

WURLITZER

ORGANS



Model 545

Model 555

USE THIRD MANUAL

SCHEMATICS FOR ORBIT III™



**Service Schematics and Printed
Circuit Board Assembly Drawings**

DS 156

DeKalb Division, DeKalb, Illinois 60115

MODEL 545 AND MODEL 555
WURLITZER ORGANS

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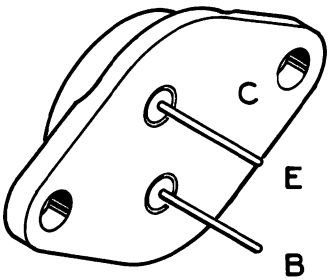


FIG. A

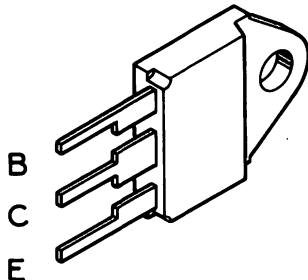


FIG. B

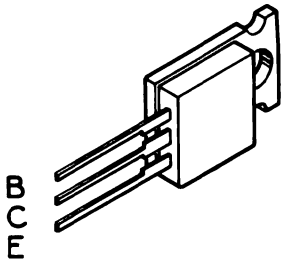


FIG. C

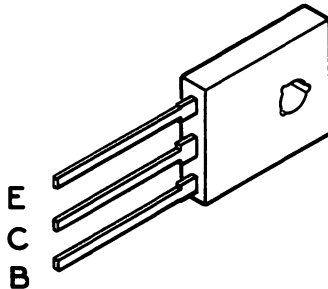


FIG. D

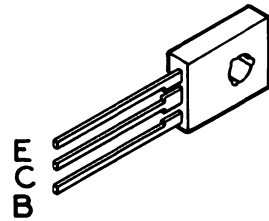


FIG. E

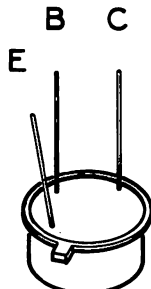


FIG. F

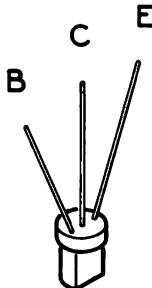


FIG. G

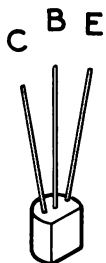


FIG. H



FIG. I



FIG. J

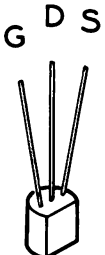


FIG. K

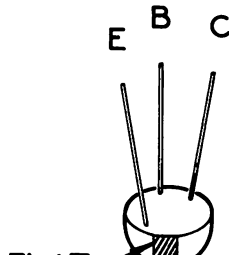


FIG. L

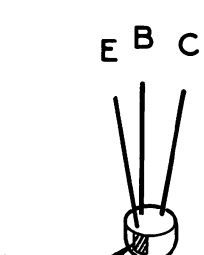


FIG. M

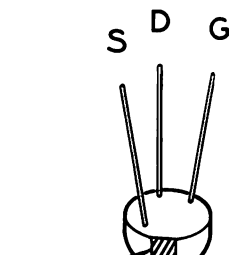


FIG. N

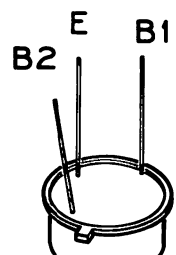
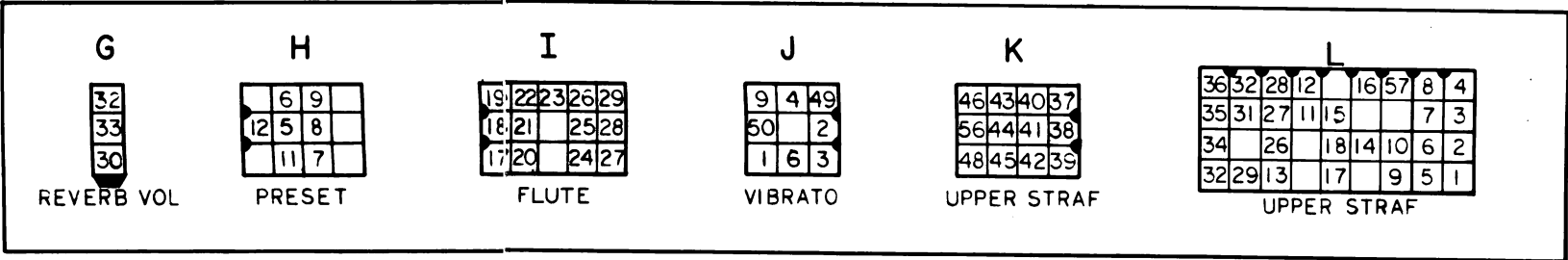


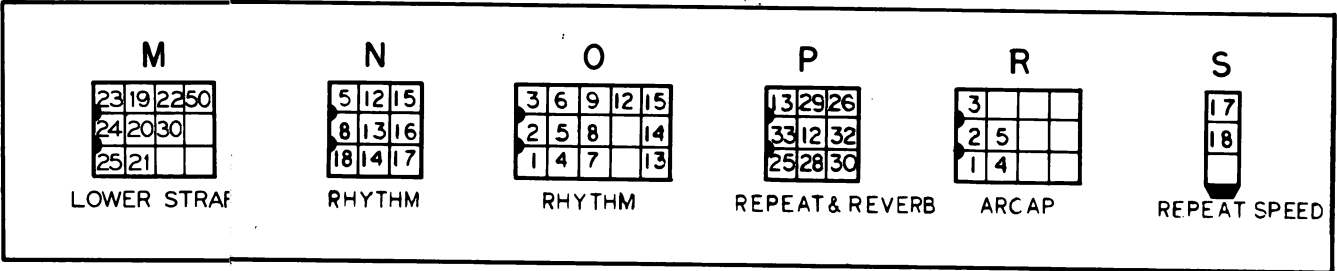
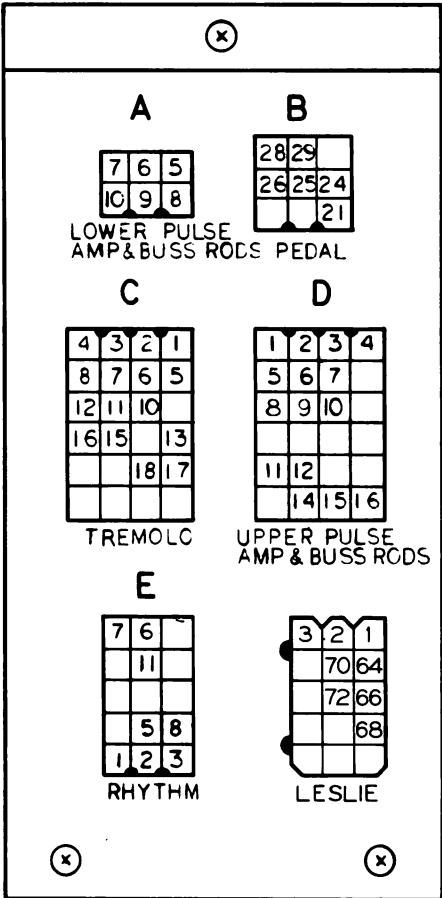
FIG. P

Wurlitzer Part No.	FIG.	REMARKS		Wurlitzer Part No.	FIG.	REMARKS	
505287	F	G. E.	NPN	659141	D	Power	PNP
506566	C	Power	NPN	659143	E	Driver	PNP
506902	H	Hi Gain	NPN	659174	D	Power	NPN
507660	C	Driver	NPN	660092	C	Regulator	NPN
507661	B	Power	PNP	660142	G	G. E. Lo. Noise	NPN
507663	C	Driver	PNP	660142	L	FCD. Lo. Noise	NPN
507664	B	Power	NPN	508762	H	JEDEC 2N2926	
650859	F	T. I. G. E.	PNP			Sil. Planar	NPN
650860	F	T. I.	NPN	508890	H	Lo. Noise	
650970	A	T. I. Power	PNP			Sil. Planar	NPN
651012	F	T. I.	PNP				
651202	A	T. S. Power	PNP				
651236	F	T. I.	PNP				
651891	G	G. E.	NPN				
651891	L	FCD.	NPN				
651891	M	FCD.	NPN				
651955	G	G. E.	NPN				
651955	L	FCD.	NPN				
651956	F	G. E.	NPN				
652072	L	FCD. Noise Diode					
652085	A	Mo. Power	PNP				
652086	A	Mo. Power	PNP				
652091	G	G. E. Zener	NPN				
652321	F	G. E. Hi V.	NPN				
656064	I	Mo. Unijun.	PN				
656064	P	G. E. Unijun.	PN				
656204	G	G. E.	NPN				
656204	L	FCD.	NPN				
656520	J	T. I. F. E.	P				
656520	K	Mo. F. E.	P	Manufacturer			
656520	N	FCD. F. E.	P				
656719	G	G. E. Zener	NPN	FCD.		Fairchild	
656746	G	Sil. Planar	NPN	G. E.		General Electric	
657179	E	Driver	PNP	Mo.		Motorola	
657180	E	Power	NPN	T. I.		Texas Instruments	
657181	E	Power	PNP	T. S.		Tung Sol	
658620	H	Sil. Planar	PNP				
659133	H	Driver	NPN				
659137	H	Diff. Input	PNP				
659140	E	Driver	NPN				

