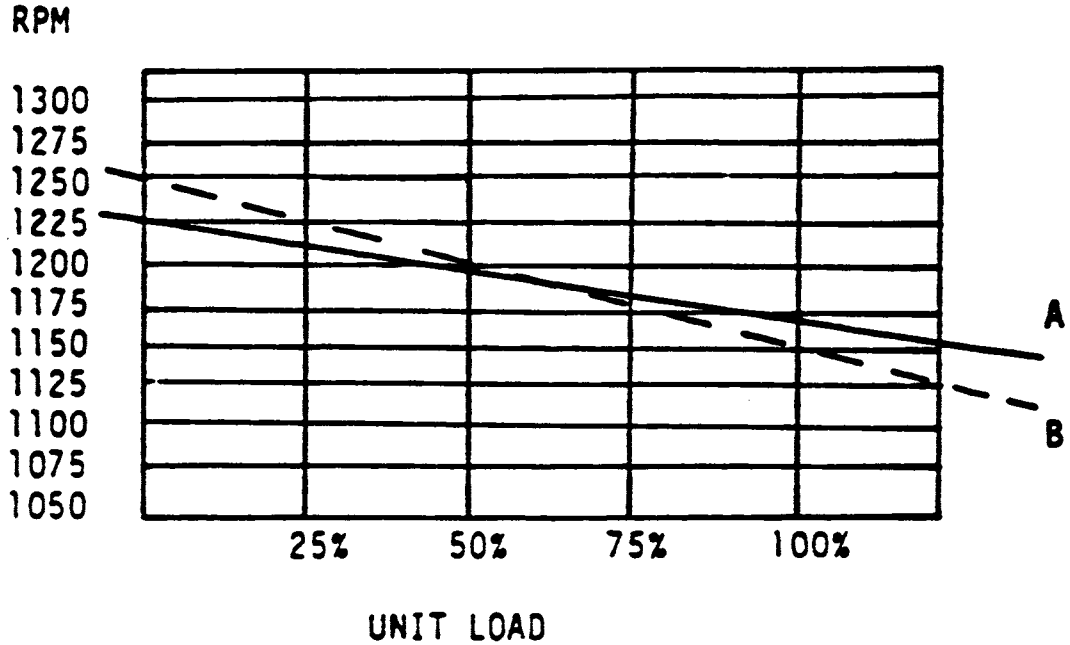


(a)

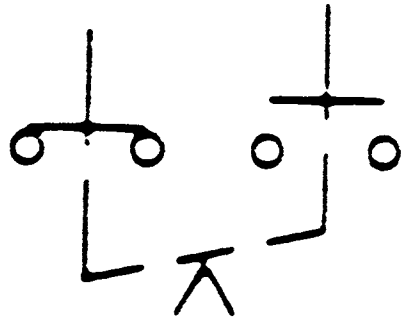


(b)

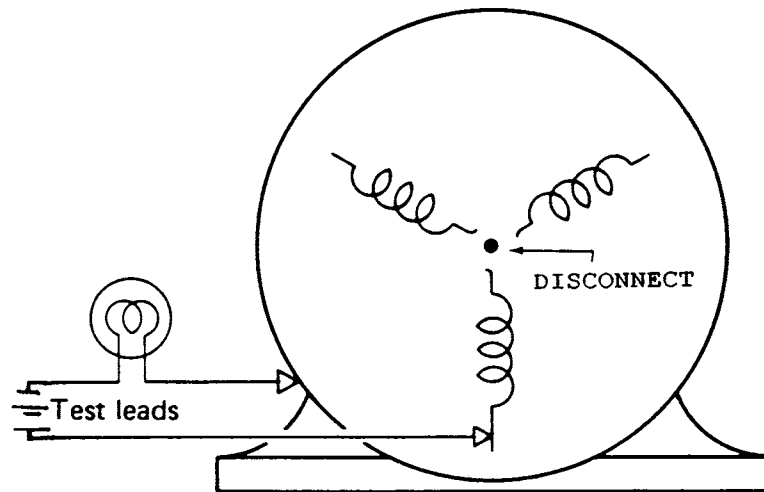
EL-0025



EL-0026

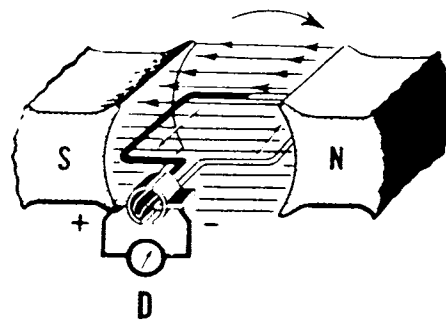
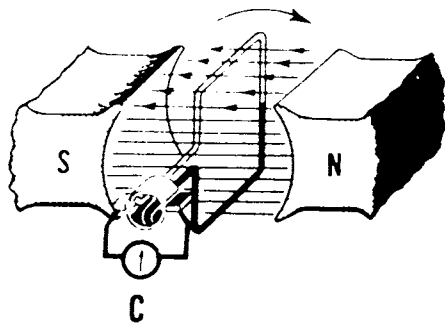
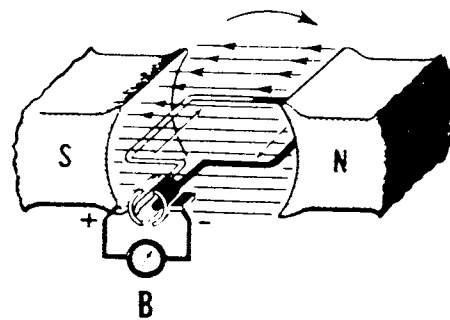
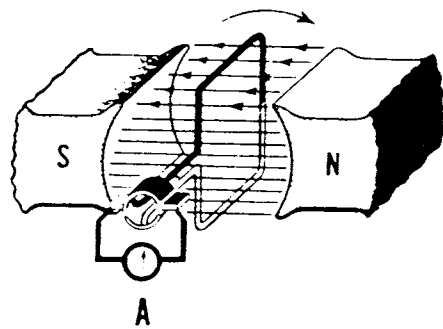


