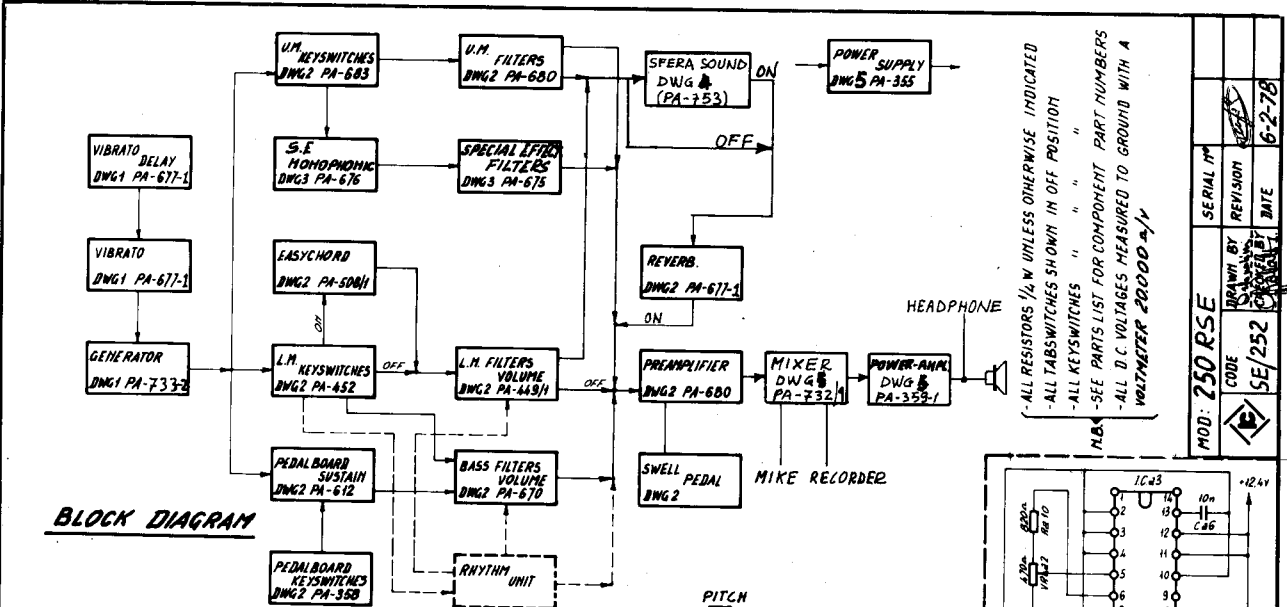




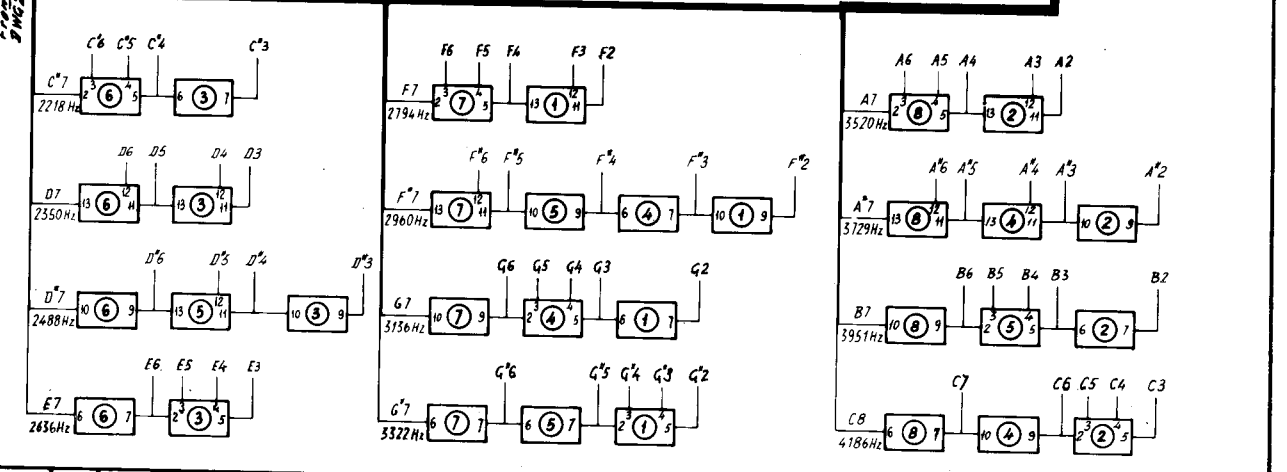
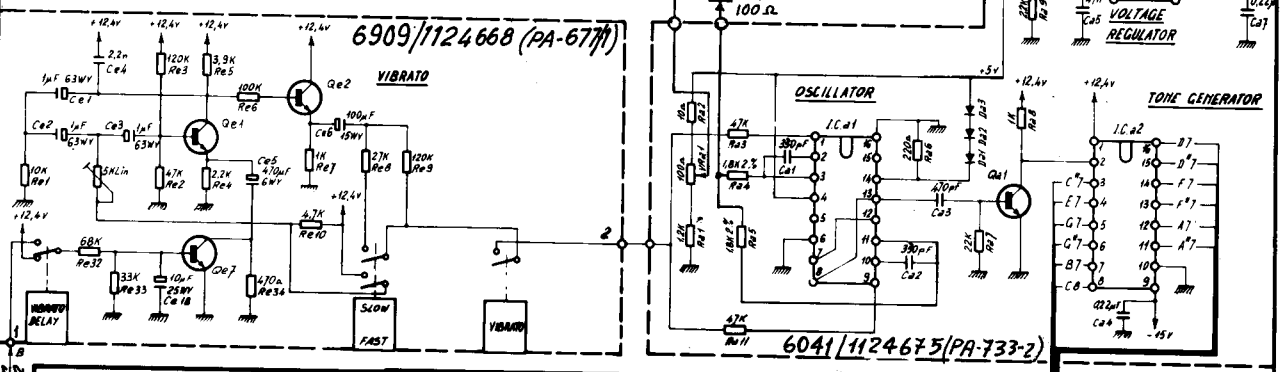
SCHEMATIC DIAGRAM