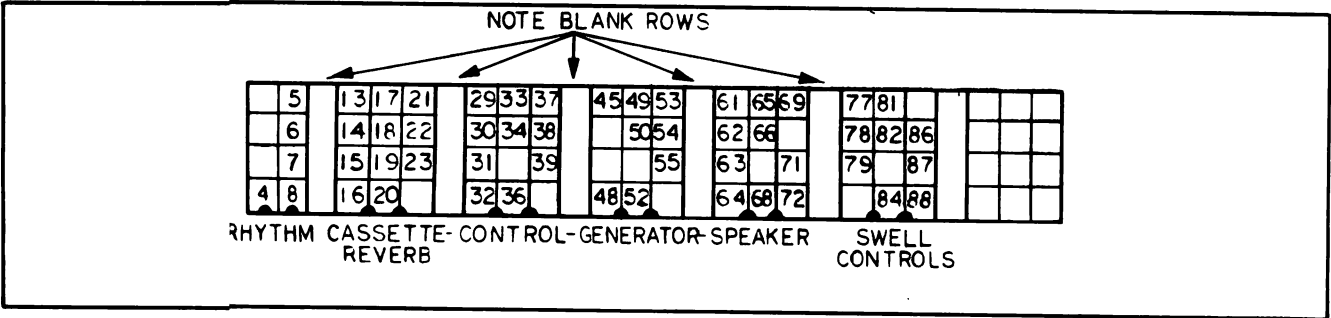
ALL DISCONNECTS VIEWED FROM WIRE SIDE OF DISCONNECT ON CABLE



BACK VIEW UPPER KEYBLOCK BASS END

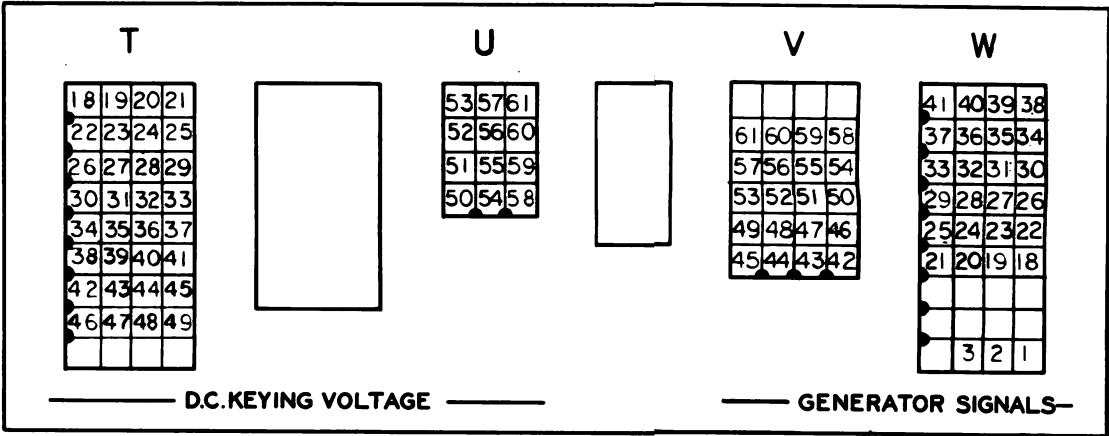


BACK VIEW LOWER KEYBLOCK BASS END



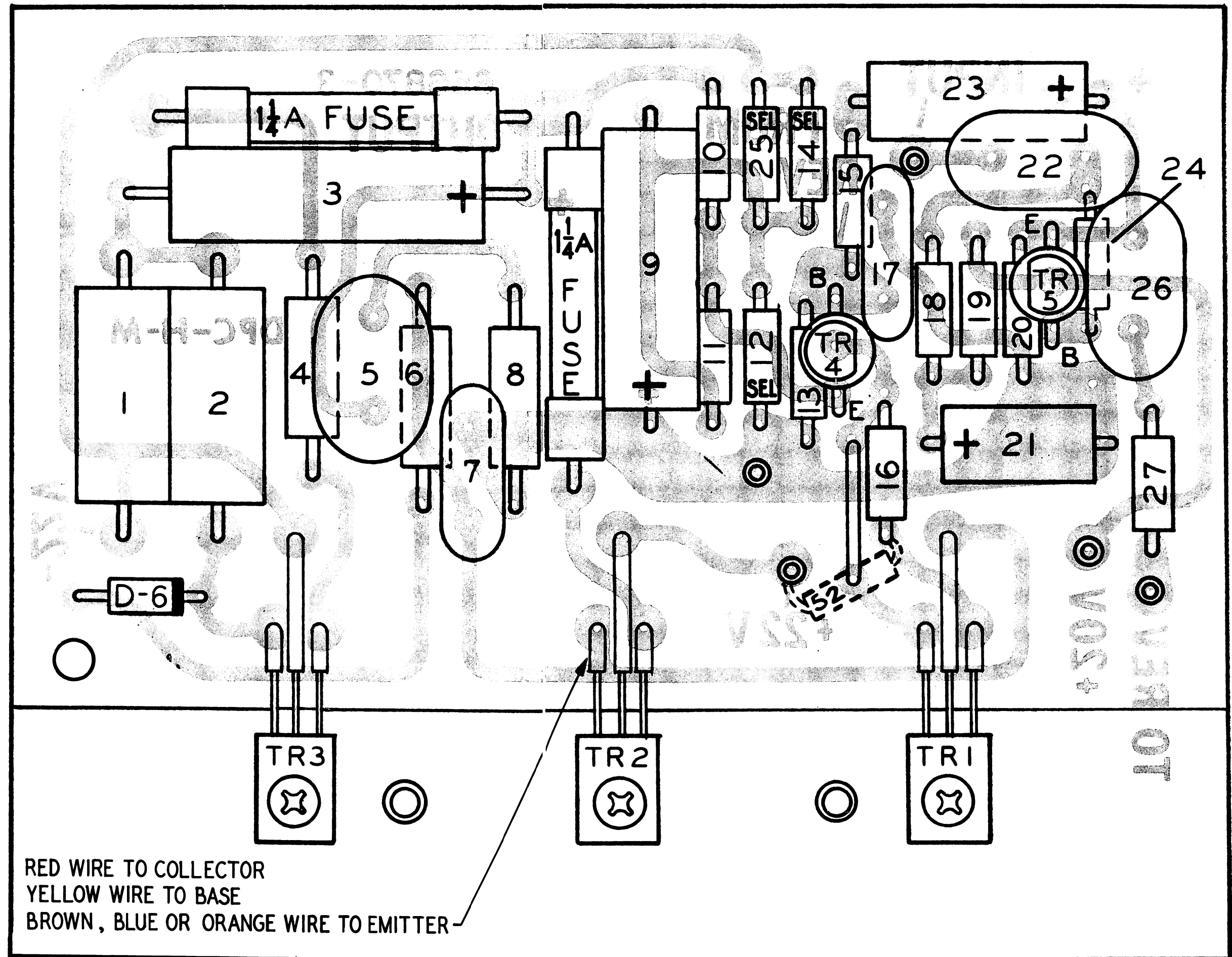
AMPLIFIER DISCONNECTS

TOP VIEW OF STRAF JUNCTION



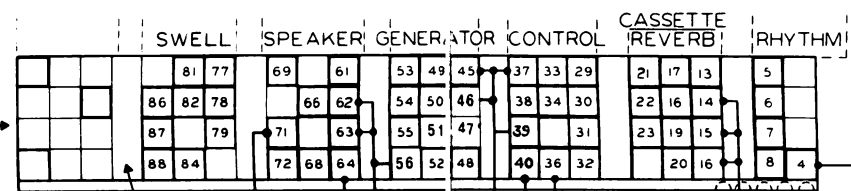
MASTER OSC & D.C. KEYING JUNCTION-UNDER KEYBED

NOTES
 SEE SCHEMATIC PG 4 FOR CONNECTIONS AND COMPLETE
 CIRCUIT. NUMBERS ON COMPONENTS CORRESPOND TO NUMBERS
 ON SCHEMATIC PAGE 4
 BAND INDICATES CATHODE END OF DIODE.



NUMBERS WITHIN SQUARES INDICATE PLUG AND SOCKET CONNECTIONS.

BE SURE TO START LINE SWITCH PLUG FLUSH WITH OUTSIDE EDGE OF SOCKET

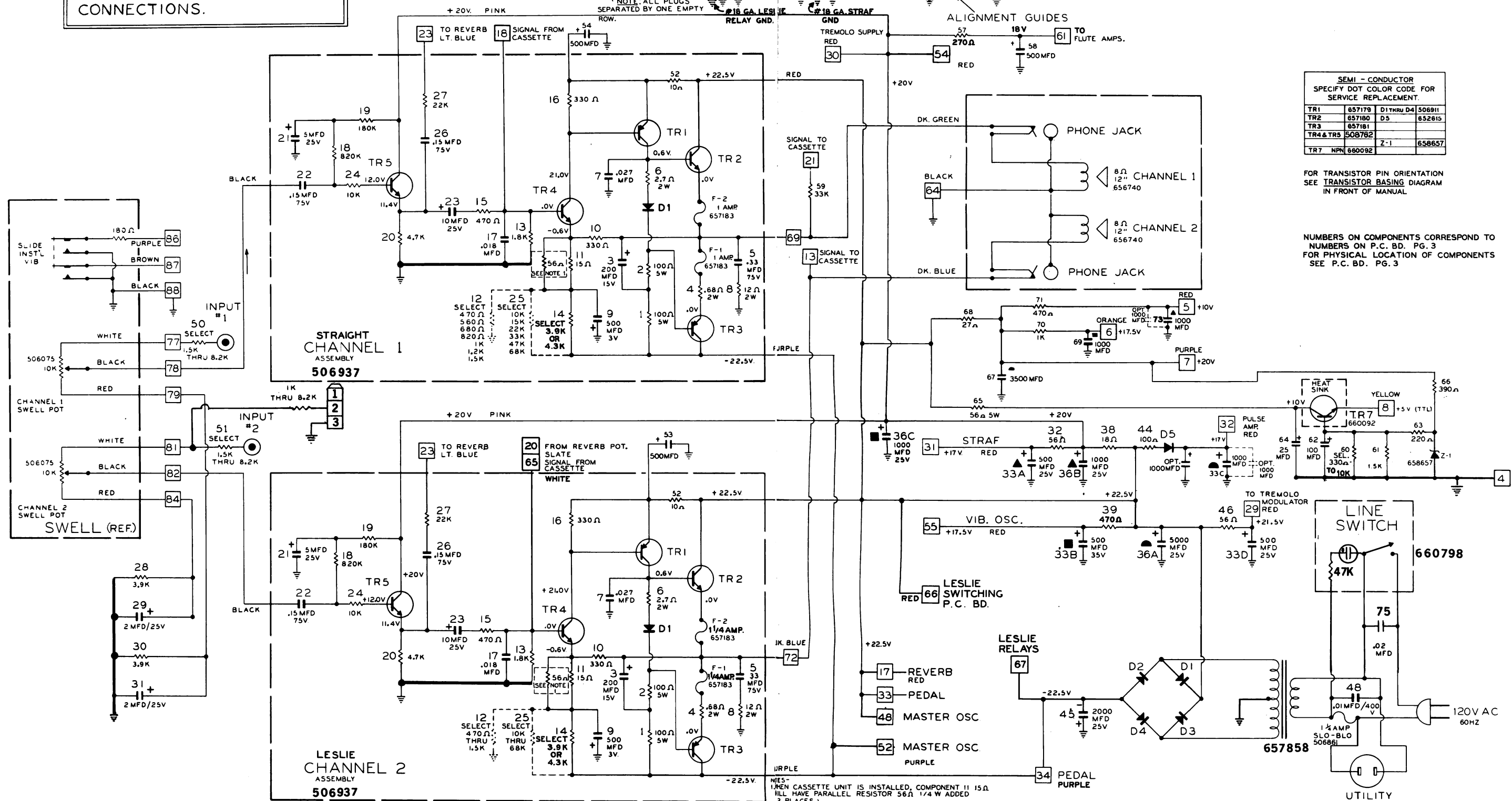


NOTE
WIRE SIDE OF RECEPTACLE SHOWN.
PINS 19 22 AND 50 86 ARE JUMPER TOGETHER AT THE RECEPTACLE.