EL-0027

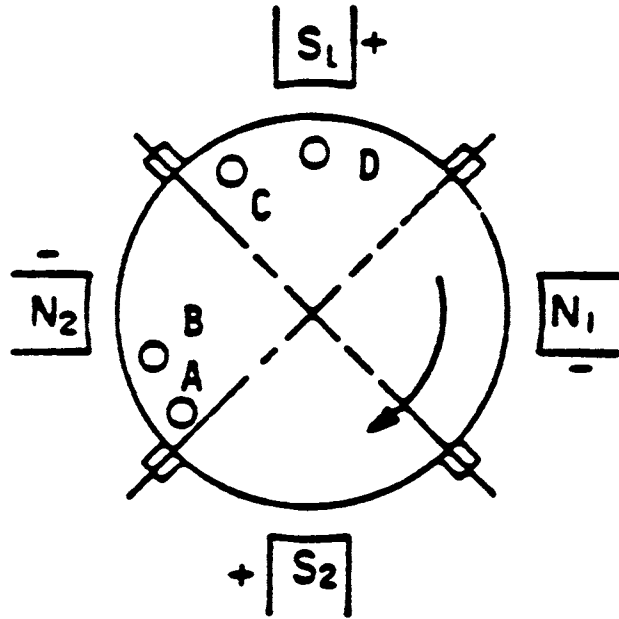


A

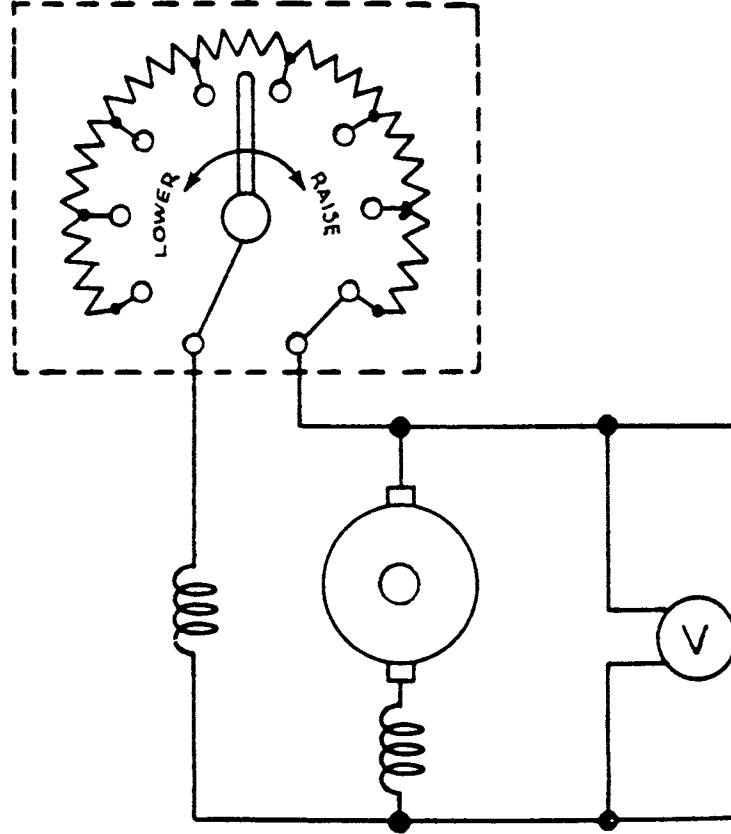
EL-0028



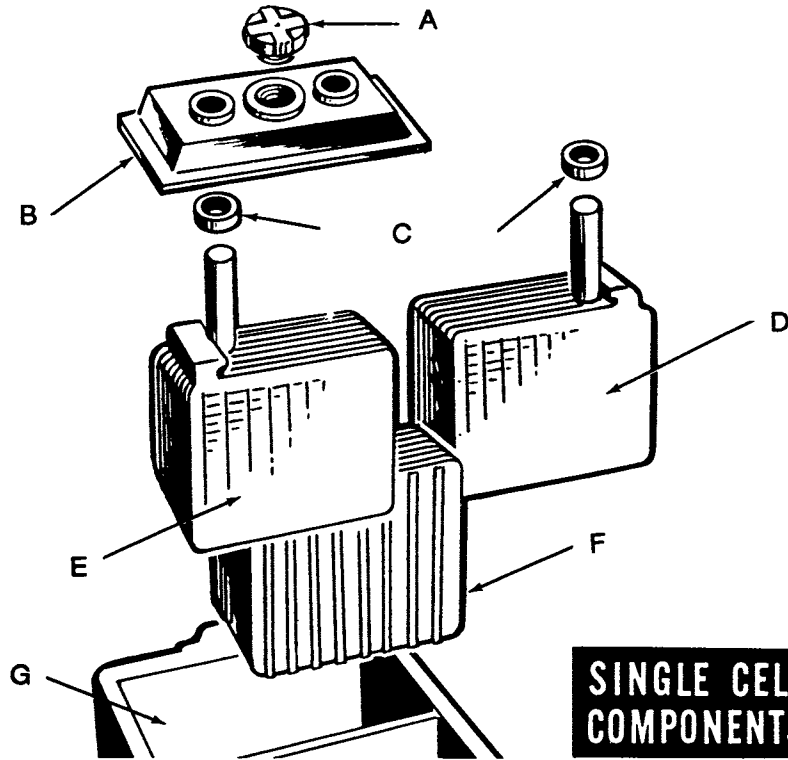
EL-0029



EL-0030

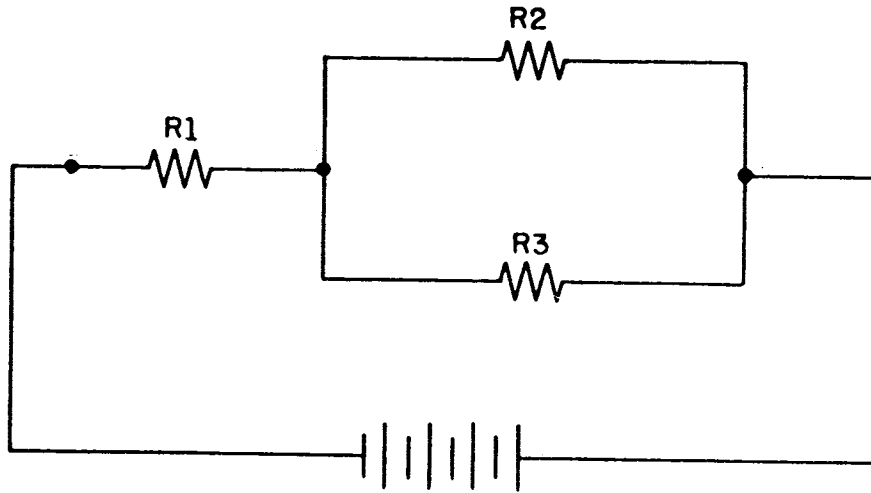


EL-0031

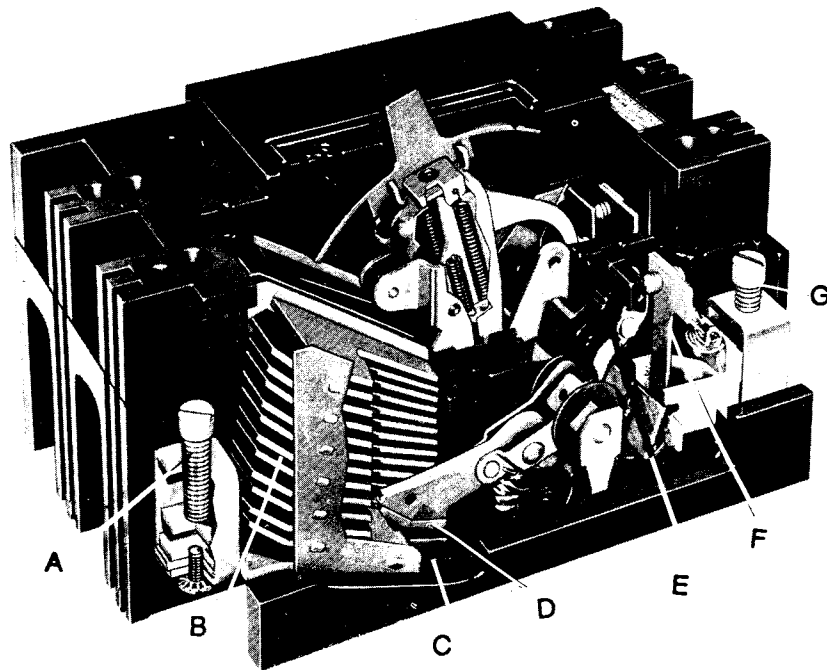


**SINGLE CELL
COMPONENTS**

EL-0032



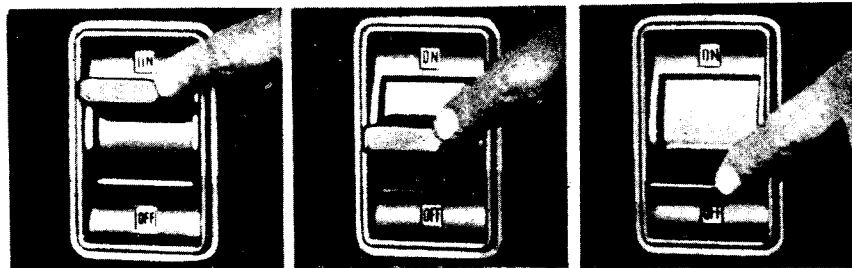
EL-0033



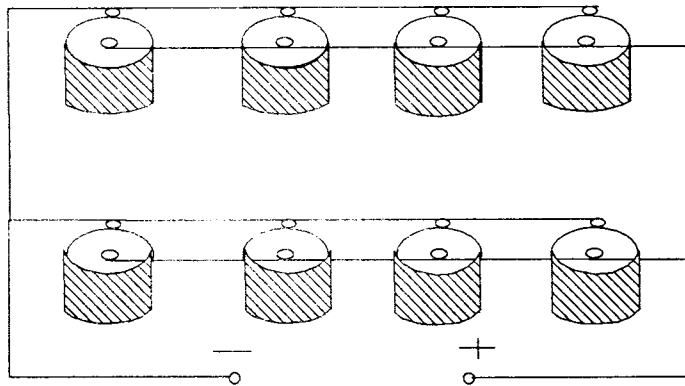
X

Y

Z



EL-0034



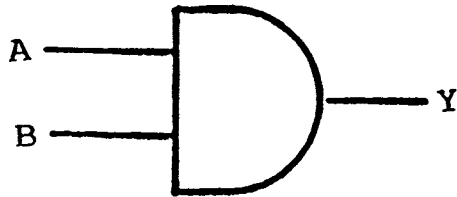
EL-0035

FUNCTION

SYMBOL

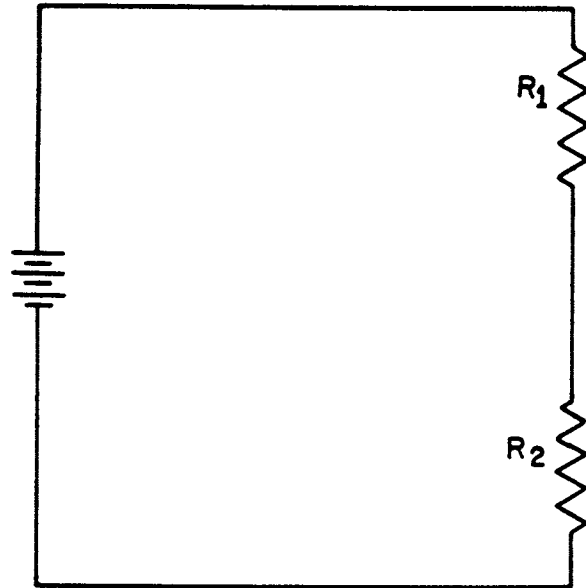
TRUTH TABLE INPUTS

AND

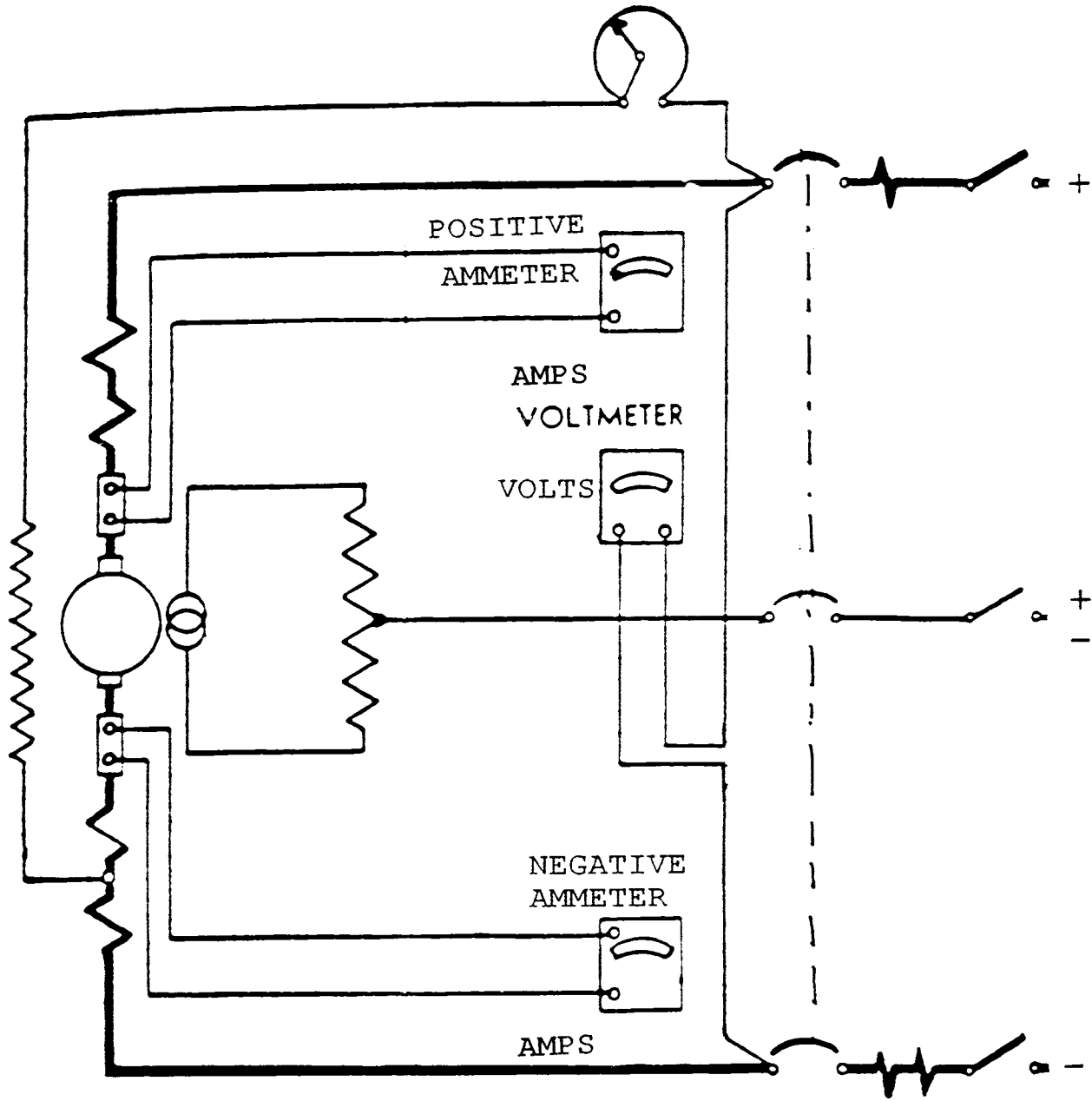


A	B
1	1
1	0
0	1
0	0

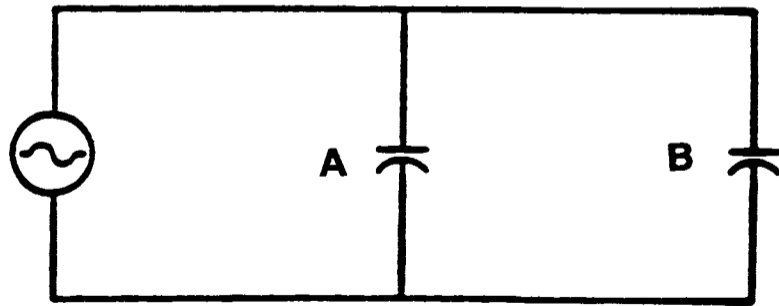
EL-0036



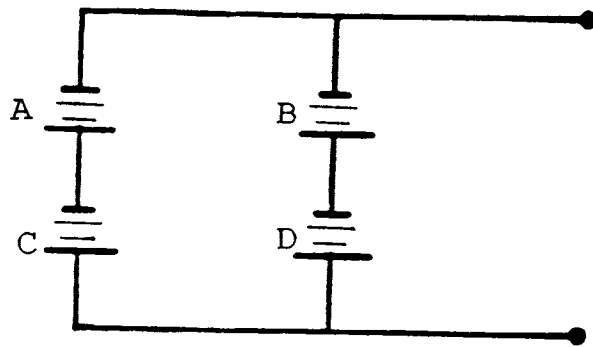
EL-0037



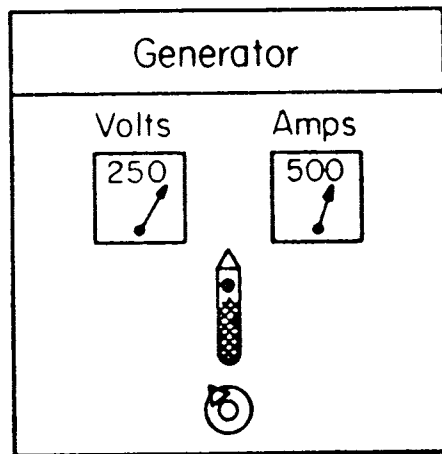
EL-0038

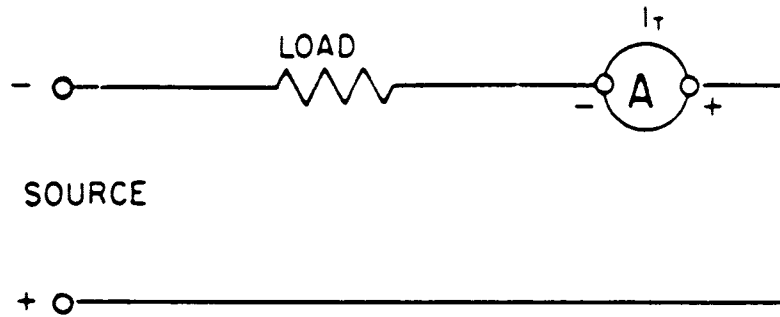


EL-0039

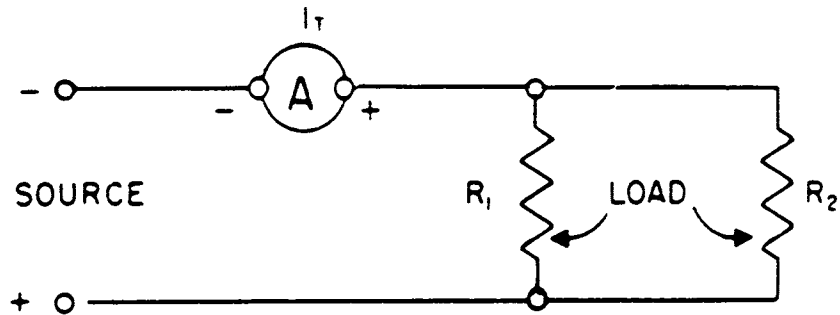


EL-0040

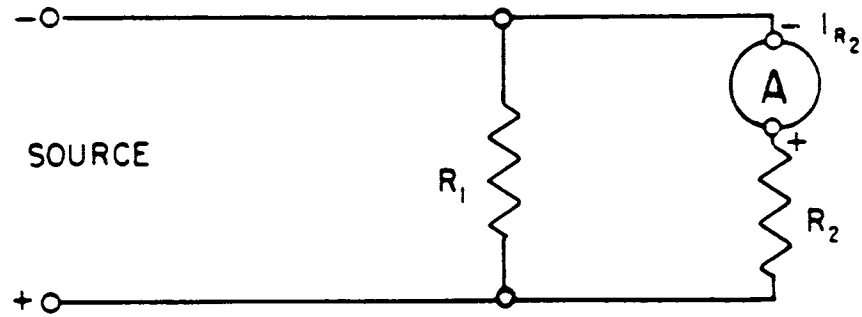




(A) SERIES CIRCUIT

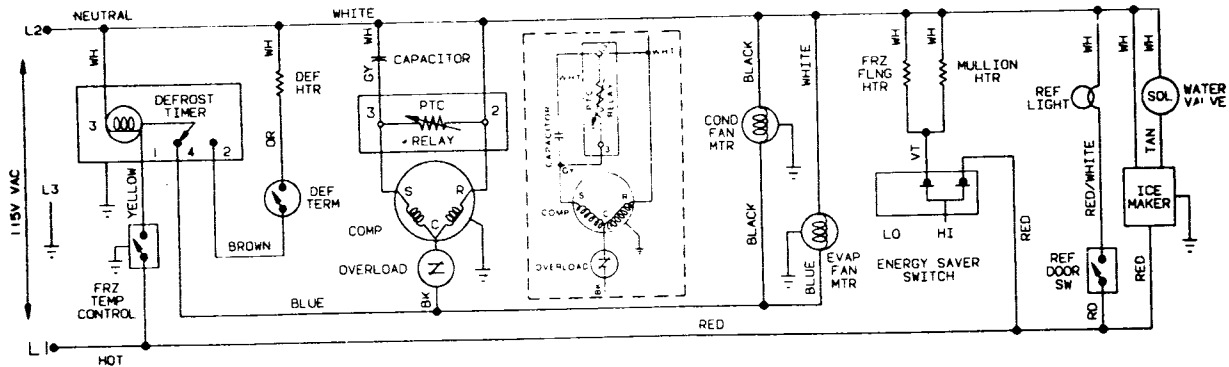


(B) PARALLEL CIRCUIT

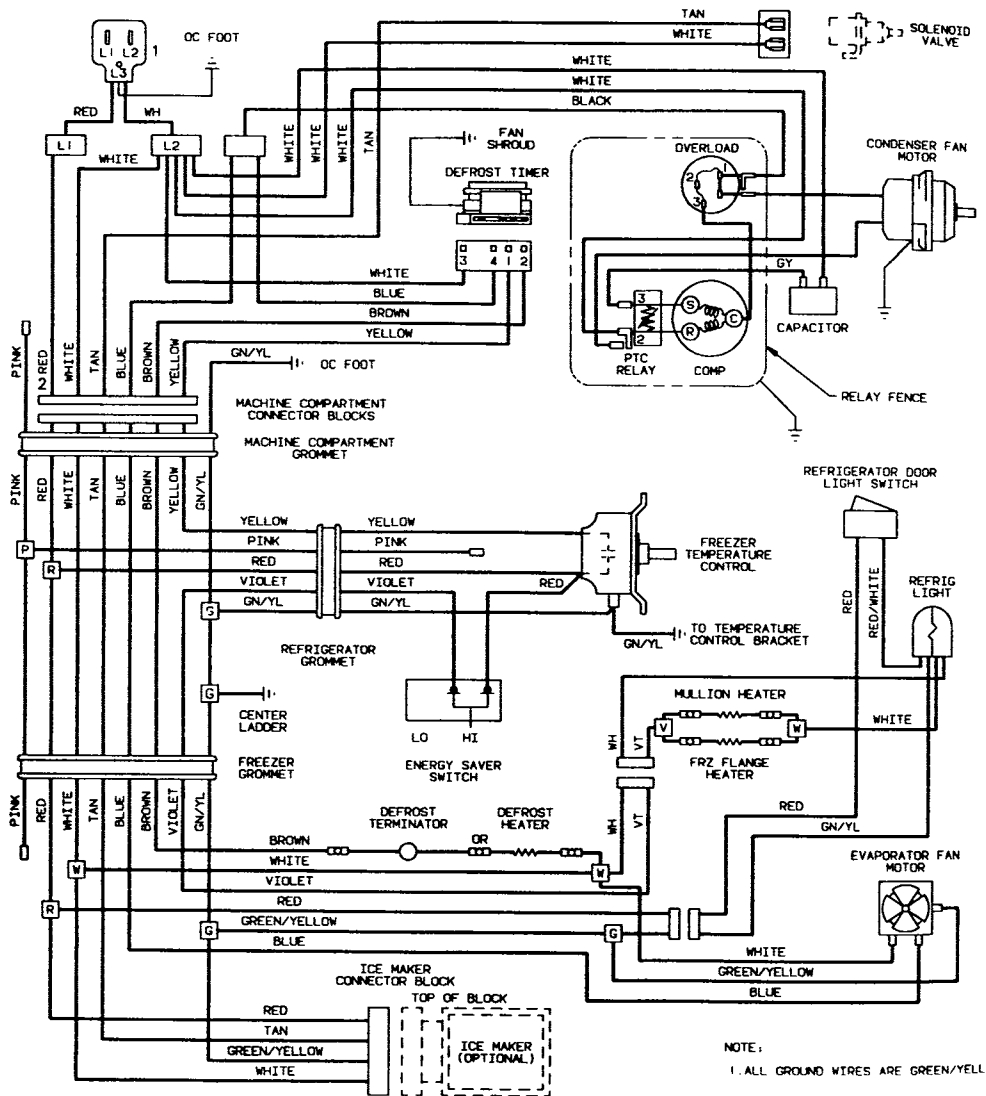


(C) PARALLEL CIRCUIT

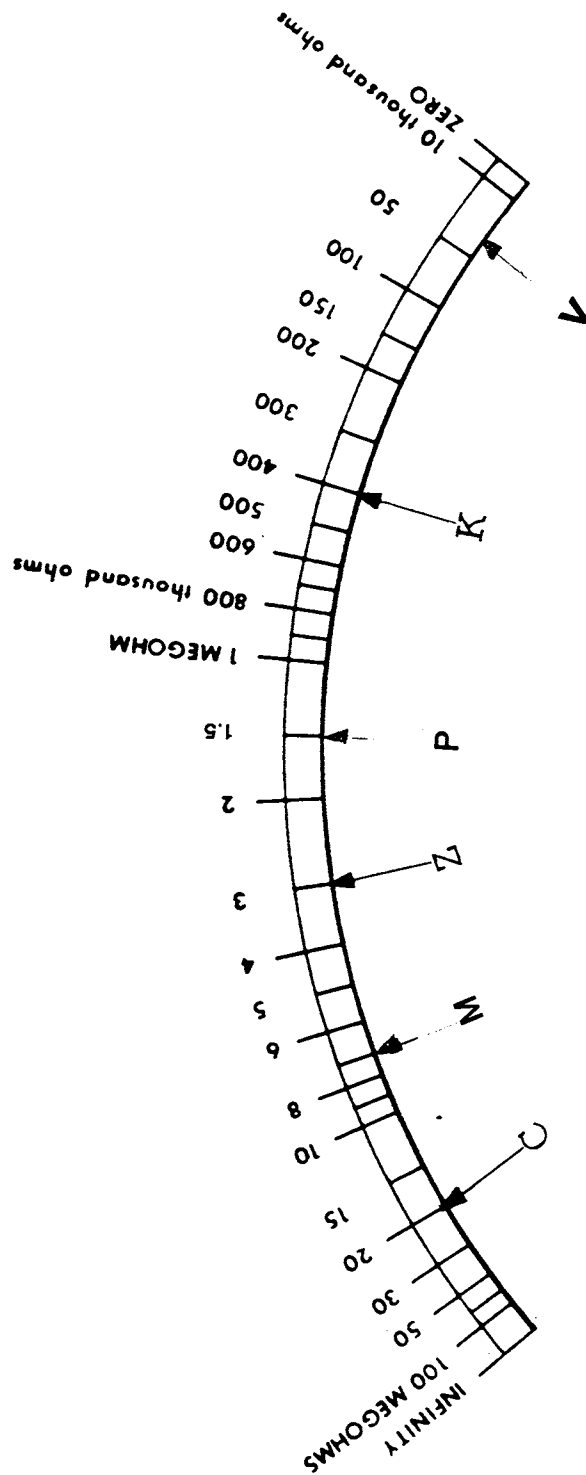
EL-0042



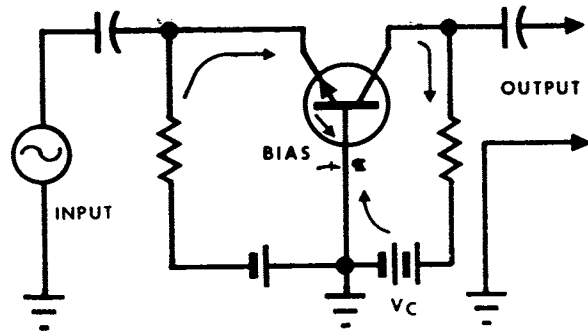
EI-0043



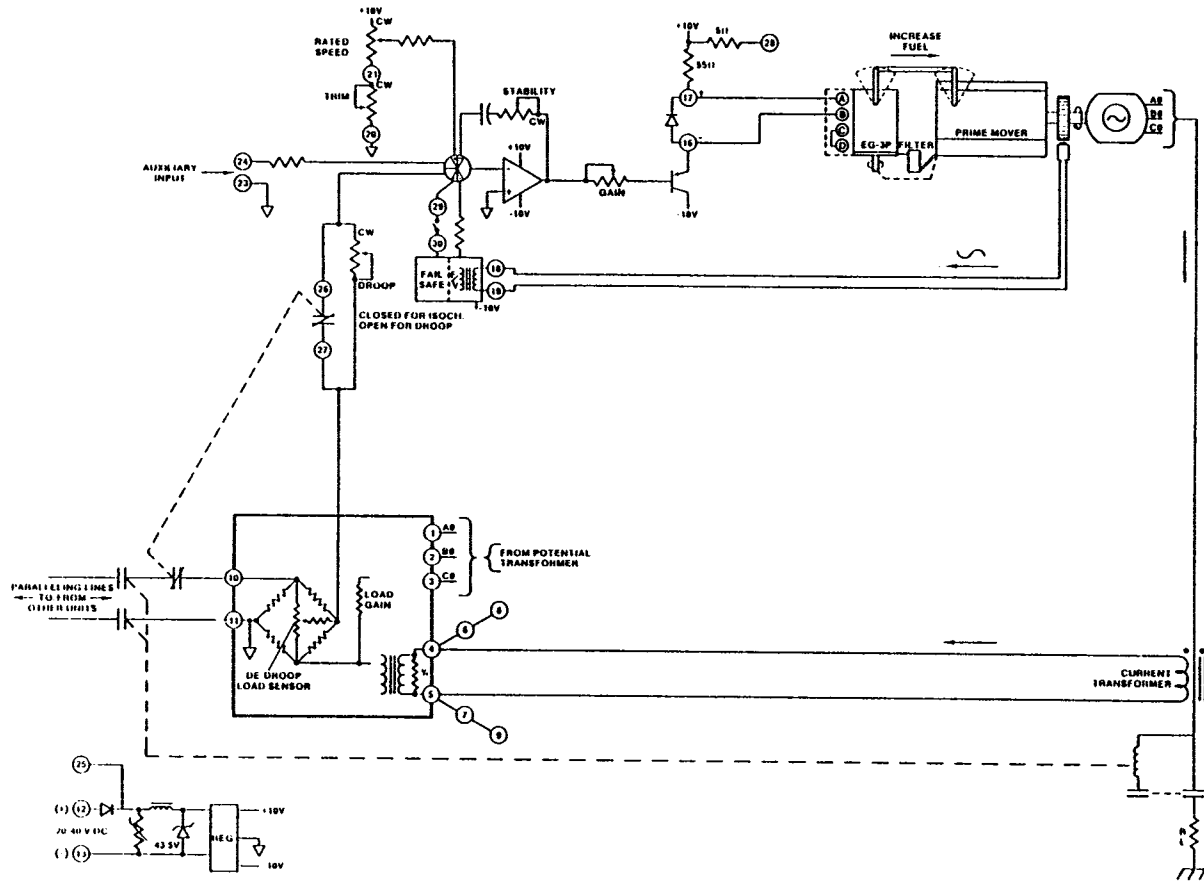
EL-0044



EL-0045



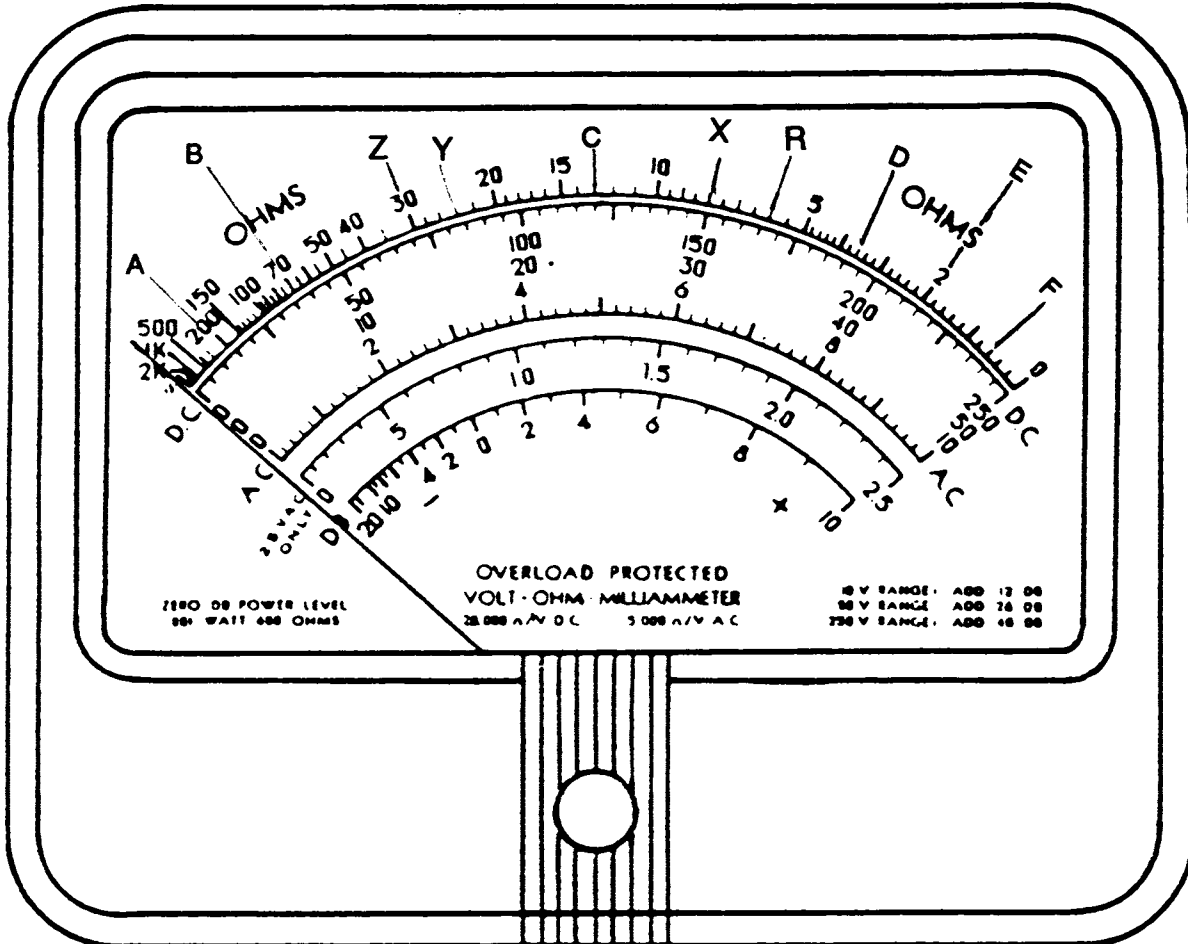
EL-0046



2301 (UNITIZED) CONTROL SYSTEM 8271-442 TYPICAL

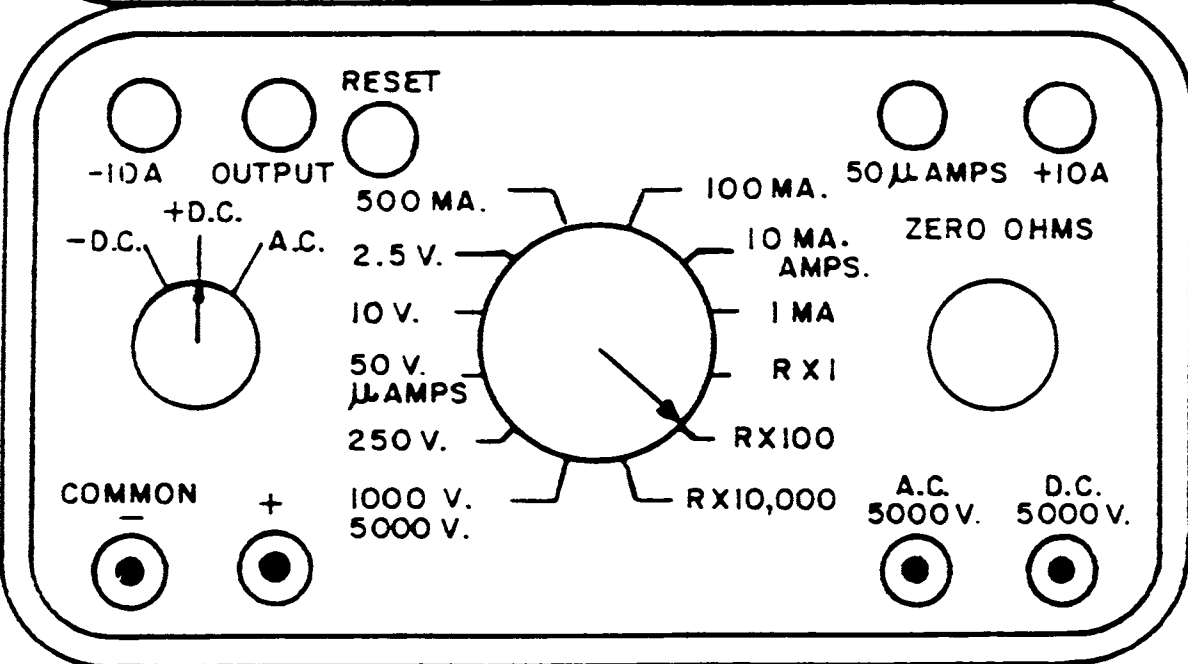
(Courtesy of Woodward)

EL-0047

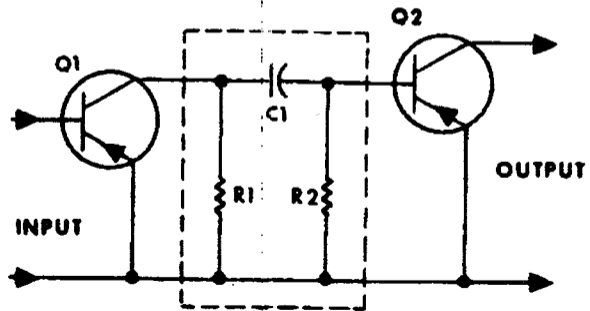


OVERLOAD PROTECTED
VOLT-OHM-MILLIAMMETER
25,000 A/V D.C. 5,000 A/V A.C.