2nd EDITION

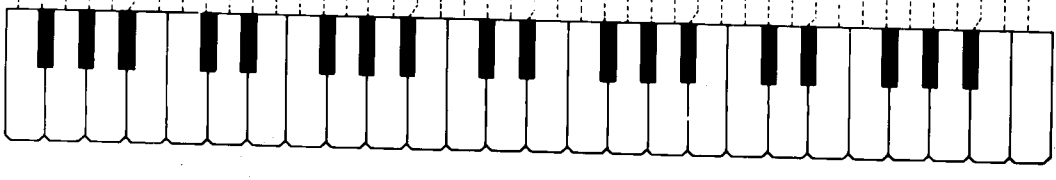
Electronic Organ
Model 250 RSE



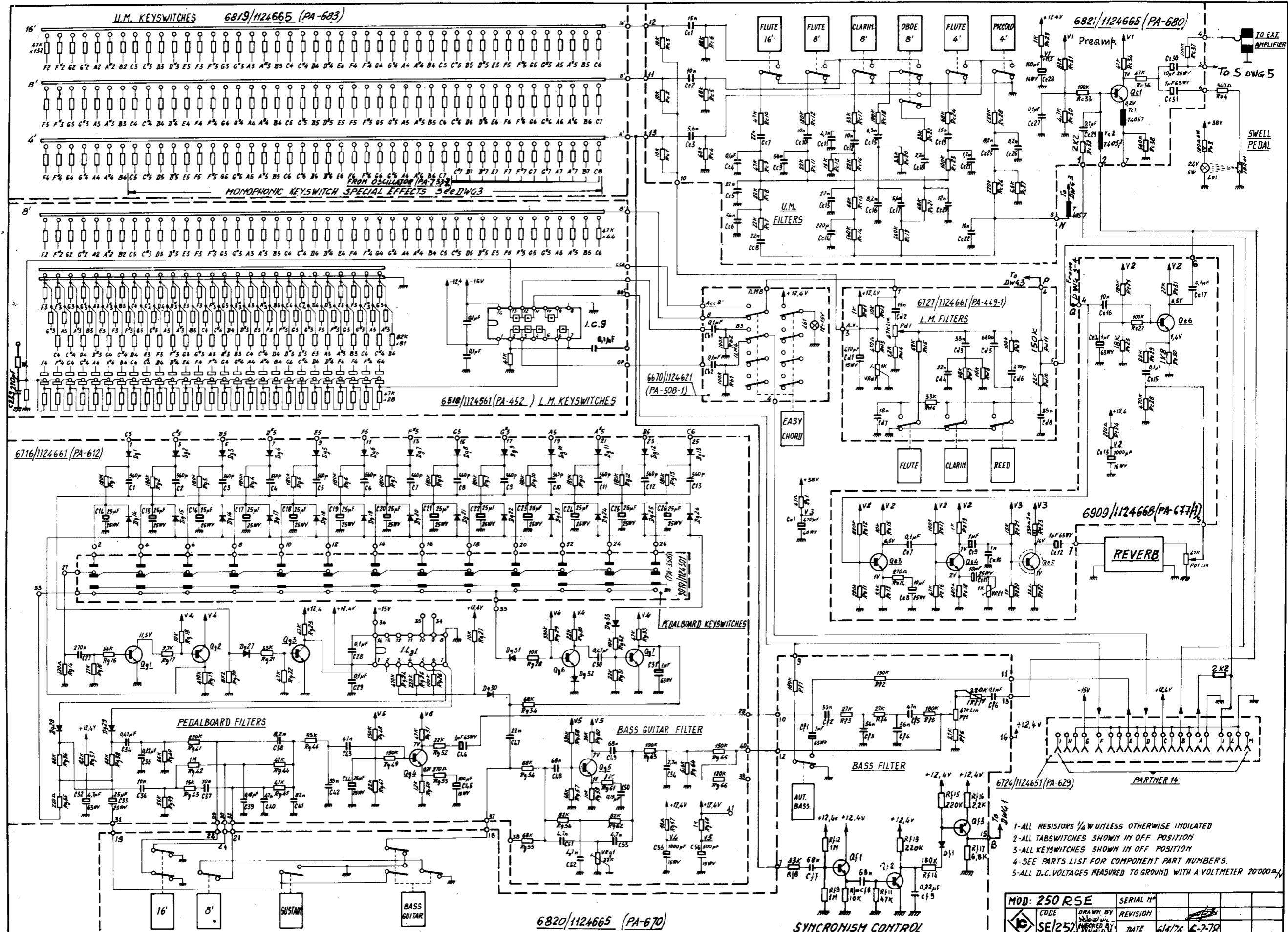
BLOCK DIAGRAM



U.M.	16'	I.C. N°	1	1	1	1	2	2	2	2	3	3	3	3	1	4	4	1	2	4	5	2	6	3	5	3	7	5	4	1	8	4	5	2	6	5	3	7	7	4	5	8	8	5	4					
	8'	I.C. N°	11	9	7	5	11	9	7	5	7	11	9	5	12	7	5	4	12	11	5	4	12	11	5	4	5	9	4	3	5	12	4	3	6	11	12	3	4	11	3	7	4	5	8	4	5	4		
		PIN N°	1	4	4	1	2	4	5	2	6	3	5	3	7	5	4	1	8	4	5	2	6	6	5	3	7	7	4	5	8	4	5	4	6	6	6	7	7	7	7	7	7	8	8	8	8			
		PIN N°	12	7	5	4	12	11	5	4	5	12	11	4	5	9	4	3	5	12	4	3	6	11	12	3	4	11	3	7	4	11	3	9	3	12	9	7	3	12	9	7	3	12	9	7	3	12	9	7
L.M.	8'	I.C. N°	1	1	1	1	2	2	2	2	3	3	3	3	1	4	4	1	2	4	5	2	6	3	5	3	7	5	4	1	8	4	5	2	6	5	3	7	7	4	5	8	8	5	4					
	4'	I.C. N°	1	4	4	1	2	4	5	2	6	3	5	3	7	5	4	1	8	4	5	2	6	6	5	3	7	7	4	5	8	4	5	4	6	6	6	7	7	7	7	7	8	8	8	8				
		PIN N°	12	7	5	4	12	11	5	4	5	12	11	4	5	9	4	3	5	12	4	3	6	11	12	3	4	11	3	7	4	11	3	9	3	12	9	7	3	12	9	7	3	12	9	7	3	12	9	7
		PIN N°	12	7	5	4	12	11	5	4	5	12	11	4	5	9	4	3	5	12	4	3	6	11	12	3	4	11	3	7	4	11	3	9	3	12	9	7	3	12	9	7	3	12	9	7	3	12	9	7