SEMI-CONDUCTOR SPECIFY DOT COLOR CODE FOR SERVICE REPLACEMENT.			
TR1	657178	D1 THRU D4	506911
TR2	657180	D5	652615
TR3	657181		
TR4 & TR5	508782		
TR7	NPN 660092	Z-1	658657

FOR TRANSISTOR PIN ORIENTATION
SEE TRANSISTOR BASING DIAGRAM
IN FRONT OF MANUAL

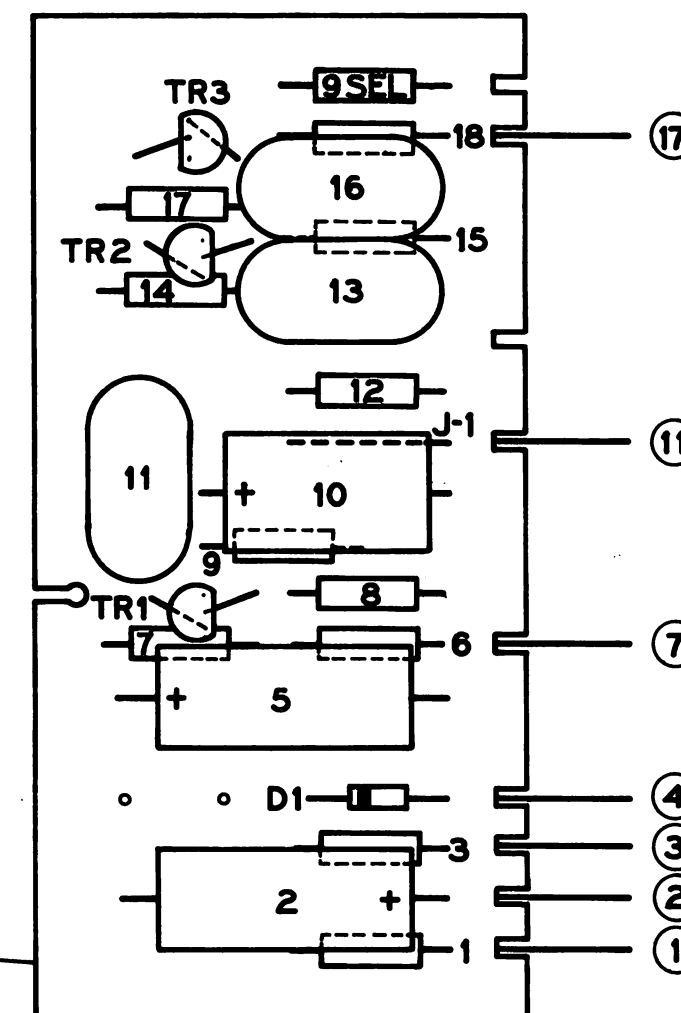
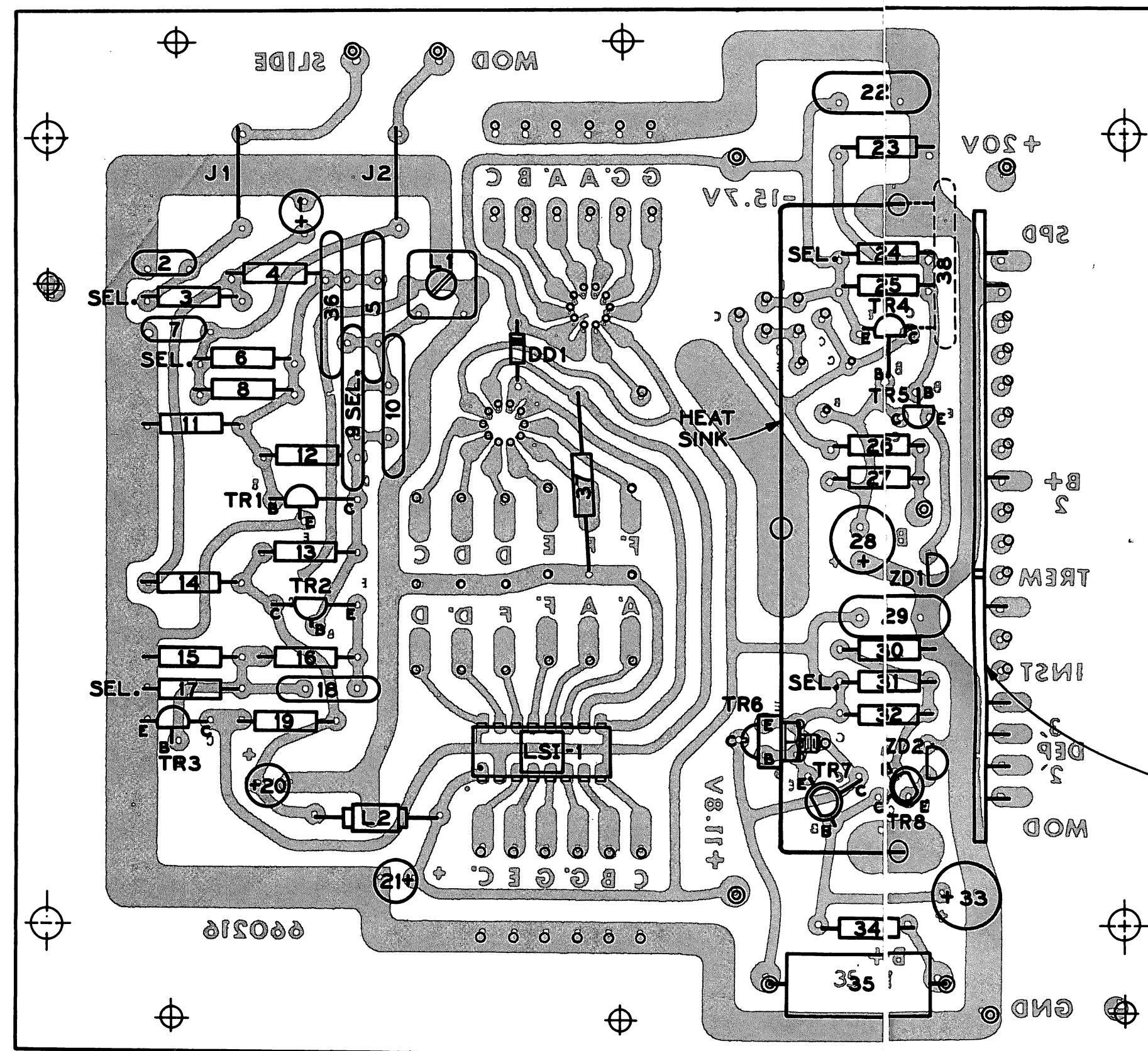
NUMBERS ON COMPONENTS CORRESPOND TO
NUMBERS ON P.C. BD. PG. 3
FOR PHYSICAL LOCATION OF COMPONENTS
SEE P.C. BD. PG. 3



NOTES:
1. WHEN CASSETTE UNIT IS INSTALLED, COMPONENT 11 15Ω
WILL HAVE PARALLEL RESISTOR 56Ω 1/4 W ADDED
2 PLACES
2. D.C. VOLTAGES MEASURED WITH A HI IMPEDANCE INPUT
VOLT-METER TOL. ±10% EXCEPT AS NOTED.
3. VOLTAGE 120V. 60HZ.
4. ELECTRONIC COMPONENTS SUCH AS RESISTORS,
CAPACITORS ETC. ARE IDENTIFIED WITH A NUMBER.

EXAMPLE 15Ω

MODEL - 545-555 PART NO. - 660923-S-1-E-5
TITLE - AMPLIFIER SCHEM.
STARTING SERIAL NO. - M-545 - 1096175, M-555 - 1097725 DATE - 5/1/74
THE WURLITZER COMPANY - DEKALB DIVISION - DEKALB, ILL.



VIBRATO 660316

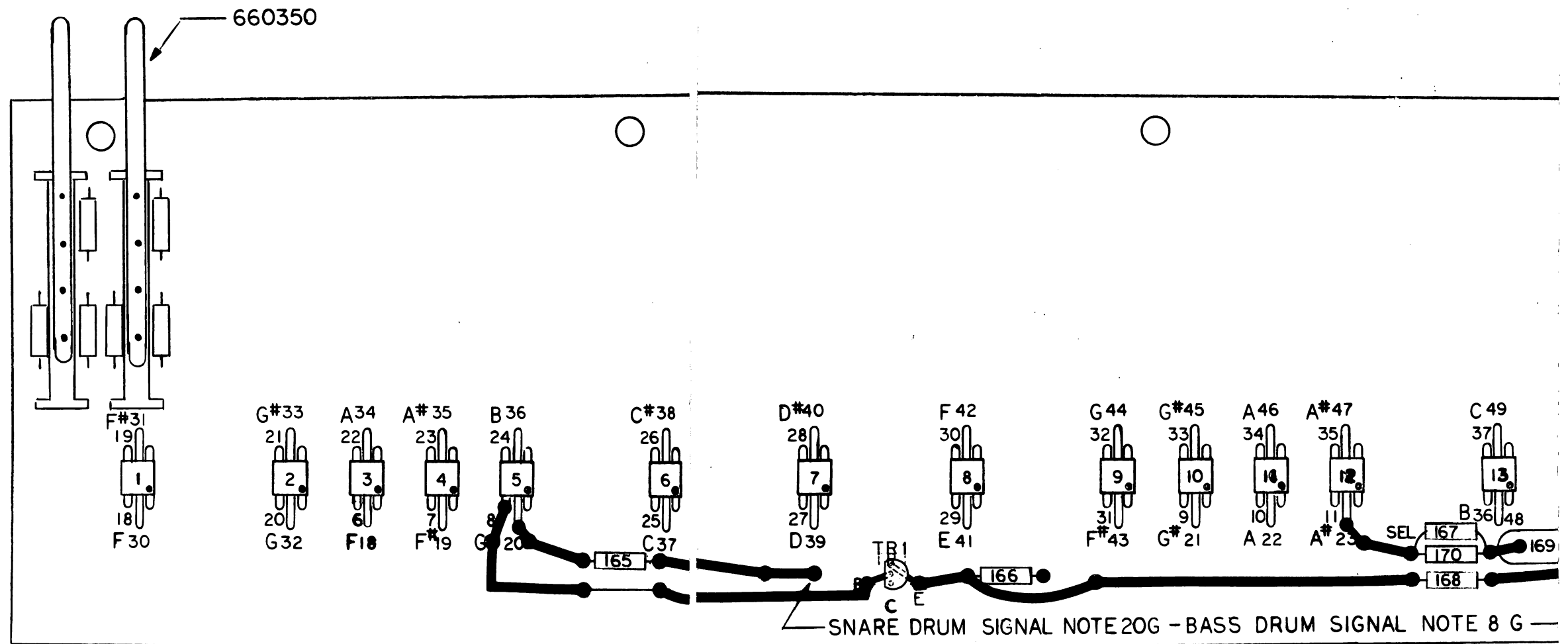
NOTES-

SEE SCHEMATIC PG. 6 FOR CONNECTIONS AND COMPLETE CIRCUITS.

NUMBERS ON COMPONENTS CORRESPOND TO NUMBERS ON SCHEMATIC PG. 6

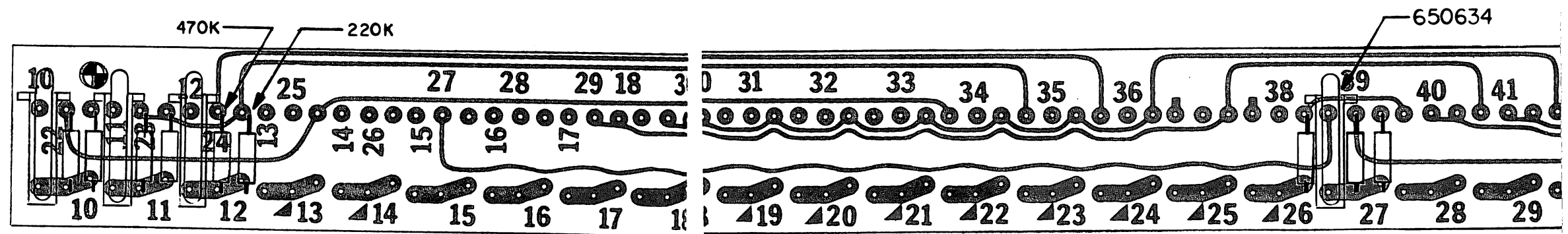
BAND INDICATES CATHODE END OF DIODE.

