

SERVICE MANUAL

STEREO TURNTABLE

SANSUI SR-636/838



SANSUI ELECTRIC CO., LTD.

SPECIFICATIONS

- **SR-636**
 - Type Two-speed direct-driven
 - Speeds 33-1/3, 45 rpm
 - Fine speed adjustment range $\pm 2.5\%$
 - Platter Aluminum alloy die-cast
318 mm (12-9/16") diameter,
1.6 kg (3.5 lbs.)
 - Motor 20-pole brushless DC servo-type
 - Wow and flutter less than 0.028% (W.R.M.S.)
 - S/N better than 63 dB (IEC-B)
 - Rumble better than 71 dB (DIN-B)
 - Tonearm Statically-balanced
S-shaped tubular type
 - Tonearm length 230 mm (9-1/16")
 - Overhang 16.1 mm (11/16")
 - Optimum cartridge weight
When the headshell supplied is employed
. 4 ~ 11 g
 - Dimensions 490 mm (19-5/16") W
167 mm (6-5/8") H
390 mm (15-3/8") D
 - Weight 12.8 kg (28.2 lbs) net
14.8 kg (32.6 lbs) packed
 - Power Consumption 7W (rated)
 - Cartridge SV-43
 - Frequency response 10 ~ 20,000 Hz
 - Output voltage 3.3 mV per channel (1,000 Hz
50 mm/sec)
 - Load impedance 47 k Ω
 - Tracking force 2.0 g
 - Stylus diamond (SN-43)

- **SR-838**
 - Type Two-speed direct-driven
 - Speeds 33-1/3, 45 rpm
 - Fine speed adjustment range $\pm 2.5\%$
 - Platter Aluminum alloy die-cast
318 mm (12-9/16") diameter,
1.7 kg (3.7 lbs)
 - Motor 20-pole brushless DC servo-type
(Quartz-servo)
 - Wow and flutter less than 0.025% (W.R.M.S.)
 - S/N better than 64 dB (IEC-B)
 - Rumble better than 72 dB (DIN-B)
 - Tonearm Statically-balanced
S-shaped tubular type
 - Tonearm length 230 mm (9-1/16")
 - Overhang 16.1 mm (11/16")
 - Optimum cartridge weight
When the headshell supplied is employed
. 4 ~ 11 g (11 ~ 20.5 g with the sub-
weight mounted)
 - Total weight including the headshell
. 23 ~ 32 g with the subweight
mounted
 - Dimensions 490 mm (19-5/16") W
167 mm (6-5/8") H
390 mm (15-3/8") D
 - Weight 12.8 kg (28.2 lbs) net
14.8 kg (32.6 lbs) packed
 - Power Consumption 7W (rated)
 - Cartridge SV-43
 - Frequency response 10 ~ 20,000 Hz
 - Output voltage 3.3 mV per channel (1,000 Hz
50 mm/sec)
 - Load impedance 47 k Ω
 - Tracking force 2.0 g
 - Stylus diamond (SN-43)

- Design and specifications subject to change without notice for improvements.

1. BLOCK DIAGRAM

1) SR-636

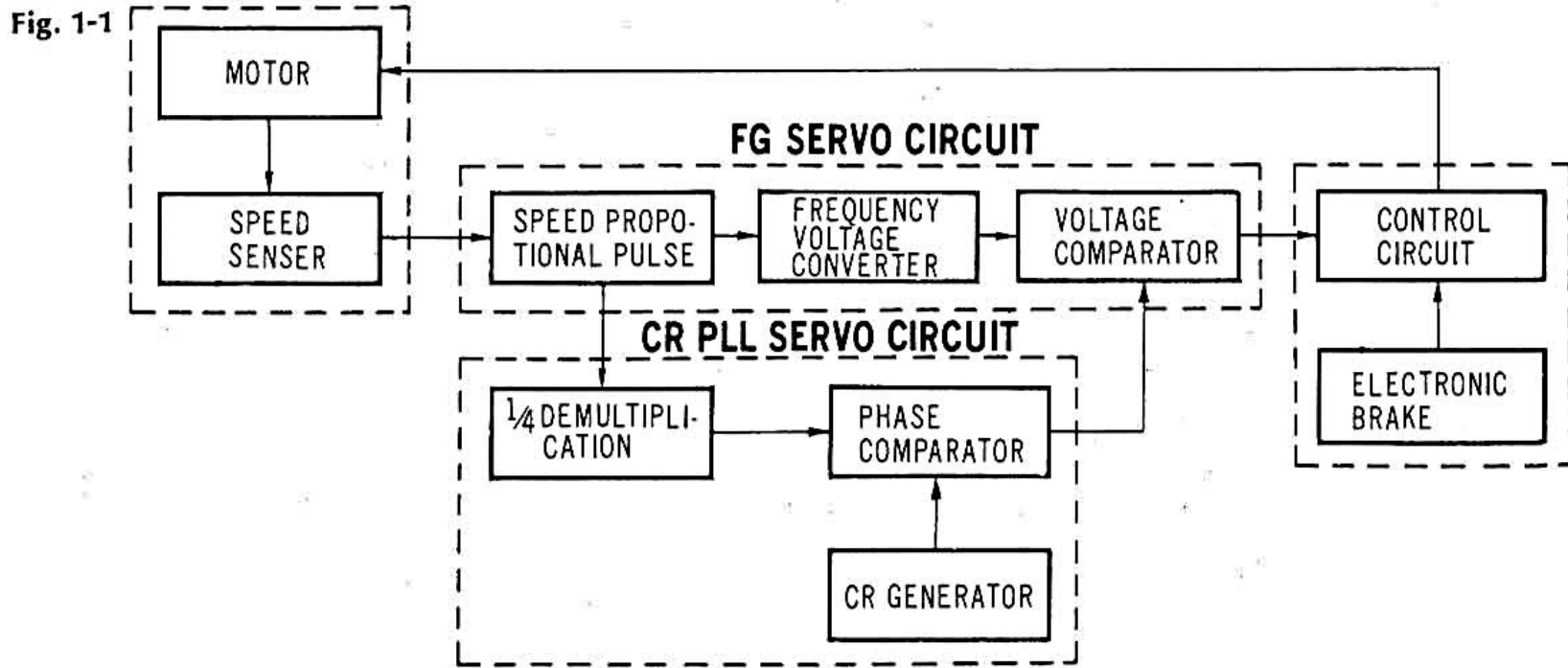
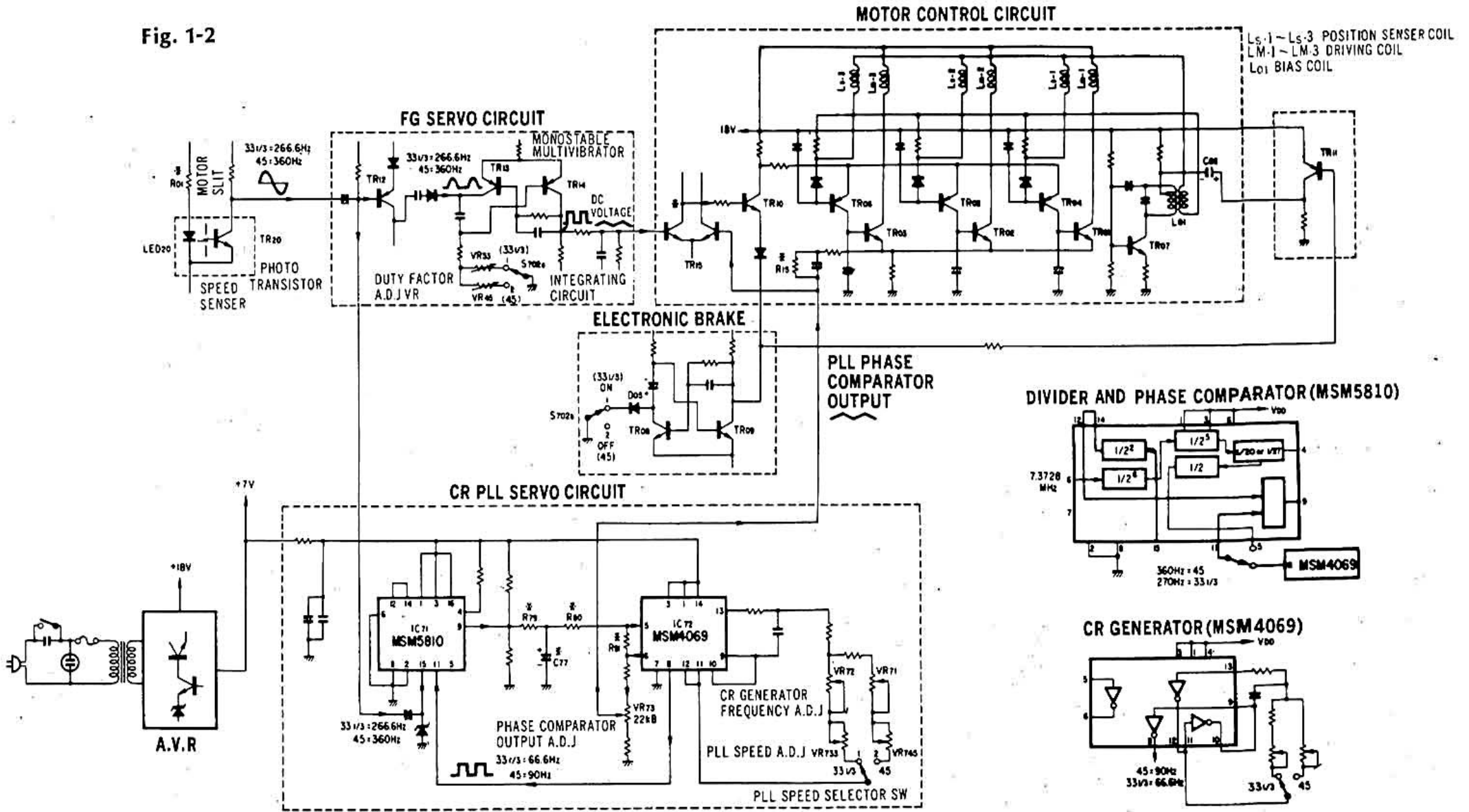


Fig. 1-2



◇SR-636, SR-838 Main Circuit

The electronic circuitry in this set is two servo circuits and a motor control circuit.

The servo circuit employs the PLL servo system and the speed control system (Frequency-Generator servo) together.

The F-G servo system is effective for the threshold characteristic and also control of PLL-Lock-out.

However, PLL servo system has an advantage against the influence by load fluctuation.

For this reason, this set employs both the F-G servo system and PLL servo system by which rotation fluctuation is always locked in the reference signal.

PLL servo circuit of the phase control system, is both CR generator and quartz generator used in this model.

