

# SERVICE MANUAL

# SD9020

Since only the unidentical parts between the original model are listed, please use this manual (Flysheet) with the original model SD9000 (U version) service manual accordingly.

## Different Parts between MODEL SD9000 (U) and MODEL SD9020 (N).

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REF. DESIG.	Q'TY		MODEL SD9000 (U)	MODEL SD9020 (N)	DESCRIPTION
	U	N	PART NO.	PART NO.	
A	1	1	4280063400	4280063440	Front Panel Assembly
031B	1	1	2127259010	216H259010	Bushing
901B	1	1	4280063010	4280063030	Escutcheon
902B	2	2	4279118010	4279118050	Spacer
025B	4		59046502G9		Washer
030B	1	1	2127154010	216H154010	Knob Power SW
032B	2		2127115010		Spring
044B	1	1	4278154010	4278154040	Knob Output
045B	2	2	4278154020	4278154050	Knob Record
046B	2	2	4278154030	4278154060	Knob Record
909B	3	3	2970154020	2970154220	Knob, Lever SW

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REF. DESIG.	Q'TY		MODEL SD9000 (U)	MODEL SD9020 (N)	DESCRIPTION
	U	N	PART NO.	PART NO.	
055B	1		4279257010		Lid, Top Cover
944B		1		4279257040	Lid, Top Cover
947B		1		4581861010	Label

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REF. DESIG.	Q'TY		MODEL SD9000 (U)	MODEL SD9020 (N)	DESCRIPTION
	U	N	PART NO.	PART NO.	
926B	1	1	4280160010	4280160030	Bracket Rear Panel
931B	1		1455259030		Bushing
T002	1	1	TS15406240	TS15406250	Power Transformer
W001	1	1	YC02000140	ZC01805030	AC Power Cord
F001		1		FS10080800	Fuse
J005		1		YJ08000290	Jack
J006		1		YP04000610	Plug
J007		1		BY05080010	Voltage Selector

**N.B.** Following precautions should be used when putting order for service manual:

- (1) The original Service manual will not be delivered if the P/N 4280855080 (Flysheet) is used for ordering.
- (2) When comprehensive manual are required, please use both P/N of 4280855010 (Original) and 4280855080 (Flysheet) simultaneously.

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
E	1	1	4279302400	4279302420	Dial Assembly LED Dial, LED Meter
913B	1	1	4279302010	4279302030	
027B	1	1	4279154070	4279154080	Knob, Rec Mute Spacer
034B		1		4279118040	
J001	1	1	YJ01001110	YJ01001120	Jack Mic (L)
J002	1	1	YJ01001110	YJ01001120	Jack Mic (R)
S001	1	1	SP01010280	SP01010410	Push Switch Power
980F		1		59030810P0	Washer
990F		1		4279104020	Retaine
991F		1		51280308B0	B.H. Tapped Screw

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
B	1	1	4279053400	4279053420	Cover Assembly Cover Escutcheon
001B	1	1	4279053010	4279053050	
004B	1	1	4279063050	4279063110	
C	1	1	4280053410	4280053430	Head Cover Assembly Escutcheon (L) Escutcheon (R)
011B	1	1	4279063060	4279063120	
012B	1	1	4279063070	4279063130	
D	1	1	4279063420	4279063440	Escutcheon Assembly Escutcheon
014B	1	1	4279063040	4279063100	
008B	1	1	4279063030	4279063090	Escutcheon

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
T001	1	1	TS16621010	TS16621020	Power Transformer
941F		1		3890160040	Bracket
942F		1		51100306A9	B.H.M. Screw B3 x 6
943F		1		51100306A9	B.H.M. Screw B3 x 6

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
001T	1	1	4279851210	4279851350	Instructions Instructions Circuit Diagram Packing Case Serial No. Card Silicagel
002T	1	1	4280851220	4280851330	
004T		1		4280856010	
901U	1	1	4280801010	4280801030	
905U	2	2	9526019010	9526019030	
910U		1		2731821010	

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
C228	1	1	DF15333300	DF15103350 EA10602530	Film 0.01μF ±5%
C229		1			Elect 10μF 25V

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
R116	1	1	GG05101140	GG05470140	Resistor 47Ω
R119	1	1	GD05562140	GD05472140	Resistor 4.7KΩ
R120	1	1	GD05472140	GD05392140	Resistor 3.9KΩ
R121	1	1	GD05133140	GD05103140	Resistor 10KΩ
R140	1	1	GD05101140	GD05100140	Resistor 10Ω
R152	1	1	GD05821140	GD05820140	Resistor 82Ω
R154	1	1	GD05821140	GD05820140	Resistor 82Ω
R159	1	1		GD05152140	Resistor 1.5KΩ
R179	1	1	GG05101140	GG05470140	Resistor 47Ω
R190	1	1		GD05822140	Resistor 8.2KΩ
R216	1	1	GG05101140	GG05470140	Resistor 47Ω
R219	1	1	GD05562140	GD05472140	Resistor 4.7KΩ
R220	1	1	GD05472140	GD05392140	Resistor 3.9KΩ

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
R221	1	1	GD05133140	GD05103140	Resistor 10KΩ
R240	1	1	GD05101140	GD05100140	Resistor 10Ω
R254	1	1	GD05821140	GD05820140	Resistor 82Ω
R259	1	1		GD05152140	Resistor 1.5KΩ
R279	1	1	GG05101140	GG05470140	Resistor 47Ω
R290	1	1		GD05822140	Resistor 8.2KΩ
R322	1	1	GD05393140	GD05823140	Resistor 32KΩ
R331	1	1		GD05333140	Resistor 33KΩ

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
J303	1	1	YT02040260	YT02050020	Terminal
C518	1	1	DF15472300	DF15152300	Film 0.0015μF ±5%
C519	1	1	DD15330370		Ceramic 33pF ±5%
C527	1	1	DD15330370		Ceramic 33pF ±5%
C531	1	1	EA22601630	EA33601630	Elect 33μF 16V
C536	1	1		EA47602530	Elect 47μF 25V
C537	1	1		DF15103300	Film 0.01μF 50V