MOD: 250	CODE: SE/252	SERIAL N°: []
DRAWN BY: []	REVISION: []	DATE: 6-2-78



- 1-ALL RESISTORS 1/4W UNLESS OTHERWISE INDICATED
- 2-ALL TABSWITCHES SHOWN IN OFF POSITION
- 3-ALL KEYSWITCHES SHOWN IN OFF POSITION
- 4-SEE PARTS LIST FOR COMPONENT PART NUMBERS.
- 5-ALL D.C. VOLTAGES MEASURED TO GROUND WITH A VOLTMETER 20'000Ω

MOD: 250 RSE		SERIAL N°	
CODE	DRAWN BY	REVISION	
SE/252	EMERSON		
DATE	6/4/76	6-2-78	

6819/1124665 (PA-683)

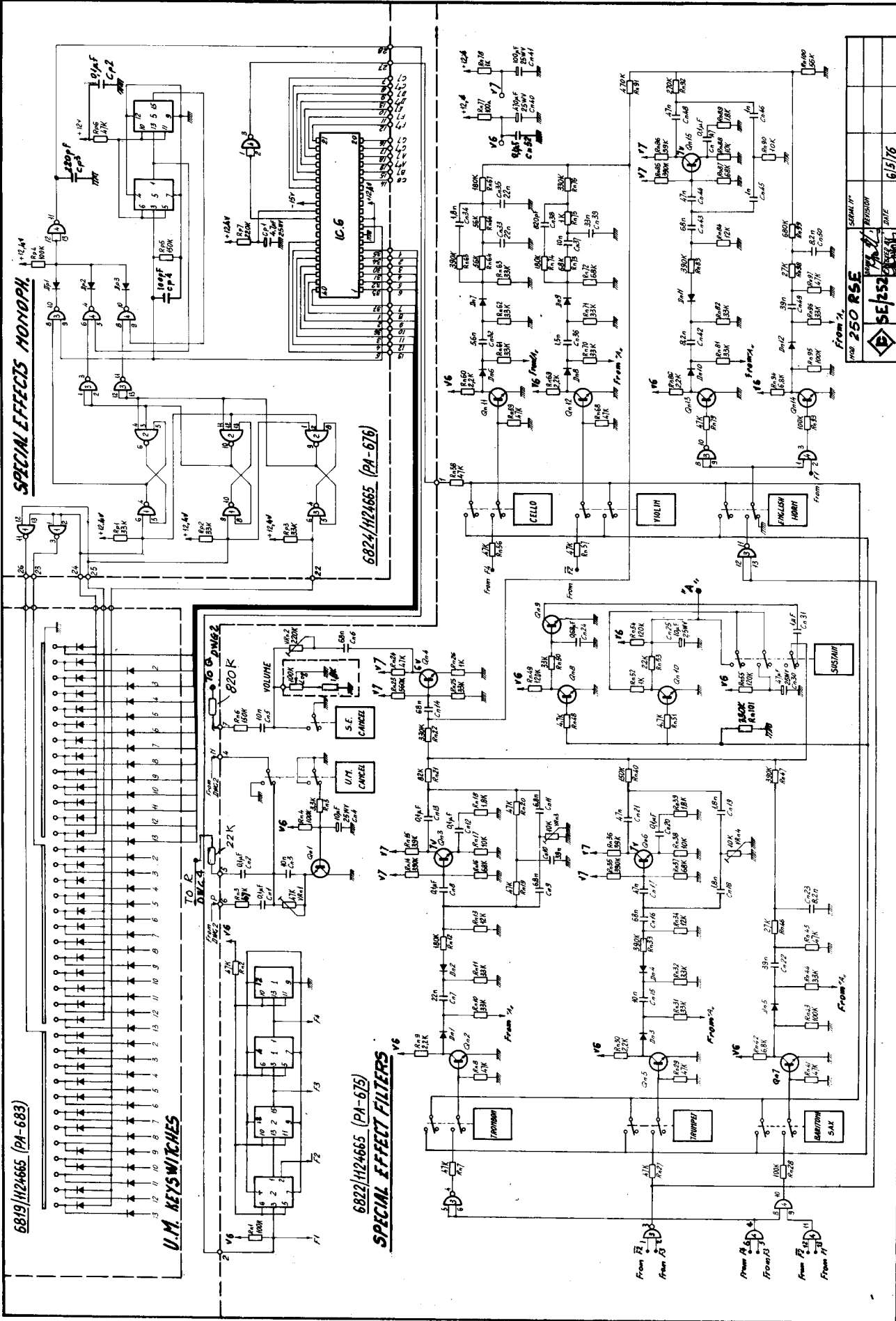
U.M. KEYSWITCHES

SPECIAL EFFECTS MONOPH.

6822/1124665 (PA-675)