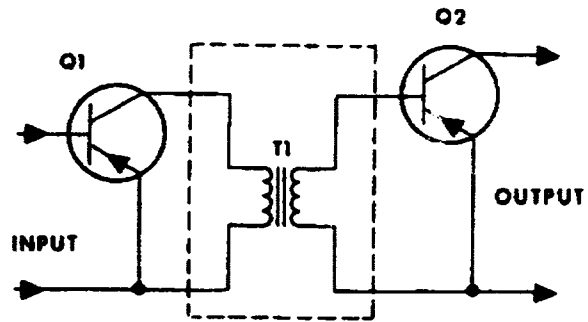
10 V RANGE: ADD 12 00
50 V RANGE: ADD 24 00
250 V RANGE: ADD 48 00



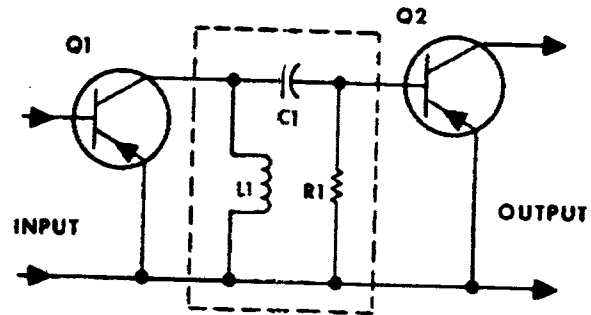
EL-0048



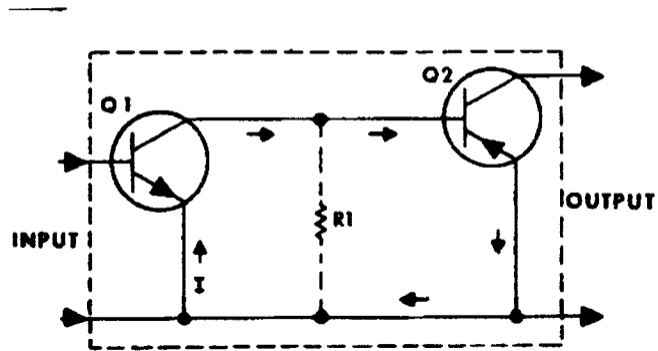
EL-0049



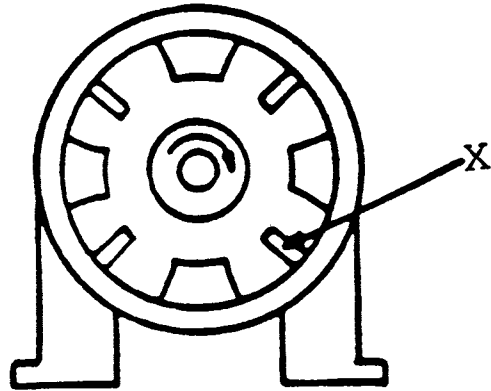
EL-0050



EL-0051



EL-0052



EL-0053

A



B



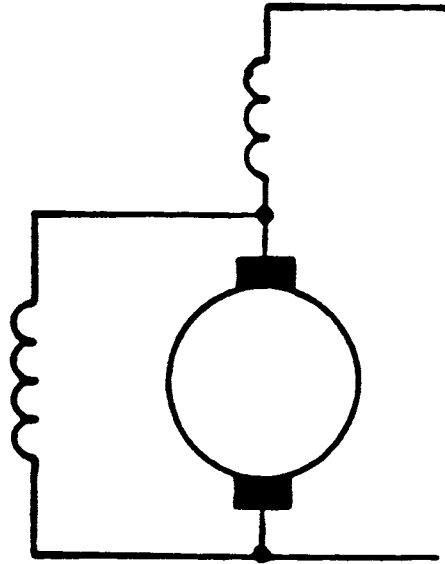
C



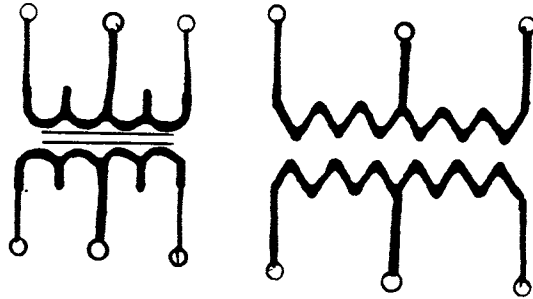
D

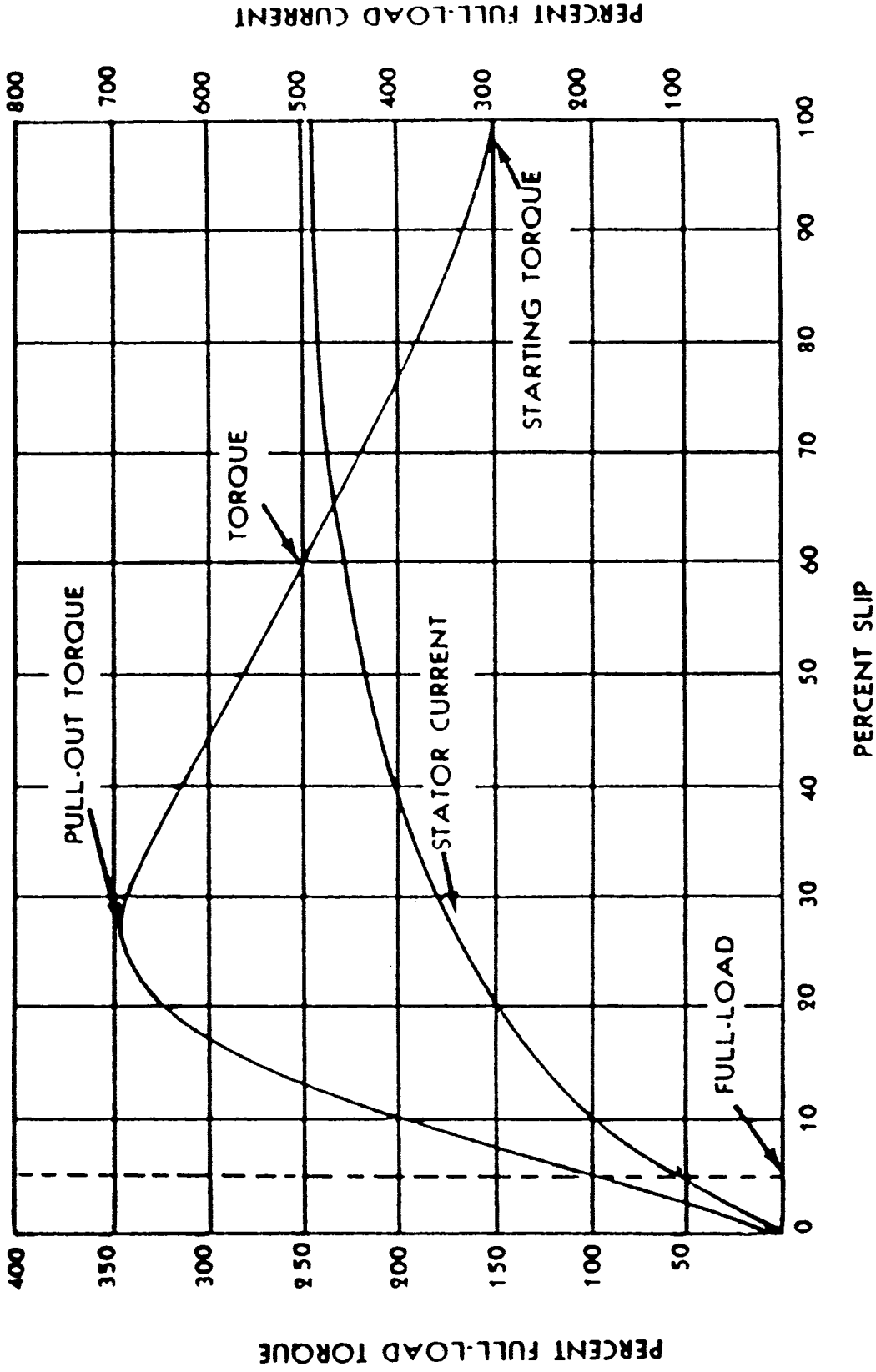


EL-0054



EL-0055





TORQUE AND CURRENT CURVES

EL-0057

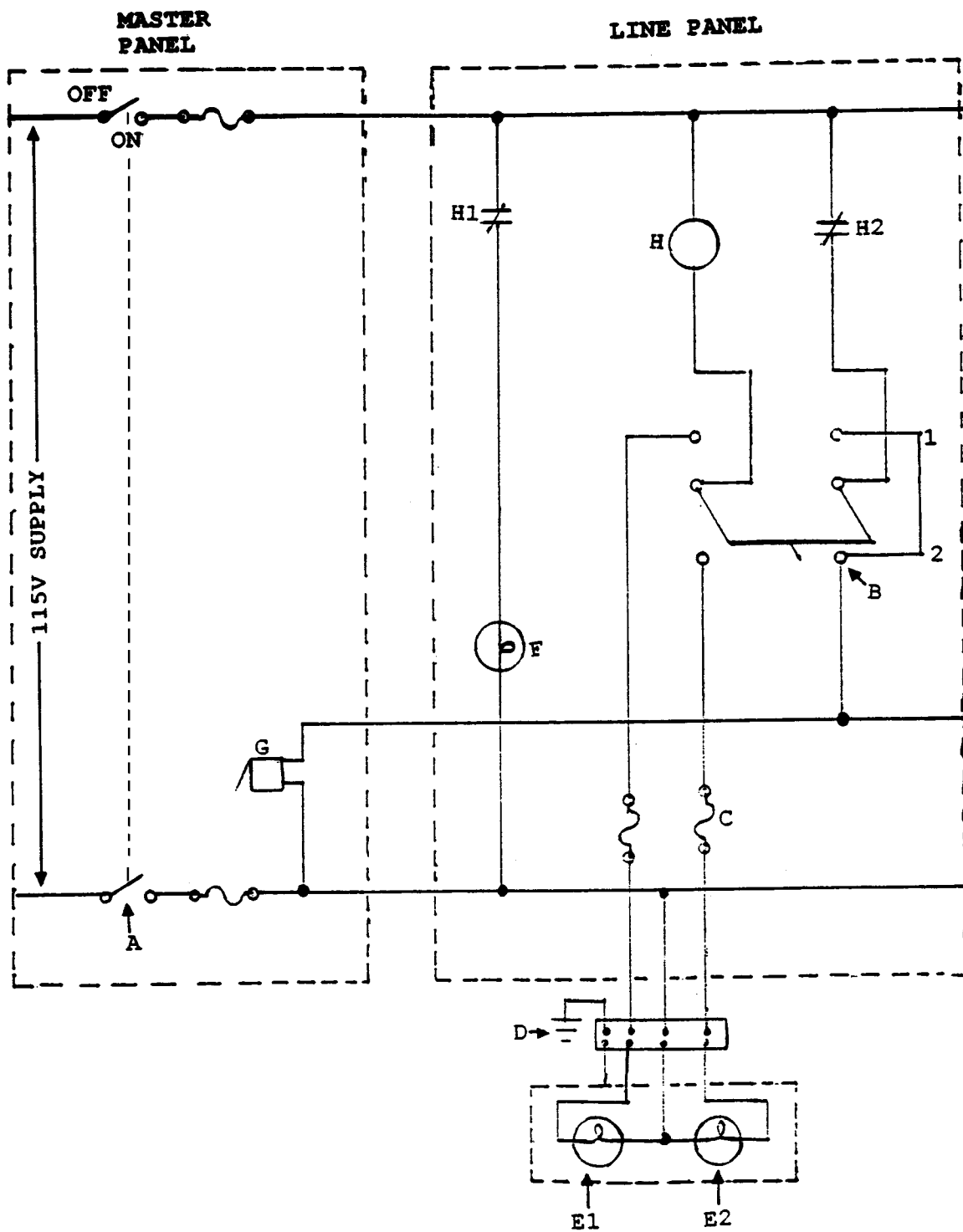
A
+ [] [] [] []
- [] [] [] []
+ [] [] [] []
- [] [] [] []

B
+ [] [] [] []
- [] [] [] []
+ [] [] [] []
- [] [] [] []

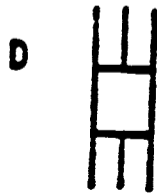
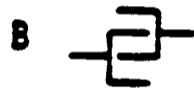
C
+ [] [] [] []
- [] [] [] []
+ [] [] [] []
- [] [] [] []

D
+ [] [] [] []
- [] [] [] []
+ [] [] [] []
- [] [] [] []