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
R506	1	1	GD05562140	GD05102140	Resistor 1KΩ
R525	1	1	GD05152140	GD05333140	Resistor 33KΩ
R545	1	1	GD05681140	GD05561140	Resistor 560Ω
R546	1	1	GD05821140	GD05561140	Resistor 560Ω
R568	1	1	GD05331140	GD05151140	Resistor 150Ω
R600	1	1		GD05103140	Resistor 10KΩ

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
R695	1	1	GD05223140	GD05222140	Resistor 2.2KΩ
R733	1	1		GD05562140	Resistor 5.6KΩ
R734	1	1		GD05104140	Resistor 100KΩ
R735	1	1		GD05133140	Resistor 13KΩ
Q557	1	1	HD10001010	HD10004020	Diode 0A-91
Q558	1	1	HD10001010	HD10004020	Diode 0A-91

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
Q611		1		HD20011050	Diode 1S155
Q612		1		HD20011050	Diode 1S155
Q613		1		HD20011050	Diode 1S155
Q623	1	1	HD10001010	HD10004020	Diode 0A-91
Q624	1	1	HD10001010	HD10004020	Diode 0A-91
L501	1	1	LI10015010	LO10105010	O.S.C. Coil

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
C701	1	1	DF15223350	DF15683350	Film 0.068 $\mu$ F 50V
C702	1	1	EA10505030	EA22505030	Elect 2.2 $\mu$ F 50V
Q776		1		HD20001210	Diode 1S2473
Q777		1		HF100512B0	F.E.T. 2SJ51
CM16	1	1	EA47405030	EA10405030	Elect 1 $\mu$ F 50V

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
RM11	1	1	RA01020300	RA05020180	Resistor 5K $\Omega$
RM44	1	1	GD05104140	GD05473140	Resistor 47K $\Omega$
QM21	1	1	HC452800B0	HC10040060	IC UPD4528C
C424	1	1	EA22802530	EA10802530	Elect 1000 $\mu$ F 25V
C434	1	1	EA47702530	EA47706330	Elect 470 $\mu$ F 630V
C449		1		EA10802530	Elect 1000 $\mu$ F 50V