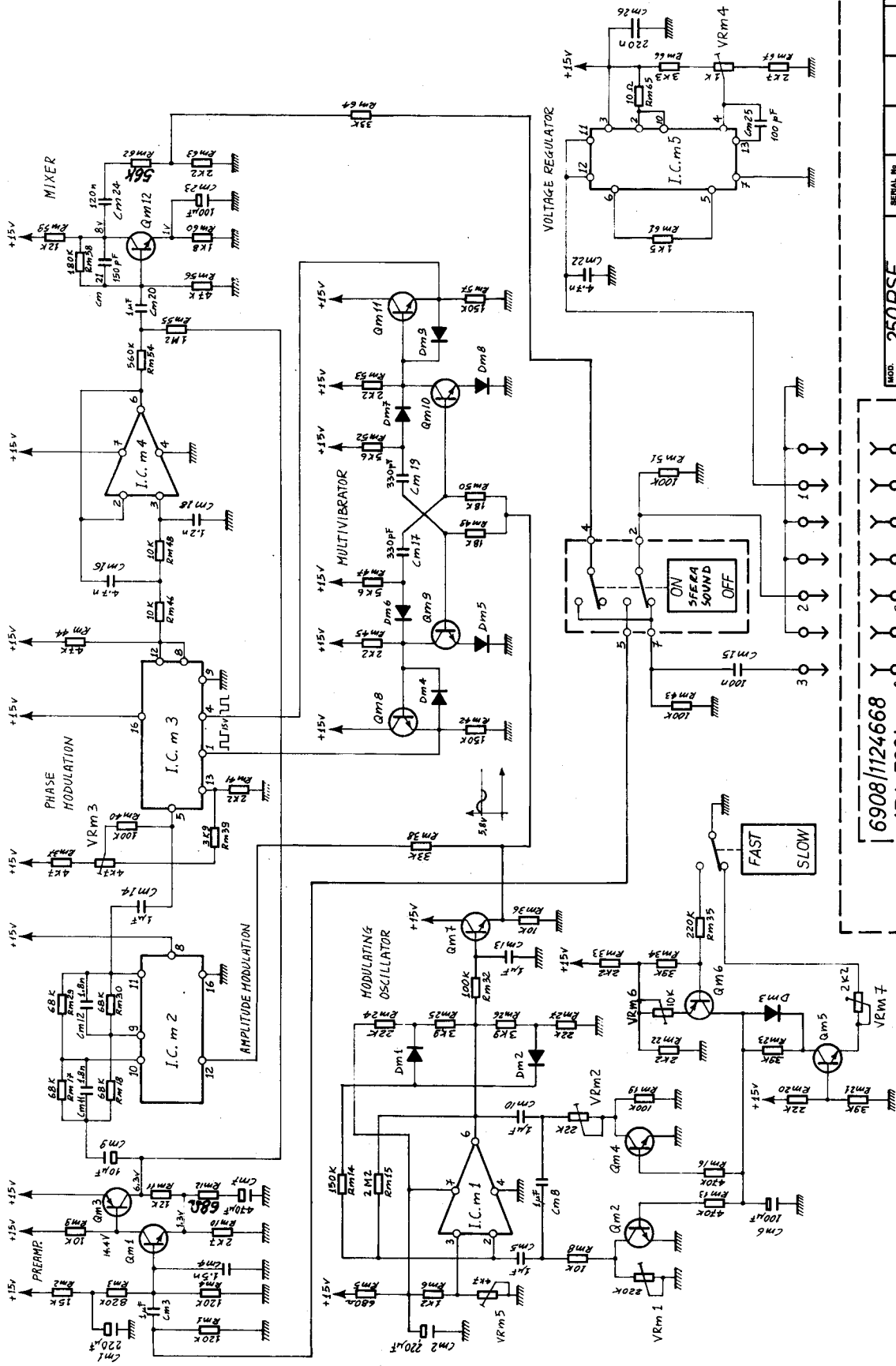
SPECIAL EFFECT FILTERS

6824/1124665 (PA-676)

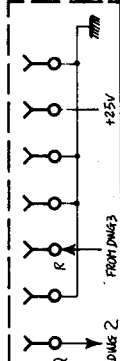


REV 250 RSE	DATE	6/15/76	OF 5
DESIGNED BY	DATE		
CHECKED BY	DATE		
APPROVED BY	DATE		

SFERA SOUND 6907/1124668 (PA-753)



6908/1124668
(PA-760)



MOD. 250RSE	CODE	DRAWN BY	REVISION	DATE
		SE/252		6-2-78
		MANAGED BY		
		DESIGNED BY		
		SERIAL NO.		

Schem. Ref.	Circuit	Type	Part Code
CHASSIS	POWER SUPPLY CHASSIS (DWG 5/SE 252)		8000/1124601
		RCA 2N 3055	W/1801
		Westinghouse 2N 3055	W/1801
Q 2	Series Stabilizer	Westinghouse 156-043	W/1800
		Solitron H 9340	W/1800
D 2	Rectifier Birdge	SIEMENS B 40-C3700	B/1208
		AEG B 40-C3700	
PA 355	VOLTAGE REGULATOR BOARD (DWG 5/SE 252)		6449/1124601
Q 1	Series Stabilizer	SGS BC 286	W/1601