2) SR-838

Fig. 1-3

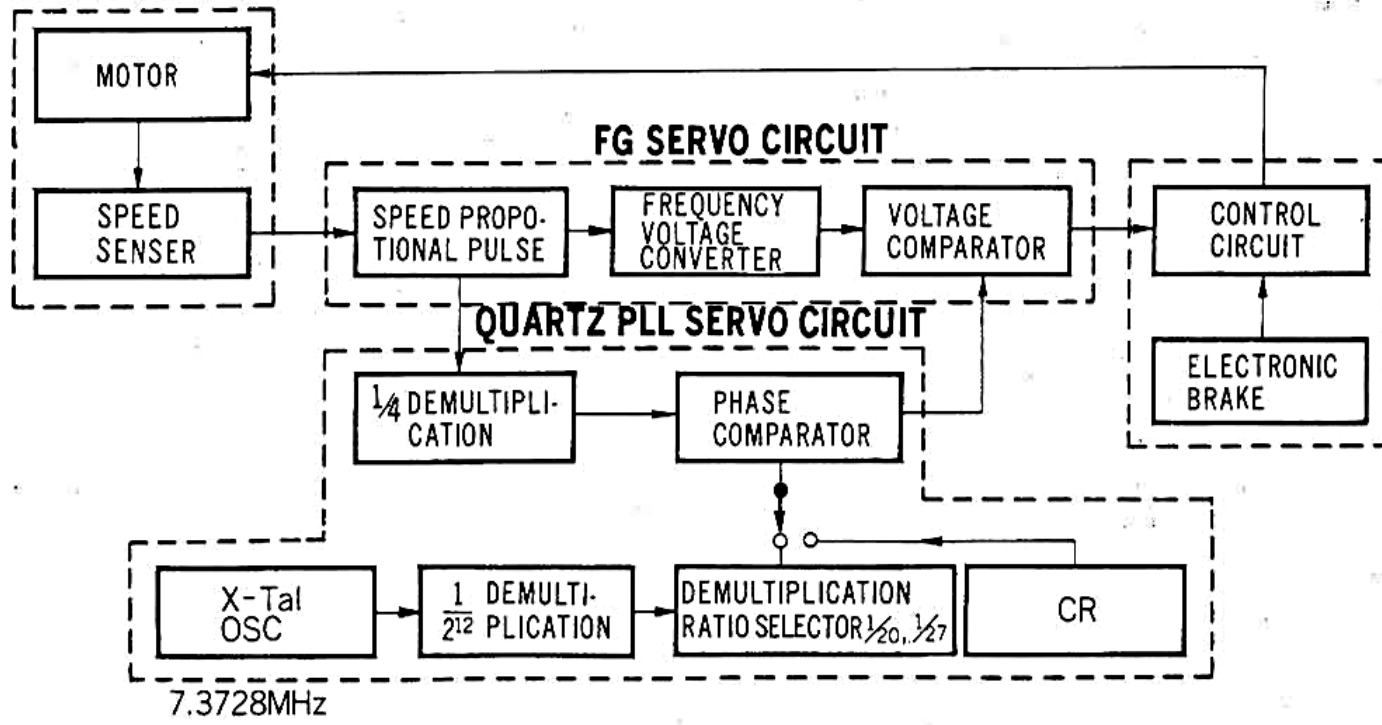
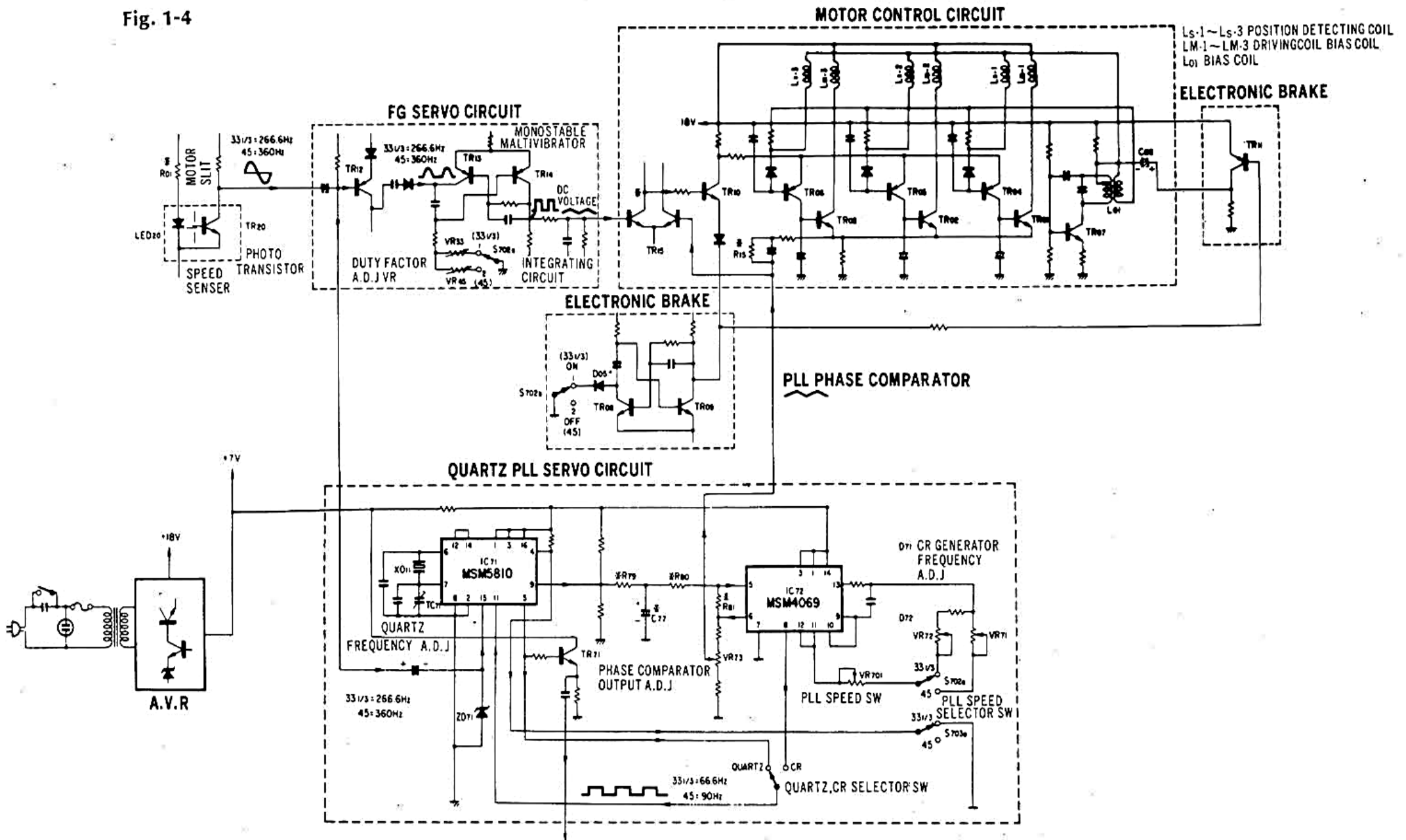


Fig. 1-4



2. OPERATION OF NEW CIRCUIT

1) The Function and Operation of MSM5810 (Fig. 2-1)

The MSM 5810 includes divider of PLL servo circuit, selector terminal of 1/20 (45 rpm) and 1/27 (33-1/3 rpm) and phase comparator.

A). Quartz PLL

1. Input signal 7.3728 MHz from quartz generator is added to the pin, No. 6, and is demultiplied as $1/2^6 \times 1/2^5 \times 1/2^0 \times 1/2$ (45 rpm) by passing through the divider; then, it is applied to phase comparator.
2. The pin No. 1, 2, 3, are selector terminal of dividing ratio from $1/2$ to $1/2^n$. By supplying VDD to pins No. 1, No. 3, and by grounding pin No. 2, $1/2^5$ of dividing ratio is obtained.
3. Divided output signal appears at pin No. 5, and it switches TR71 to light the neon lamp.
4. Since trigger pulse frequency changes with turntable revolution speed, the dividing ratio is necessary to shift accordingly to the turntable revolution speed; therefore by adding H level or L level to pin No. 4, the dividing ratio of 1/20 or 1/27 is selected.
5. A signal from speed sensor is supplied to pin No. 15, and after divided into 1/2, the signal is supplied to phase comparator.

B). CR. PLL

1. From CR generator in MSM4069, the reference signal enters into the pin No. 11, of MSM5810.
2. A signal from speed sensor is supplied to pin No. 15 and after divided into 1/2, the signal is supplied to phase comparator.
3. In quartz PLL, the revolution speed is locked by its generating frequency; however, in CR PLL, pitch is controllable by altering its generating frequency.

2) Frequency-voltage Converter Circuit (Fig. 2-2)

The frequency-voltage converter circuit is composed of a mono-stable multivibrator by TR13, TR14.

When trigger pulse detected by speed sensor is supplied to TR13, pulses which width are defined by time constant CR20, R22, R68, and VR33 (R22, VR45), appears at the collector of TR14 as the same number as input trigger pulses.

The volume of VR33 and VR45 are for duty factor adjustment to determine the "t", the pulse width.

With fluctuation of turntable revolution speed, the trigger pulse frequency occurred in a unit period varies.

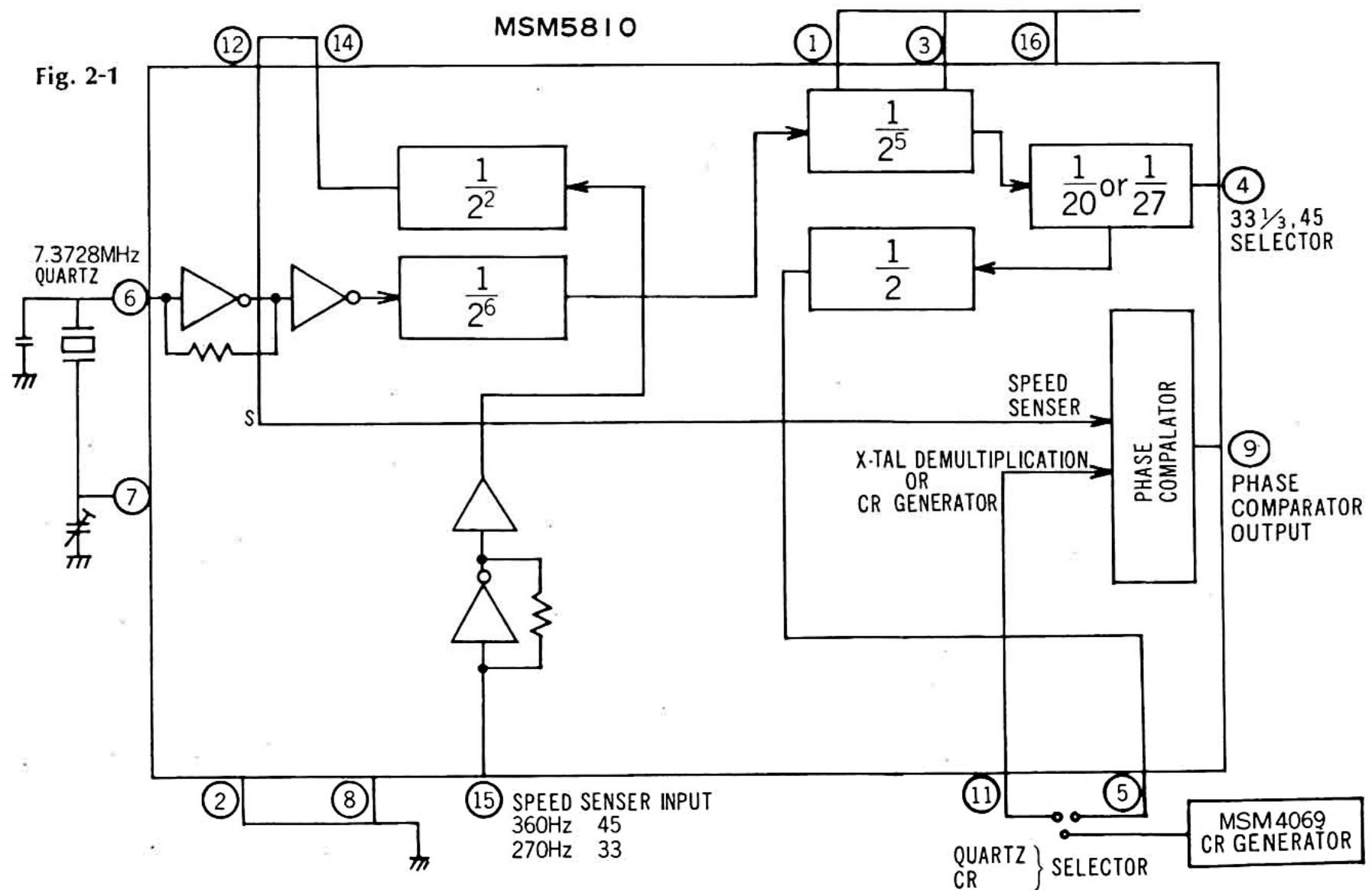
As the width "t" of the pulse is defined by above mentioned C, R, it would not change but term "T" in which the trigger occurs, would change.

Therefore, at the output of the next stage, integrating circuit, the proportioned D.C output to the trigger pulse frequency is obtained.

• Duty Factor

When a pulse of width "t" is occurring in a certain term "T", t/T is so called DUTY FACTOR.

$$\text{DUTY FACTOR (D)} = \frac{\text{PULSE WIDTH (t)}}{\text{TERM (T)}}$$



3) Electronic Brake (Fig. 2-3)

As turntables (platters) which are employed in direct drive system players, have great inertial moment, it requires certain time to settle the rotation when shifting the revolution speed from 45 rpm to 33-1/3 rpm.

To avoid above phenomenon, this model is developed to have Electronic Brake. The torque needed for the brake is obtained by reversing the revolving direction of motor to eliminate the capacitor C06 electrically from high frequency oscillator in the motor control circuit and by switching off the speed control transistor (TR10) to omit the servo control that the revolution torque is increased.

In fact, turntable platter would not begin reverse turn because of the inertial moment and time length of braking.

The circuit to eliminate the capacitor C06 electrically and to turn off the speed control transistor is monostable multivibrator and selector switch as shown in Fig. 2-3.

Operation

A circuit including TR08 and TR09 is a monostable multivibrator and usually its operation is in stable state with TR09 being ON. When TR09 is ON, TR10 functions normally and TR11 is ON. C06 and R20 are parallelly connected and functioning to TR11. When revolution speed is shifted from 45 rpm to 33-1/3 rpm, namely S702 is switched from 2 to 1, a minus trigger is supplied to monostable multivibrator.

At the same time, plus pulse defined by R13 and C11 is generated at the collector of TR09. By this pulse, the emitter voltage of TR10 is increased so that TR10 becomes not to function as speed control and the servo system does not function.

Since this pulse is supplied to the base of TR11 simultaneously, TR11 turns off and makes C06 not function completely.

When C06 is eliminated electrically, both reverse turn and torque increase by cutting off the servo system occur at once. Consequently, the brake functions only while the pulse is generated.