MODEL - 545-555 PART NO. - 660755-S-1-E-7
 TITLE - MASTER OSC. P.C. BD.
 STARTING SERIAL NO. - M-545 - 1096175, M-555 - 1097725 DATE - 5/1/74
 THE WURLITZER COMPANY - DEKALB DIVISION - DEKALB, ILL.



BASS END

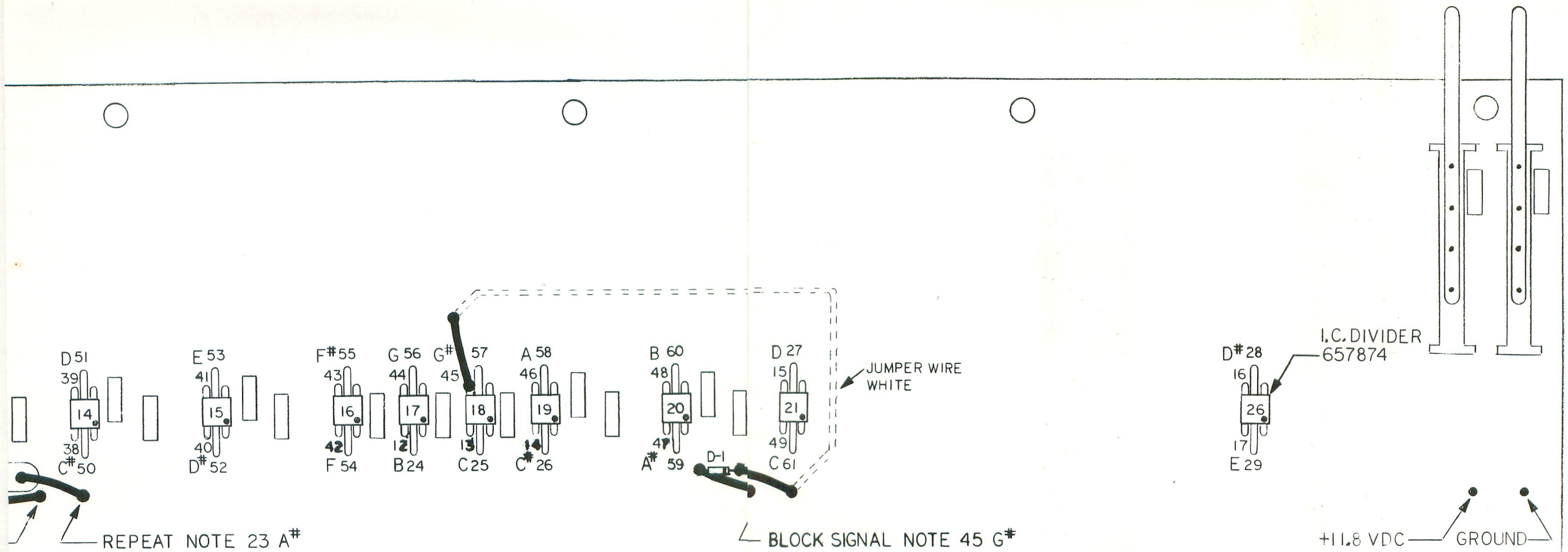
VIEW FROM COM
COMPONENT NUM



BASS END

VIEW FROM FOIL

MODEL - 545-555 PART NO - 660734-S-1-E-4
TITLE - UPPER & LOWER KEYBD. P.C. BD. 656751-S-1-E-4
STARTING SERIAL NO. - M-545 - 1096175, M-555 - 1097725 DATE - 5/1/74
THE WURLITZER COMPANY - DEKALB DIVISION - DEKALB, ILL.

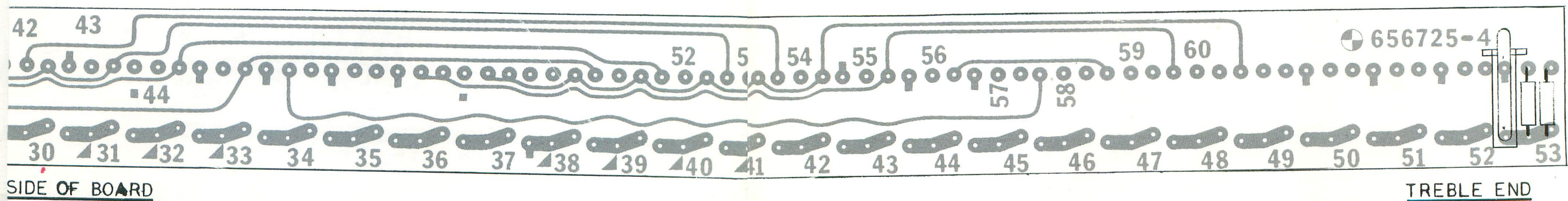


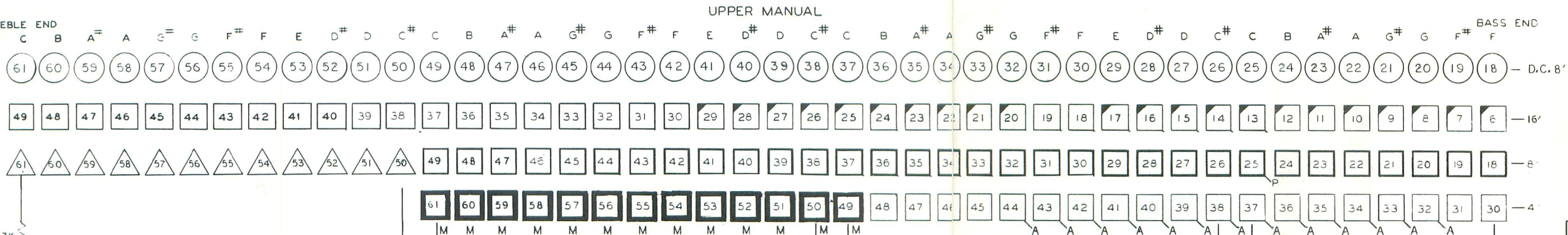
TREBLE END

PONENT SIDE OF BOARD

BERS CORRESPOND TO NUMBERS ON SCHEMATIC PAGE 8

17-21
26-30
A



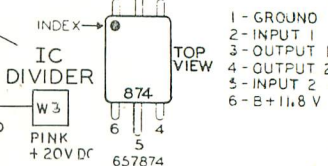
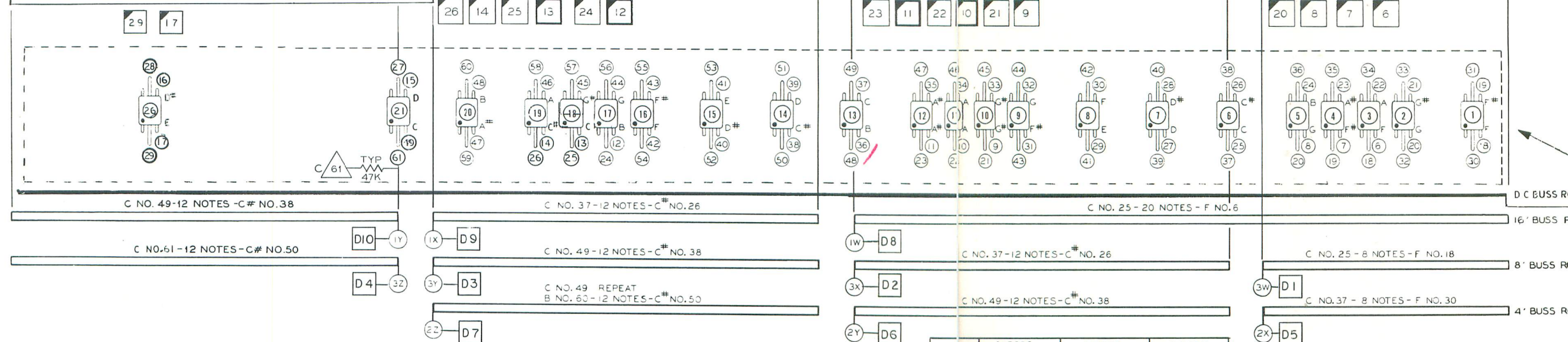


SCALE OF NOTE NUMBERS USED

F	6	18	30	42	54
F#	7	19	31	43	55
G	8	20	32	44	56
G#	9	21	33	45	57
A	10	22	34	46	58
A#	11	23	35	47	59
B	12	24	36	48	60
C	13	25	37	49	
C#	14	26	38	50	
D	15	27	39	51	
D#	16	28	40	52	
E	17	29	41	53	

TYPICAL JUMPER TO KEY CONTACT

VIEW FROM FOIL SIDE OF P.C. BOARD

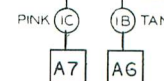
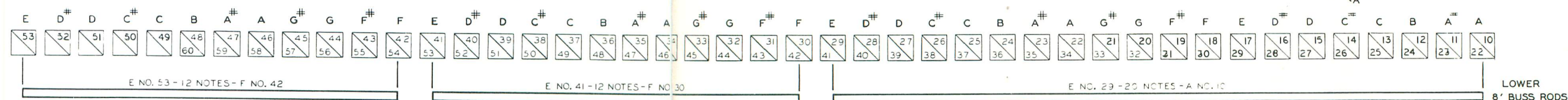


1. ALL IDENTICAL NOS. IN SQUARES ARE COMMON POINTS FROM DIVIDERS
2. HEAVY SQUARES - JUMPER CABLE UPPER TO LOWER MANUAL
3. CABLE TO MASTER OSCILLATOR
4. WIRE JUMPERS TO IC DIVIDERS
5. AI DI INDICATES WIRE NOS. IN DISCONNECTS A & D
6. SIGNAL CABLE TO PEDAL

	8' RODS	4' RODS	16' RODS
1 - BASS	3W - PURPLE	2X - YELLOW	1W - BROWN
2	3X - SLATE	2Y - DK. GREEN	1X - RED
3	3Y - WHITE	2Z - DK. BLUE	1Y - ORANGE
4 - TREBLE			

FOR COMPLETE CIRCUITS OF ABOVE ROD CONNECTIONS SEE SCHEMATIC PG. 17

LOWER MANUAL

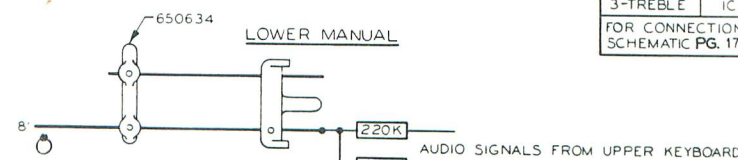
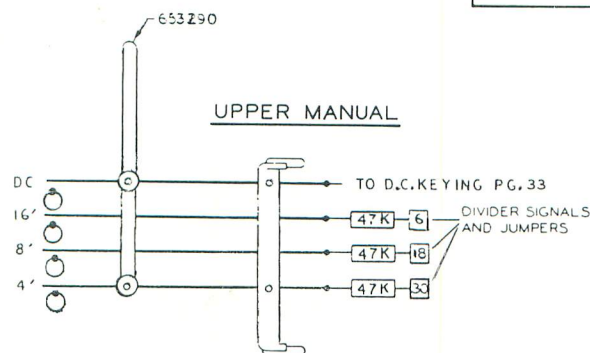
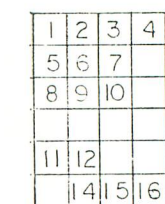
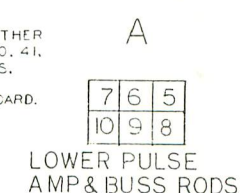