D 1	Rectifier Diode (Bridge)	IR 1N 4002	B/1100
		IR 10 D1	
Z 1	Voltage Reference-Diode Zener (13 V - 1 W)	IR 1 Z 13	B/1418
		MOTOROLA 1N 4743 A	
Z 2	Voltage Reference-Diode Zener (15V - 400 mV)	ITT ZPD 15	B/1319
		MOTOROLA 1N 5245-B	
PA 359-1	POWER AMPLIFIER BOARD (DWG 5/SE 252)		6630/1124601
Q 3	Input preamplifier PNP	BC 154	W/1500
Q 4	Temperature Compensator	MISTRAL BC 207 A or B.	W/1401
		BC 209 B or C.	W/1407 - W/1410
Q 5	Driver Amplifier NPN	SGS BC 286	W/1601
Q 6	Driver NPN	SGS BC 286	W/1601
Q 7	Driver PNP	SGS BC 287	W/1702
Q 8 - Q 9	Power Transistors	WESTINGHOUSE 150-043 ..	W/1800
		SOLITRON H 9340	W/1800
PA 680	UPPER MANUAL FILTER BOARD (DWG 2/SE 252)		6821/1124665
Q c 1	Output Preamplifier	BC 209 B, red dot	W/1413
		BC 239 B, red dot	