Reverse Revolution

At normal revolution, the direction is defined by relation between position sensor coil and magnet, position sensor coil and driving coil, and others. One of 3 position sensor coils functions successively and individually which turns on the switching transistors connected to position sensor coil to function driving coils. At reverse revolution, a signal wave having $90^\circ \sim 180^\circ$ of phase difference against standard wave is mixed to preceding standard wave by eliminating C06 electrically. Then the mixed wave is supplied to switching transistors.

Above function breaks the electrical balance of position sensor coils and its function becomes opposite; therefore, the position sensor coil which is normally ON turns OFF and other coils become ON. As a result, the opposite revolution torque for brake is obtained.

Fig. 2-2 MONOSTABLE MULTIVIBRATOR CIRCUIT

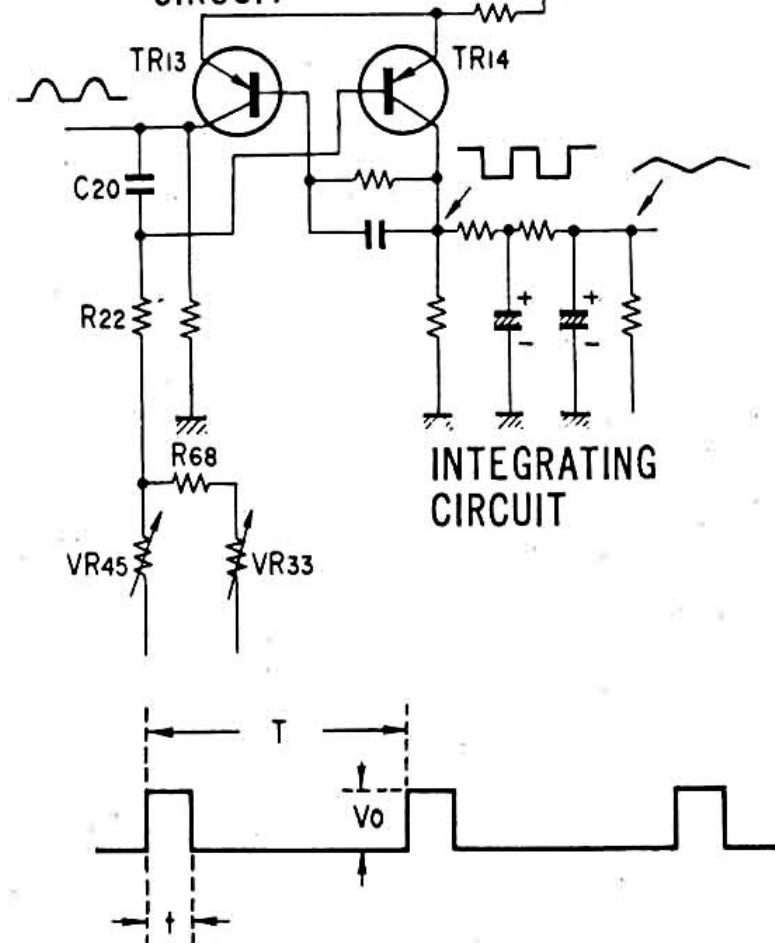
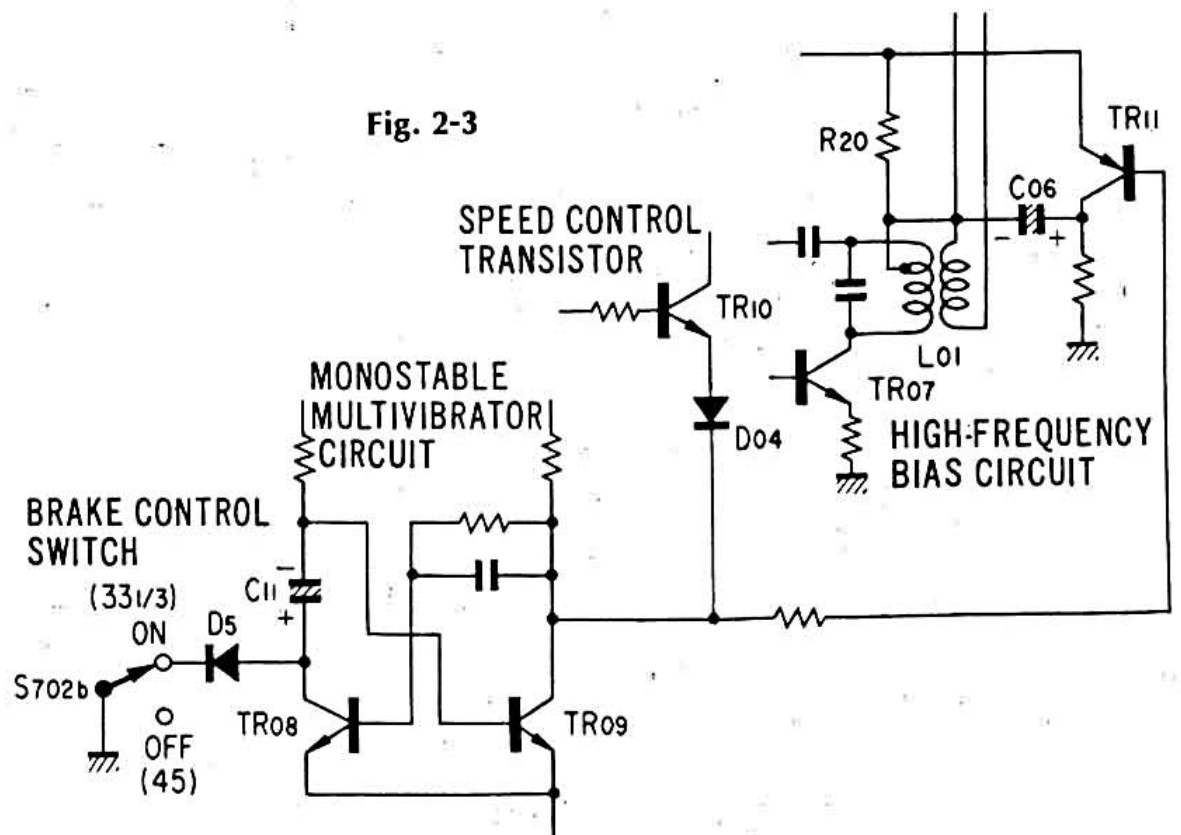


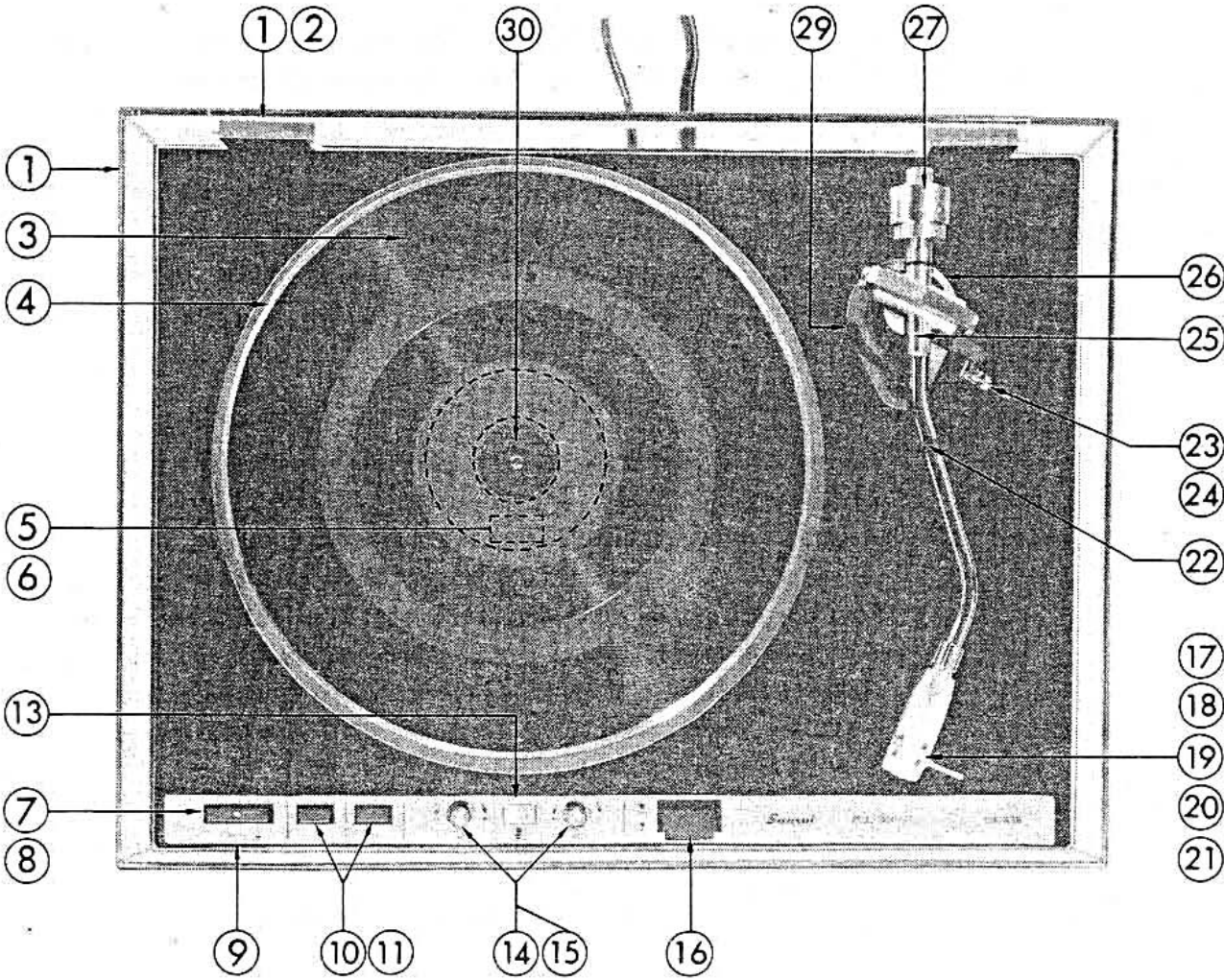
Fig. 2-3



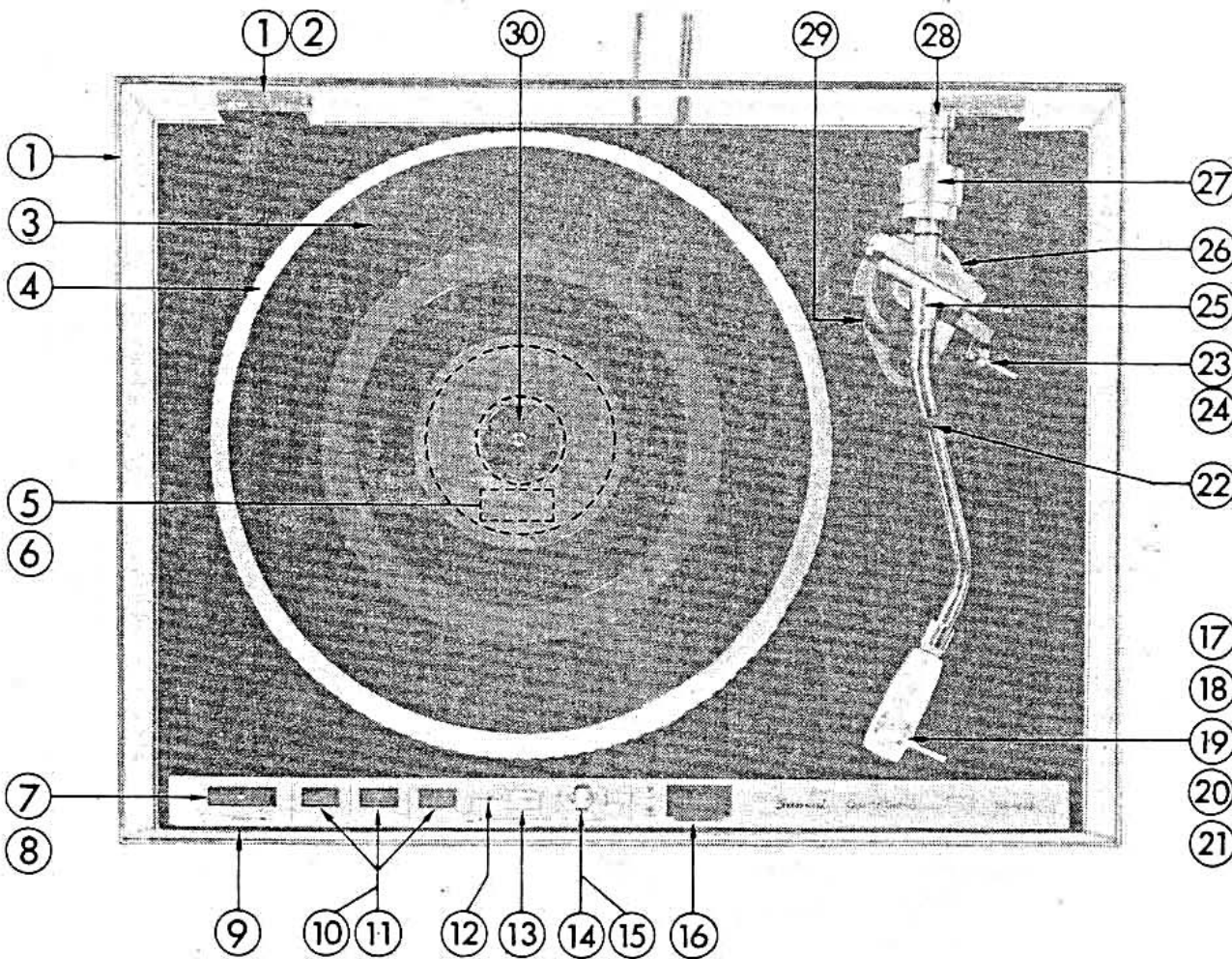
3. MECHANISM PARTS LOCATION AND PARTS LIST