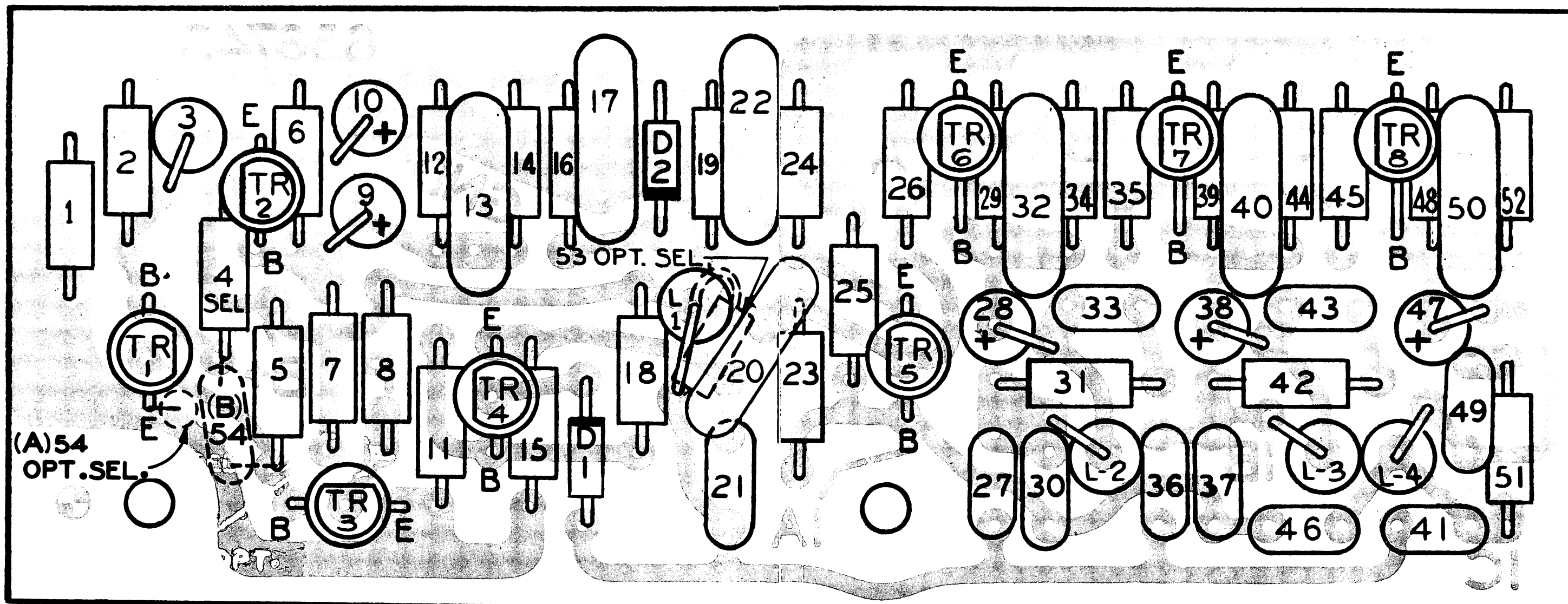
8' RODS

1 - BASS	1A - BLUE
2	1B - TAN
3 - TREBLE	1C - PINK

FOR CONNECTIONS SEE SCHEMATIC PG. 17

- LOWER MANUAL NOTES -
1. ALL COMMON NUMBERS ARE CONNECTED TOGETHER (A) NUMBERS 22, 23, 24, 27, 28, 29, 30, 39, 40, 41, 42, 46, 47, 48 & 49 ARE FOIL CONNECTIONS.
 2. 10 22 INDICATES CONNECTION TO UPPER KEYBOARD.

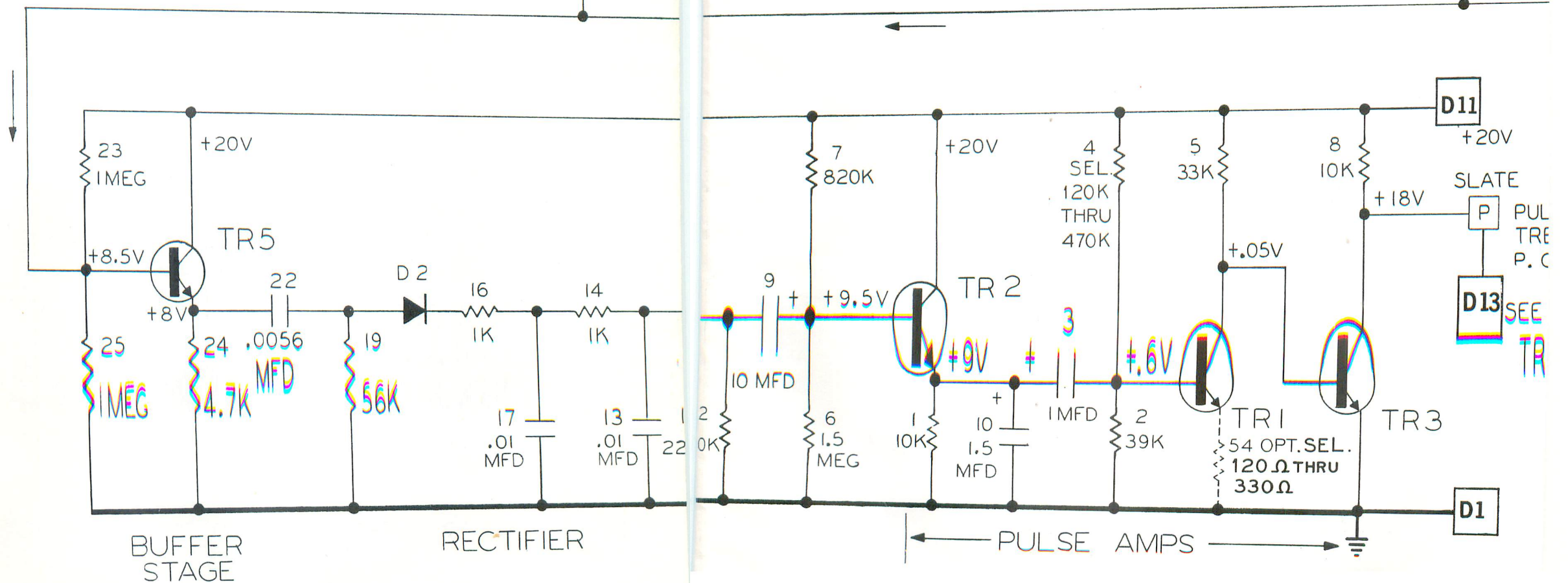




A - 54 OPT. SEL. USED ON UPR. PULSE GEN.
 B - 54 USED ON LWR. PULSE GEN.

NOTES

SEE SCHEMATICS PG'S. 10 & 11 FOR CONNECTIONS AND
 COMPLETE CIRCUITS. NUMBERS ON COMPONENTS CORRESPOND
 TO NUMBERS ON SCHEMATICS PAGES 10 & 11
 BAND INDICATES CATHODE END OF DIODE.