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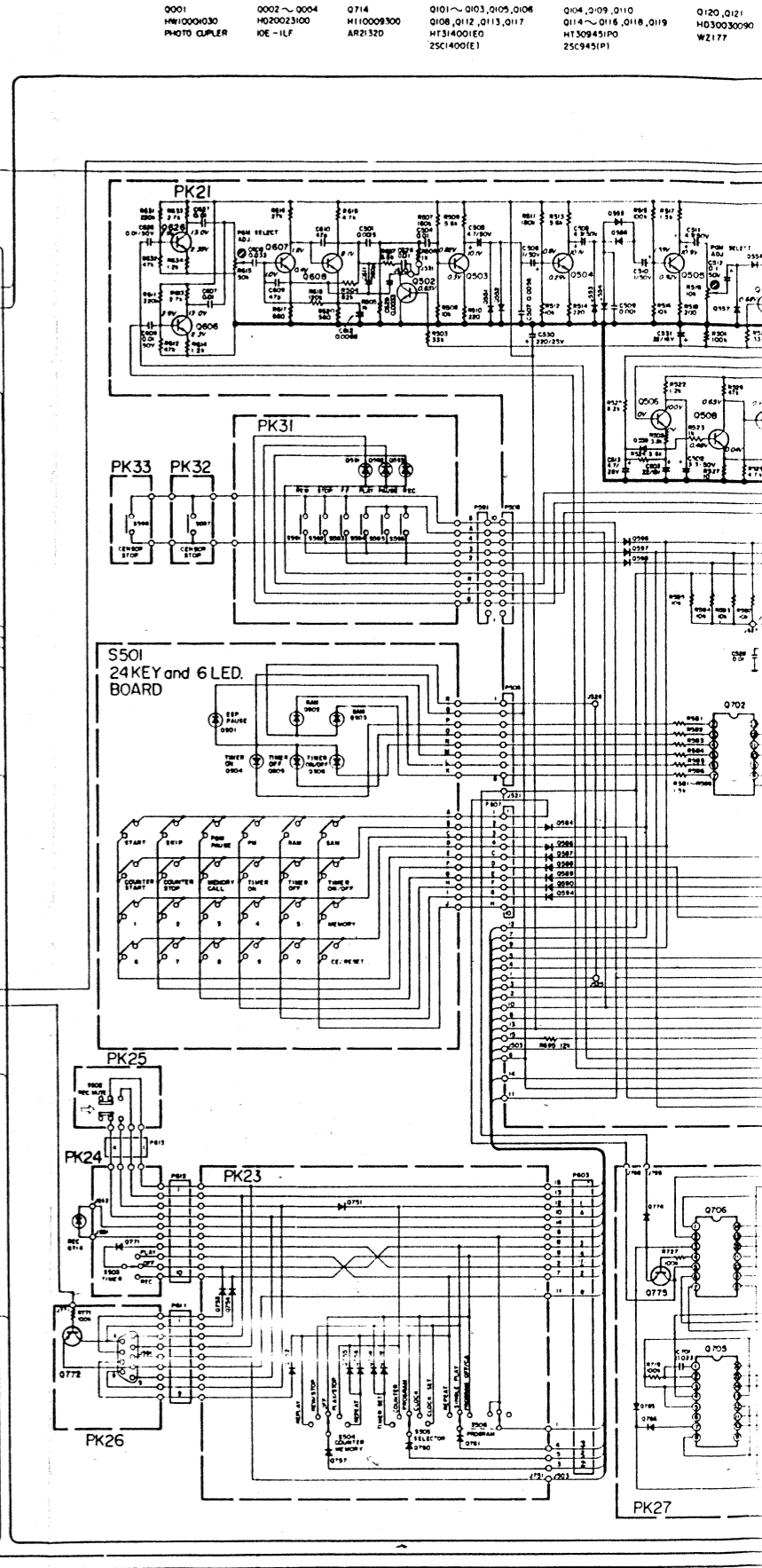
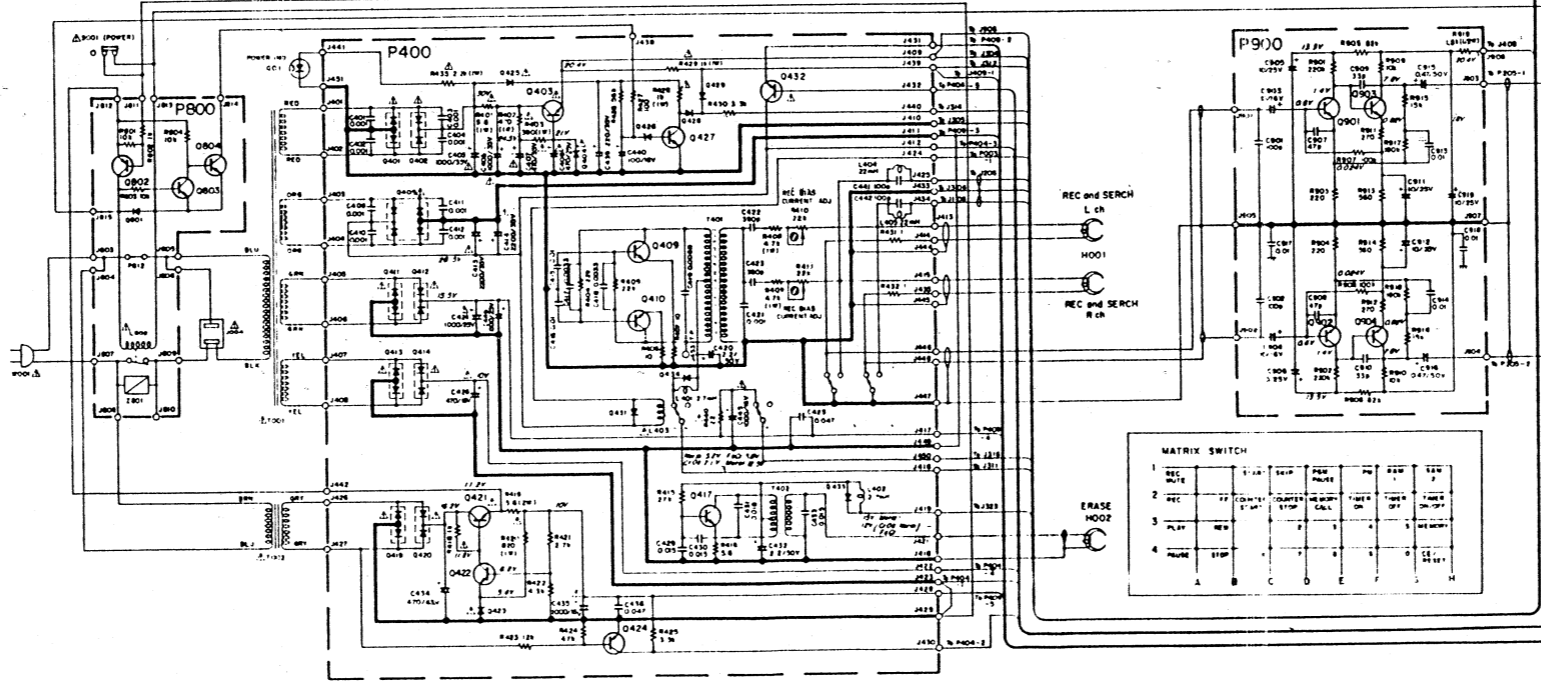
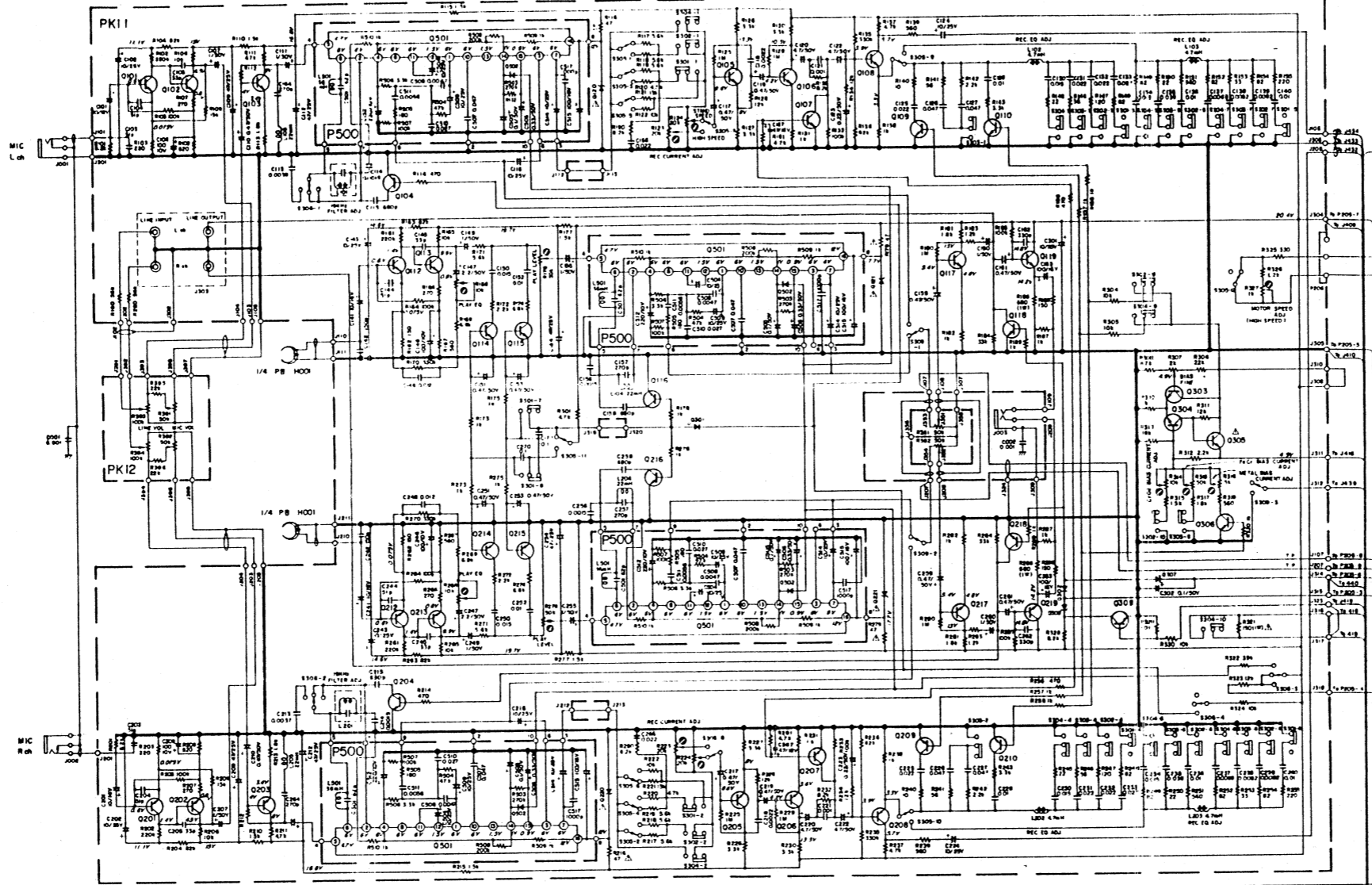
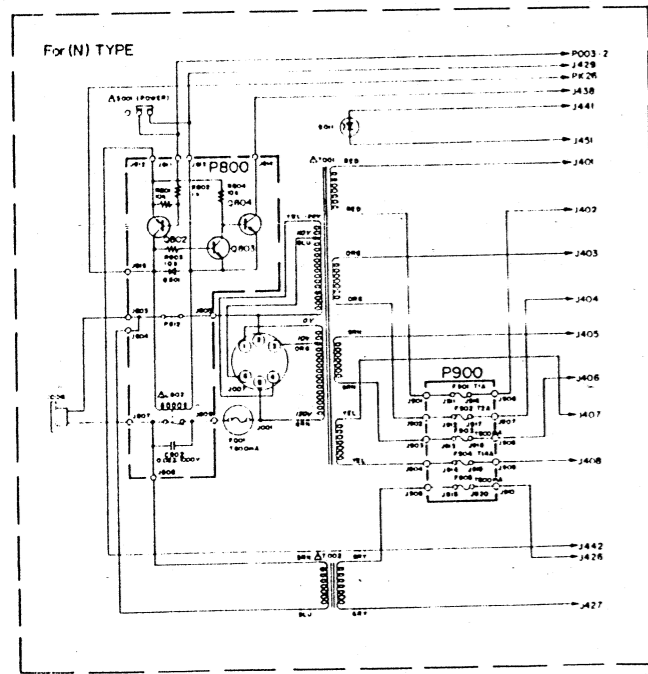
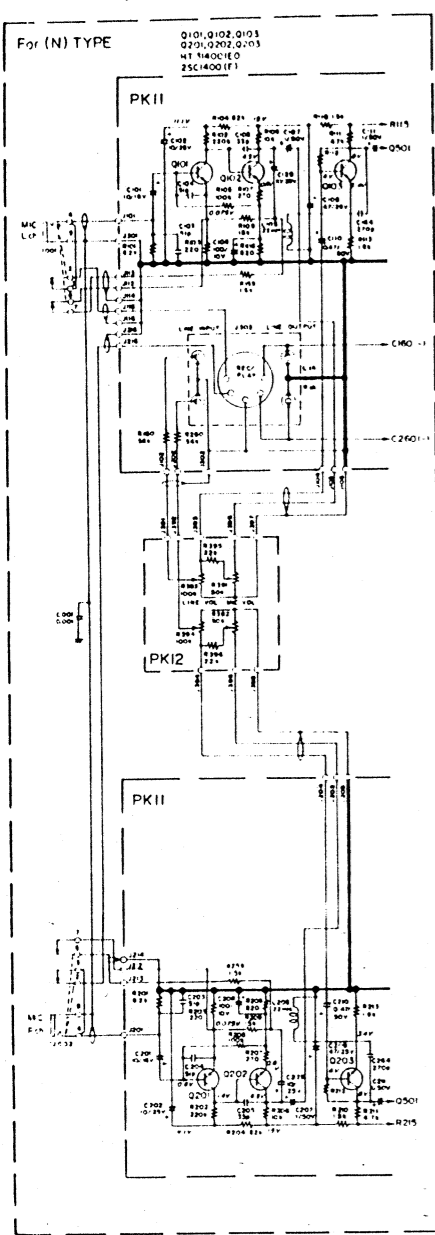
REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
Q421	1	1	HT403131F0	HT407181B0	Transistor 2SD718
C501	4		DD15620360		Ceramic 62pF $\pm$ 5%
C513	4		EA10602530		Elect 10 $\mu$ F 25V
C517		4		DF15102300	Film 0.001 $\mu$ F $\pm$ 5%
R501	4		GD05274140		Resistor 270K $\Omega$
R502	4		GD05564140		Resistor 560K $\Omega$
R508		4		GD05204140	Resistor 200K $\Omega$
R509		4		GD05102140	Resistor 1K $\Omega$
R510		4		GD05102140	Resistor 1K $\Omega$
Q501	4	4	HC10001360	HC10007270	IC NF6468
Q502	4	4	HD20011050	HD20001210	Diode 1S2473