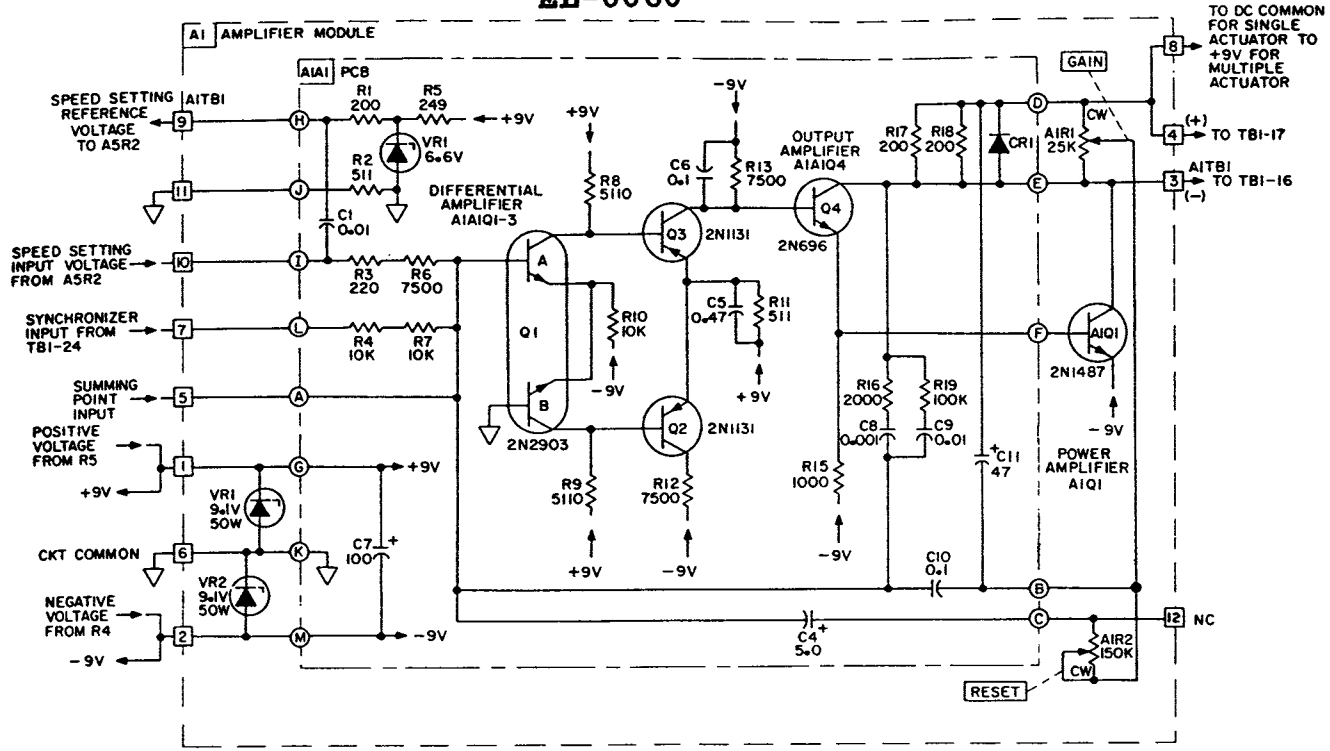
EL-0058



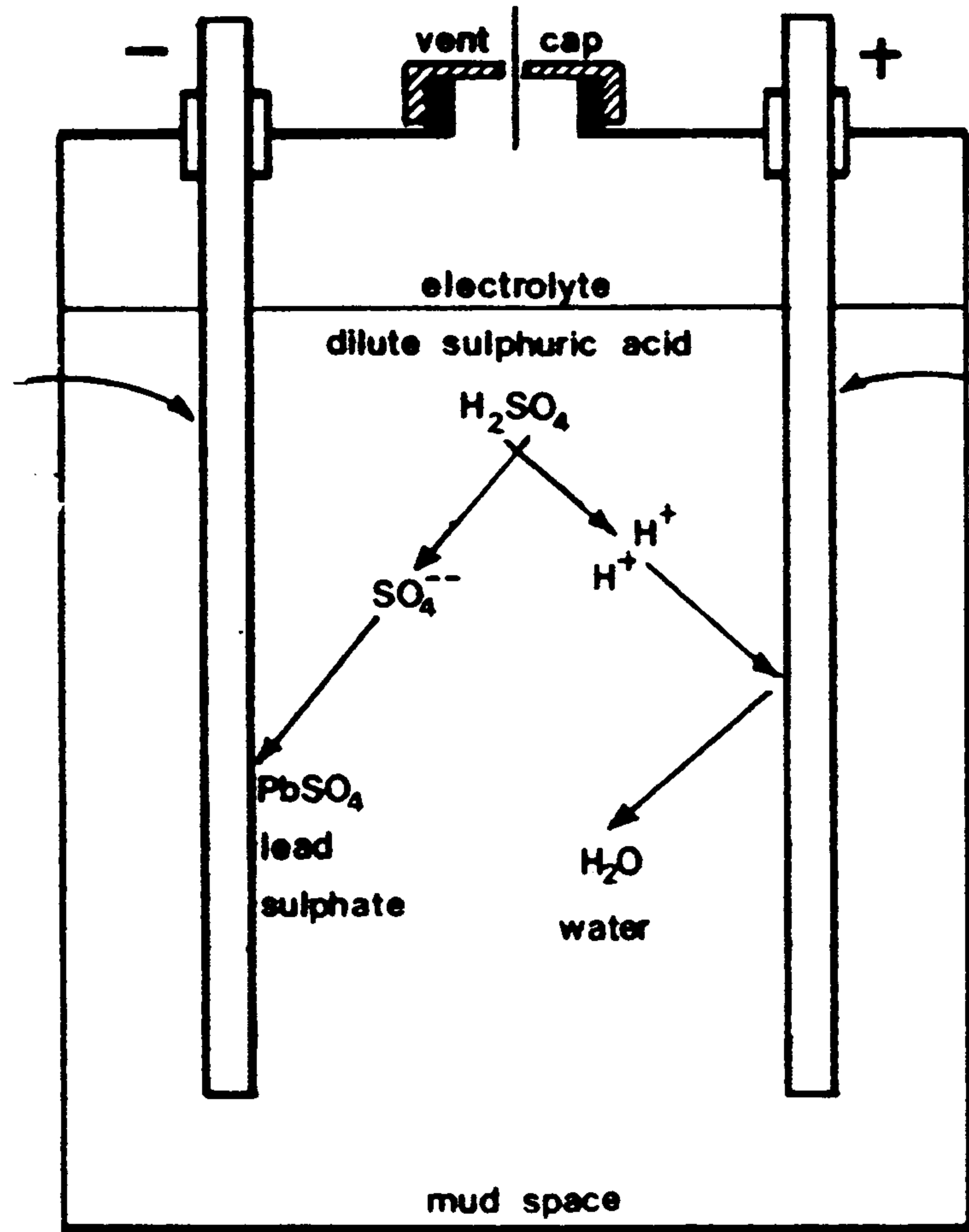
EL-0059



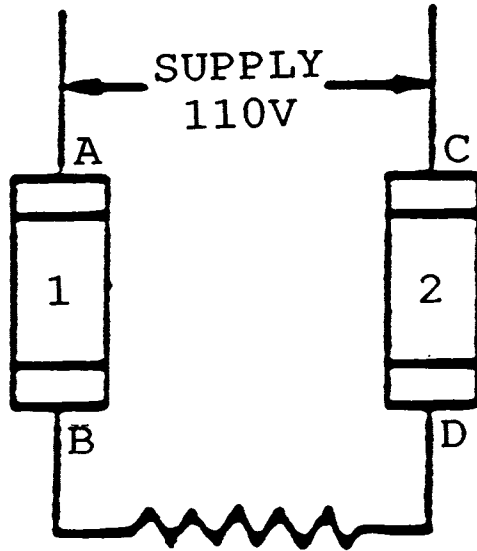
EL-0060



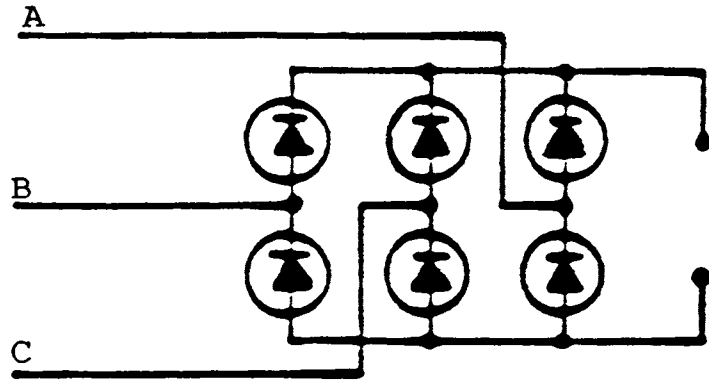
EL-0061



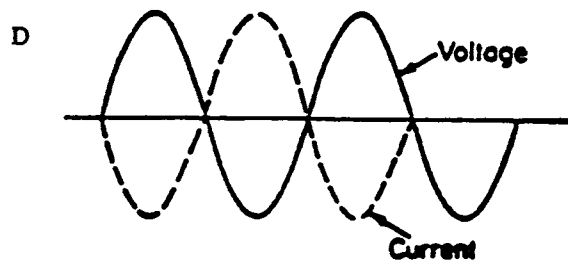
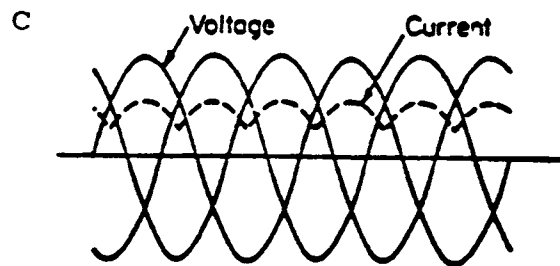
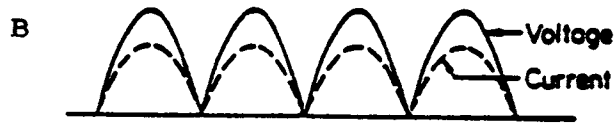
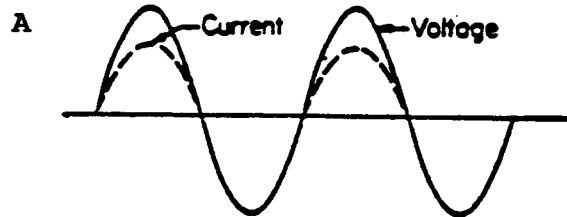
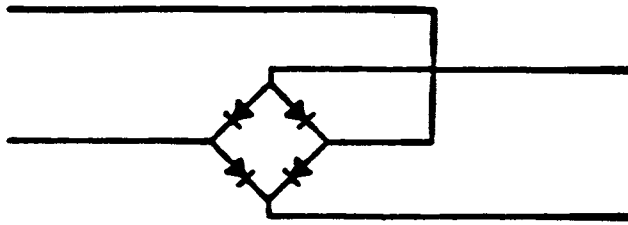
EL-0062



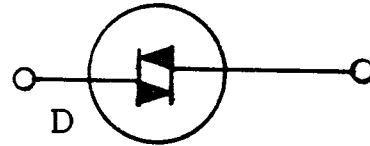
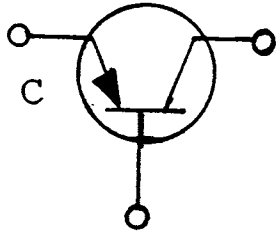
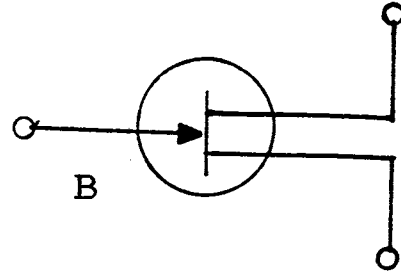
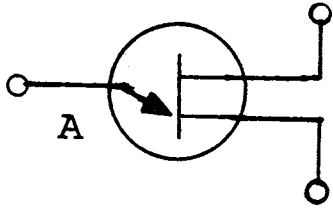
EL-0063



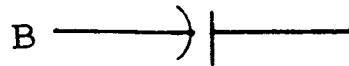
EL-0064



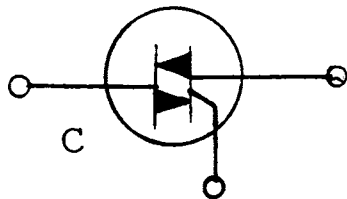
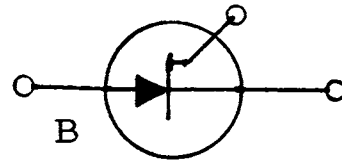
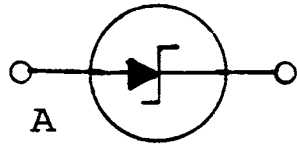
EL-0065



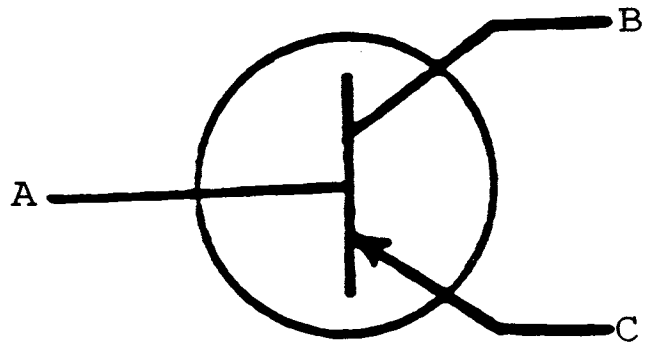
EL-0066



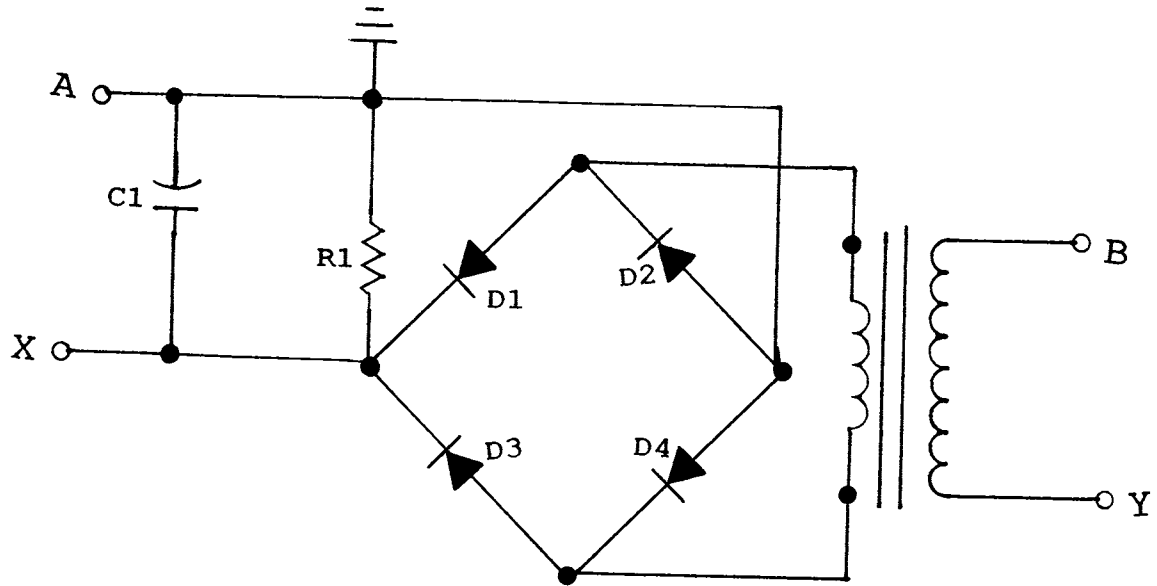
EL-0067



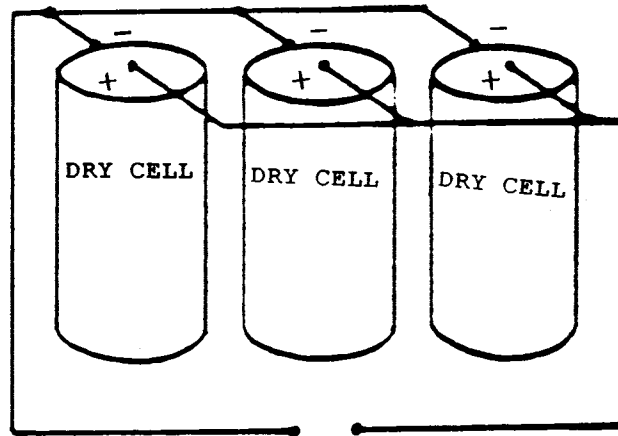
EL-0068



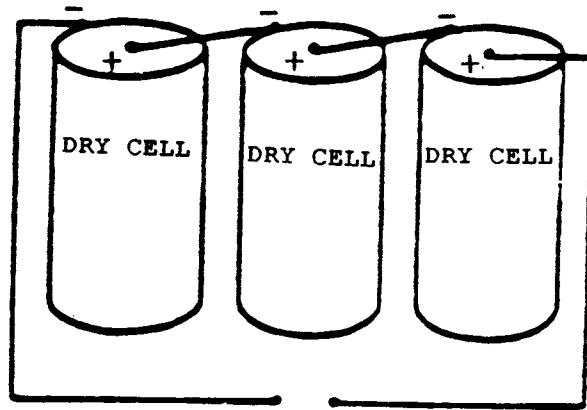
EL-0069



EL-0070



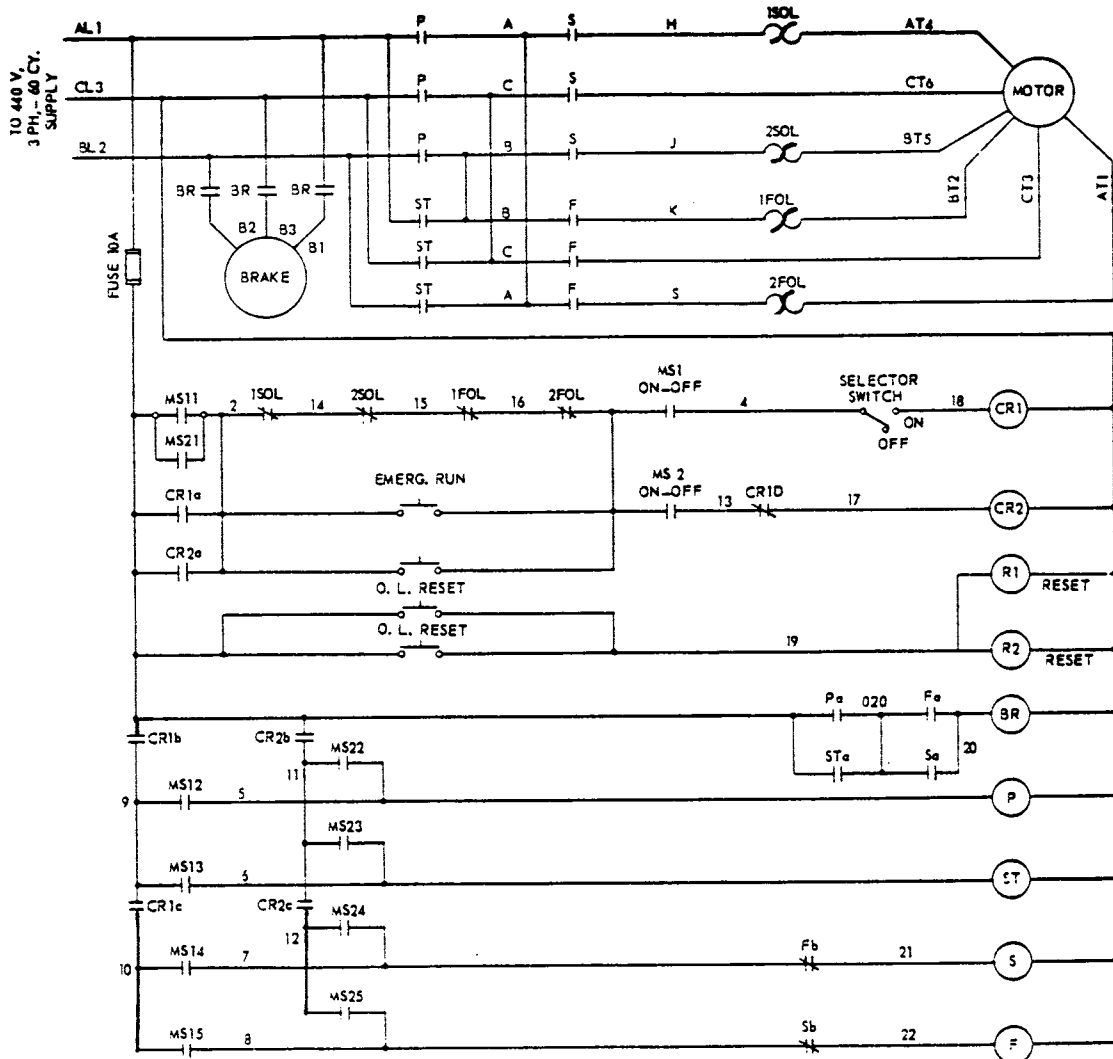
EL-0071



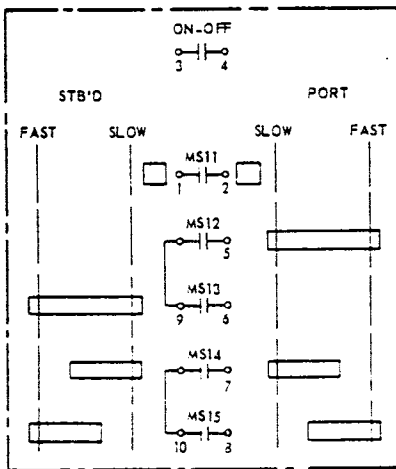
EL-0072

CONTACTS	INPUT		OUTPUT
	A	B	Z
VOLTAGE	1	0	1
	0	1	1
	1	1	1
	0	0	0

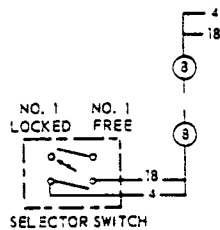
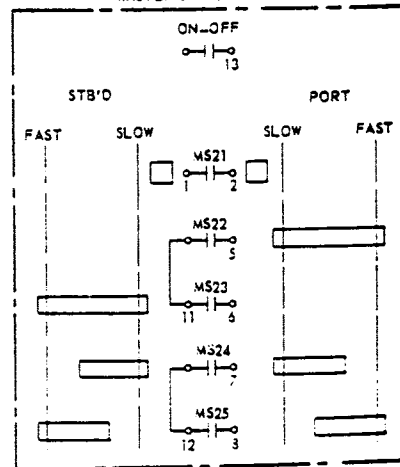
EL-0073