1) Top View Parts List

● SR-636 <Top View> Fig. 1



● SR-838 <Top View> Fig. 2



Parts List <SR-636/838 Top View>

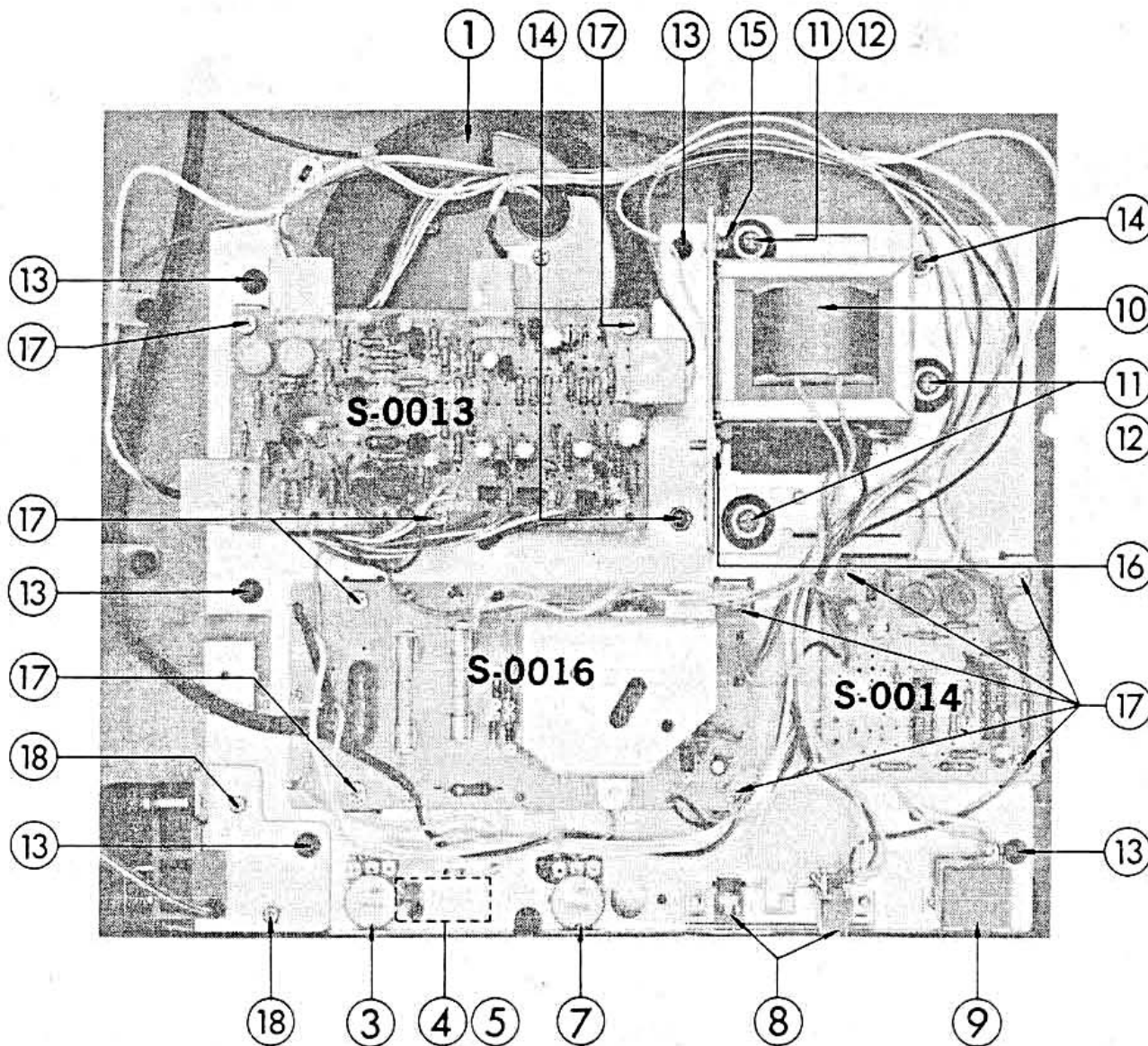
No.	Parts No.	Stock No.	Description
1	7012150		Dust Cover Ass'y
	6922320		Auto Hinge Plate, Dust Cover
	6922370		Auto Hinge, Dust Cover
	5502711		Rubber Cushion
	5102663		F Type Screw M4 X 10, Dust Cover
2	6922300		Auto Hing Lock Plate, Cabinet
3	5502741		Rubber Mat EU, CSA, BS.
	5502851		Rubber Mat XX, UL
4	6112202		Turntable (Platter) (SR-838 only)
	6112191		Turntable (Platter) (SR-636 only)
5	LD01	0319140	SR 106C L.E.D, Speed Sensor
6	TR20	0390010	PH 101 Photo Transistor
7		5322150	Push Button, Power Switch
8		5392201	Button Guide, Power Switch
9		5332090	Sansui Badge
10		5322160	Push Button, Selector, Quartz
11		5392190	Button Guide, Selector, Quartz
12		0319130	Quartz indicator L.E.D (SR-838 only)
13		5442020	Illuminator
14		5312280	Knob, Pitch-Control
15		5392210	Knob Guide, Pich Control
16		5392220	Lever Guide, Lifter
17		6642250	Head Shell
18		4310340	Cartridge Ass'y (SV-45) XX (Stylus, Screw Ass'y, Stylus Cover)
19		4940220	Stylus (SN-43)
20		5012080	Stylus Cover
21		5192150	Screw Ass'y
22		6622270	Arm Rest Ass'y
23		6912610	I.F.C. Mechanical Ass'y (I.F.C. Weight, I.F.C. Shaft)
24		6912620	I.F.C. Thread Ass'y
25		7092710	Tonearm Ass'y
26		7092720	Arm Base Ass'y
		5172290	Base nut
		5192140	Hox Socket Screw M3 X 4, Arm Base
27		6912590	Main Weight
28		6912600	Sub Weight (SR-838 only)
29		7082310	Tonearm Guide Ass'y (Piston Hoxsocket Screw)
		5192130	Hox Socketscrew M4 X 0.7, Tonearm Guide
30		6172040	45 Adaptor

Abbreviations	
1. Pan Head Tapping ScrewPT Type	10. Round Head Wood ScrewRH Type
2. Washer Head Tapping ScrewWT Type	11. Hex. Socket Setscrew...SC Type
3. Pan Head ScrewP Type	12. Slot Type Setscrew...SS Type
4. Pan Head SEMS A ScrewPSA Type	13. Binding Head SEMS B ScrewBSB Type
5. Pan Head SEMS B ScrewPSB Type	14. Spring WasherS Type
6. Binding Head SEMS F Screw ..BSF Type	15. Plain WasherP Type
7. Binding Head ScrewB TYPE	16. Retaining Ring (E Washer)...E Type
8. Flat Counter Sunk Head Screw...F Type	17. Toothed Lock Washer (External)TLE Washer
9. Flat Counter Sunk Wood ScrewFC Type	18. Wave Washer
	19. Hexagon Nut H Type Nut

NOTE:
AS to U.L., C.S.A., B.S., ES and XX marked in the Parts Lists, note the followings:
U.L., C.S.A. Approved parts used in the unit which is applicable to the U.S. and Canada under safety standard.
B.S. Approved parts used in the unit which is applicable to British under safety requirement.
E.U. Approved parts used in the unit which is applicable to Sweden, Denmark, Norway, Finland, West Germany, and Switzerland under safety requirement.
XX Parts used in the unit which is applicable to other countries excepting mentioned above.
* Parts unspecified such as CSA, UL, EU & XX in "Description" are common parts.

2) Bottom View Parts List

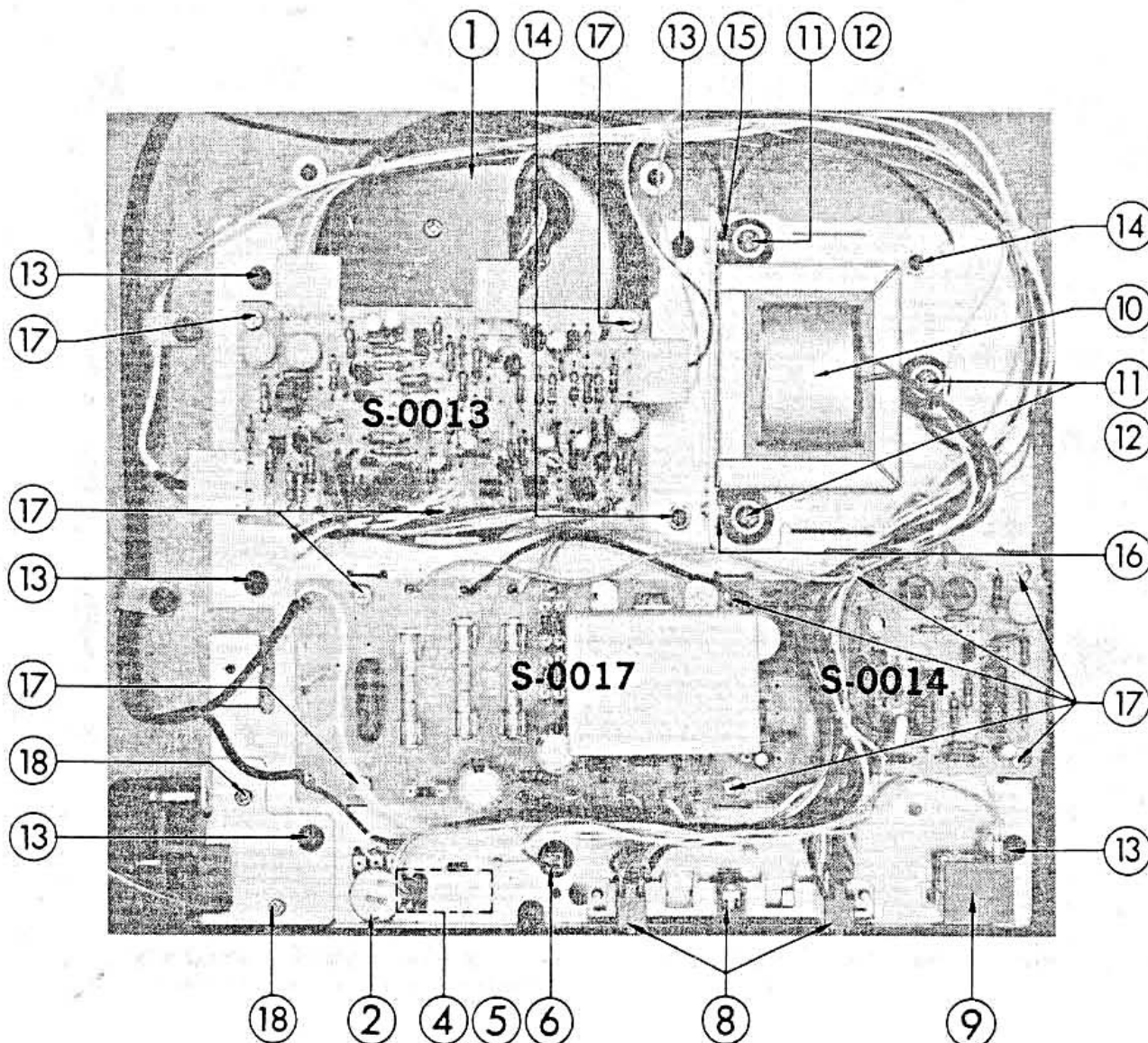
● SR-636 <Bottom View> Fig. 3



Parts List <SR-636/838 Bottom View>

No.	Parts No.	Stock No.	Description
1	4320540		D.D. Motor
2	VR701	1005310	Volume 50kΩ B. Pitch Control (SR-838 only)
3	VR745	1005110	Volume 50kΩ B. Pitch Control (45 rpm) (SR-636 only)
4	NL701	0410151	Neon Lamp NE-2HUWSA-8
5		5262280	Lamp Holder
6		7595402	L.E.D Board Ass'y (S0021) (SR-838 only)
7		2410990	Mini Pin Ass'y
7	VR733	1005310	Volume 50kΩ B. Pitch Control (33 rpm) (SR-636 only)
8	S702	{ 1131460 1131470	Speed Selector Switch (SR-636 only) Speed Selector Switch (SR-838 only)
9	S701	{ 1131230 1131520	Power Switch XX, CSA, UL Power Switch EU, BS
10	PT01	{ 4002640 4002644 4002642 4002630 4002634 4002632	Power Transformer XX Power Transformer EU, BS } SR-838 Power Transformer CSA, UL Power Transformer XX Power Transformer EU, BS } SR-636 Power Transformer UL, CSA
11		5502650	Flowing Rubber, Transformer
12		5162540	WT Type Screw, 3×13, Flowing Rubber
13		5109905	WT Type Serew, 3×12, Chassis
14		5110261	Hexagon nut M4×3.2, Chassis
15		{ 5107862 512256	BSA Type Serew M4×6, Power Transformer TLE Type washer 4φ
16		5109122	BT Type Screw 3×8, Power Transformer
17		5101043	B Type Screw M3×6, Circuit Board
18		5107744	PSB Type Screw M3×6, Lifter Cam Ass'y

● SR-838 <Bottom View> Fig. 4



◇ Main Parts Replacement

1) Pitch Control VR, Speed Selector SW, PowerSW. Quartz Indicator, Neon Lamp.