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
C802		1		DF17223800	Film Cap 0.022 $\mu$ F
L802	1	1	LY10120140	LY10120150	Relay G2W-1112V
Z801	1		BF10400030		Cap. Comp Spark Kiler
P900		1		WF42790020	P.W. Board Fuse
F901		1		ZZ42798020	P.W. Board Assembly
F902		1		FS10100800	Fuse 1A
		1		FS10200800	Fuse 2A

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REF. DESIG.	Q'TY		MODEL SD9000 (U) PART NO.	MODEL SD9020 (N) PART NO.	DESCRIPTION
	U	N			
F903		1		FS10080800	Fuse 0.8A
F904		1		FS10140800	Fuse 1.4A
F905		1		FS10080800	Fuse 0.8A
J911		10		YJ08000200	Jack
J920					

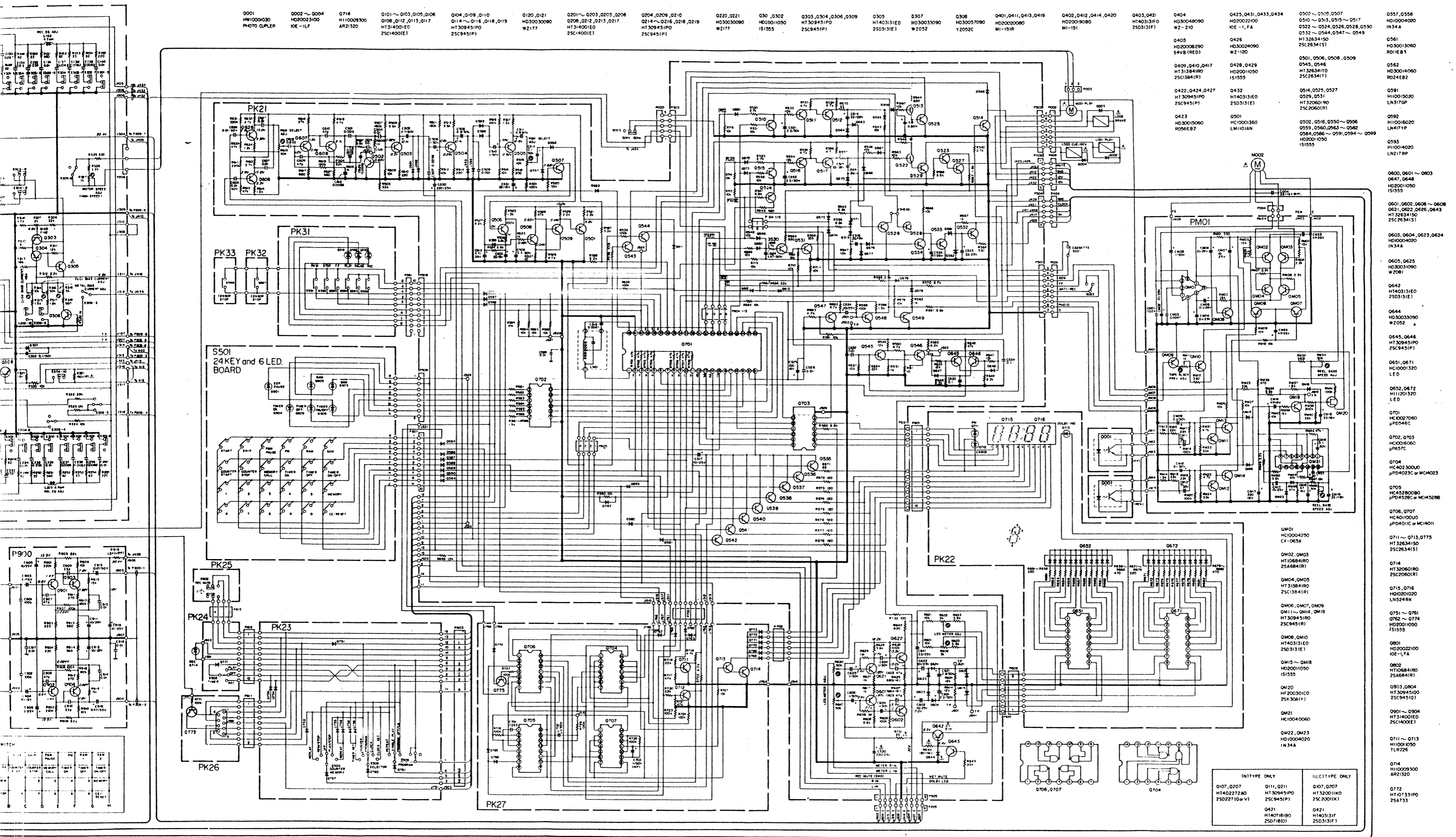


# Model SD 9020

- SWITCHES**  
 S301: TAPE SELECTOR (NORMAL) S304: TAPE SELECTOR  
 S302: TAPE SELECTOR (Special/CrO ) S305: TAPE SELECTOR  
 S303: TAPE SELECTOR (FeCr)

Note on safety: The parts marked with  $\Delta$  are important parts on the safety. Please use the parts having the designated parts number without fail.

Components and wiring are subject to change for modification.



- 0001 PHOTO COUPLER
- 0002~0004 HD20023100 IOE-ILF
- 0714 HI10009300 AR2132D
- 0101~0103, 0105, 0106 0108, 0112, 0113, 0117 HT314001E0 Z5C14001E1
- 0104, 0109, 0110 0114~0116, 0118, 0119 HT309451P0 Z5C9451P1
- 0120, 0121 HD30030090 WZ177
- 0201~0203, 0205, 0206 0208, 0212, 0213, 0217 HD30030090 WZ177
- 0204, 0209, 0210 0214~0216, 0218, 0219 HT309451P0 Z5C9451P1
- 0220, 0221 HD30030090 WZ177
- 030, 0302 HD10011050 IS1555
- 0303, 0304, 0306, 0309 HT309451P0 Z5C9451P1
- 0305 HT403131E0 Z5D3131E1
- 0307 HD30033090 WZ052
- 0308 HD30057090 YZ052C
- 0401, 0411, 0413, 0419 HD20020080 MI-151R
- 0402, 0412, 0414, 0420 HD20019080 MI-151
- 0403, 0421 HT403131F0 Z5D3131F1
- 0404 HD30048090 WZ-210
- 0405 HD20008290 54VB (RED)
- 0409, 0410, 0417 HT313841R0 Z5C13841R1
- 0422, 0424, 0427 HT309451P0 Z5C9451P1
- 0423 HD30015060 RD56E2
- 0425, 0431, 0433, 0434 HD20022100 WZ-120
- 0428, 0429 HD20011050 IS1555
- 0432 HT320601R0 Z5C20601R1
- 0433 HT403131E0 Z5D3131E1
- 0501 HC1001360 LM101AN
- 0501, 0506, 0508, 0509 0545, 0546 HT326341T0 Z5C26341T1
- 0501, 0506, 0508, 0509 0545, 0546 HT326341T0 Z5C26341T1
- 0514, 0525, 0527 0529, 0531 HT320601R0 Z5C20601R1
- 0502, 0518, 0550~0556 0559, 0560, 0563~0562 0584, 0586~0591, 0594~0599 HD20011050 IS1555
- 0557, 0558 HI10004020 IN34A
- 0561 HD30013060 RO1E3
- 0562 HD30014060 RD24E2
- 0591 HI10015020 LN317GP
- 0592 HI10016020 LN4177P
- 0593 HI10014020 LN217RP
- 0600, 0601~0603 0647, 0648 HD20011050 IS1555
- 0601, 0602, 0606~0608 0621, 0622, 0626, 0643 HT32634150 Z5C2634151
- 0603, 0604, 0623, 0624 HD10004020 IN34A
- 0605, 0625 HD30031090 WZ061
- 0642 HT403131E0 Z5D3131E1
- 0644 HD30033090 WZ052
- 0645, 0646 HT309451P0 Z5C9451P1
- 0651, 0671 HC1000320 LED
- 0652, 0672 HI11201320 LED
- 0701 HC10027060 JPD546C
- 0702, 0703 HC10016060 JPA57C
- 0704 HC40230000 JPD4023C or MC4023
- 0705 HC40280080 JPD4528C or MC4528B
- 0706, 0707 HC40100000 JPD401C or MC4011
- 0711~0713, 0775 HT32634150 Z5C2634151
- 0714 HT320601R0 Z5C20601R1
- 0715, 0716 HD10201020 LN524RK
- 0751~0751 OM11~OM16, OM19 HT309451P0 Z5C9451P1
- 0752~0774 HD20011050 IS1555
- 0801 HD20022100 IOE-ILF
- 0802 HT106841R0 Z5A6841R1
- 0803, 0804 HT309451P0 Z5C9451P1
- 0901~0904 HT314001E0 Z5C14001E1
- 0711~0713 HI10011050 TLR226
- 0714 HI10009300 AR2132D
- 0772 HT107331P0 Z5A733