MASTER SWITCH NO. 1

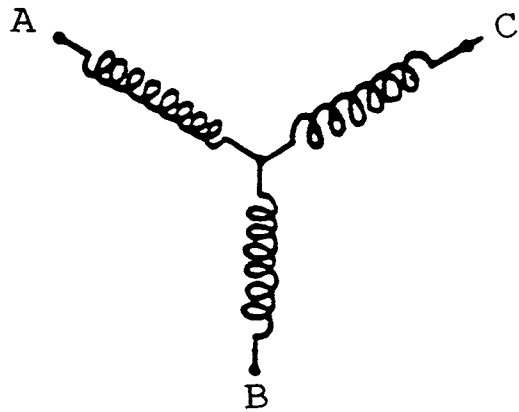


MASTER SWITCH NO. 2

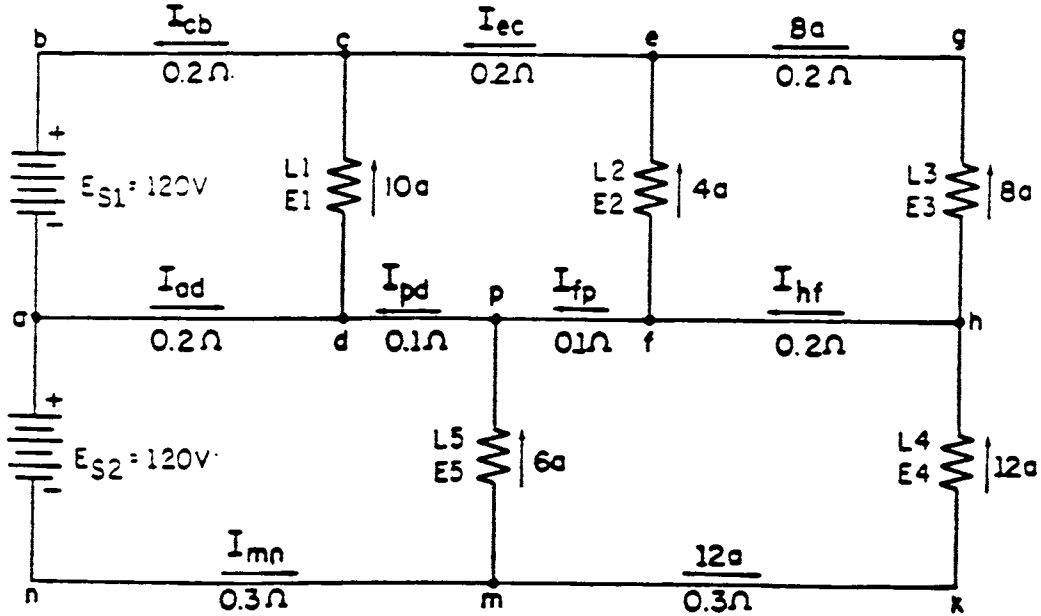


Reversing across-the-line starter for two-speed anchor windlass

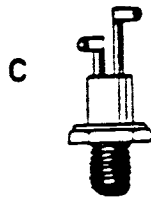
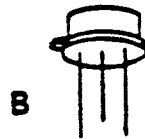
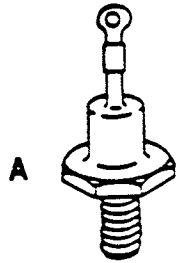
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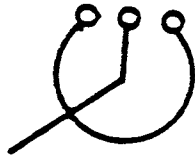
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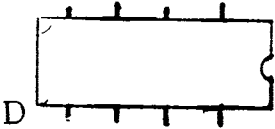
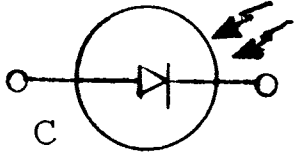
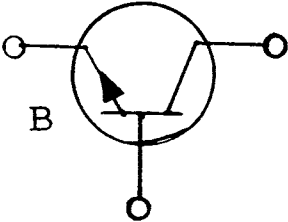
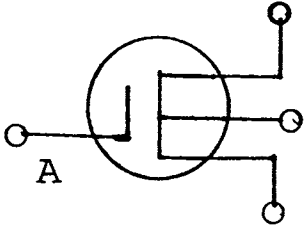
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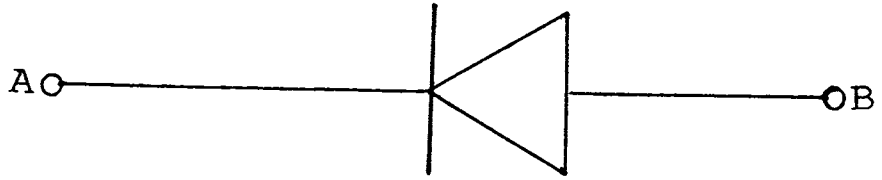
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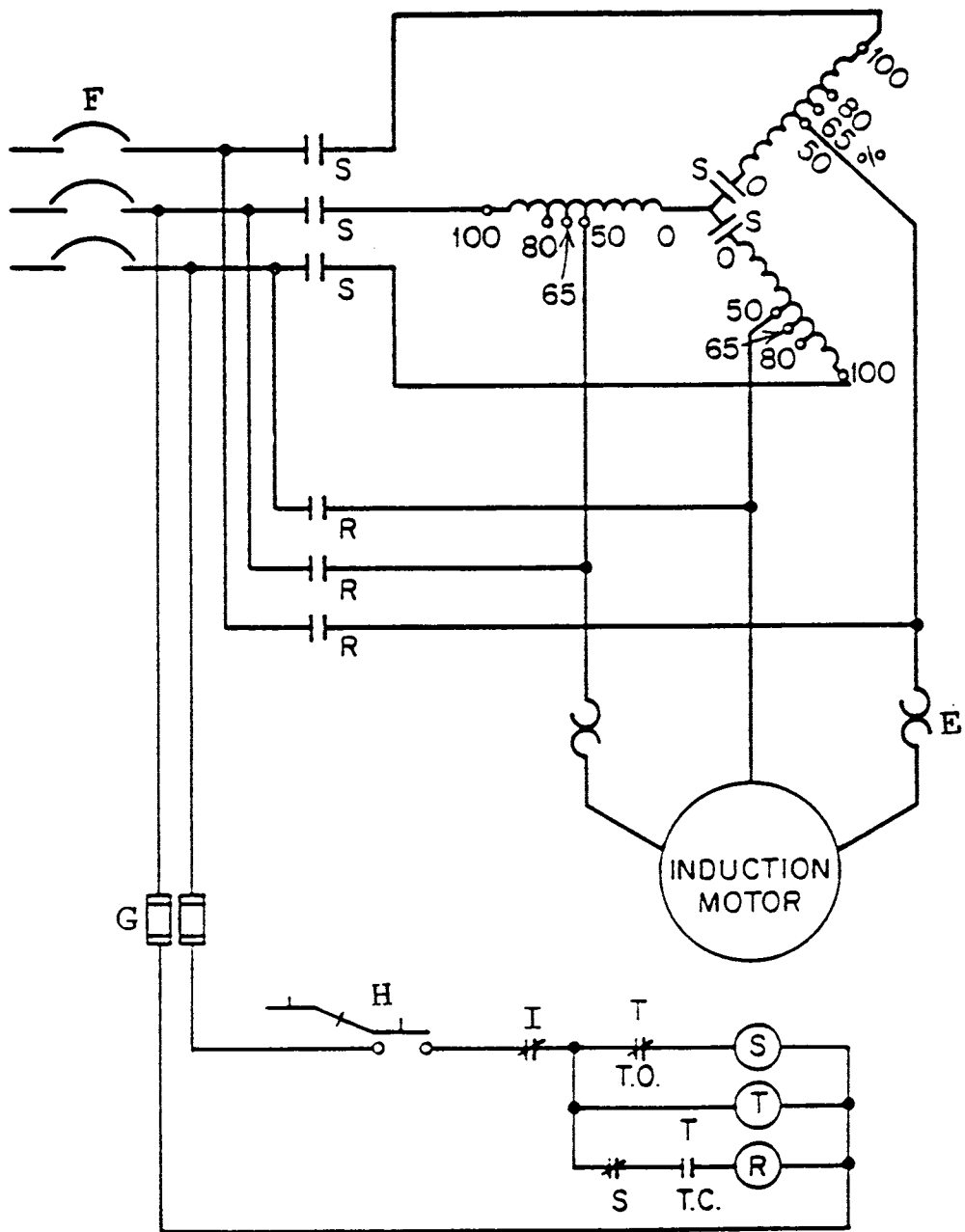
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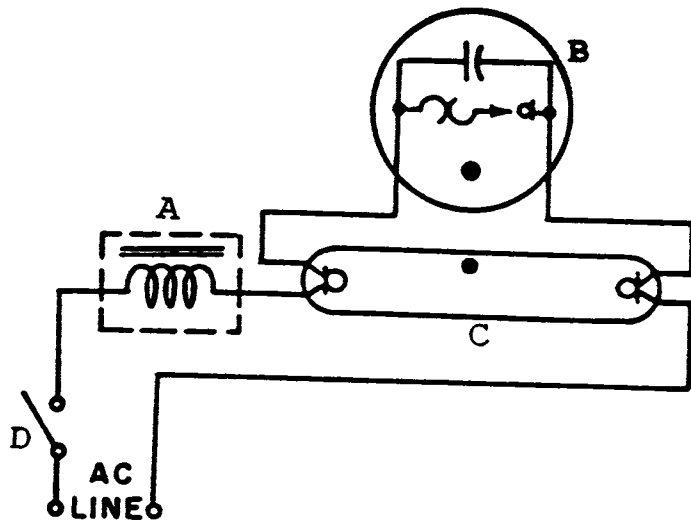
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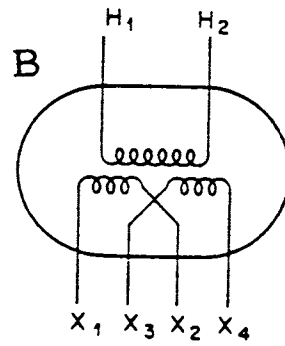
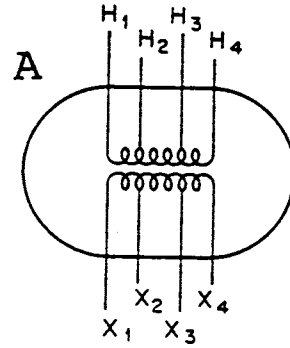
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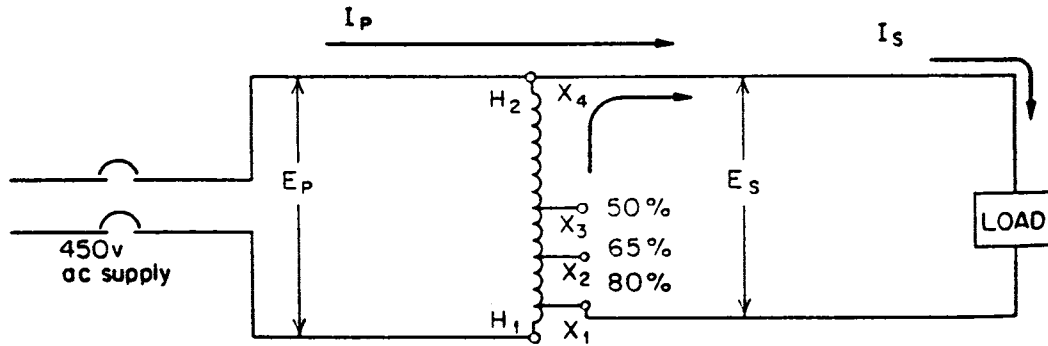
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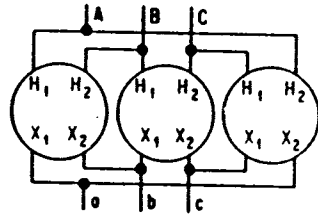
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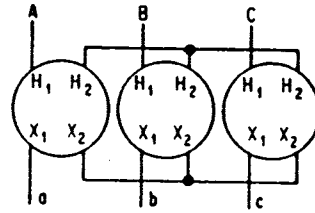
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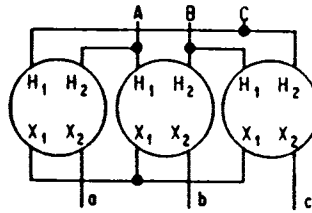
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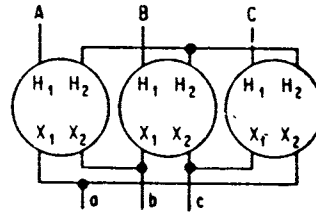
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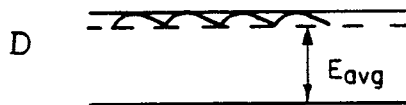
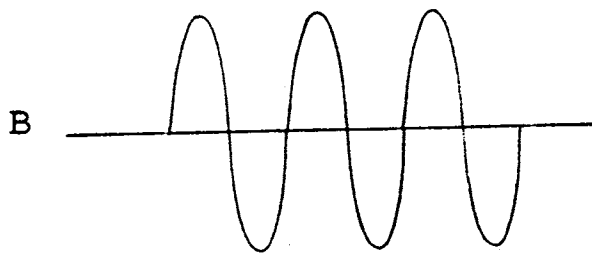
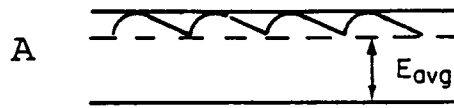
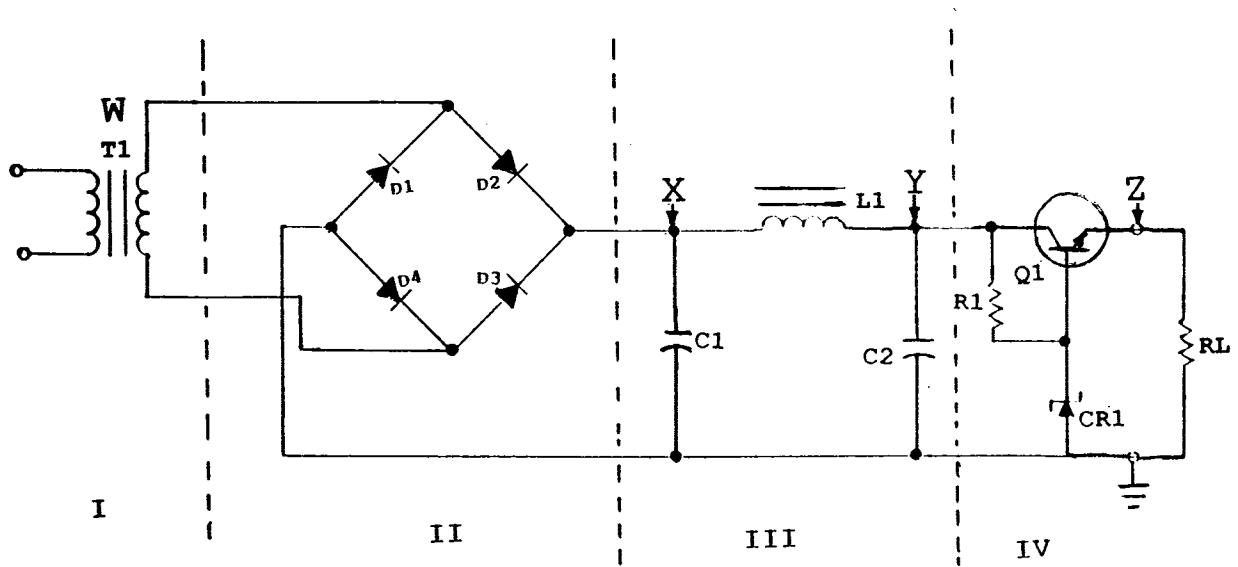
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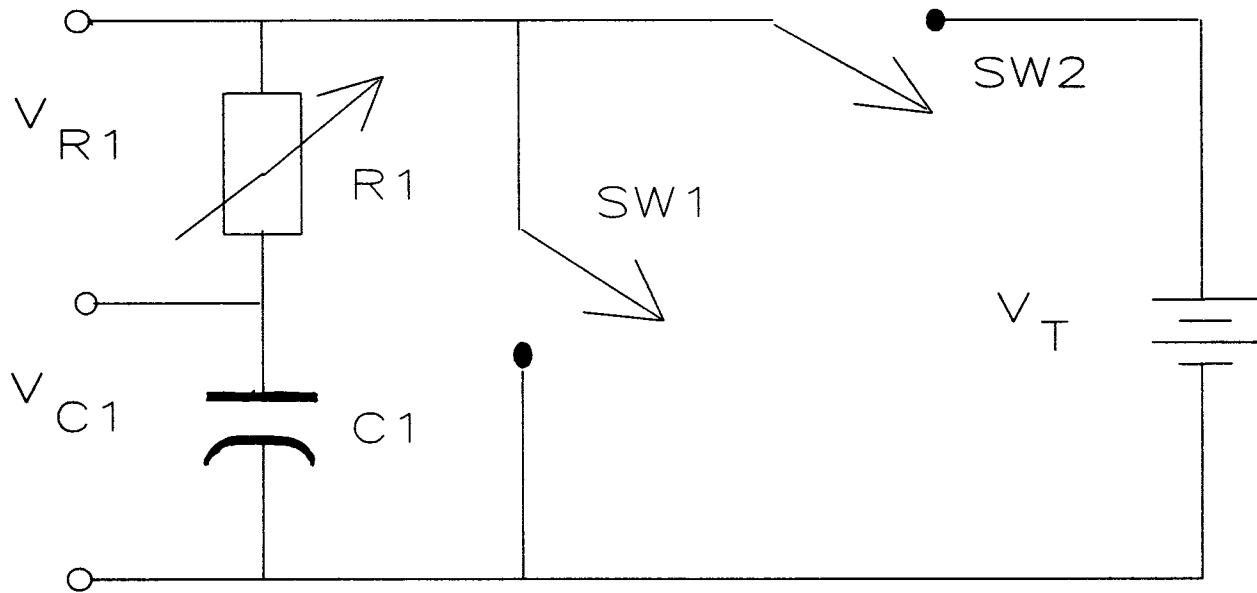
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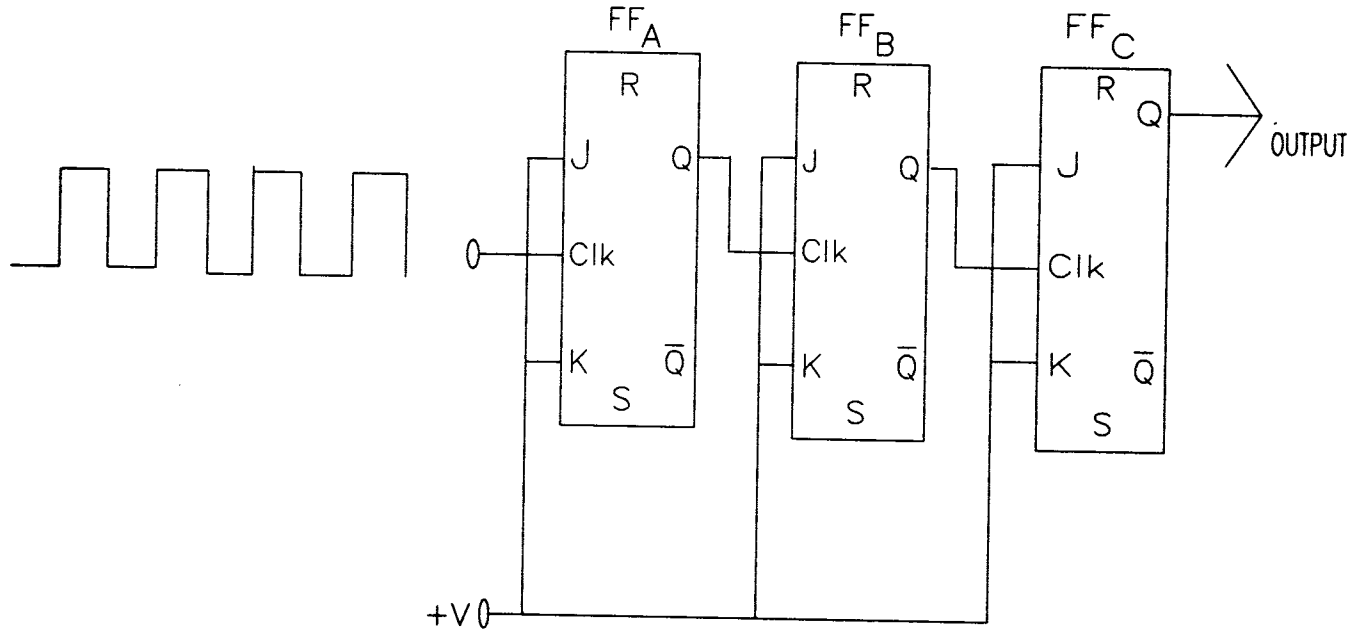
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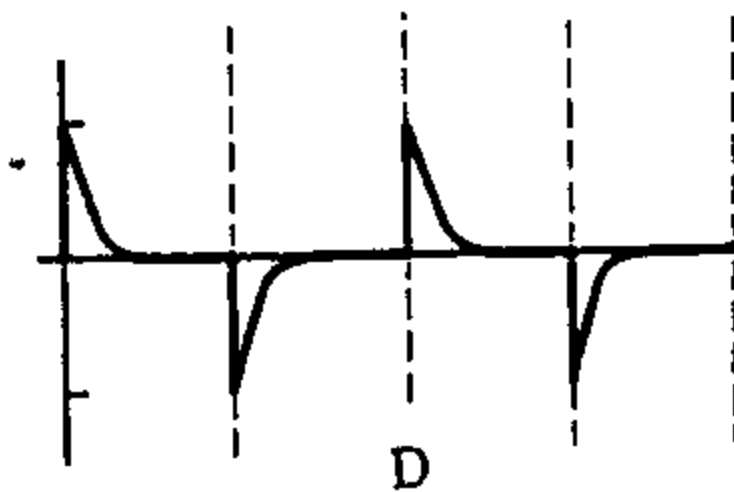
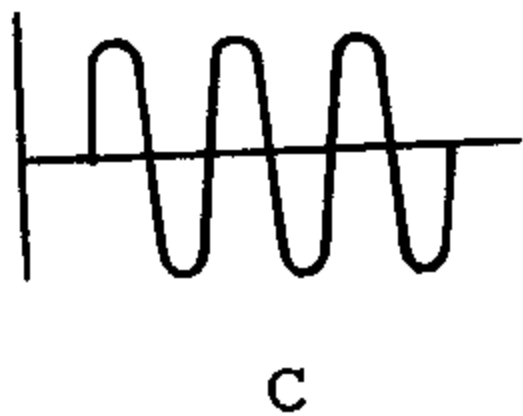
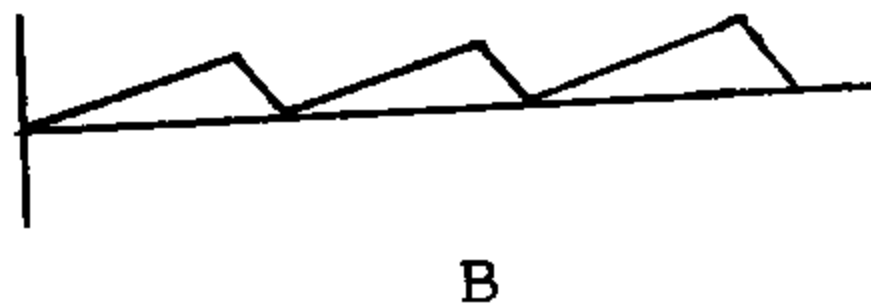
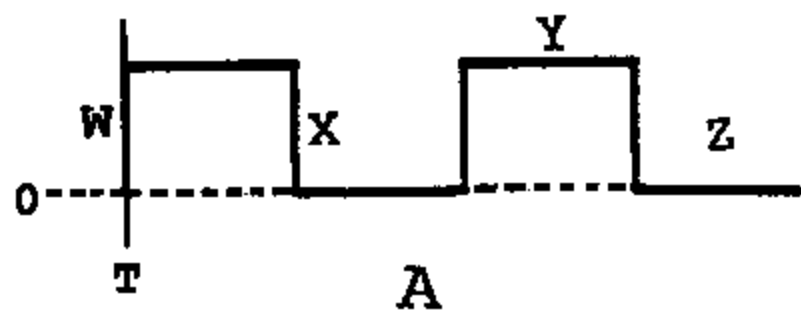
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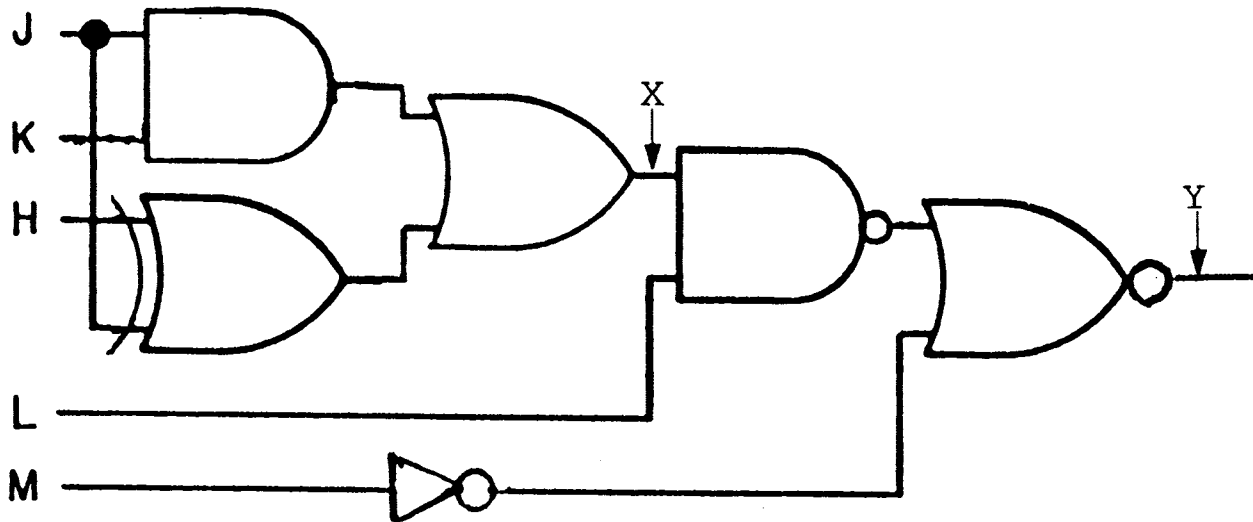
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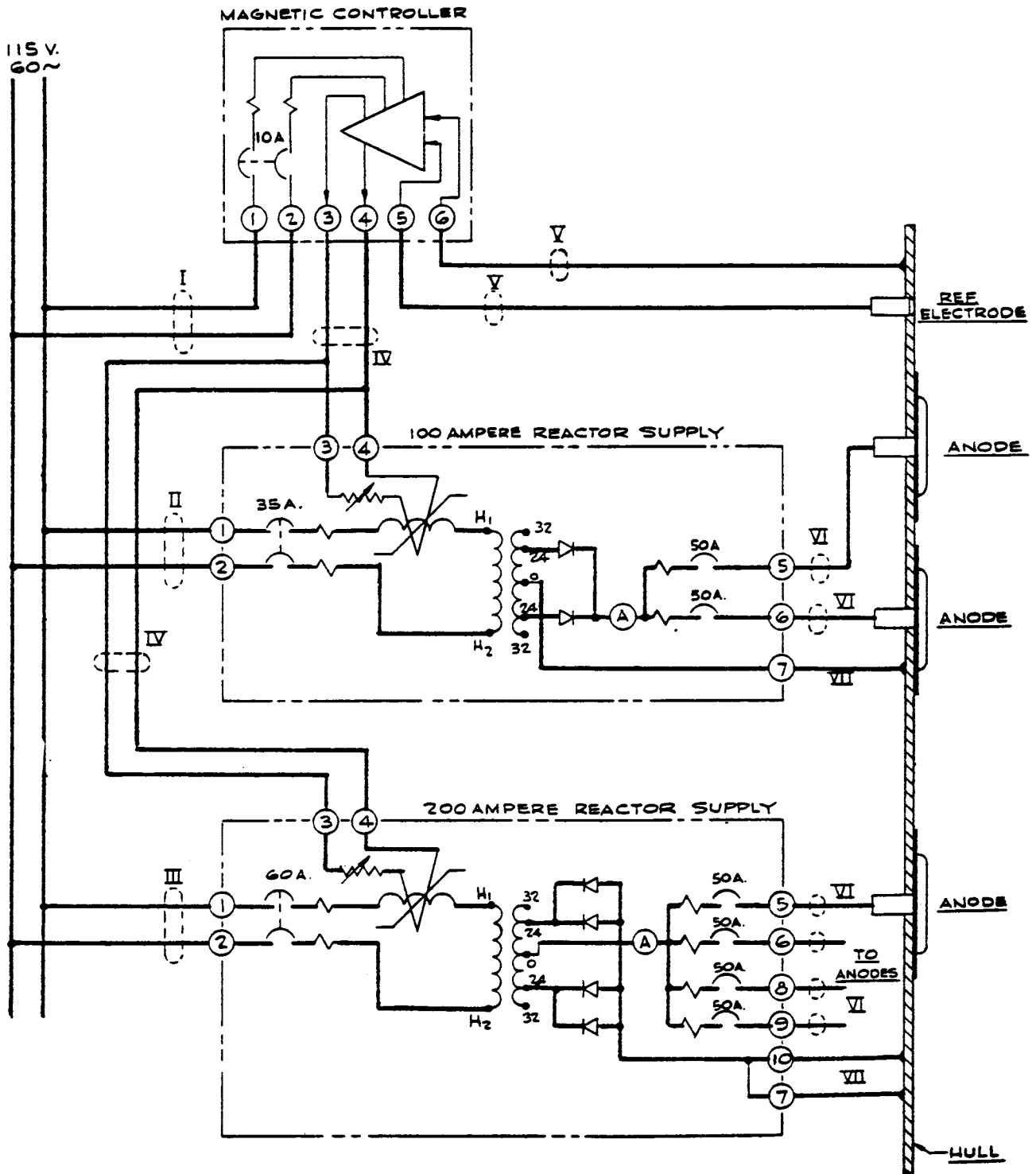
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EL-0089