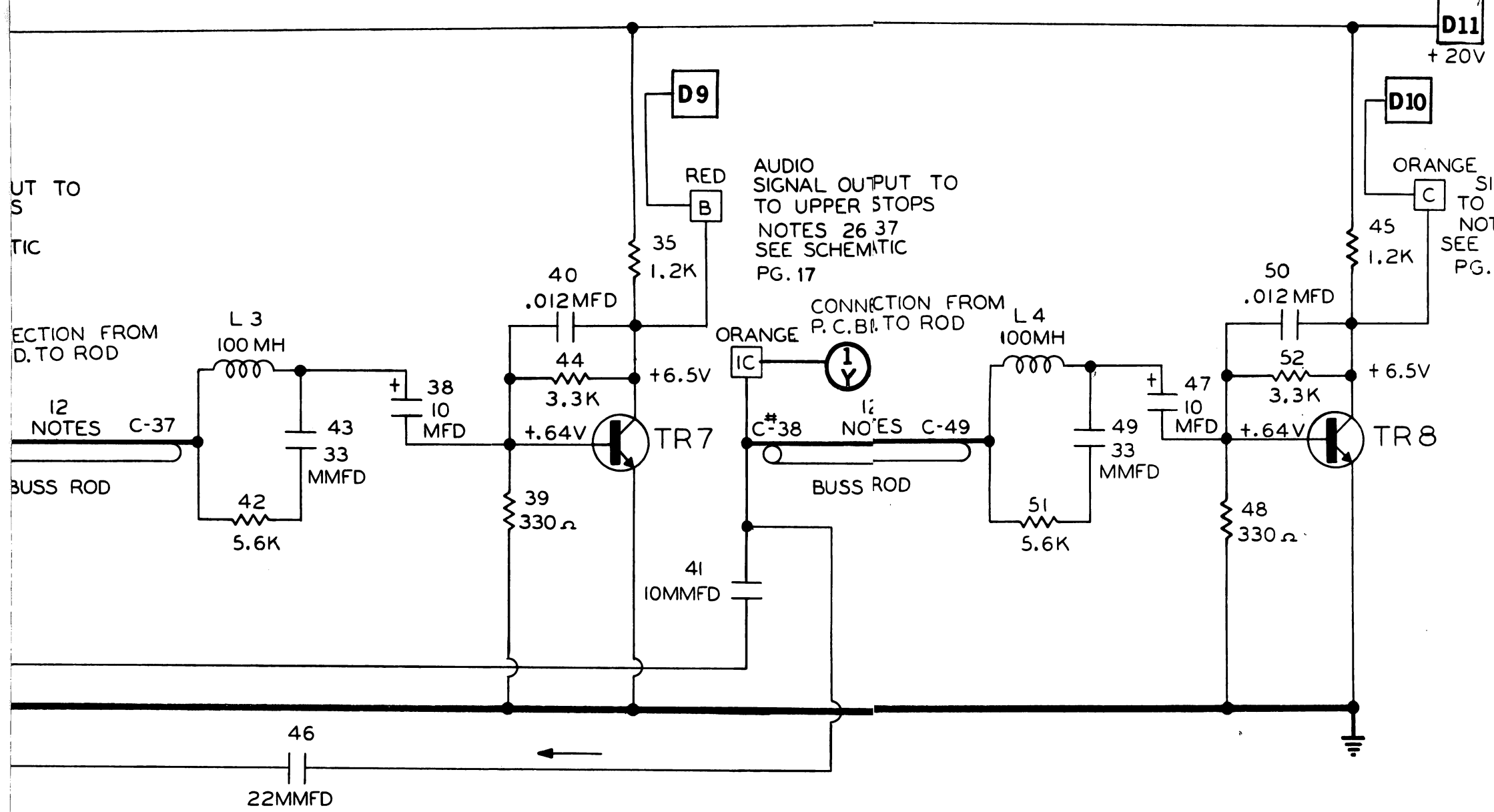
UT TO
S
TIC

SECTION FROM
D. TO ROD

12 NOTES C-37
BUSS ROD

USE OUTPUT TO
EMOLO - PULSE
C. BOARD

SCHEMATIC PAGE 20
EMOLO - REPEAT



AUDIO
SIGNAL OUTPUT TO
TO UPPER STOPS
NOTES 26 37
SEE SCHEMATIC
PG. 17

ORANGE AUDIO
SIGNAL OUTPUT
TO UPPER STOPS
NOTES 38-49
SEE SCHEMATIC
PG. 17

CONNECTION FROM
P.C.B.I. TO ROD

INDICATES WIRE NUMBERS IN DISCONNECT

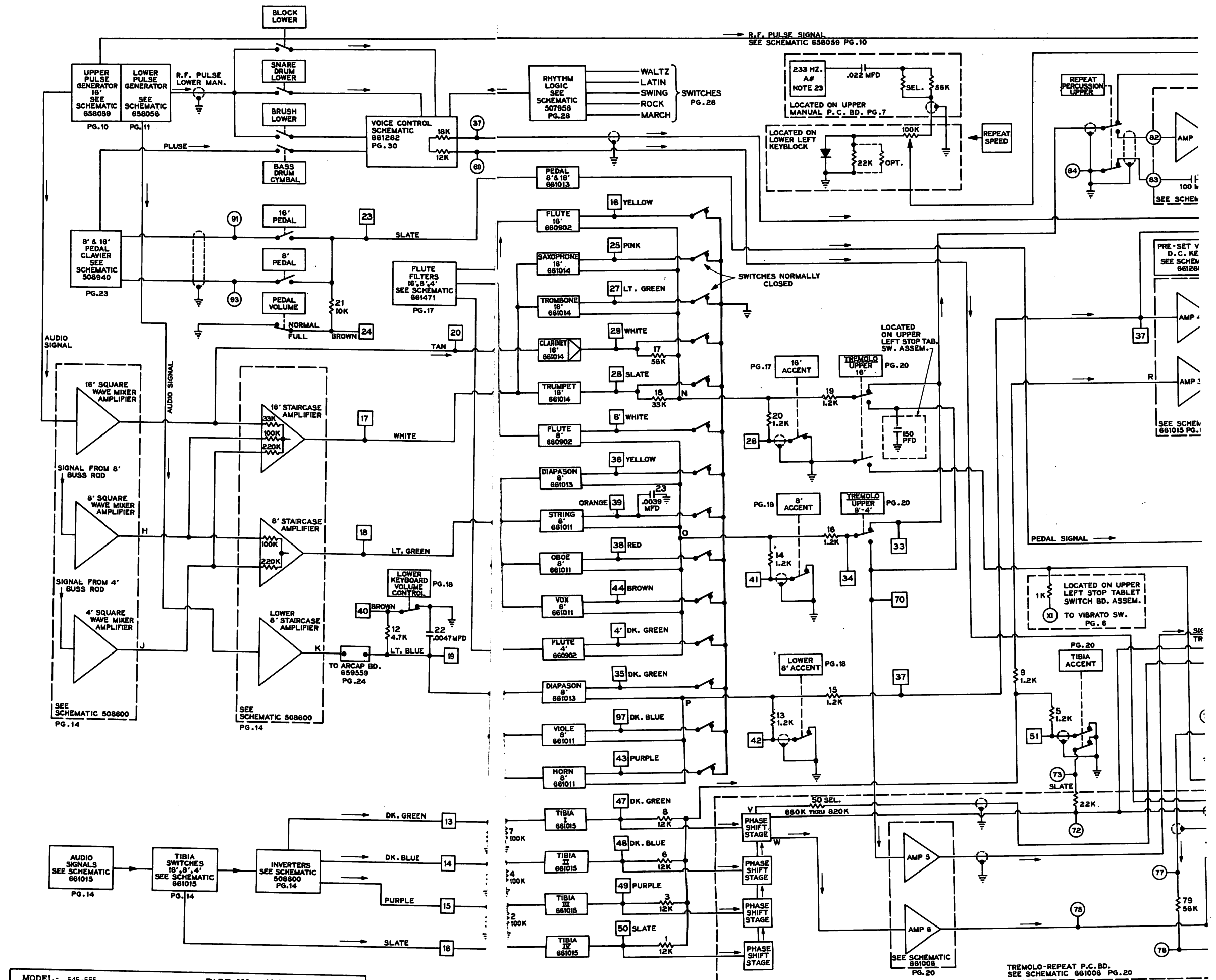
ALL DIODES WURLITZER 504720
ALL D.C.VOLTAGES MEASURED WITH A HI IMPEIANCE INPUT VOLTMMETER
TOL.±10% EXCEPT AS NOTED. LINE VOLTAGE 120V.- 60 HERTZ.
ALL ELECTRONIC COMPONENTS SUCH AS RESISTORS, CAPACITORS ETC.
ARE IDENTIFIED WITH A NUMBER.

EXAMPLE
2
39K

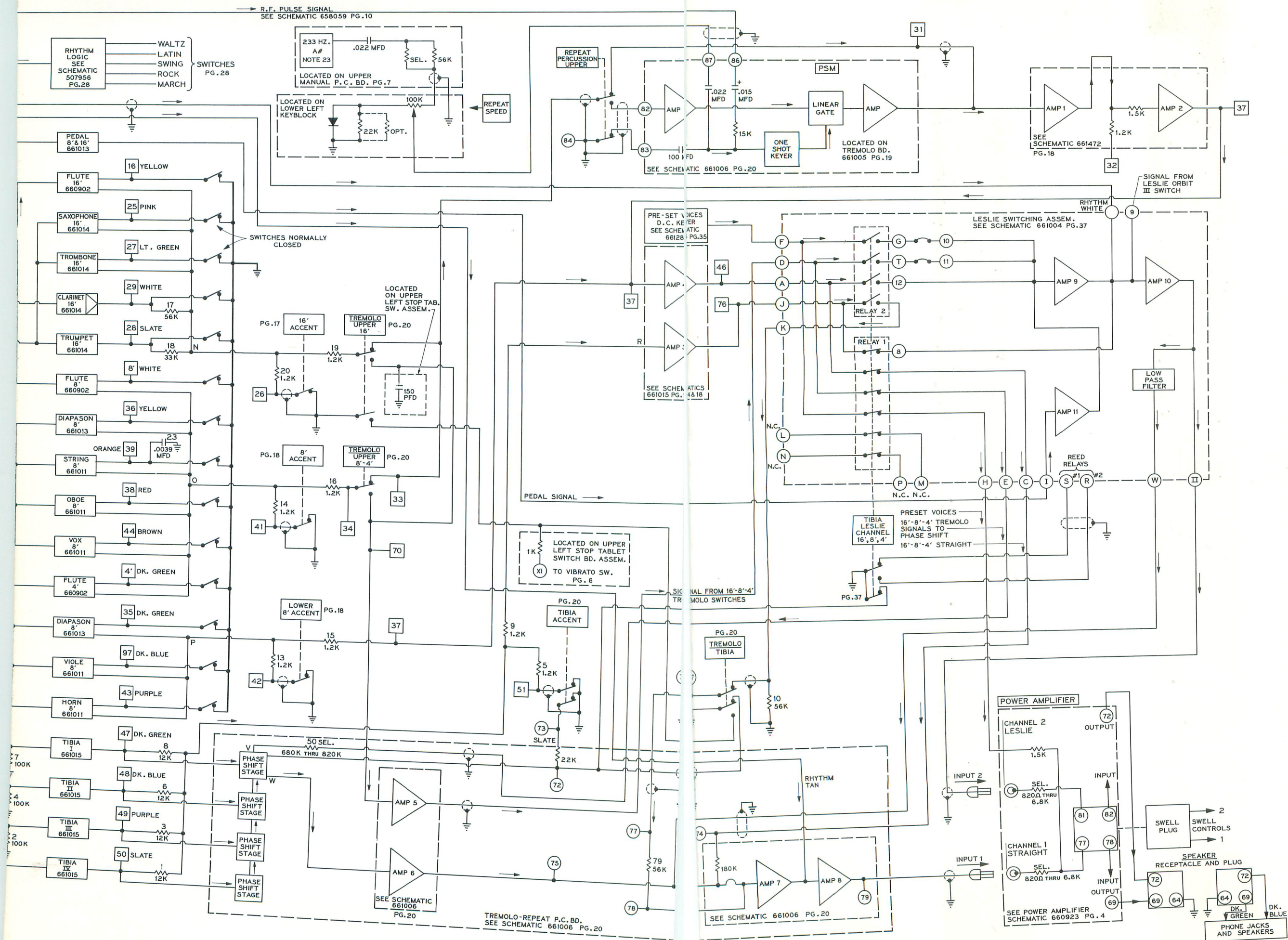
FOR PHYSICAL LOCATION OF COMPONENTS SEE P.C.BD. PG. 9
NUMBERS ON COMPONENTS CORRESPOND TO NUMBERS ON
P.C.BD. PAGE 9

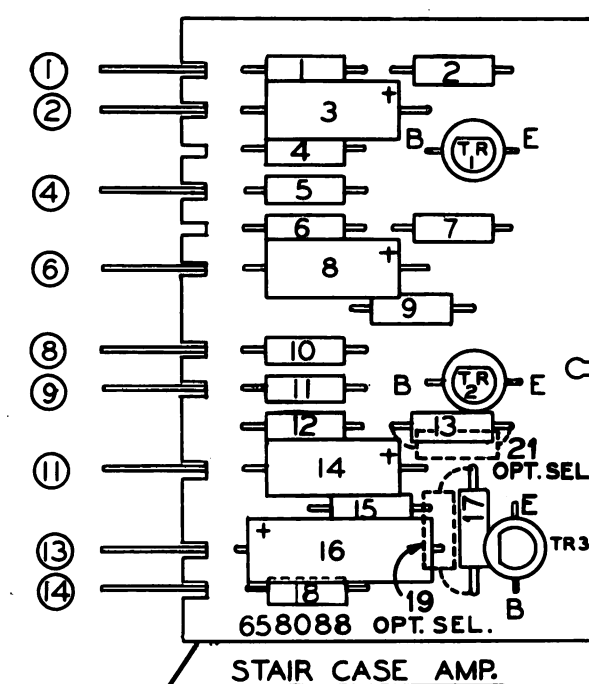
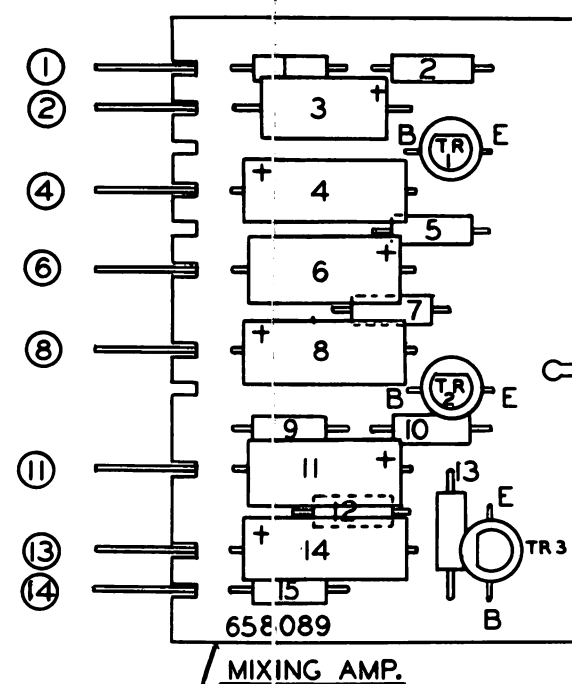
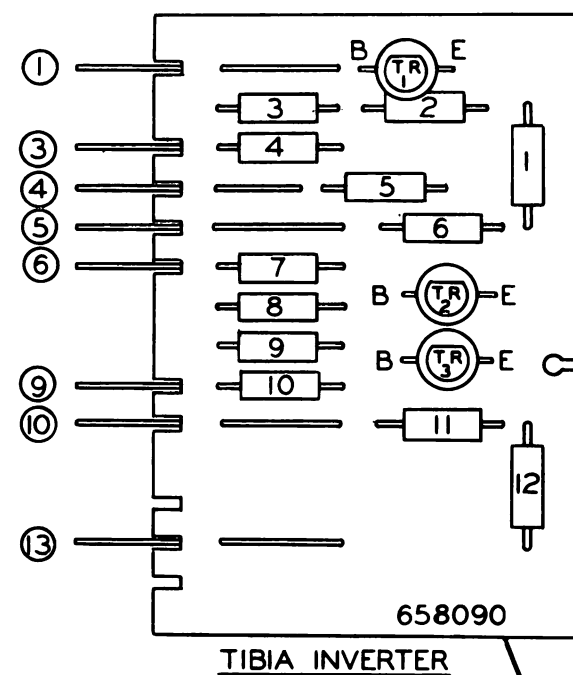
SEMI - CONDUCTOR SPECIFY DOT COLOR CODE FOR SERVICE REPLACEMENT.		
TR1 - TR3	508762	
TR4	656746	
TR5 - TR8	508762	