- SWITCHES
- S301: TAPE SELECTOR (NORMAL)
  - S302: TAPE SELECTOR (Special/CrO)
  - S303: TAPE SELECTOR (FeCr)
  - S304: TAPE SELECTOR (Metal)
  - S305: TAPE SPEED SWITCH (STANDARD)

INTEGRATED CIRCUIT ONLY		DISCRETE COMPONENT ONLY	
0107, 0207 HT402222A0 Z5D2222(A or V)	0111, 0211 HT309451P0 Z5C9451P1	0107, 0207 HT320011K0 Z5C2001K1	
	0421 HT407181B0 Z5D7181B1	0421 HT403131F0 Z5D3131F1	

Components and wiring are subject to change for modification without notice.

M7503

## MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ Company has created the ultimate in stereo sound. Only original MARANTZ parts can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ stereo are generally available within 72 hours throughout the nation via a toll-free line to our National Parts Depot in California. The sales professionals who take your call immediately refer to their own desk top computer terminal and can quickly determine the availability and price information you require. If for some reason, your order should exceed our available stock, we usually can instantly provide an alternate replacement part or current delivery information. When the order is placed and confirmed, the computer simultaneously generates "hard copy" orders at the distribution center. As hard copies come directly from the computer to the national parts depot, your requested stock is assembled and prepared for shipment and placed on the first available carrier for delivery to you.

### ORDERING PARTS

Phone orders will eliminate mail delays, and we encourage the use of this method. If you order by mail, use MARANTZ parts order forms which are available from our National Parts Depot located at the following address:

SUPERSCOPE NATIONAL PARTS DEPARTMENT  
20525 Nordhoff Street  
Chatsworth, California 91311  
Phone: 1-800-423-5108  
1-213-998-9333

The following information must be supplied to eliminate delays in processing your order:

1. Complete address.
2. Complete part numbers.
3. Complete description of parts.
4. Model number for which part is required (indicate MARANTZ).
5. Account number (for account customers only).

Direct consumers will be provided with the current retail price quotation on available parts in order to advise them of the cost of the parts and shipping.

### OVERSEAS PARTS ORDERING

Parts may also be ordered from the following overseas addresses:

#### CANADA

Superscope Canada, Ltd.  
3710 Nashua Drive  
Mississauga  
Ontario, Canada L4V1M5

#### AUSTRALIA

Superscope (Australasia) Pty., Ltd.  
32 Cross Street (P.O. Box 604)  
Brookvale 2100 N.S.W.  
Australia

#### JAPAN

Marantz Japan, Inc.  
3622 Kamitsuruma  
Sagamihara Shi  
Kanagawa, Japan

#### EUROPE

Superscope Europe, S.A.  
Avenue Leopold III, 2  
7120 Perennes-Lez-Binche  
Belgium

Marantz France  
Rue Louis Armand 9  
92600 Asnieres  
Hauts-de-Seine  
France

Marantz Audio U.K. Ltd.  
London Road, 203  
Staines  
Middlesex  
England

Superscope GmbH  
Max-Planck-Strasse 22  
D-6072 Dreieich 1  
West Germany

All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.



## 1. P.W. BOARD

As can be seen from the circuit diagram, the chassis, of the Model SD9000 consists of following units. Each unit mounted on a printed circuit board is described with in the square enclosed by bold dotted line on the circuit diagram.

Pre-Amp	.....	mounted on P.W. Board	PK11
Mic & Line Vol	.....	mounted on P.W. Board	PK12
Output Vol	.....	mounted on P.W. Board	PK13
Power Supply	.....	mounted on P.W. Board	P400
Computer	.....	mounted on P.W. Board	PK21
Remote Jack	.....	mounted on P.W. Board	PK26
Digital & Meter LED	.....	mounted on P.W. Board	PK22
Program Selector	.....	mounted on P.W. Board	PK23
Program	.....	mounted on P.W. Board	PK27
Timer Switch	.....	mounted on P.W. Board	PK24
Rec Mute Switch	.....	mounted on P.W. Board	PK25
Timer Relay	.....	mounted on P.W. Board	P800
Photo Cuppler	.....	mounted on P.W. Board	P001
Mecha Logic Switch	.....	mounted on P.W. Board	PK32
(Safety Switch)			PK33
FF. Rew Governor	.....	mounted on P.W. Board	PM01
Music Interval			
Detector	.....	mounted on P.W. Board	P900
Dolby	.....	mounted on P.W. Board	P500

## 2. PHASE COMPENSATOR ADJUSTMENT

### SETUP

1. Power voltage: - 50/60 Hz
2. Input level: - 1 kHz, -60 dB (square wave)
3. Input terminal: - MIC
4. Tape speed selector switch: - HIGH
5. Dolby: - OFF
6. MPX: - OFF
7. Output: - Line Out (connect oscilloscope)

### PROCEDURE

1. Set the tape in recording mode.
2. Depress the pause button to set the tape in REC-PAUSE mode.
3. Adjust the MIC volume control until the LED meter indicates 0 VU.
4. Reduce the MIC input level by 10 dB (-70 dB).
5. Under this condition, release the REC-PAUSE mode and start recording. Play the recorded tape and adjust R183 and R283 until the waveform shown below is obtained. If required, repeat recording and playback.