Schem. Ref.	Circuit	Type	Part Code
PA 733/2	TONE GENERATOR (DWG 1/SE 252)		6041/1124675
I.C. a 1	Oscillator	SN 29730 N	W/1009
I.C. a 2	Top Octave Synthesizer	G.I.E. AY-I-0212	W/1105
		A.M.I.	
I.C. a 3	Voltage Regulator	SN 72723 N	W/1209
Q a 1	Buffer	BC 208-B-C	W/1404
Da 1 ÷ Da 3	Diodes	D 525 B-BA 130	B/1000 - B/1003
PA 677/1	REVERB. VIBRATO (DWG 1-2/SE 252)		6909/1124668
Q e 1	Vibrato Oscillator	BC 208-B-C	W/1404
Q e 2	Vibrato Buffer		
Q e 4	Reverberation Preamplifier	BC 109 B or C	W/1409 - W/1407
		BC 209 B	
Q e 5	Reverberation Driver	SGS BC 286	W/1601
Q e 6 - Q e 3	Reverberation Preamplifier	BC 109 B or C, red dot	W/1415 - W/1413
		BC 209 B red dot	
Q e 7	Driver Vibrato Delay	BC 209-C	W/1426
PA 612	SUSTAIN PEDALBOARD (DWG 2/SE 252)		6716/1124661
I.C. g 1	Divider	G.I.E. AY-1-5050	W/1100 - W/1101
Q g 1	Pulse Amplifier		
Q g 3 - Q g 6	Buffers	BC 208-B-C	W/1404
Q g 7	Modulator	BC 209-B	W/1407
Q g 2	Reset	BC 287	W/1702
Q g 4	Preamplifier	BC 209-B red dot	W/1413
		BC 109-B red dot	W/1415
Q g 5	Bass Guitar Filter	BC 209-B	W/1407
D g 1 ÷ D g 13	Diodes	D 525 B - BA 130	B/1000 - B/1003
D g 14 ÷ D g 26	Diodes	1N 914 - 1N 4148	B/1002
D g 27 ÷ D g 33	Diodes	D 525 B - BA 130	B/1000 - B/1003
PA 683	UPPER MANUAL KEYSWITCH BOARD (DWG 1-2-3/SE 252)		6819/1124665
I.C. 1 ÷ I.C. 8	Integrated Frequency Divider	AY-1-5050	W/1101 - W/1100
D 1 ÷ D 73	Diodes	D 525 A	B/1000 - B/1001
PA 452	LOWER MANUAL KEYSWITCH BOARD (DWG 2/SE 252)		6518/1124561
I.C. 1	Integrated Frequency Divider	G.I.E.	W/1101 - W/1100

Schem. Ref.	Circuit	Type	Part Code
PA 670	PEDALBOARD (DWG 2/SE 252)		6820/1124665
Q f 1	Buffer	BC 208 B-C	W/1404
Q f 2	Synchronism Control	BC 209 -B	W/1407
Q f 3	Synchronism Control	BC 154	W/1500
D f 1	Diode	D 525 A	B/1000 - B/1001
PA 676	SPECIAL EFFECT MONOPHONIC (DWG 3/SE 252)		6824/1124665
* I.C. 1 - I.C. 3	Quadruple-2input NAND GATES		
* I.C. 4	C/MOS	4011	W/1150
* I.C. 2	Triple-3 input NAND GATES		
	C/MOS	4023	W/1152
* I.C. 5	Dual JK Flip-Flop C/MOS	4027	W/1153
I.C. 6	Priority Latching Circuit	G.I.E. AY-1-1313	W/1108
D p 1 ÷ D p 3	Diodes	D 525 A	B/1000 - B/1001
PA 675	SPECIAL EFFECTS (DWG 3/SE 252)		6822/1124665
* I.C. 1 - I.C. 2	Dual JK Flip-Flop C/MOS	4027	W/1153
* I.C. 3	Quadruple-2 input NAND GATES		
	C/MOS	4011	W/1150
* I.C. 4	Quadruple-2 input-AND GATES		
	C/MOS	4081	W/1156
Q n 1	Upper Manual Cancel	BC 209-C	W/1426
Q n 2-5-7		BC 208 B-C	W/1404
11-12-13-14	Buffers	BC 209 B	W/1407
Q n 3	Trombone Filter	BC 209-B	W/1407
Q n 4	Preamplifier	BC 209-B red dot	W/1413
Q n 6	Trumpet Filter	BC 209-B	W/1407
Q n 8 - Q n 9	Effect Modulators.....	BC 209-C MISTRAL.....	W/1426
Q n 10	Effect Modulator	BC 208-B-C	W/1404
Q n 15	English horn	BC 209-B	W/1407
D n 1 ÷ D n 12	Diodes	D 525 A	B/1000 - B/1001

* Handle with care.