FOR TRANSISTOR PIN ORIENTATION
SEE TRANSISTOR BASING DIAGRAM
PG.1 IN FRONT OF MANUAL BOOKLET.

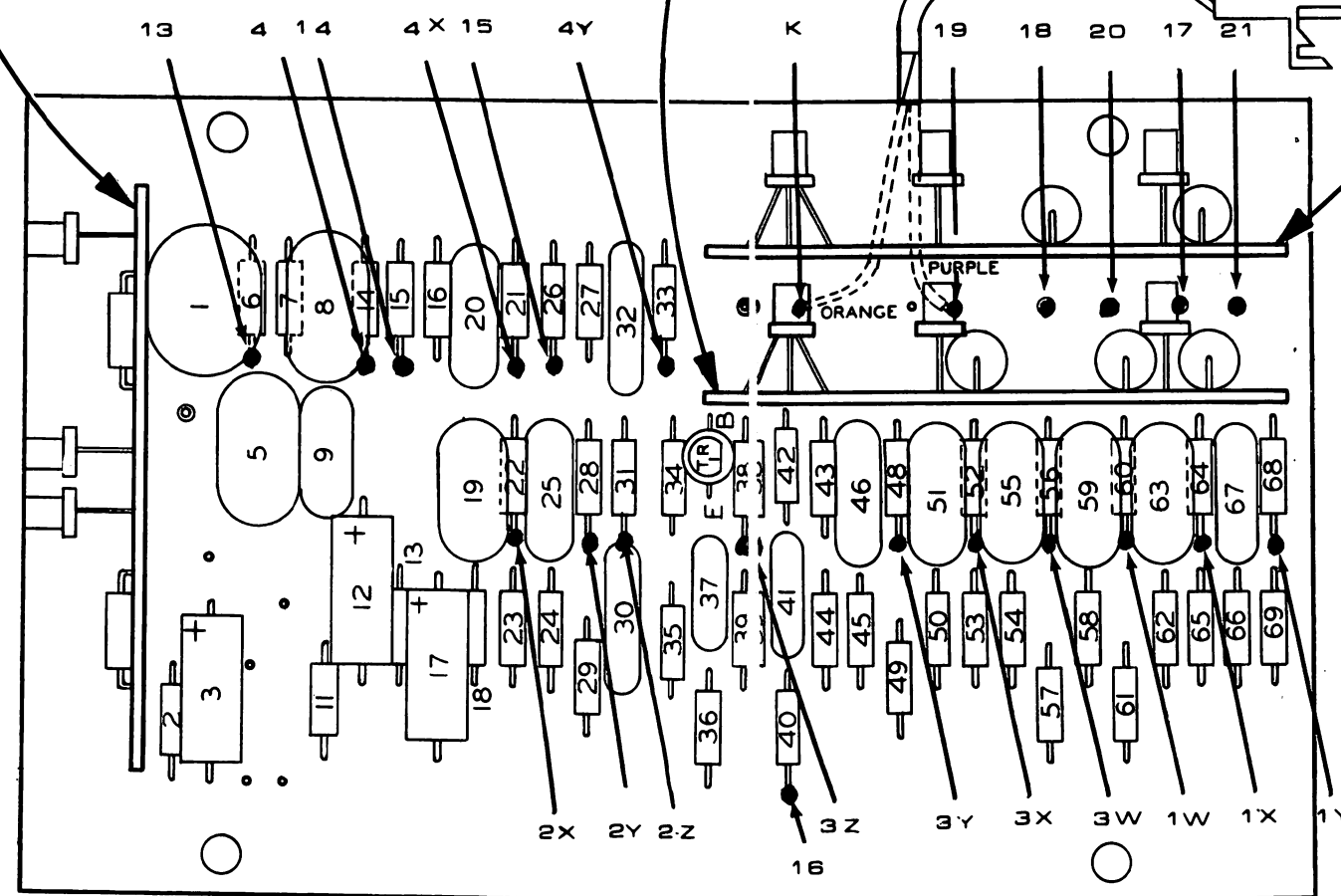


MODEL- 545-555 PART NO- 661012-S-1-E-2
 TITLE- STRAP BLOCK DIAG.
 STARTING SERIAL NO- M-545 - 1096175, M-555 - 1097725 DATE- 5/1/74
 THE WURLITZER COMPANY - DEKALB DIVISION - DEKALB, ILL.





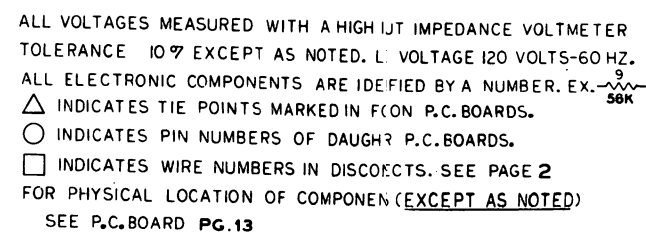
NOTE
R - 2, 4, 5, 6, 7, 10, 11, 12, 13, 17, 18
MAY BE PARALLELED WITH
ANOTHER RESISTOR
VALUE RANGE 15K - 2.2 MEG.



SEE SCHEMATIC PG. 14 FOR CONNECTIONS
AND COMPLETE CIRCUITS. NUMBERS ON
COMPONENTS CORRESPOND TO NUMBERS
ON SCHEMATIC PG. 14