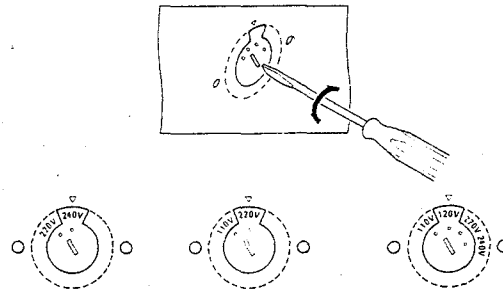


## 3. VOLTAGE CONVERSION FOR EUROPEAN MODEL

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

### CAUTION:

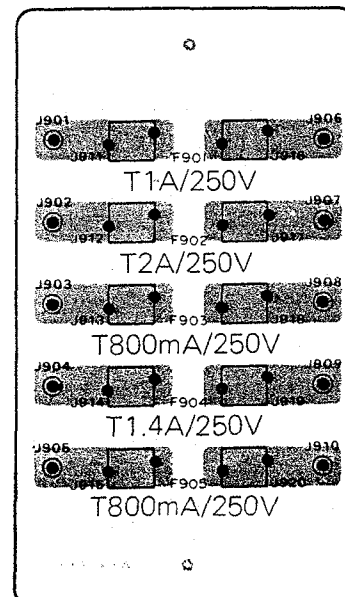
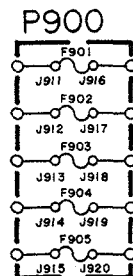
**DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE. DO NOT DISASSEMBLE THE VOLTAGE SELECTOR ABSOLUTELY.**



### Note on safety:

The parts marked with  $\triangle$  are important parts on the safety. Please use the parts having the designated parts number without fail.

## 4. FUSE ASSEMBLY (P900) SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS (N Version only)

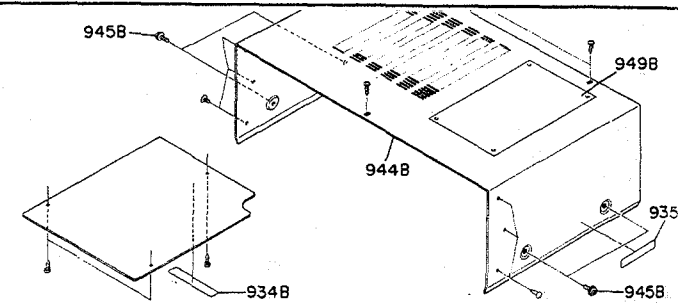


[P01-99] Front Panel (Page 51)

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N				U	C	N		
A	1	1		4280063400	Front Panel Assembly	044B	1	1		4278154010	Knob, Output
A1			1	4280063430	Front Panel Assembly	044B			1	4279154010	Knob, Output
026B	1	1	1	4276259010	Bush, Rec Mute	909B	3	3	3	2970154024	Knob, Lever Switch
031B	1	1	1	2127259010	Bush, Power Switch						
040B	2	2	2	2112259030	Bush, Tape Selector						
901B	1	1		4280063013	Escutcheon, Front Panel						
901B			1	4280063020	Escutcheon, Front Panel						
902B	2	2	2	4279118010	Spacer						
910B	1	1	1	4280107010	Sheet, Lever Switch						

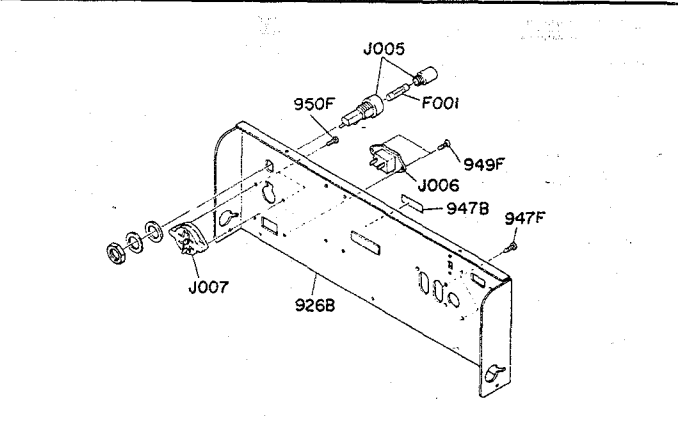
[P04-99] Top Cover and Main Chassis (Page 52)

934B			1	3889861010	Label						
935B	1		1	2932861012	Label						
944B	1	1	1	4279257012	Lid, Top Cover						
945B	4	4	4	51480406S9	F. Washer Screw	F4 x 8					
949B	1			4279107013	Sheet						



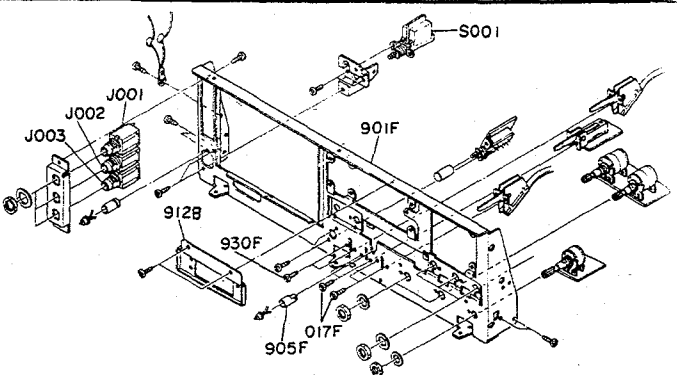
[P06-99] Rear Panel (Page 53)