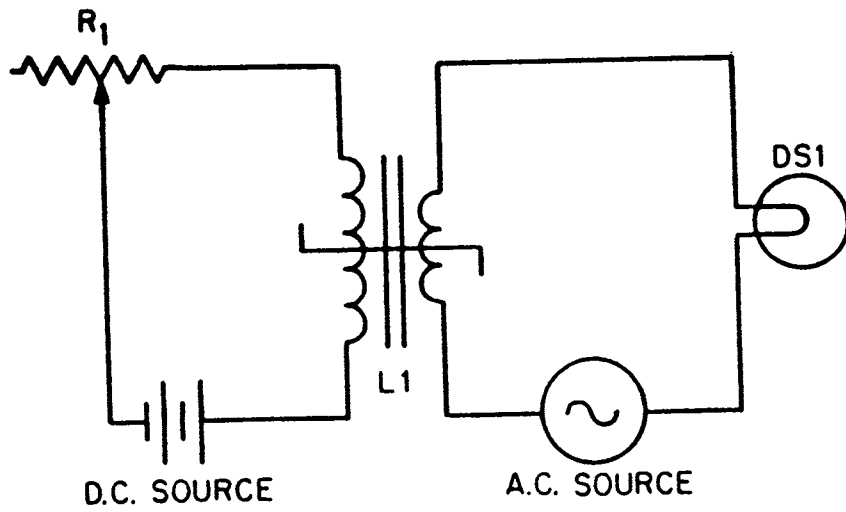


EL-0090

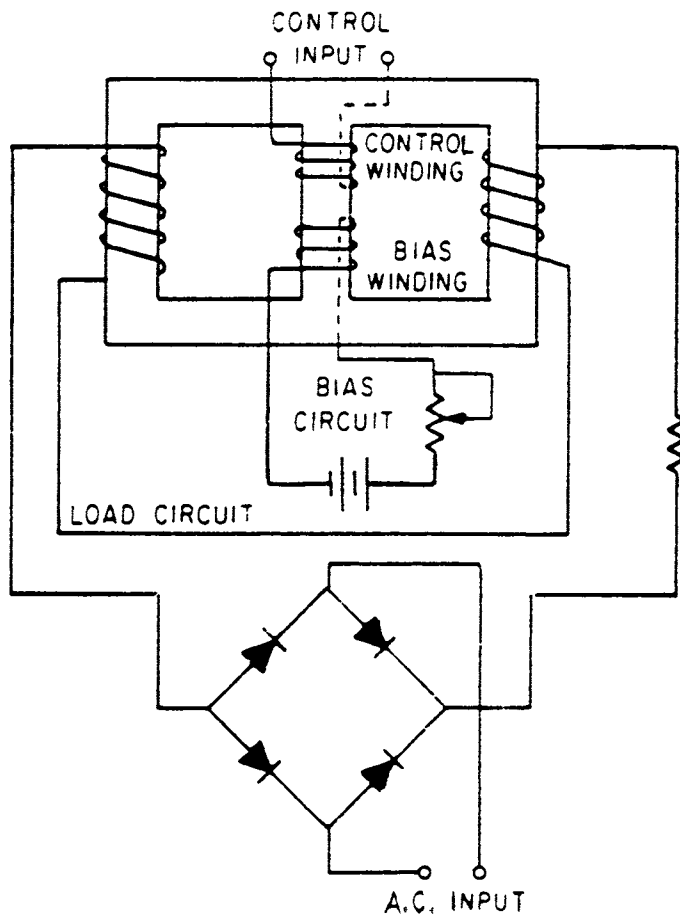


(COURTESY OF ENGLEHARD)

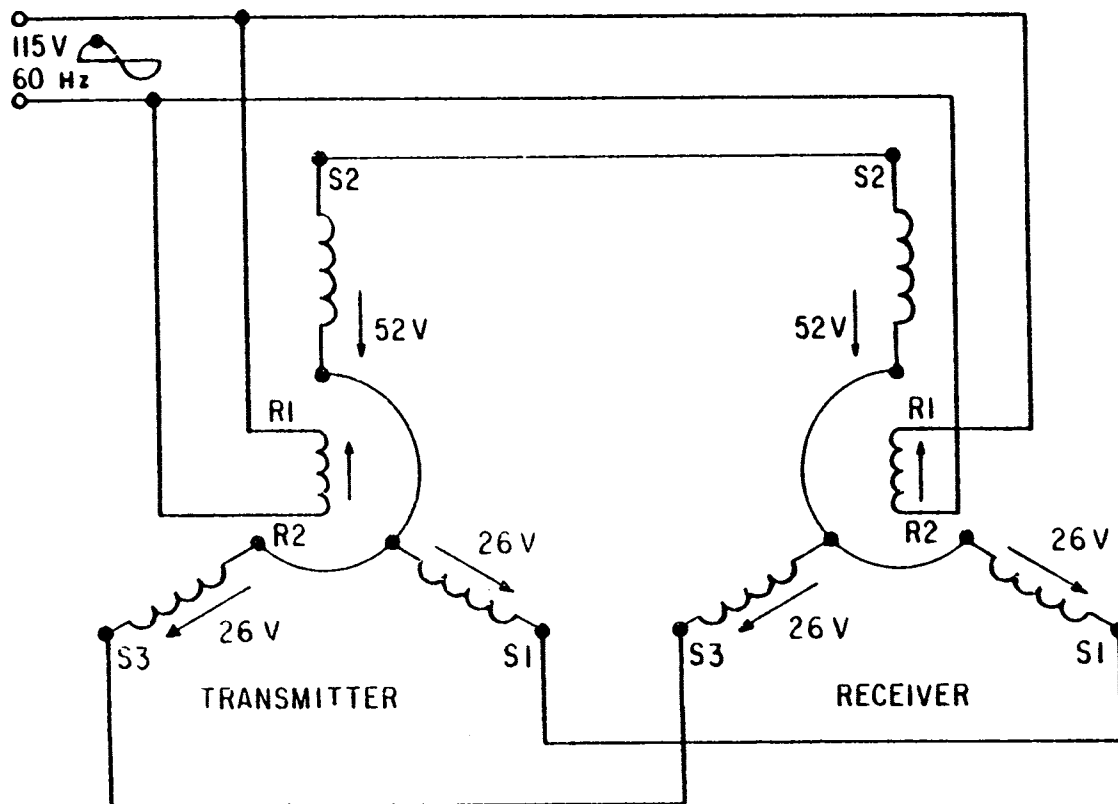
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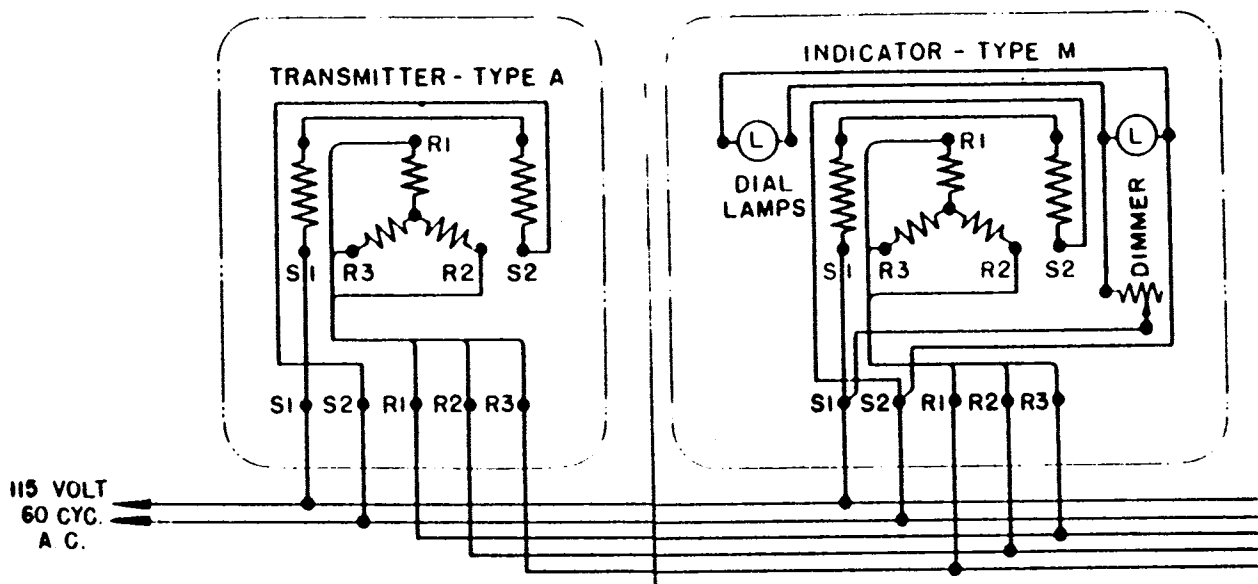
A



B



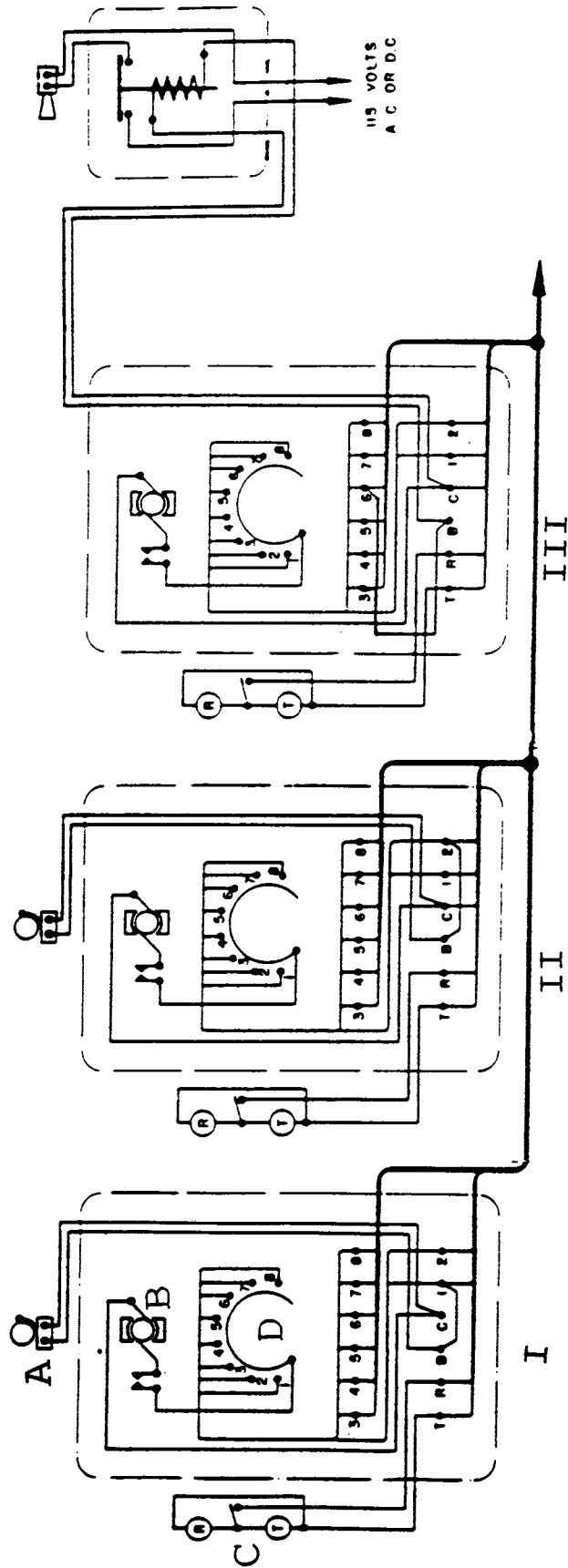
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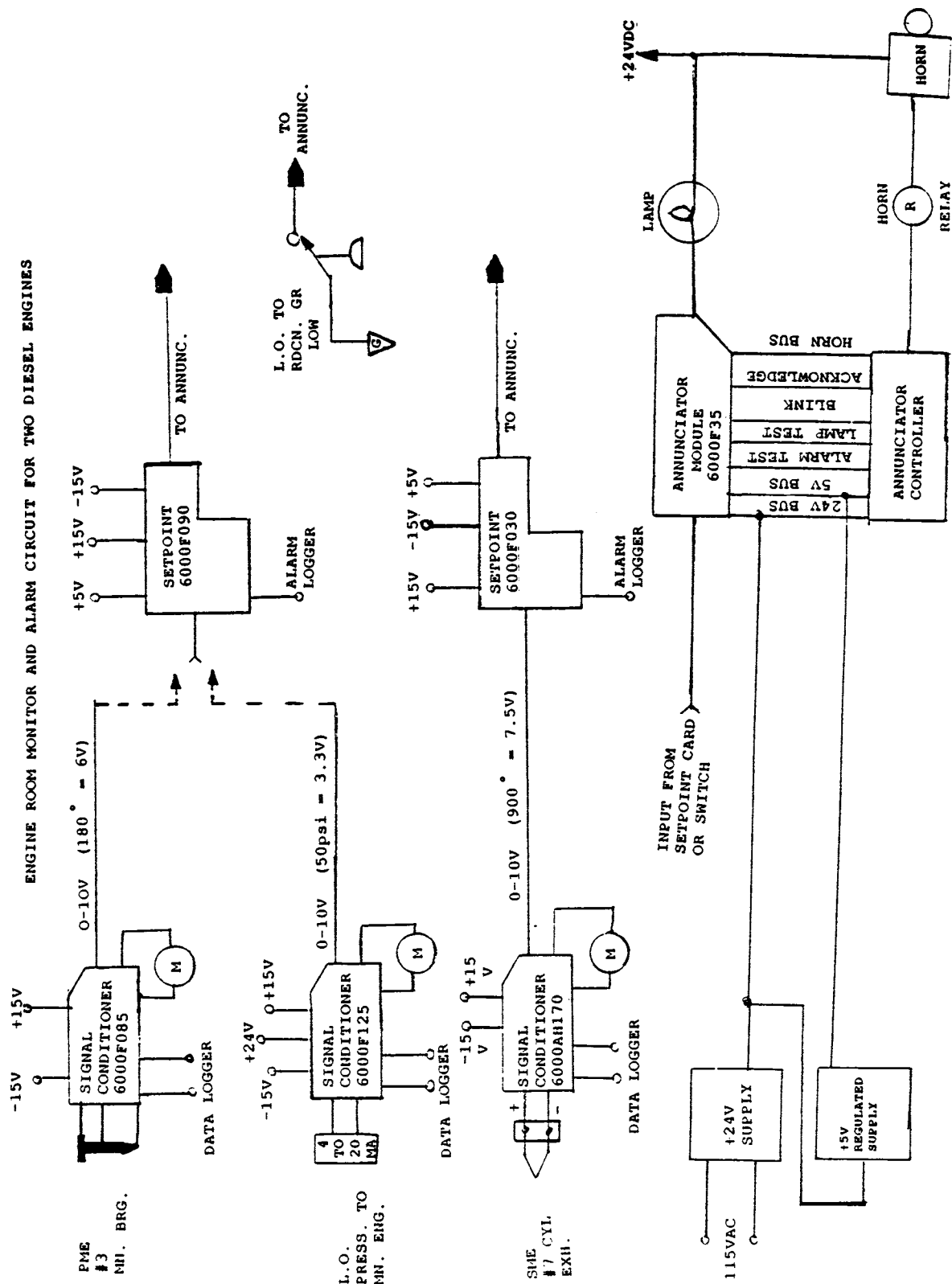
B

(Courtesy of Henschel Corp.)