- Pull the Pitch Control VR Knob to remove.
- Remove the screws No. 13, No. 18 and Nut No. 14 in Fig. 3, 4.
- Lift the chassis (Pay attention not to hart the wires)
- Each Parts is now interchangeable individually.

2) Tone arm Ass'y

- Loosen the Hox screw beside Lifter mechanical Ass'y, No. 8 in Fig. 5.
- Take off the Lifter mechanical Ass'y.
- Remove the shield plate over S-0012.
- Disconnect the Lead wires soldered on S-0012.
- Remove the Base Nut No. 7 in Fig. 5.
- Pull the Tone arm Ass'y upward.

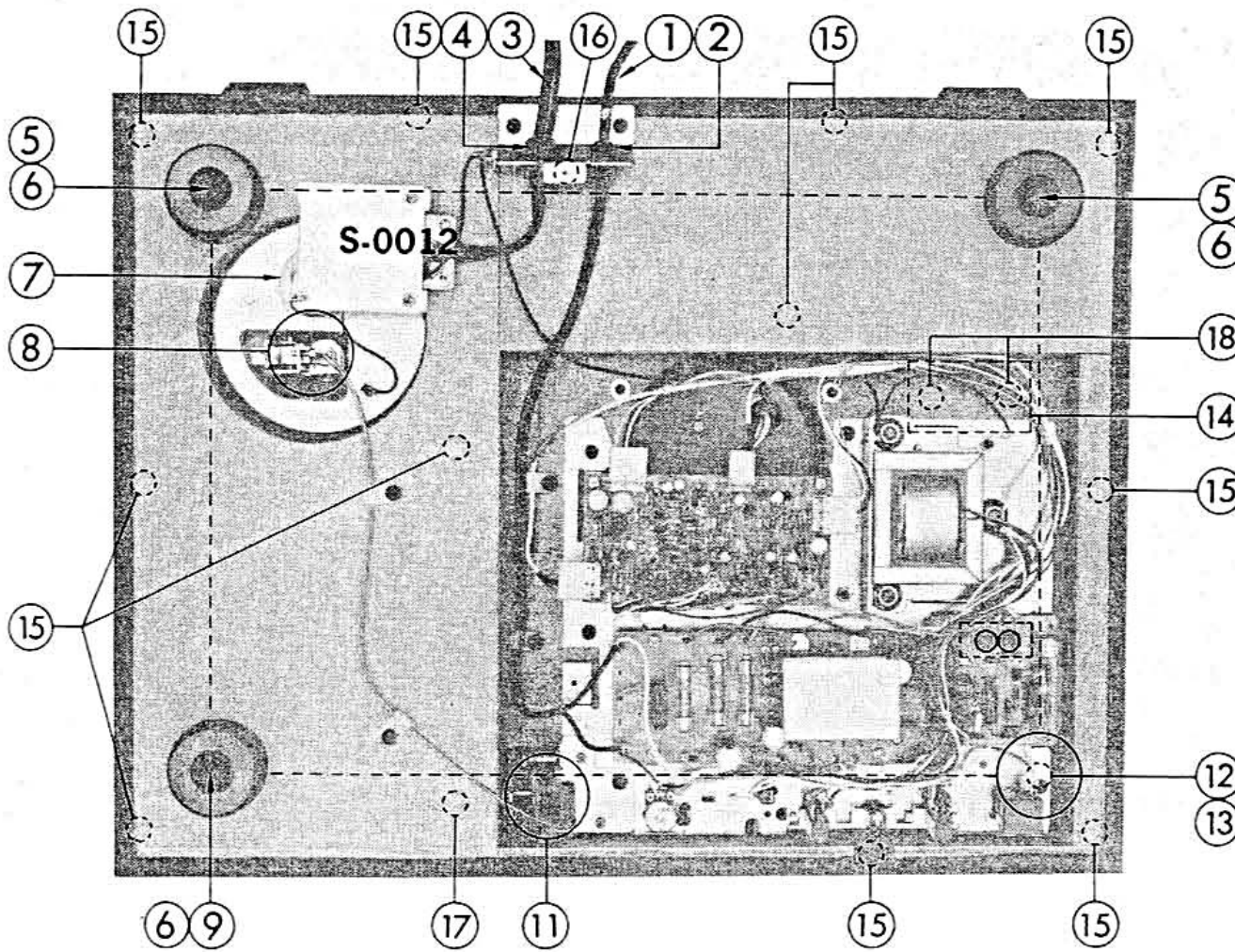
3) Insulators (Rubber Leg on bottom plate)

Since pressure on each insulator differs at each corner, the shape of insulators, spring and fixing screws are different.

In Fig. 5, No. 5, 9, 12 indicate insulators.

3) Bottom View Parts List

Fig. 5



Parts List <SR-636/838 Bottom View>

No.	Parts No.	Stock No.	Description
1	{ 3800420, 1		Power Cord XX, CSA, UL
	{ 3800430		Power Cord BS
2	3910600		Strain Relief (5.2φ), Power Cord
3	3810290		Output Cord
4	3910570		Strain Relief (8.2φ), Output Cord
5	7072040		Insulator (D)
6	5162620		WT Type Screw 3×16, Insulator
7	5172290		Base nut, Arm Base Ass'y
8	7062320		Lifter Mechanical Ass'y
	{ 5242780		Lifter Bracket
	{ 5242760		Lifter Plate
	{ 6903010		Platespring, Lifter
	{ 6903030		Spring, Lifter
9	7072070		Insulator (G)
11	7052400		Lifter Cam Ass'y. (Include control wire)
12	7072030		Insulator (C)
13	5107746		PSB Type Screw, M3×12, Insulator (C)
14	5052120		Selector Cover
15	5108465		WT Type Screw 3×12, Bottom plate
16	5107744		BSB Type Screw M3×6, Bottom plate
17	5108465		PT Type Screw 3×12, Bottom plate
18	5100943		B Type Screw M3×6, Selector Cover

With units sold in U.S.A., Canada and certain European countries, no cartridge is provided.

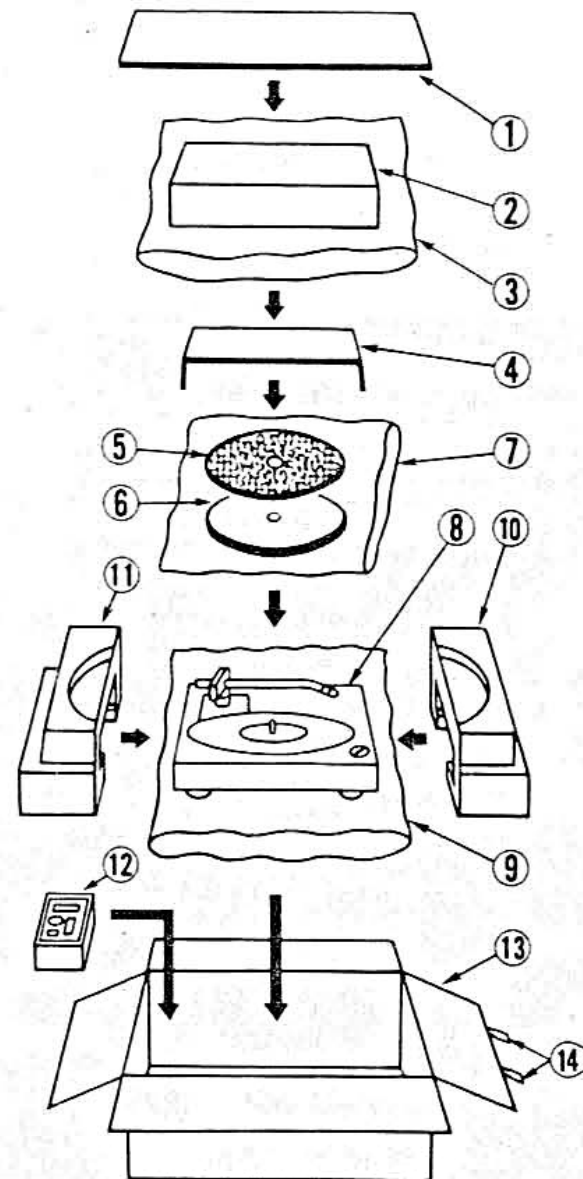
	Cartridge	Remarks
CSA model	None	Stamped E on carton case
UL model	None	Stamped E on carton case
Audio club	None	Stamped E on carton case
BS model	None	Stamped E on carton case
EU model	None	Stamped E on carton case
XX model	SV-43	No marks on carton case

4. PACKING LIST

No.	Parts No.	Stock No.	Description
1	9012280		Protector Sheet, upper
2	7012150		Dust Cover
3	9112220		Polyethylene Bag
4	9012300		Protector Sheet, turntable
5	{ 5502741		Rubber Mat EU, CSA, BS
	{ 5502851		Rubber Mat XX, UL
6	{ 6112191		Turntable (Platter), (SR-636 only)
	{ 6112202		Turntable (Platter), (SR-838 only)
7	9112210		Polyethylene Bag, turntable
8			Turntable Unit
9	9112210		Polyethylene Bag, turntable unit
10	9082093		Styrofoam Packing, front
11	9082102		Styrofoam Packing, back
13	9002680		Carton Case (SR-838 only)
	9002760		Carton Case (SR-636 only)
14	5996080		Curl Stopper

5. ACCESSORY PARTS LIST

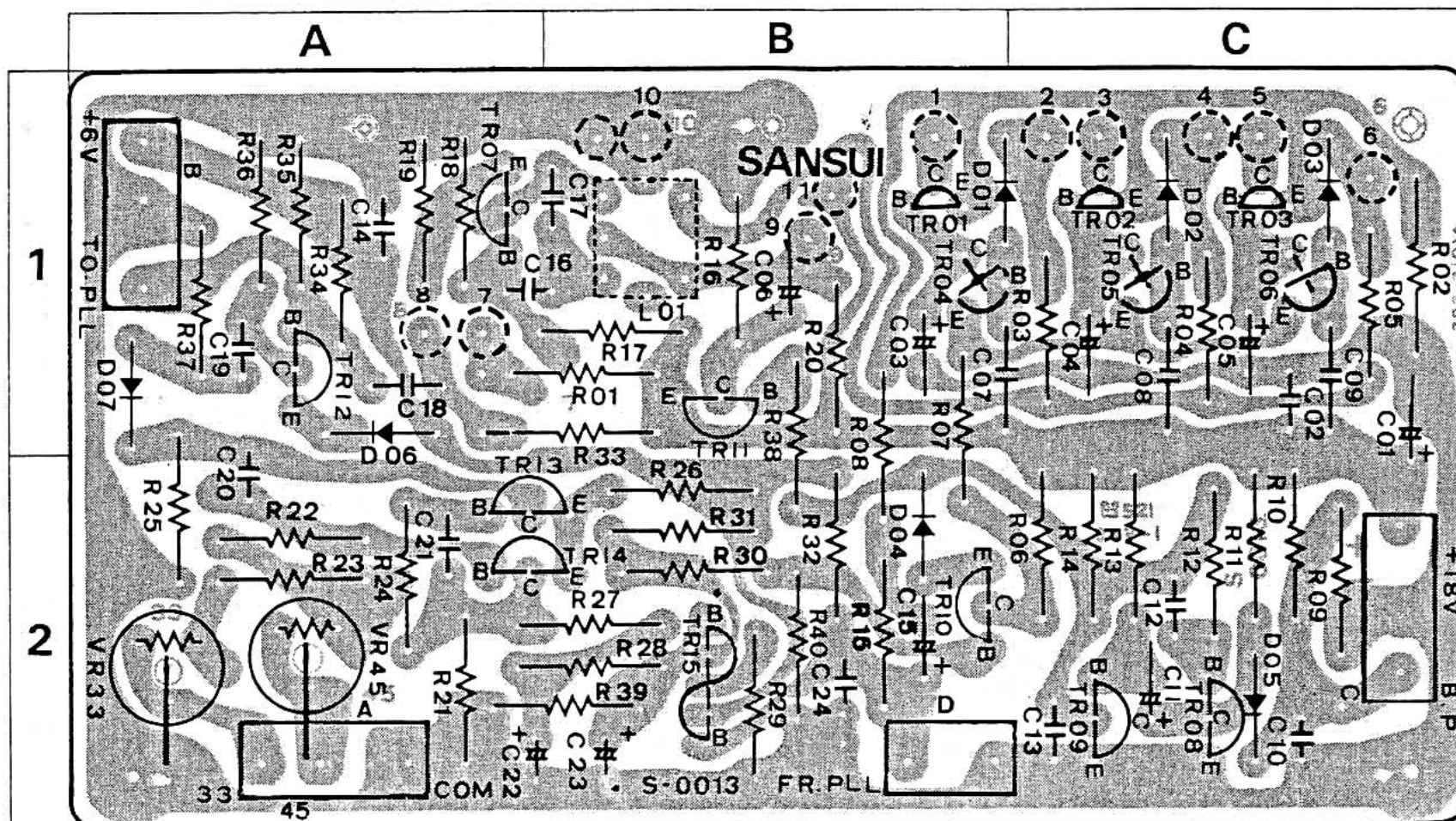
No.	Parts No.	Stock No.	Description
1	5192082		Hexagon Wrench
2	9406022		Polishing Cloth
3	9203050		Operating Instruction (SR-838)
	9203580		Operating Instruction (SR-636)
4	9234140		Schematic Diagram (SR-838)
	9232180		Schematic Diagram (SR-636)



6. PARTS LOCATION & PARTS LIST

Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the common parts list for capacitors & resistors which was appended previously to each Sansui Manual.