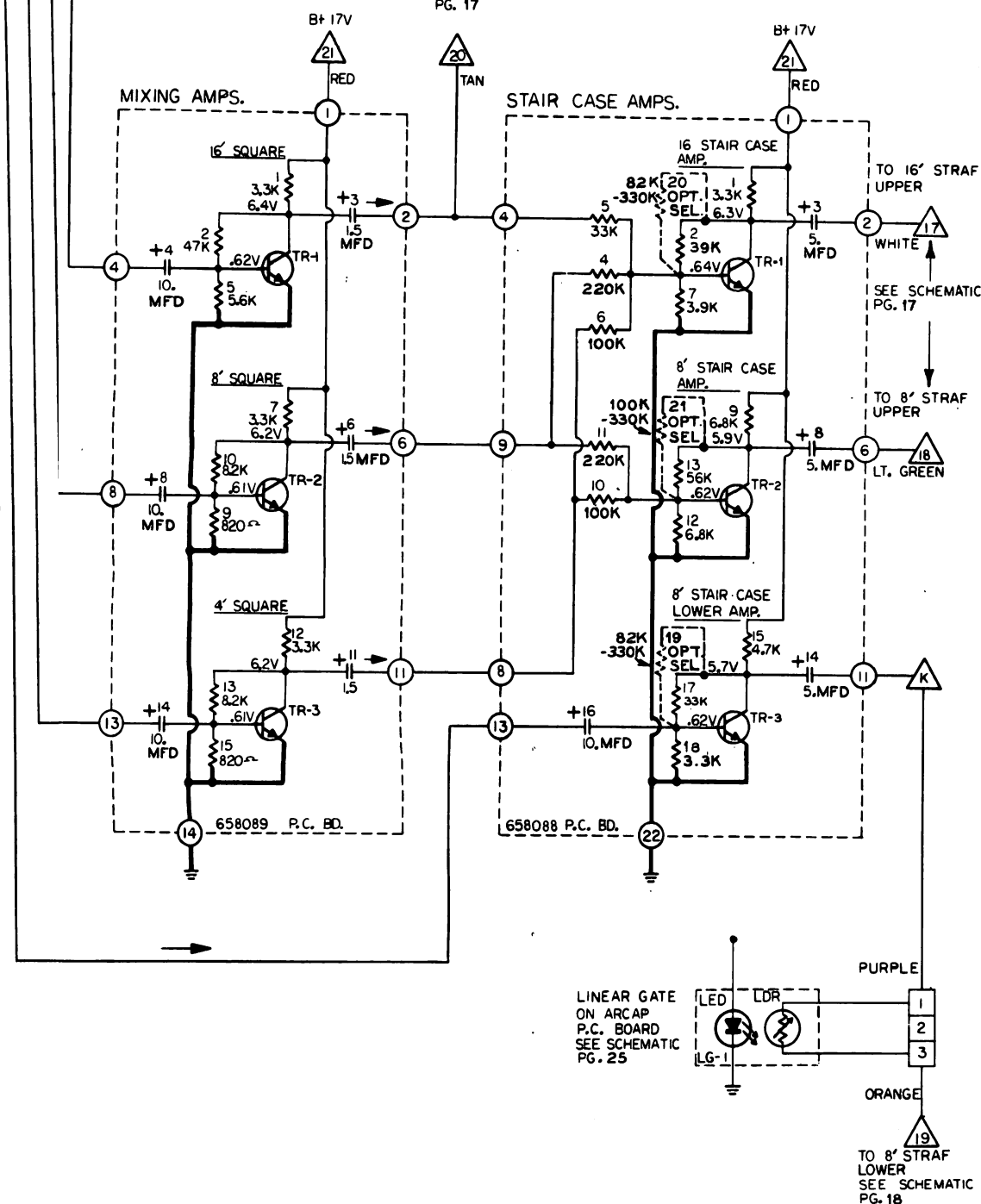
TIBIA FILTERS

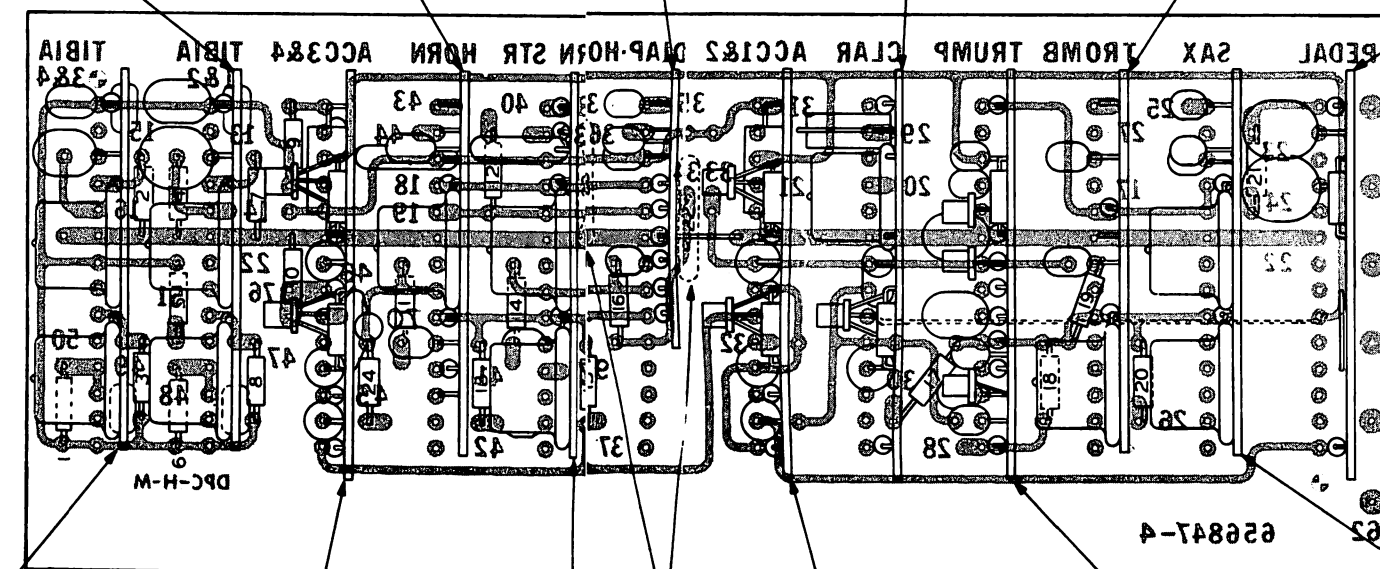
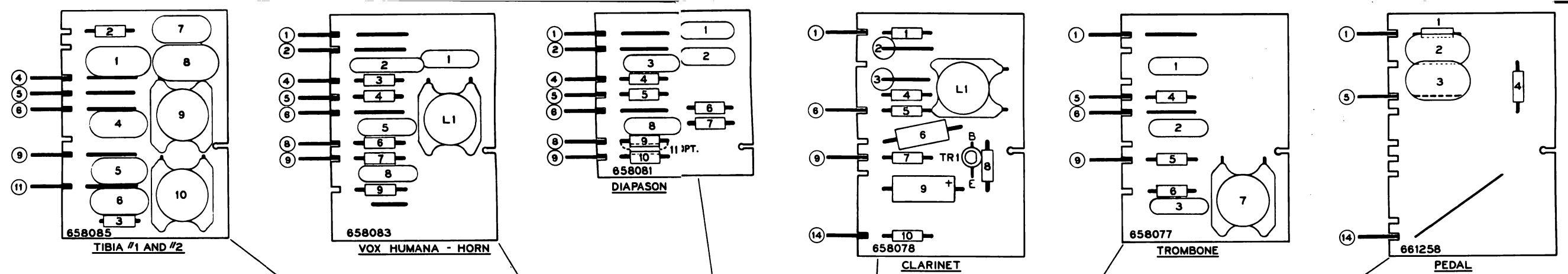
—NOTE 1 TO TIBIA PHASE
SHIFT SCHEM.
PG. 20



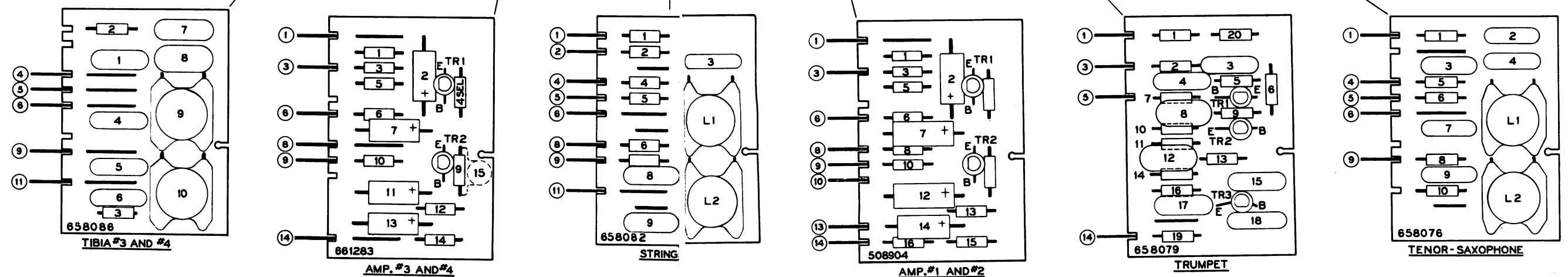
ALL TRANSISTORS PART N(508762 - EXCEPT AS NOTED.

TO 16' CLARINET
SEE SCHEMATIC
PG. 17

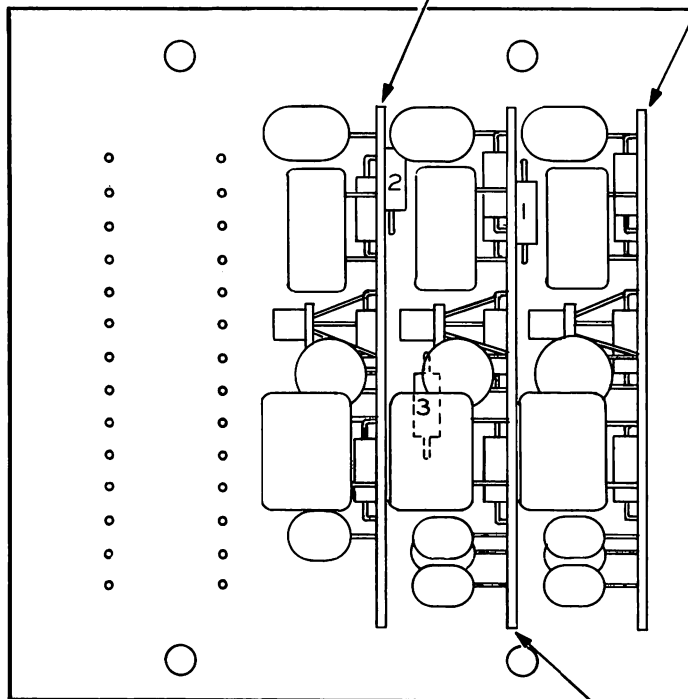
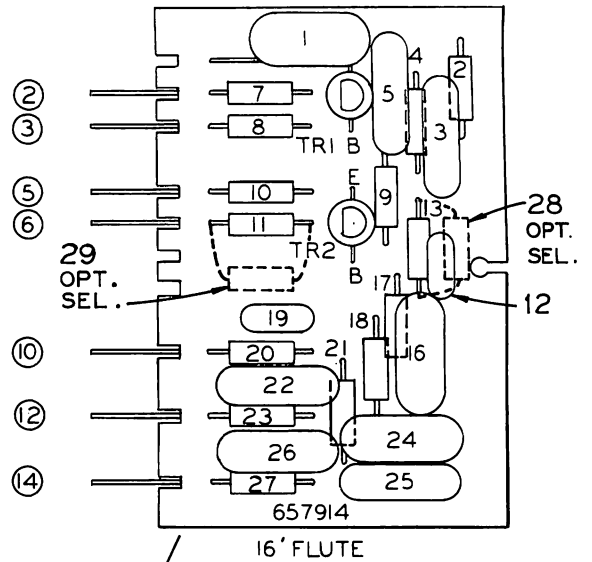
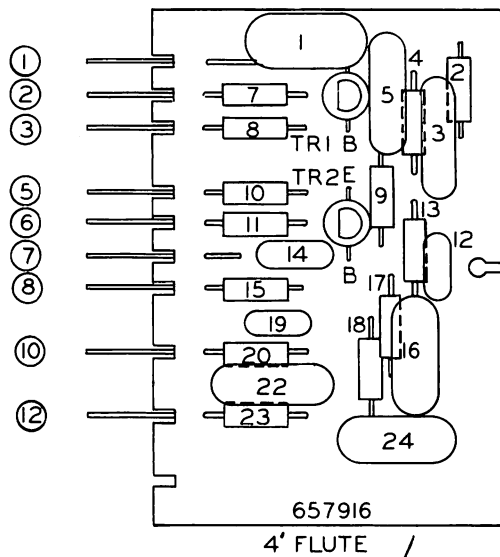




SEE SCHEMATIC PG'S. 17
FOR CONNECTIONS AND COMPLETE CIRCUITS.
NUMBERS ON COMPONENTS CORRESPOND TO
NUMBERS ON SCHEMATICS PG'S. 17



MODEL - 545-555
TITLE - STRAF P.C. BD. UPPER
PART NO. - 661000-S-1-E-2
STARTING SERIAL NO. - M-545 - 1096175, M-555 - 1097725
DATE - 5/1/74
THE WURLITZER COMPANY - DEKALB DIVISION - DEKALB, ILL.



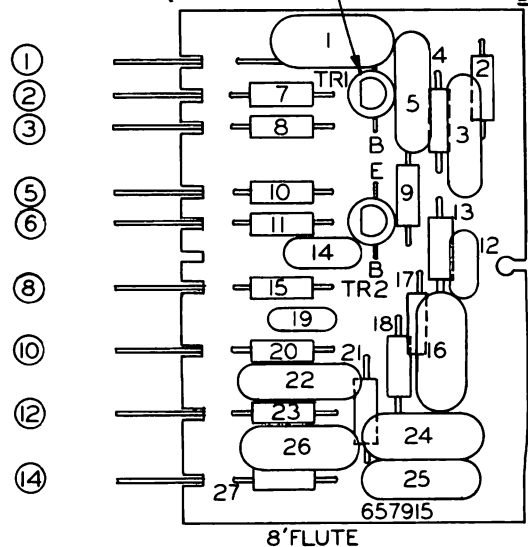
NOTE - RESISTORS 1, 2, 3
LOCATED ON MASTER BD.

TYP. OPT. TRANSISTORS

508762
EBC NOTE BASING
SERVICE SPECIFY COLOR
DOT

SEE SCHEMATIC PAGE 17
FOR COMPLETE FLUTE CIRCUITS.

NUMBERS ON COMPONENTS CORRESPOND TO
NUMBERS ON SCHEMATIC ON PAGE 17



MODEL - 545-555
TITLE - FLUTE P.C. BD.

PART NO. - 660814-S-1-E-3

STARTING SERIAL NO. - M-545 - 1096175, M-555 - 1097725 DATE - 5/1/74
THE WURLITZER COMPANY - DEKALB DIVISION - DEKALB, ILL.