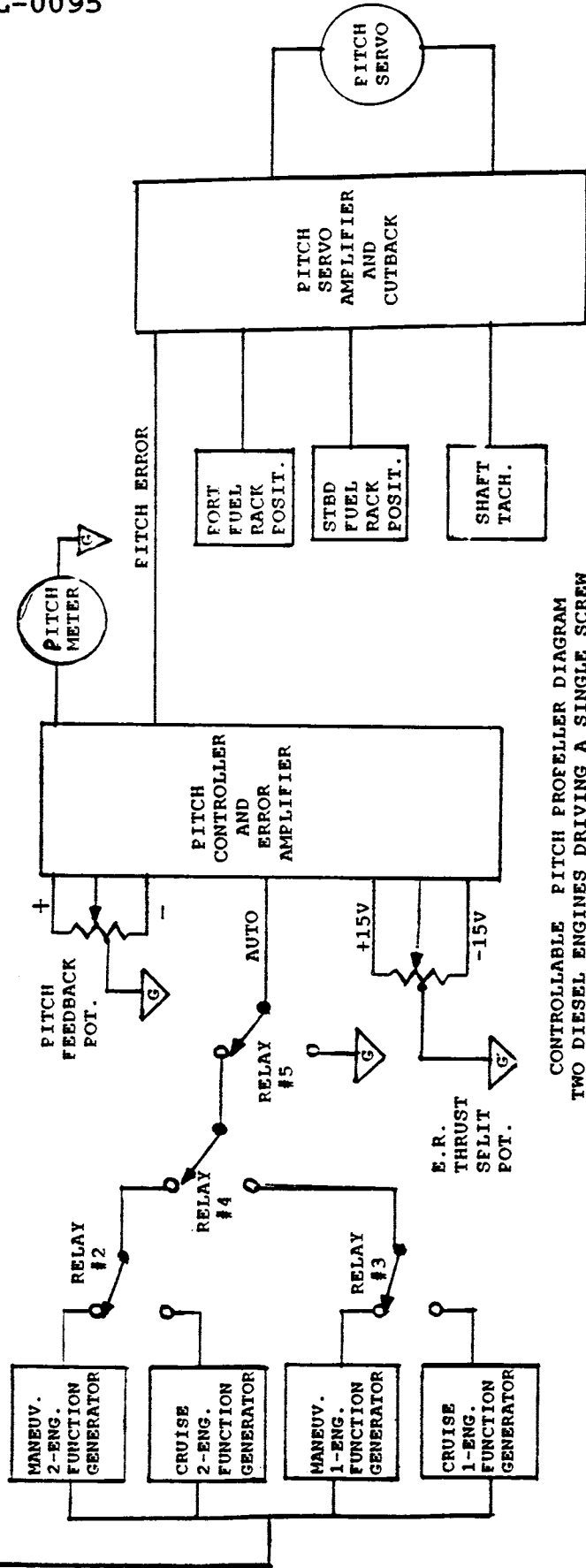
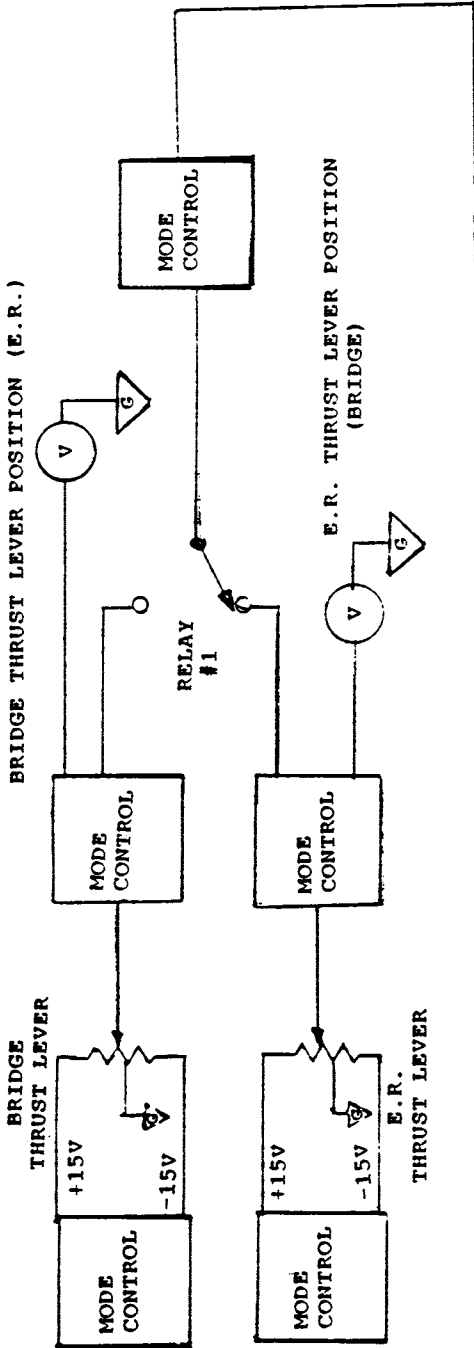
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(COURTESY OF HENSCHEL CORP.)



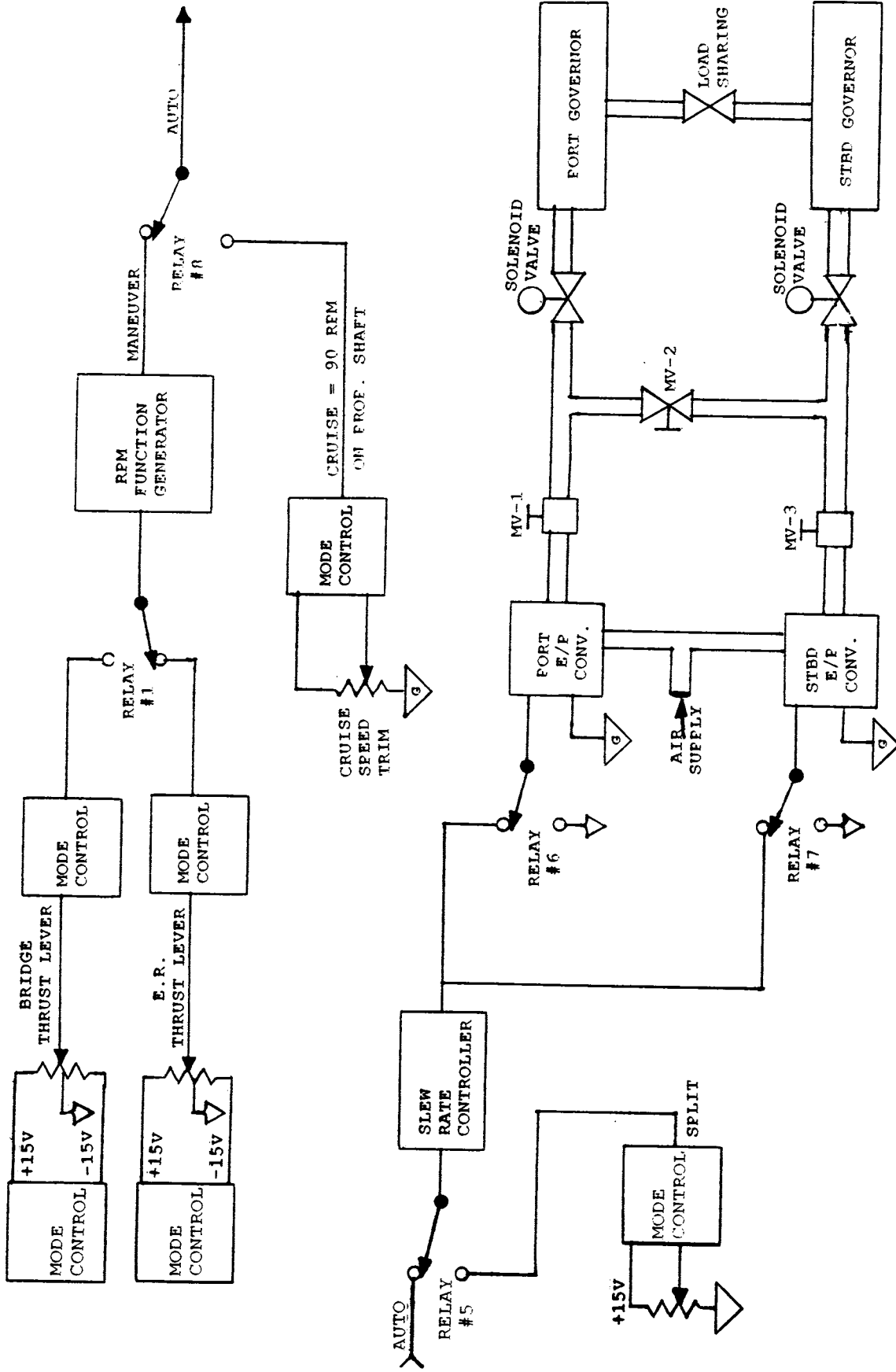
(COURTESY OF TANO Marine Systems)



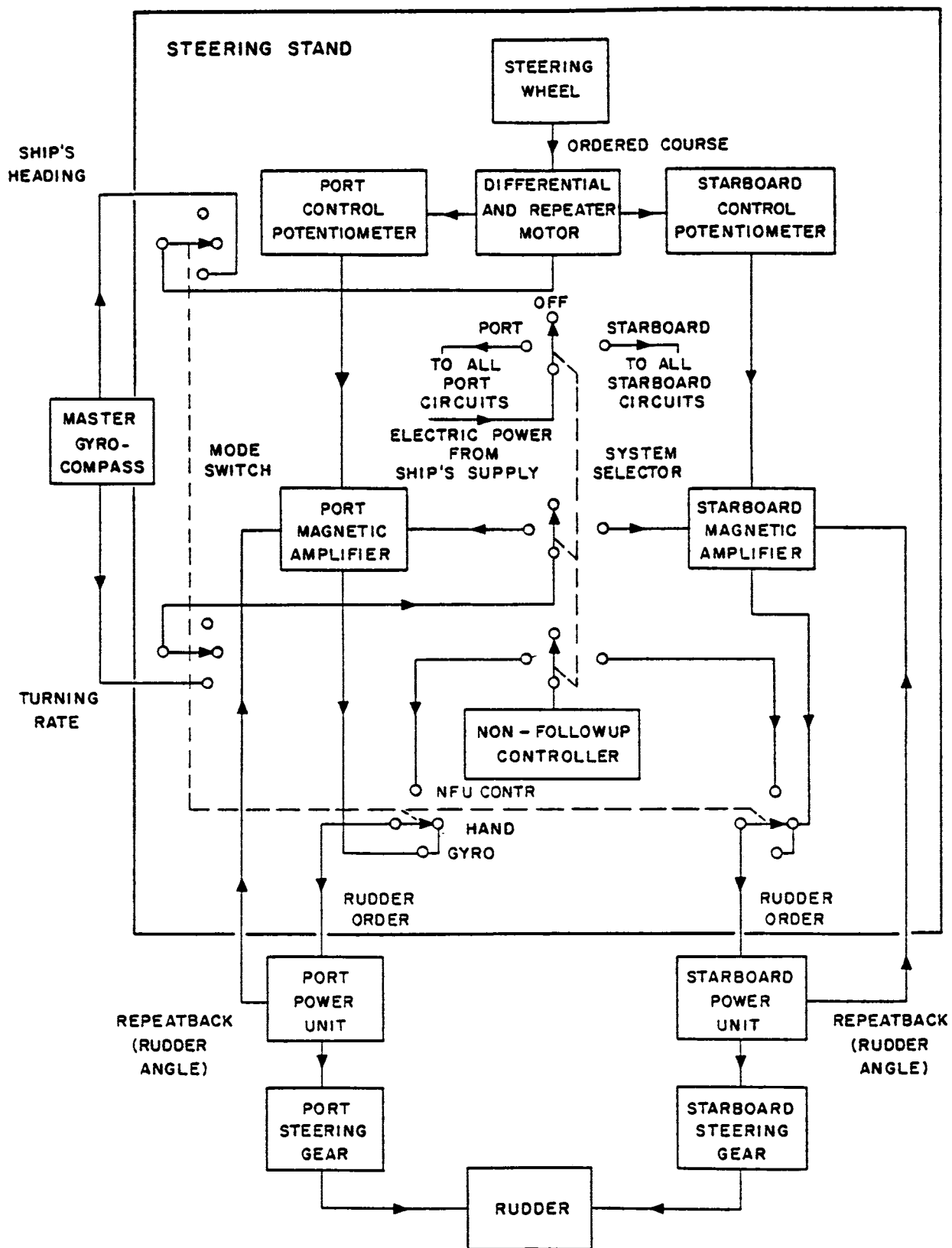
CONTROLLABLE PITCH PROPELLER DRIVING A SINGLE SCREW

(Courtesy of TMO Marine System)

SPEED CONTROL DIAGRAM FOR TWO DIESEL ENGINES DRIVING A SINGLE SCREW

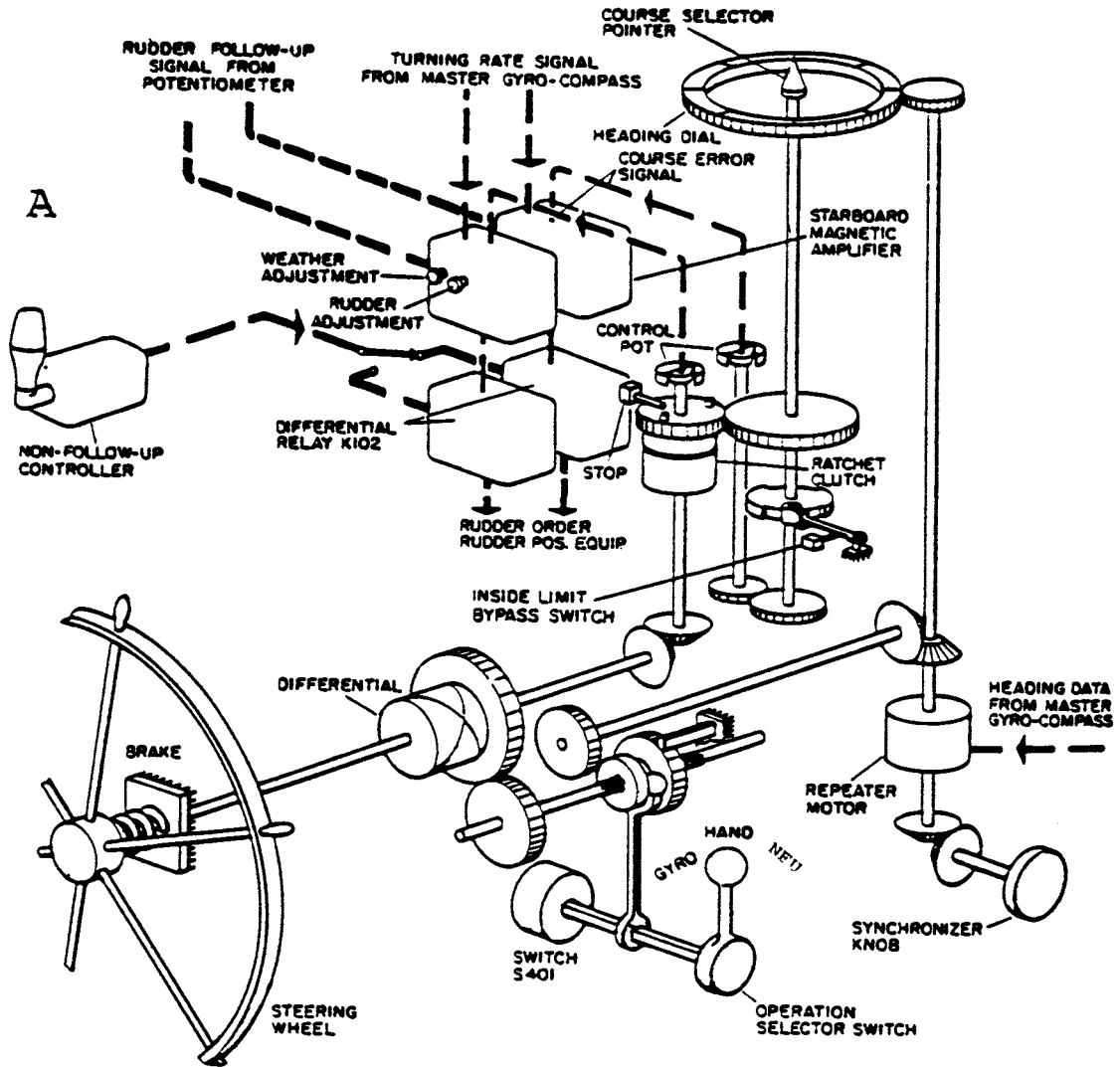


(Courtesy of TANO Marine System)

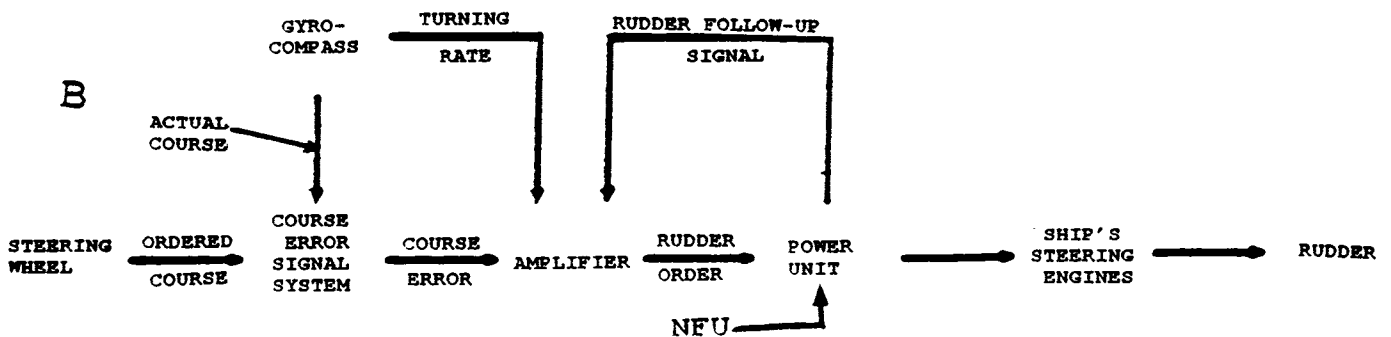


Block Diagram of Dual Steering Control System

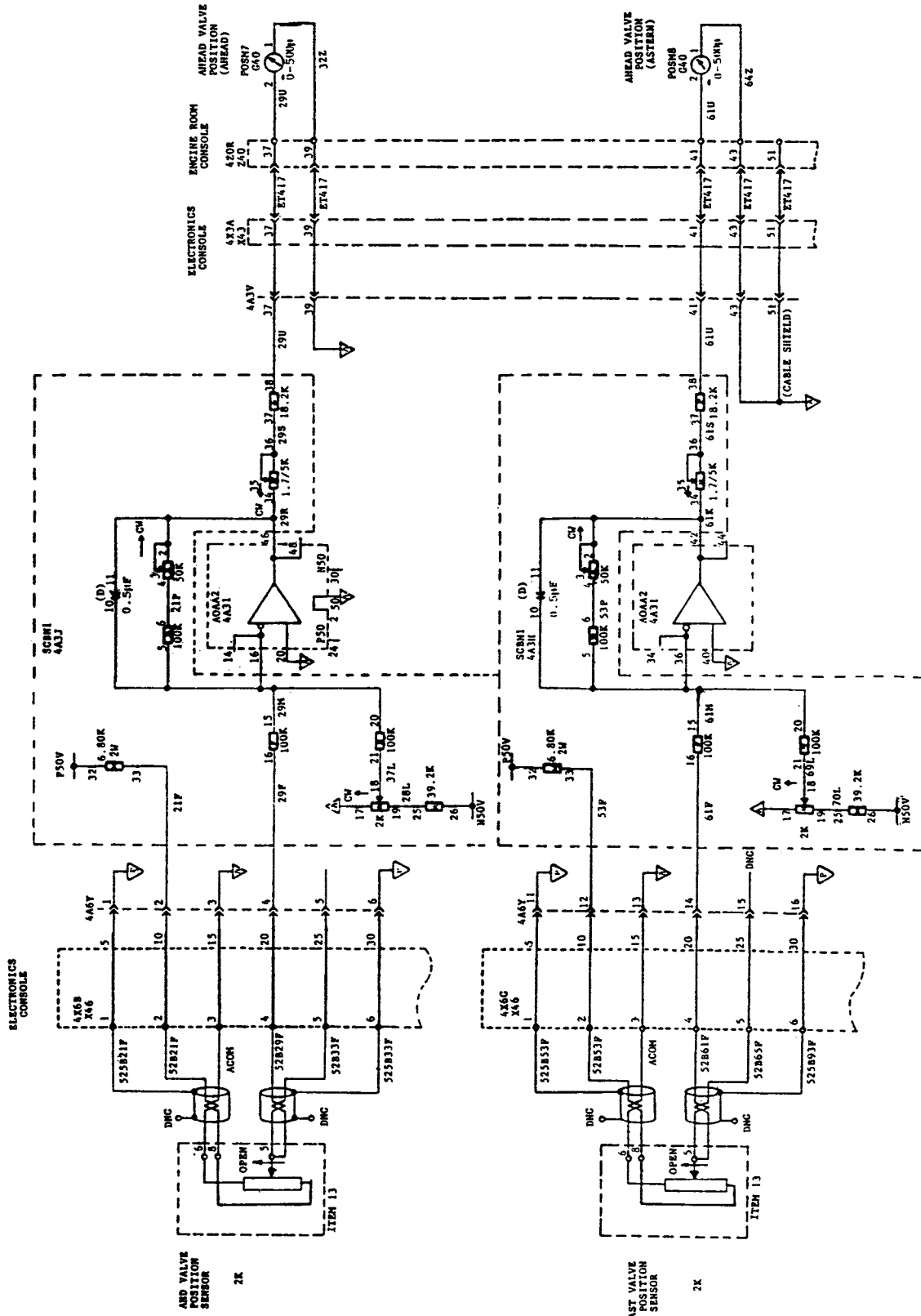
EL-0098



Simplified isometric schematic of dual control Sperry Gyro-Pilot® steering stand.



(Courtesy of Sperry Marine Inc.)