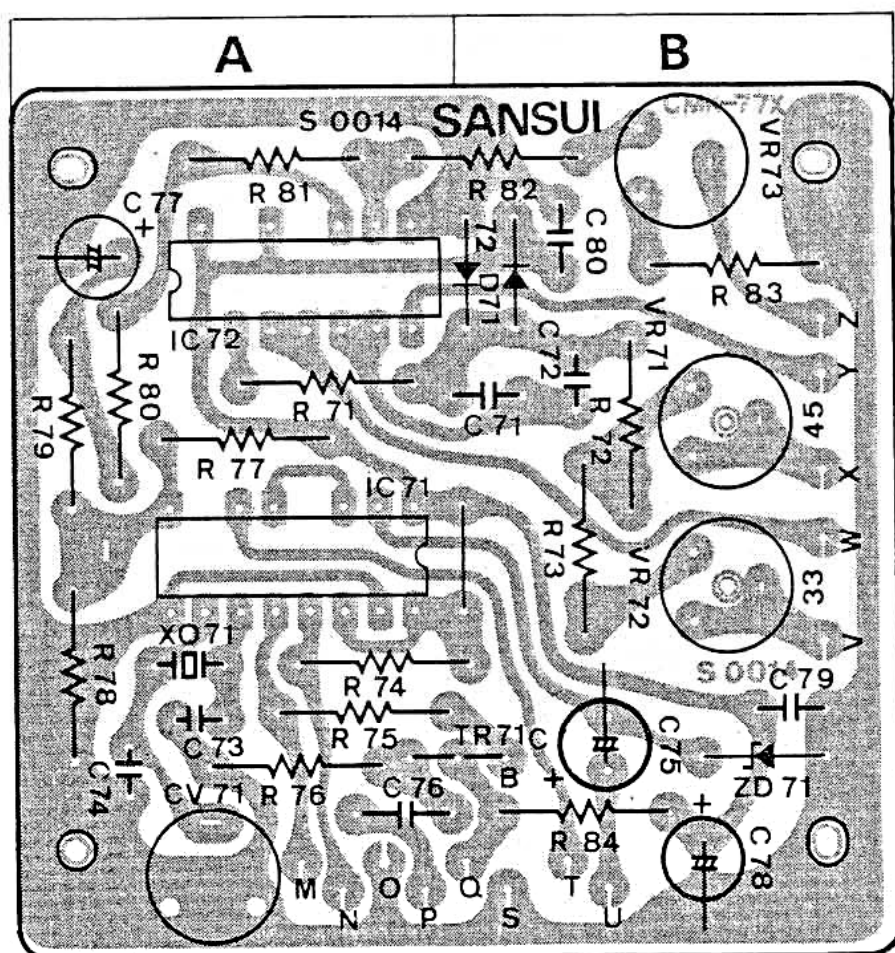
1) S-0013 Motor Control Circuit Board (Stock No. 7595771 SR-636/SR-838)



Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position						
TR01-03	0308590-2	2SD471 (M. L. K)	1B, 1C	C10	0656223	22000pF	2C	R01	0200222	2.2kΩ	1/2W N.I.R.						
TR04-06	0300680, 1	2SA733 (P. Q)	1B, 1C	C14	0656223	22000pF	1A					0200272	2.7kΩ				
TR07-09	0305951-3	2SC945 (Q. P. K)	1A, 1C	C20	0625103	10000pF 50V P.C.	2A							0200332	3.3kΩ		
TR10	0305952	2SC945 (P)	2B	C24	0656223	22000pF 25V C.C.	2B	R02	0200229	2.2Ω	1C						
TR11, 12	0300680, 1	2SA733 (P. Q)	1B, 1A	R01	0200821	820Ω	1/2W N.I.R.	VR33	1035190	100kΩ (B)	2A						
TR13, 14	0300680	2SA733 (P)	2A									0200102	1kΩ	VR45	1035190	100kΩ (B)	2A
TR15		2SC1583 (G)	2B									0200122	1.2kΩ				
D01-07	0311050	1S953 Diode	1B									0200152	1.5kΩ	LD01	0319140	SR106C L.E.D.	
C02	0656223	22000pF 25V C.C.	1C	0200182	1.8kΩ	1B	TR20	0390010	PH101 Transistor								

2) S-0014 PLL Servo Circuit Board (Stock No. 7595371 SR-636) (Stock No. 7595381 SR-838)



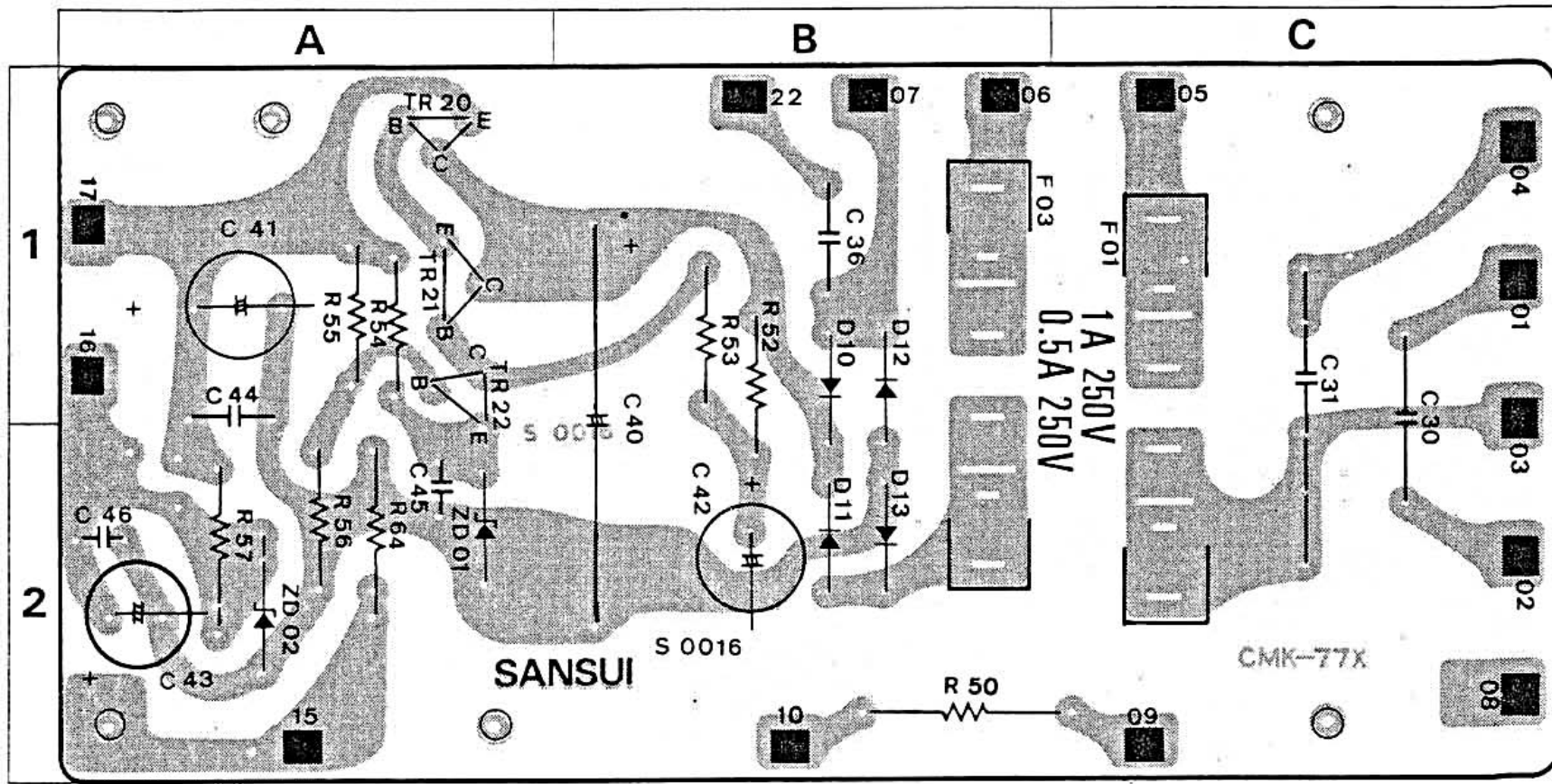
Parts List <SR-636>

Parts No.	Stock No.	Description	Position
IC71	0360560	MSM5810	A
IC72	0360570	MSM4069	
ZD71	0315770	EQA01-06S Zener Diode	B
C79-80	0657223	22000pF 50V C.C.	B
R72	0231334	330kΩ 1/2W M.R.	B
R73	0231154	150kΩ 1/2W M.R.	
VR71, 72	1034360	330kΩ (B)	B
VR73	1035150	22kΩ (B)	B

Parts List <SR-838>

Parts No.	Stock No.	Description	Position
TR71	0305951-3	2SC945 (Q.P.K) Transistor	A, B
IC71	0360560	MSM5810	A
IC72	0360570	MSM4069	
D71, 72	0311050	1S953 Diode	B
ZD71	0315770	EQA01-06S Zener Diode	B
C73	0661220	22pF	A
C74	0669210	10pF	
C79, 80	0657223	22000pF 50V C.C.	B
R72	0231334	330kΩ 1/2W M.R.	B
R73	0231154	150kΩ 1/2W M.R.	
VR71, 72	1034360	330kΩ (B)	B
VR73	1035150	22kΩ (B)	B
TC71	1230060	Trimmer Capacitor	
XO71	0930020	Quartz-element	A

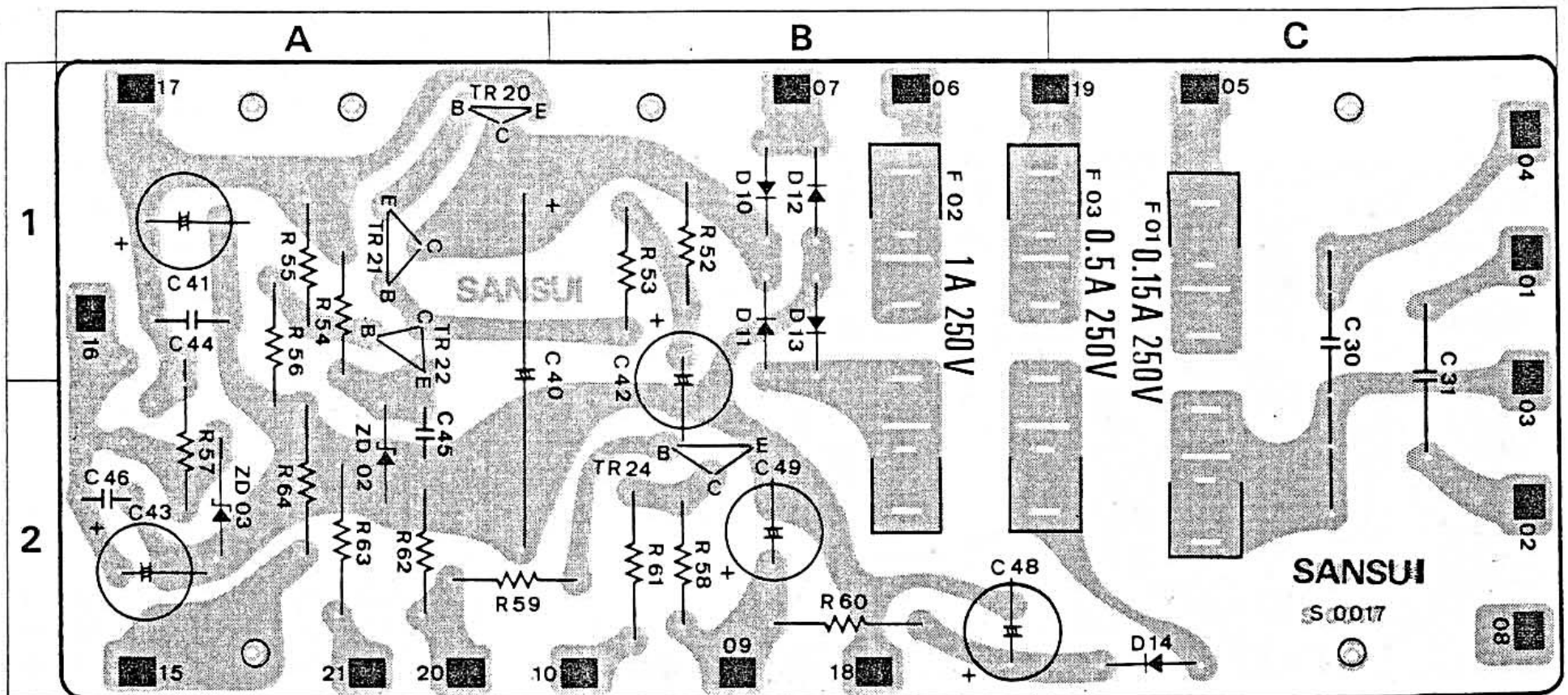
3) S-0016 Power Supply Circuit Board (Stock No. 7502461 XX, 7502463 EU, 7502464 CSA, 7002468 UL, 7502469 BS) (SR-636 only)



Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR20	0308391-3	2SD313AL (D, E, F)	1A	C31	0605337	0.033 μ F 250V M.C.	1C	R57	0211391	390 Ω 1W N.I.R.	2A
TR21	0305951-3	2SC945 (Q, P, K)	1A	C40	0505471	470 μ F 50V E.C.	1, 2B	F01	{0432210	0.5A 250V AC Fuse XX, CSA, UL-1, 2C	
TR22	0306070-2	2SC1313 (F, G, H)	1A	C44	0656473	47000 μ F 25V C.C.	1A		{0432220	80mA 250V AC Fuse EU, BS.	
D10-13	0310340	10D1 Diode	1, 2B	C45, 46	0657223	22000 μ F 50V C.C.	2A	F03	{0432220	1A 250V AC Fuse XX, CSA, UL-1, 2B	
ZD01	0316630	RD5.1E Zener Diode	2A	R50	{0211333	33k Ω 1W N.I.R. EU, BS.	2B		{0435090	800mA 250V AC Fuse EU, BS.	
ZD02	0315580	EQB01-07 Zener Diode	2A		{0211123	12k Ω 1W N.I.R. XX, CSA, UL					

4) S-0017 Power Supply Circuit Board (Stock No. 7502441 XX, 7502443 EU, 7502444 CSA, 7502448 UL, 7502449 BS) (SR-838 only)

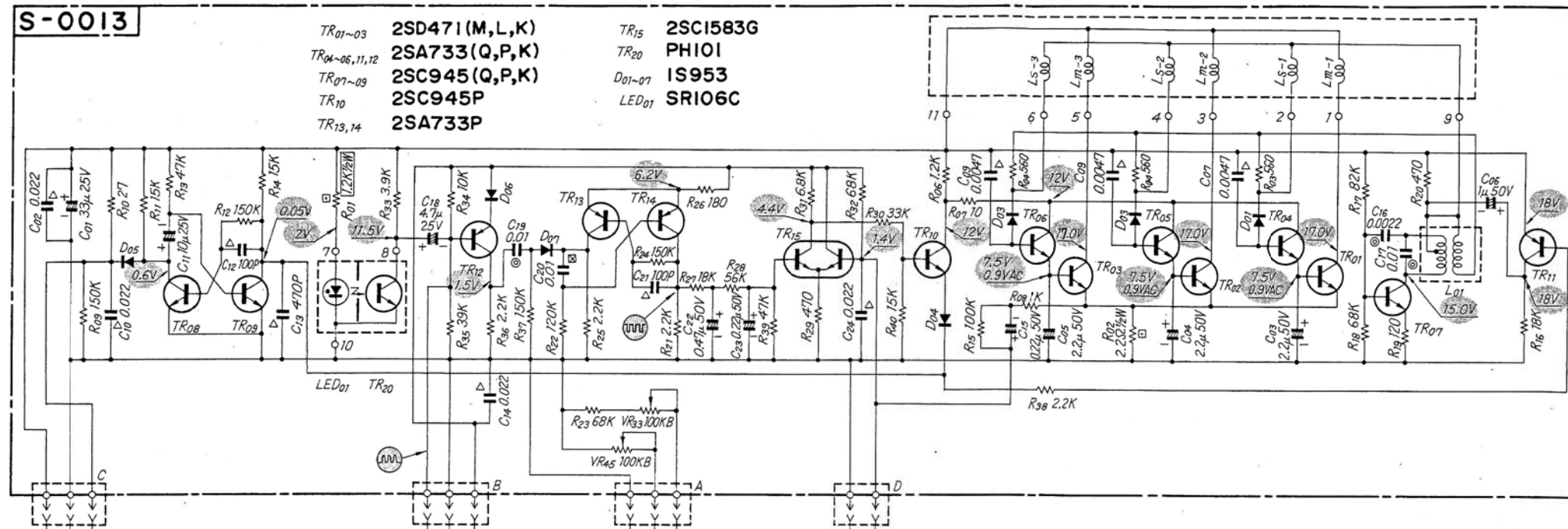


Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR20	0308391-3	2SD313AL (D, E, F)	1A	ZD02	0315580	EQB01-07 Zener Diode	2A	R60	0211122	1.2k Ω	2B
TR21	0305951-3	2SC945 (Q, P, K)	1A	C31	0603337	0.033 μ F 125V M.C.	1, 2C	R61	0211472	4.7k Ω	2B
TR22	0306070-2	2SC1313 (F, G, H)	1A	C40	0505471	470 μ F 50V E.C.	1, 2A	F01	{0432210	0.5A 250V AC Fuse XX, UL, CSA, UL-1, 2C	
TR24	0306521-2	2SC-1439-BV (B, V)	2B	C44	0656473	47000 μ F 25V C.C.	1A		{0435070	500mA 250V AC Fuse EU, BS.	
D10-13	0310340	10D1 Diode	1B	C45, 46	0657223	22000 μ F 50V C.C.	2A	F02	{0432220	1A 250V AC Fuse XX, UL, CSA, UL-1, 2B	
D14	0310350	10D2 Diode	2C	C48, 49	0518100	10 μ F 160V E.C.	2B		{0435090	800mA 250V AC Fuse EU, BS.	
ZD01	0316630	RD5.1E Zener Diode	2A	R57	0200391	390 Ω 1/2W N.I.R.	2A	F03	{0432170	0.15A 250V AC Fuse XX, UL, CSA	
									{0435020	160mA 250V AC Fuse EU, BS.	

7. SCHEMATIC DIAGRAM/1) SR-636

*La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 *Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
 *Design and specifications subject to change without notice for improvements.



SWITCHES & CONTROLS

- S701 POWER SW
- S702a F.G. SPEED SELECTOR
1. 33 1/3 r.p.m 2. 45 r.p.m
- S702b BRAKE CONTROL
1. ON 2. OFF
- S702c P.L.L. SPEED SELECTOR
1. 33 1/3 r.p.m 2. 45 r.p.m
- VR733 33 1/3 r.p.m P.L.L. SPEED ADJ. (FINE)
- VR745 45 r.p.m P.L.L. SPEED ADJ. (FINE)
- VR72 33 1/3 r.p.m P.L.L. SPEED ADJ. (ROUGH)
- VR71 45 r.p.m P.L.L. SPEED ADJ. (ROUGH)
- VR33 33 1/3 r.p.m F.G. SPEED ADJ.
- VR45 45 r.p.m F.G. SPEED ADJ.
- VR73 P.L.L. OUTPUT VOLTAGE ADJ.

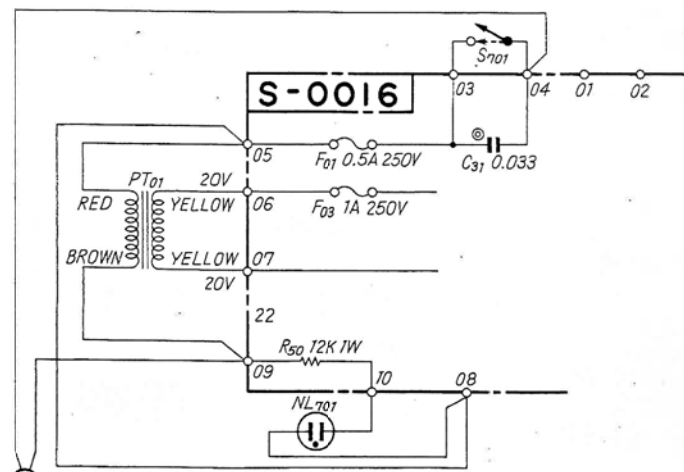
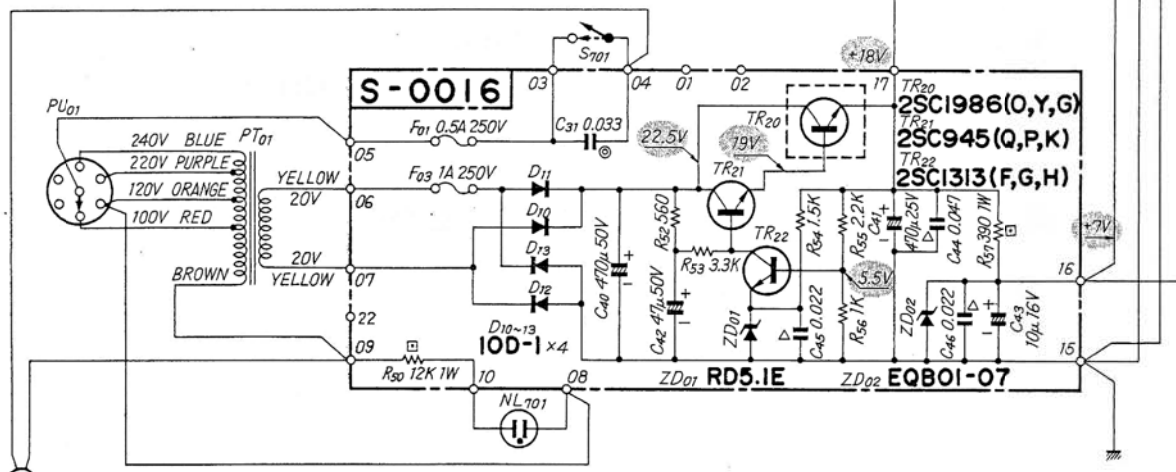
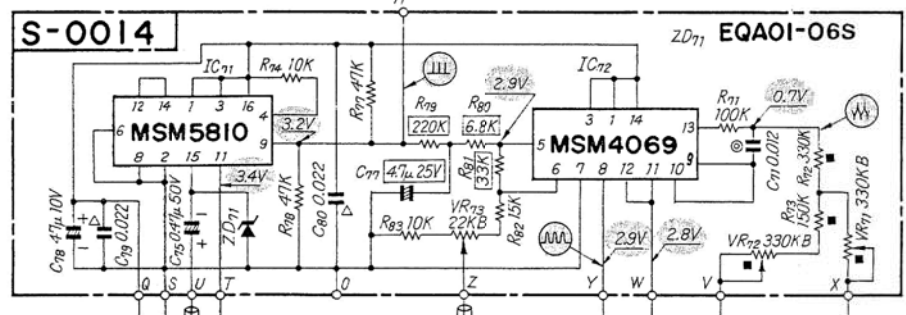
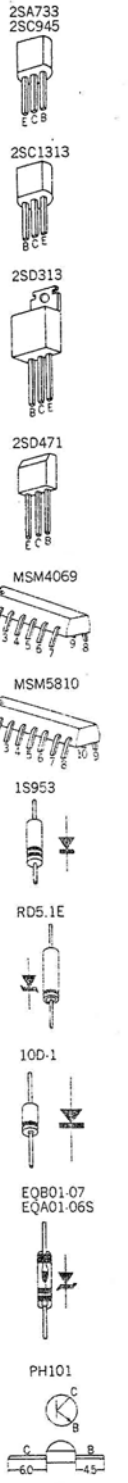
CAPACITORS

Are in μ F, Unless Otherwise Noted.
 Δ CERAMIC ⊙ MYLAR ⊠ STYROL □ ADJ.
 ⊕ TANTALUM ELECTROLYTIC

RESISTORS

Are in ohms, 1/4 Watts, \pm 5% Tolerance
 Unless Otherwise Noted. K:k Ω
 ■ METAL FILM RESISTOR
 ⊞ NON-INFLAMMABLE RESISTOR
 □ ADJ.