Schem.Ref.	Circuit	Type	Part Code
<u>PA 732-1</u>	<u>MIXER MAIN-MIKE (DWG 5/SE 252)</u>		<u>6971/1124668</u>
Qi1	Mike Preamplifier.....	} BC 209 - B red dot.....	W/1413
Qi2	Mixer Preamplifier.....		W/1415
Qi3	Mixer Preamplifier.....		BC 154.....
<u>PA 753</u>	<u>SFERA SOUND (DWG 4/SE 252)</u>		<u>6907/1124668</u>
I.C.m1	Oscillator B.F.....	SN 72741.....	W/1210
I.C.m2	Amplitude Modulation.....	TCA 740.....	W/1222
I.C.m3	Delay Line.....	TDA 1022.....	W/1113
I.C.m4	Filter.....	SN 72741.....	W/1210
I.C.m5	Voltage Regulator.....	SN 72723.....	W/1209
Qm1	Preamplifier.....	BC 209 - B red dot.....	W/1413
Qm2-Qm4	Switch.....	BC 209 - B.....	W/1407
Qm3	Preamplifier.....	} BC 154.....	W/1500
Qm6	Driver.....		
Qm5	Driver.....	} BC 208 - B.....	W/1404
Qm7	Emitter Follower.....		
Qm8-Qm11	Buffer.....		
Qm9-Qm10	Multivibrator.....		
Qm12	Mixer.....	BC 209 - B red dot.....	W/1413
Dm1 + Dm9	Diodes.....	BA 130.....	B/1003-B/1000

PARTNER 14S-14SM TRANSISTORS (Q) & DIODES (D) LIST

①

Schem.Ref.	Circuit	Type	Part Code		
<u>PA 690</u>	<u>RHYTHM GENERATOR & CLOCK (DWG 1/SE 243)</u>		<u>6845/1124666</u>		
A	Dual 2- Wide 2- Input and/ or Invert Gate.....	4085 FAIRCHILD.....	W/1158		
B	Quadr. 2- Input and Gate..	4081 FAIRCHILD.....	W/1156		
C	Quadr. 2- Input Nand Gate.	4011 FAIRCHILD.....	W/1150		
D	Dual D - Flip-Flop.....	4013 FAIRCHILD.....	W/1157		
E	Dual Retriggerable Reset. Monostable Multivibrator..	4528 FAIRCHILD.....	W/1159		
F	Rhythm Generator.....	M 256 BIAG.-S.G.S.....	W/1110		
Qa1	Interface.....	} BC 208-B BC 209-B	W/1404 W/1407		
Qa2-Qa3	Bass Modulator.....				
Qa4	Buffer Oscillator.....				
Qa5	Switch Reset.....				
Qa6	Lamp Driver.....				
Qa8-Qa9	Buffer.....				
Qa10	Chord Modulator.....				
Qa11	Chord Modulator.....			BC 209-C-MISTRAL.....	W/1426
Qa7	Lamp Driver.....			BC 154.....	W/1500
Qa12	Switch.....			} BC 209-B BC 149-B	W/1407 W/1408
Qa13	Bass Drum.....				
Qa14	Bongo Oscillator.....				
Qa15	Brush Snare Drum Filter...				
Qa16	Noise Preamplifier.....				
Qa17	Cymbal Filter.....				
Qa18	Blocks Oscillator.....				
Qa19	Rhythm Preamplifier.....	BC 209-B red dot.....	W/1413		
Qa20	Accent Switch.....	BC 209-C MISTRAL.....	W/1426		
Za1	Noise Generator-Zener Diode	B/1604 - FARFISA.....	B/1604		
Da1+Da18	Diodes.....	D 525 B- BA 130.....	B/1000-B/1003		