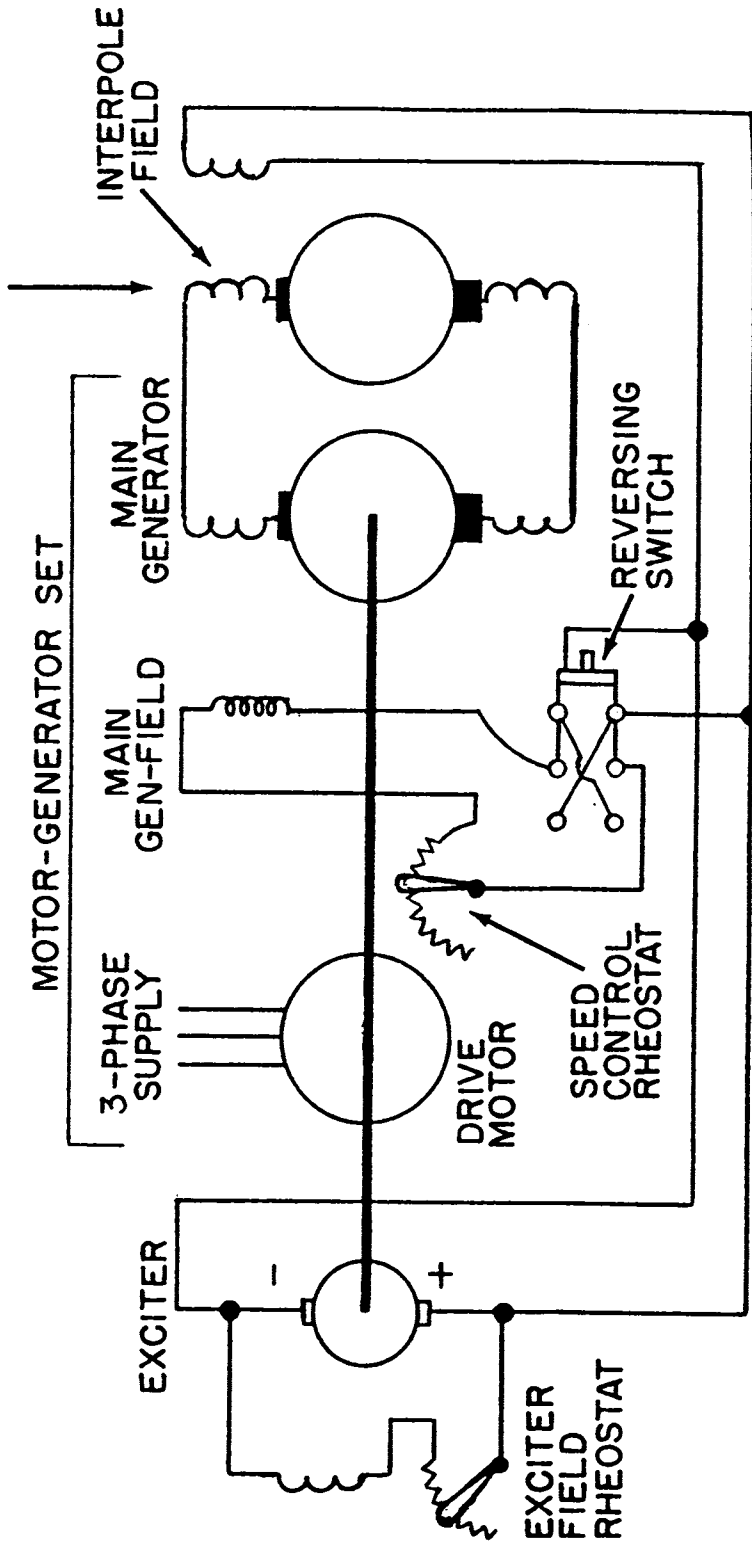


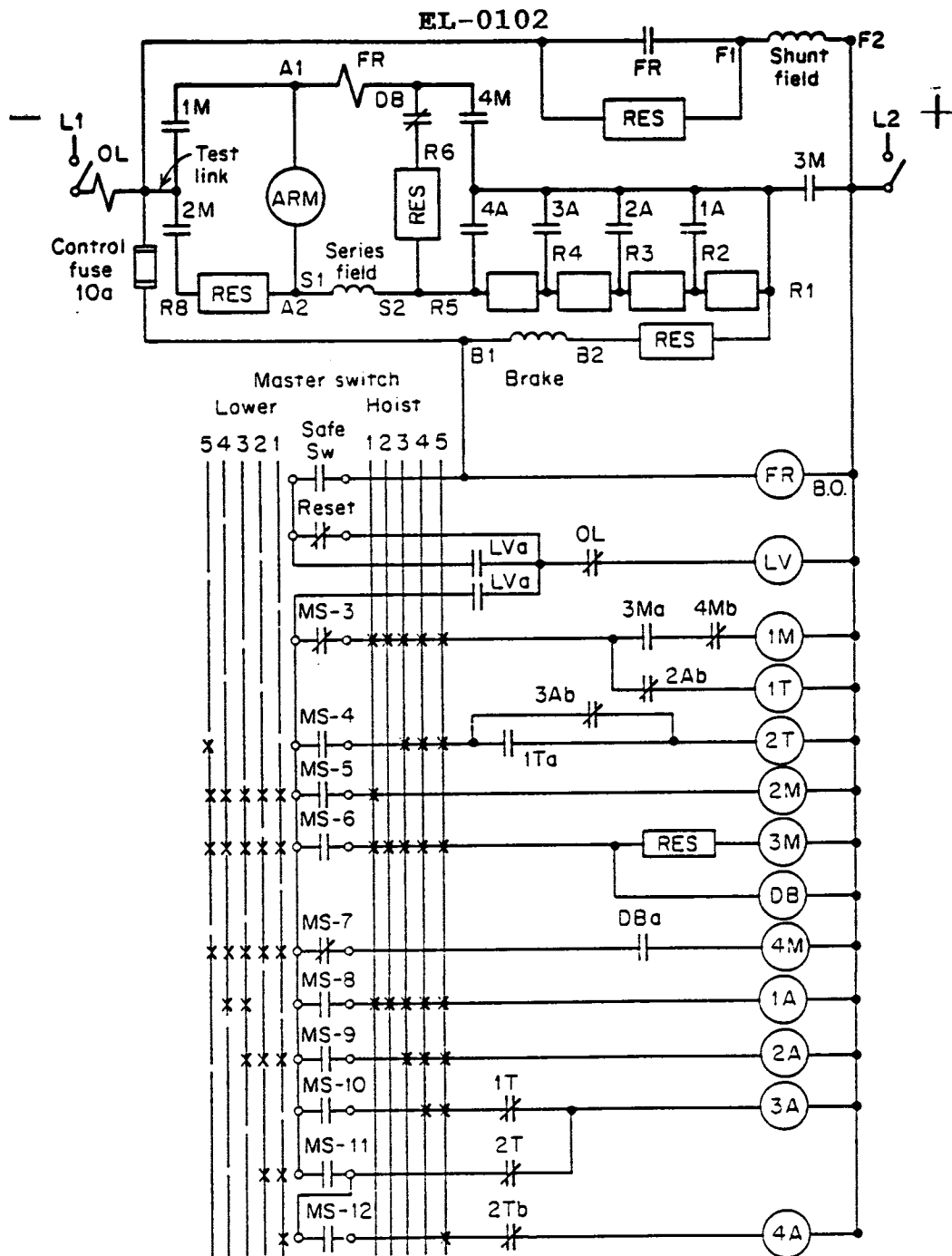
(courtesy of General Electric Drive Systems)

VALVE POSITION INDICATION

REV. 1	REV. 2	REV. 3	REV. 4	REV. 5
DATE	DATE	DATE	DATE	DATE
BY	BY	BY	BY	BY
CHECKED	CHECKED	CHECKED	CHECKED	CHECKED
GENERAL ELECTRIC INDUSTRY CONTROL DEPT. SALEM, VA. U.S.A.				

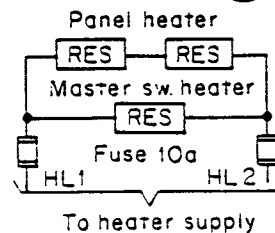
INDUSTRIAL MOTOR
WHOSE SPEED AND
DIRECTION OF ROTATION
ARE TO BE CONTROLLED





Sequence table

Con- Tact	Lower					Off	Hoist				
	5	4	3	2	1		1	2	3	4	5
1M							X	X	X	X	X
2M	X	X	X	X	X		X				
3M	X	X	X	X	X		X	X	X	X	
4M	X	X	X	X	X						
1A		X	X				X	X	X	X	
2A			X	X	X				X	X	X
3A			X	X					X	X	
4A				X							X
DB						X					

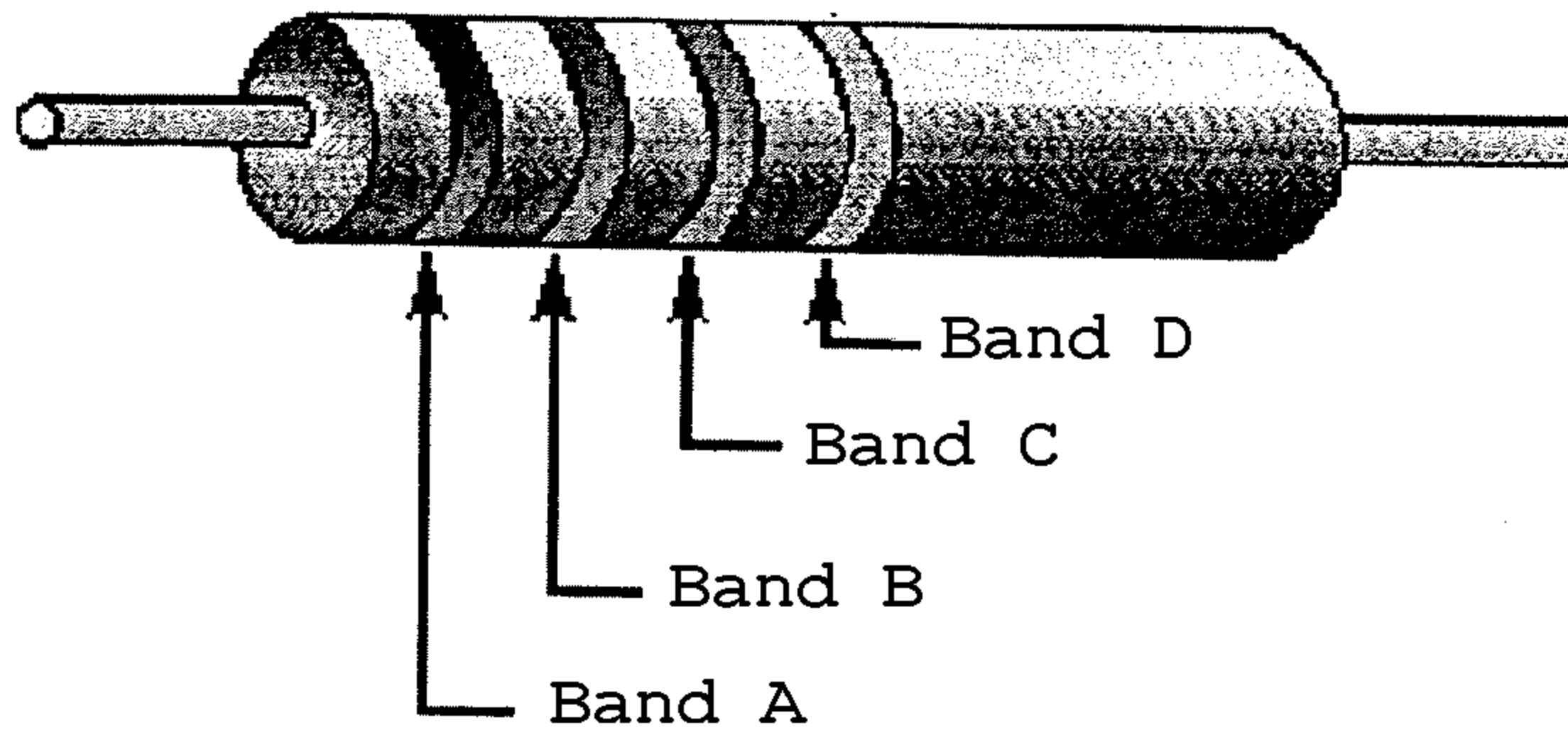


Elementary diagram for a dc hoist controller. (Courtesy of Westinghouse Electric Corp.)

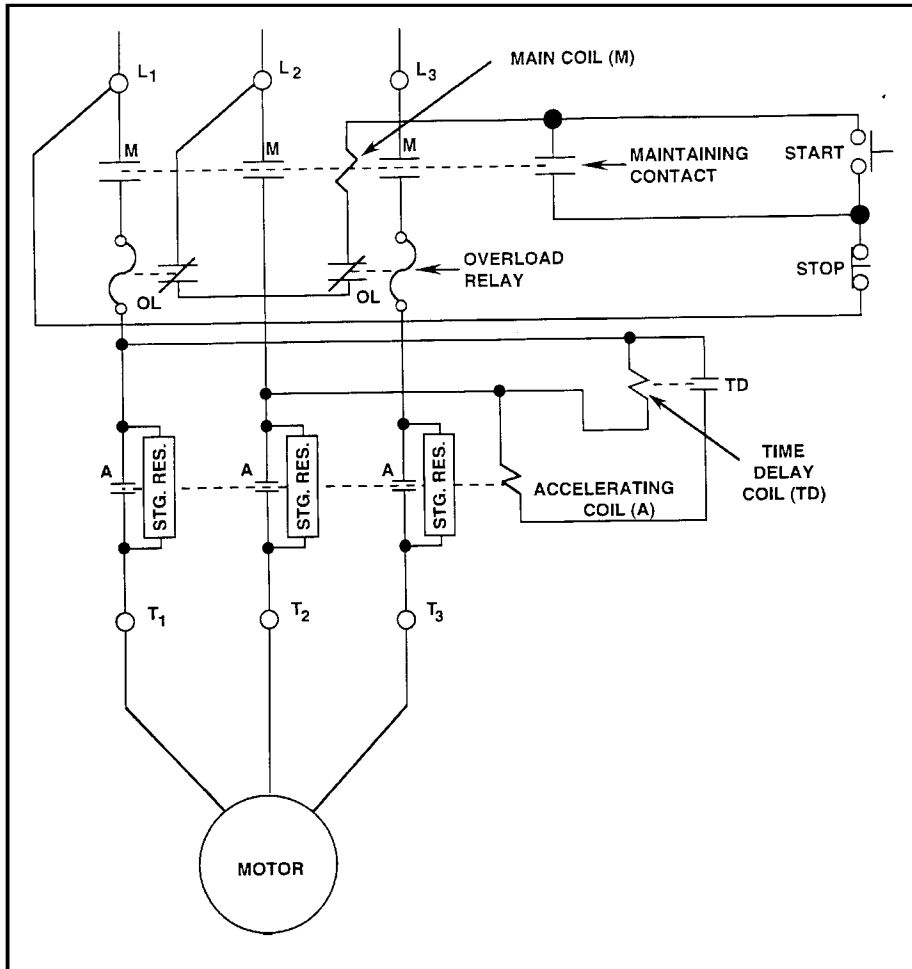
EL-0103

Standard Color Code for Resistors

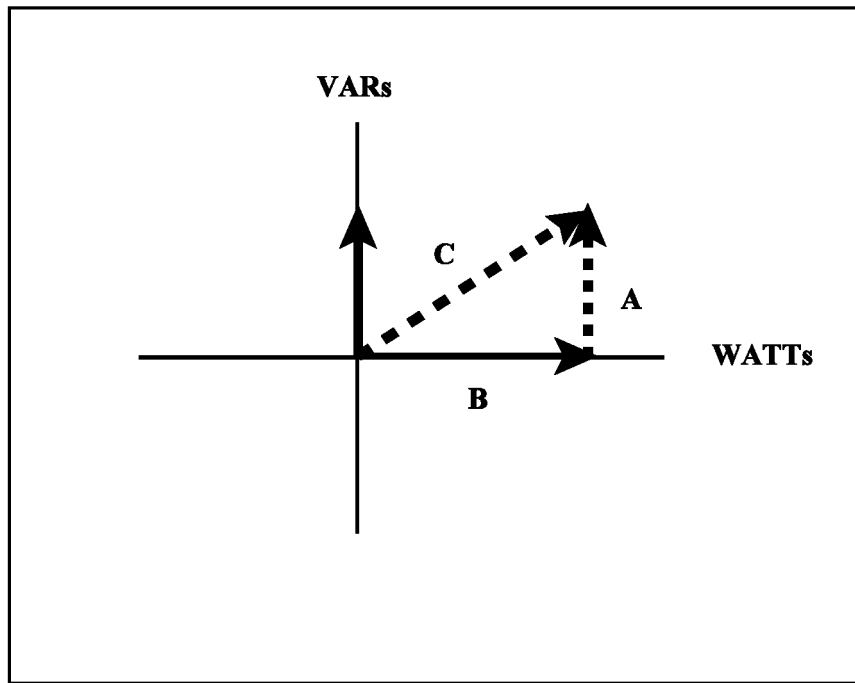
	Band A & B	Band C	Band D	
COLOR	SIGNIFICANT FIGURE	DECIMAL MULTIPLIER	TOLERANCE PERCENT	RELIABILITY LEVEL PER 1,000 HRS.
BLACK	0	1	PERCENT	1.0%
BROWN	1	10	1	.1%
RED	2	100	2	.01%
ORANGE	3	1,000	.	001%
YELLOW	4	10,000	—	—
GREEN	5	100,000	—	—
BLUE	6	1,000,000	—	—
VIOLET	7	10,000,000	—	—
GRAY	8	100,000,000	—	—
WHITE	9	1,000,000,000	—	—
GOLD	—	.1	5	—
SILVER	—	.01	10	—
NO COLOR	—	—	20	—



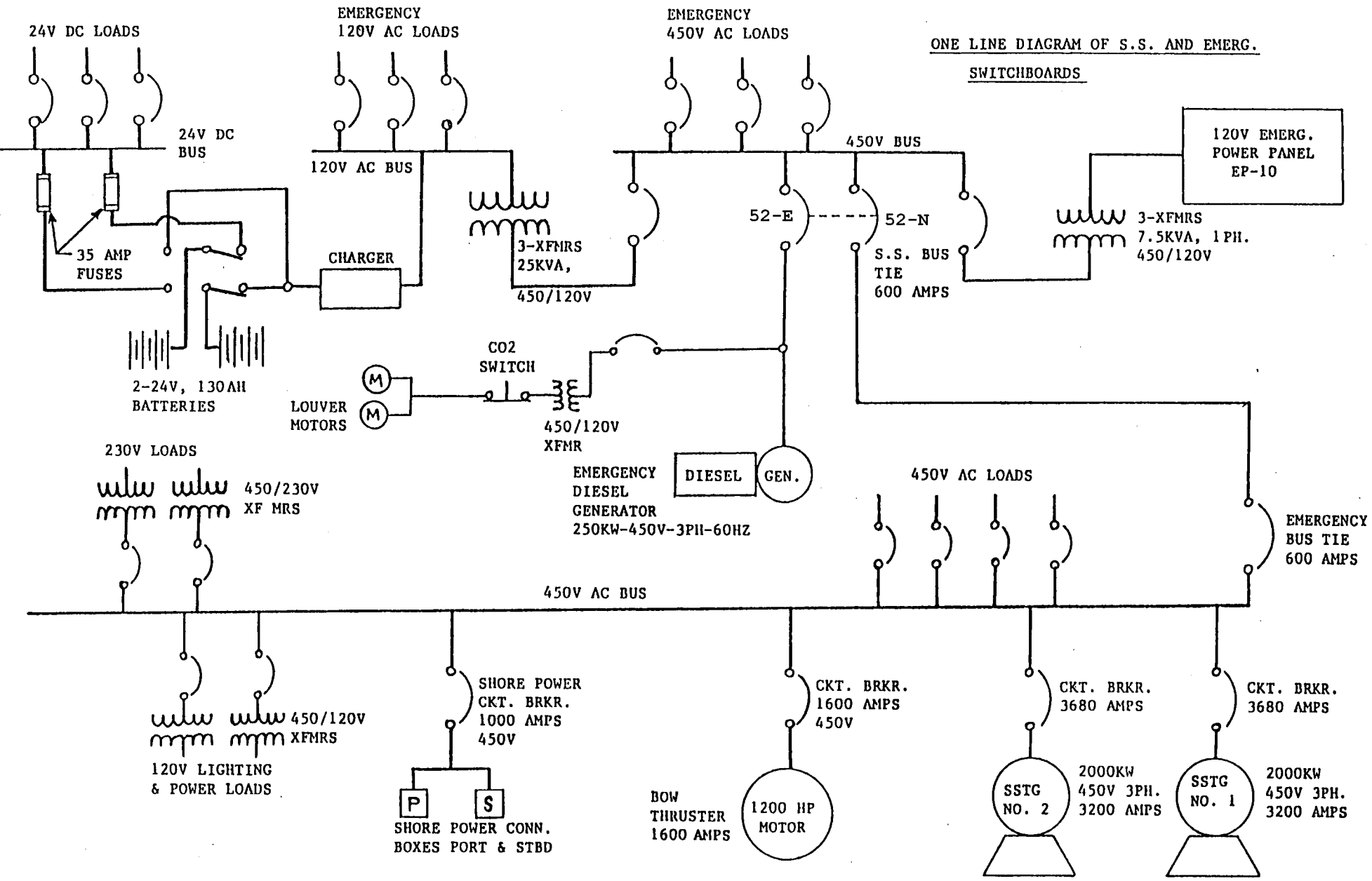
EL-0104



EL-0105



ONE LINE DIAGRAM OF S.S. AND EMERG.
SWITCHBOARDS



EL-0107