Each D.C. Voltage measured by the instruments described below shows the nominal value in volts at 33 1/3 r.p.m.
 Measuring instruments
 Volt Meter DC 20k Ω /V, AC 1k Ω /V
 Oscilloscope 5MHz



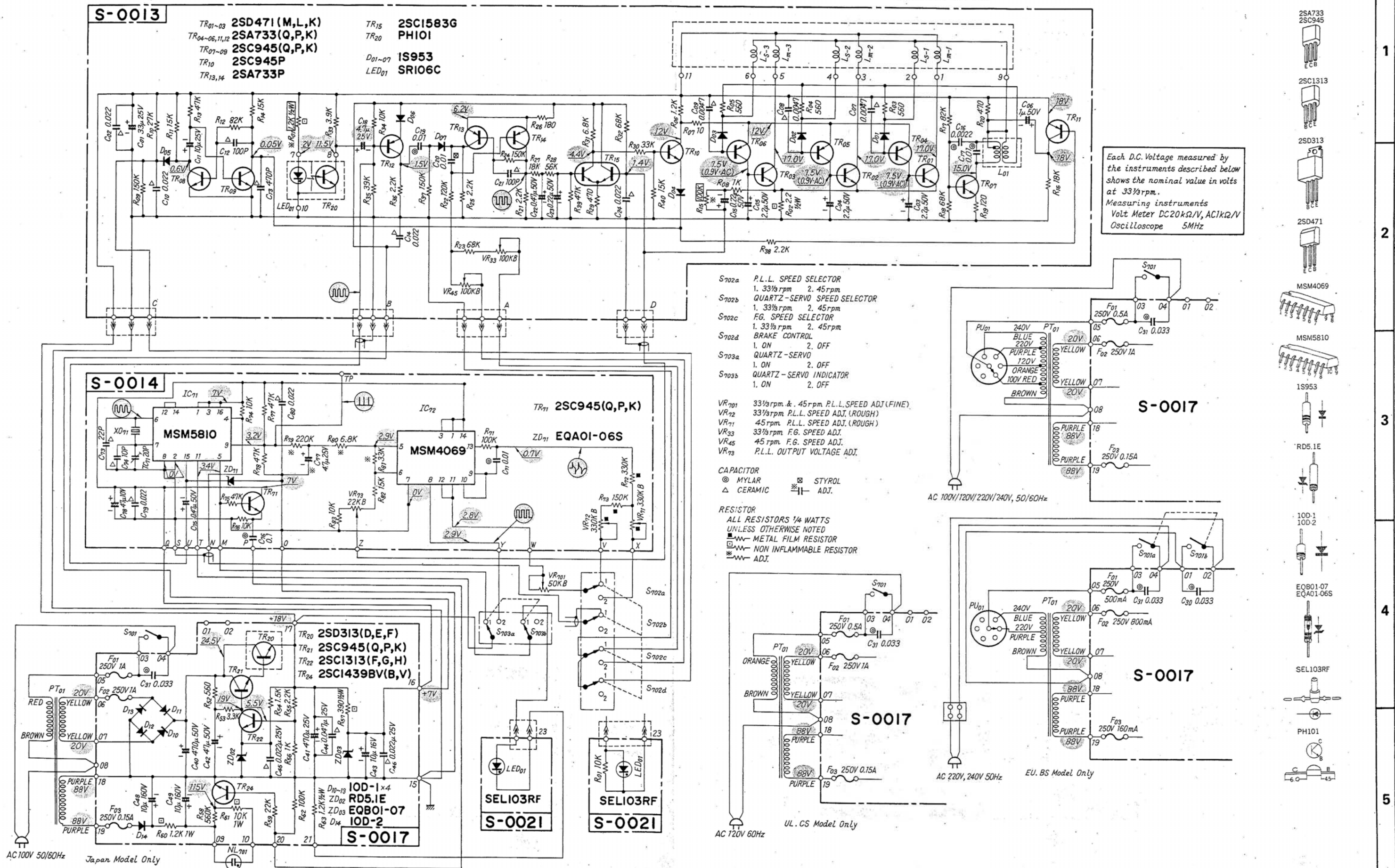
AC 100V/120V/220V/240V, 50/60Hz

AC 120V, 60Hz
 UL, CS Model OnLy

1
2
3
4
5

2) SR-838

* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 * Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.
 * Design and specifications subject to change without notice for improvements.



Each D.C. Voltage measured by the instruments described below shows the nominal value in volts at 33 1/3 rpm.
 Measuring instruments
 Volt Meter DC 20kΩ/V, AC 1kΩ/V
 Oscilloscope 5MHz

- S702a P.L.L. SPEED SELECTOR
 1. 33 1/3 rpm 2. 45 rpm
 - S702b QUARTZ-SERVO SPEED SELECTOR
 1. 33 1/3 rpm 2. 45 rpm
 - S702c F.G. SPEED SELECTOR
 1. 33 1/3 rpm 2. 45 rpm
 - S702d BRAKE CONTROL
 1. ON 2. OFF
 - S703a QUARTZ-SERVO
 1. ON 2. OFF
 - S703b QUARTZ-SERVO INDICATOR
 1. ON 2. OFF
- VR701 33 1/3 rpm & 45 rpm P.L.L. SPEED ADJ. (FINE)
 VR702 33 1/3 rpm P.L.L. SPEED ADJ. (ROUGH)
 VR71 45 rpm P.L.L. SPEED ADJ. (ROUGH)
 VR33 33 1/3 rpm F.G. SPEED ADJ.
 VR45 45 rpm F.G. SPEED ADJ.
 VR73 P.L.L. OUTPUT VOLTAGE ADJ.

- CAPACITOR
 ○ MYLAR ⊠ STYROL
 △ CERAMIC ⊞ ADJ.
- RESISTOR
 ALL RESISTORS 1/4 WATTS
 UNLESS OTHERWISE NOTED
 □ METAL FILM RESISTOR
 ⊞ NON INFLAMMABLE RESISTOR
 ⊞ ADJ.

- 2SA733
- 2SC945
- 2SC1313
- 2SD313
- 2SD471
- MSM4069
- MSM5810
- 1S953
- RD5.1E
- 10D-1
- 10D-2
- EQB01-07
- EQA01-06S
- SEL103RF
- PH101

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AC100V 50/60Hz Japan Model Only

AC 120V 60Hz UL.CS Model Only

AC 220V, 240V 50Hz EU.BS Model Only

8. ADJUSTMENTS

1) SR-838

Please complete these adjustment below when replacing volumes, C, R, and ICs or when the strobo marking pattern would not synchronize despite of turning the adjustment knob on panel. For this adjustment, see the unit horizontally and mount the turntable platter.

A. Adjustment with oscilloscope

STEP	SELECTOR SW	QUARTZ SW	ADJUST	ADJUST FOR	REMARKS
1	33-1/3	ON	VR73 (S0014)	Strobo marking pattern appears to standstill.	
2	33-1/3	ON	VR33 (S0013)	Set the waveform on oscilloscope to adjusted one as Fig. 2.	Connect oscilloscope as Fig. 1.
3	45	ON	VR45 (S0013)	Same as above	Same as above
4	33-1/3	OFF	VR701 (control knob) on panel	Center Position	
5	33-1/3	OFF	VR72 (S0014)	Strobo marking pattern appears to standstill.	
6	45	OFF	VR71 (S0014)	Same as above	

B. Adjustment without oscilloscope

If unable to adjust when QUARTZ switch is turned OFF, complete adjustment (A) instead of (B).

STEP	SELECTOR SW	QUARTZ SW	ADJUST	ADJUST FOR	REMARKS
1	33-1/3	ON	VR73 (S0014)	Strobo marking pattern appears to standstill.	
2	33-1/3	ON	VR33 (S0013)	DC 1.4V	Connect a voltmeter to D terminal on S0013 (Fig. 1).
3	45	ON	VR45 (S0013)	DC 1.4V	Same as above
4	33-1/3	OFF	VR701 (Control knob) on panel	Center position	
5	33-1/3	OFF	VR72 (S0014)	Strobo marking pattern appears to standstill.	
6	45	OFF	VR71 (S0014)	Same as above	

Fig. 1

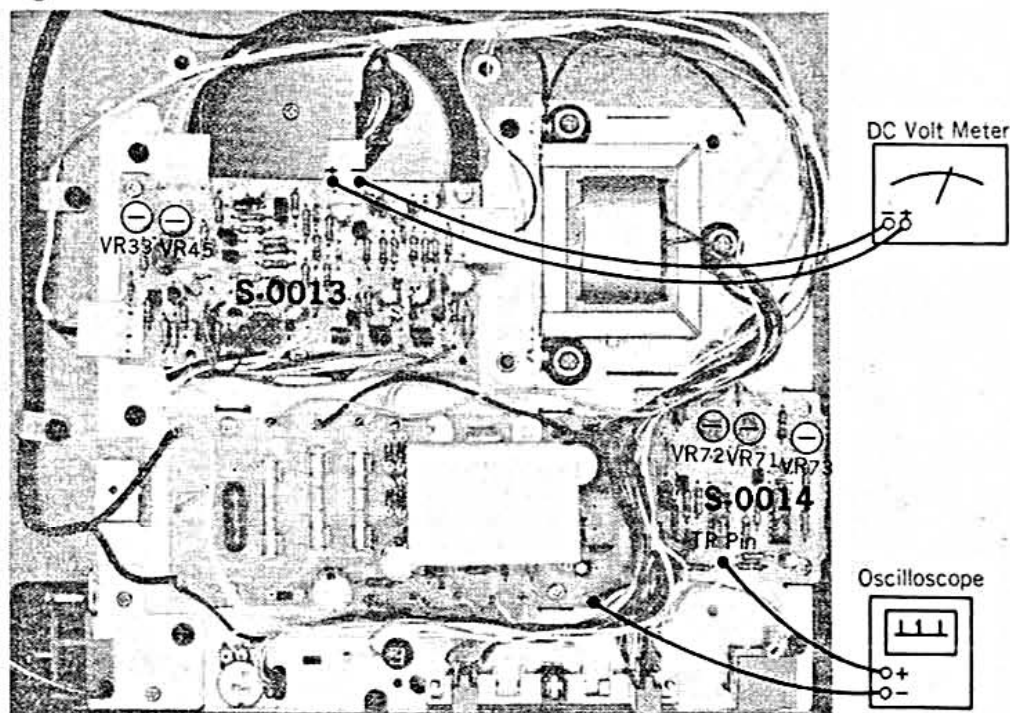
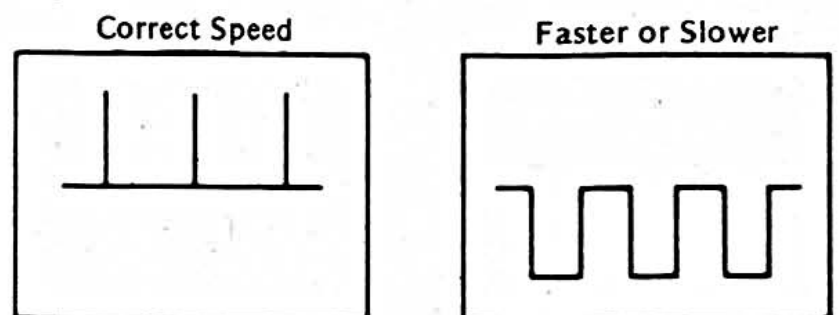


Fig. 2



Waveform on oscilloscope

2) SR-636

For adjustment, set the unit horizontally and attach the turntable platter.

A. Adjustment in case of replacing Parts except IC MSM4069, R71, R72, R73, C71, C72, VR71, VR72, VR733 and VR745 on circuit board S0014.

1) Adjustment with oscilloscope

STEP	SELECTOR SW	ADJUST FOR	ADJUST FOR	REMARKS
1	33-1/3	VR73 (S0014)	Storobo marking pattern appears to standstill.	
2	33-1/3	VR33 (S0013)	Set the waveform on oscilloscope to adjusted one as Fig. 2.	Connect oscilloscope as Fig. 1.
3	45	VR45 (S0013)	Same as above	Same as above

2) Adjustment without oscilloscope

STEP	SELECTOR SW	ADJUST FOR	ADJUST FOR	REMARKS
1	33-1/3	VR73 (S0014)	Storobo marking pattern appears to standstill.	
2	33-1/3	VR33 (S0013)	DC 1.4V	Connect a volt meter to D terminal on S0013 (Fig. 1).
3	45	VR45 (S0013)	DC 1.4V	Same as above

B. Adjustment in case of replacing some from parts of IC MSM 4049, R71, R72, R73, C71, C72, VR71, VR72, VR733 and VR745 on circuit board S0014.

STEP	SELECTOR SW	ADJUST	ADJUST FOR
1	33-1/3	VR733, VR745 (Control knob on panel)	Center position
2	33-1/3	VR72 (S0014)	Storobo marking pattern appears to standstill.
3	45	VR71 (S0014)	Same as above



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