926B	1	1		4280160014	Bracket, Rear Panel						
926B			1	4280160020	Bracket, Rear Panel						
947B			1	4581861010	Label, "Made in Japan"						
935F	1	1	1	4279109042	Shield						
947F			2	51280308U0	B.H. Tapped Screw	B3 x 8					
949F			2	51500308U0	F.H. Tapped Screw	F3 x 8					
950F			2	51280310U0	B.H. Tapped Screw	B3 x 10					
△ F001			1	FS10080800	Fuse, 0.8A						
△ J005			1	YJ08000290	Jack, Fuse Holder						
△ J006			1	YP04000610	Plug, AC Inlet						
△ J007			1	BY05080013	Voltage Selector						
△ T002			1	TS15406250	Power Transf., Back up						



[P03-99] Front Bracket (Page 54)

912B	1	1	1	4279303012	Mask						
017F	4	4	4	51100306A9	B.H.M. Screw	B3 x 6					
901F	1	1	1	4279160013	Bracket, Front Chassis						
905F	1	1	1	4279271012	Holder, Timer LED						
930F	2	2	2	51100306A9	B.H.M. Screw	B3 x 6					
J001			1	YJ01001120	Jack, Mic (L)						
J002			1	YJ01001120	Jack, Mic (R)						
△ S001			1	SP02010440	Push Switch, Power						



[P02-99] Associated Mechanism for Cassette Tape Operation (Page 55)

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION	REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N				U	C	N		
B	1	1	1	4279053400	Co'ver Assembly	D	1	1	1	4279063420	Escutcheon Assembly
001B	1	1	1	4279053016	Cover, Mechanism	014B	1	1	1	4279063042	Escutcheon
002B	2	2	2	65010306G0	Dodge Insert, S	015B	1	1	1	4279259010	Bush
003B	2	2	2	4279353010	Ring, Reel	904B	1	1	1	4279158063	Window, Azimuth Cover
004B	1	1	1	4279063053	Escutcheon, Cassette						
005B	1	1	1	4279274010	Reflector						
C	1	1	1	4280053410	Head Cover Assembly						
011B	1	1	1	4279063060	Escutcheon, Head Cover (L)						
012B	1	1	1	4279063070	Escutcheon, Head Cover (R)						
903B	1	1	1	4279053033	Cover, Head						

[P05-99] P.W. Board and General Parts (Page 56)

053F	2	2	2	51280410B0	B.H. Tapped Screw B4 x 10	
907F	1	1	1	4279109022	Shield	
910F	2	2	2	4279160082	Bracket	
941F				3890160040	Bracket	
942F				51100306A9	B.H.M. Screw B3 x 6	
943F				51100306A9	B.H.M. Screw B3 x 6	
965F	2	2	2	4280115010	Spring	
Δ T001	1			TS16621010	Power Transformer	
Δ T001		1		TS16621040	Power Transformer	
Δ T001			1	TS16621020	Power Transformer	

[H01-99] Packing Materials (Page 61)

001T	1	1		4279851210	Instructions	002V	1	1	1	4136071010	Cleaner
001T	1	1	1	4279851310	Instructions	003V	1	1	1	9011325010	Polyethylene Bag
002T	1	1		4280851220	Instructions	Δ W001			1	ZC01805020	AC Power Cord, 1.8m
002T			1	4280851320	Instructions	Z001	2	2	2	ZD01000170	Connective Cord
003T	1			2818854027	Guarantee Card						
003T			1	2918813012	Envelope						
003T			1	4280851350	Instructions						
004T			1	9630000180	Guarantee Card						
004T			1	4280856010	Circuit Diagram						
005T	1			9013025010	Polyethylene Bag						
005T			1	9650000053	S. Station Card						
006T			1	2818854043	Guarantee Card						
006T	1			102H851040	Instructions						
007T			1	9013025010	Polyethylene Bag						
001U	2	2	2	4279809010	Cushion						
003U	1	1	1	4279269010	Protector						
901U	1	1		4280801010	Packing Case						
901U			1	4280801020	Packing Case						
902U	1	1	1	2864804010	Sleeve						
903U	1	1	1	2918107150	Sheet						
905U	2			9526109010	Serial No. Card						
905U		2		9526109020	Serial No. Card						
905U		2		9526109030	Serial No. Card						
906U	1	1	1	9090909040	Polyethylene Sheet						
908U		2		9510901020	Label, Address						
910U			1	2731821012	Silicagel						

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
PK11	1	1	1	YK42801312	<b>PK11-PRE-AMP</b> P.W. Board, Pre-Amp
	1	1		ZZ42801310	P.W. Board Assembly
			1	ZZ42808310	P.W. Board Assembly
<b>PK11-CAPACITORS</b>					
C126	1	1		DF15473300	Film 0.047 $\mu$ F $\pm$ 5%
C126			1	DF15823300	Film 0.082 $\mu$ F $\pm$ 5% 50V
C127	1	1		DF15473300	Film 0.047 $\mu$ F $\pm$ 5%
C127			1	DF15563300	Film 0.056 $\mu$ F $\pm$ 5% 50V
C166	1	1		DF15223300	Film 0.022 $\mu$ F $\pm$ 5% 50V
C221	1	1		DF15122300	Film 1200pF $\pm$ 5%
C221			1	DF15102300	Film 1000pF $\pm$ 5% 50V
C226	1	1		DF15473300	Film 0.047 $\mu$ F $\pm$ 5%
C226			1	DF15823300	Film 0.082 $\mu$ F $\pm$ 5% 50V
C227	1	1		DF15473300	Film 0.047 $\mu$ F $\pm$ 5%
C227			1	DF15563300	Film 0.056 $\mu$ F $\pm$ 5% 50V
C228	1	1	1	DF15103300	Film 0.01 $\mu$ F $\pm$ 5%
C266	1	1		DF15223300	Film 0.022 $\mu$ F $\pm$ 5% 50V
<b>PK11-RESISTORS</b> (All Resistors are $\pm$ 5% and $\frac{1}{4}$ W)					
R119	1	1	1	GD05472140	4.7K $\Omega$
R120	1	1	1	GD05392140	3.9K $\Omega$
R121	1	1	1	GD05103140	10K $\Omega$
R140	1	1		GD05101140	100 $\Omega$
R140			1	GD05100140	10 $\Omega$
R141	1	1		GD05560140	56 $\Omega$
R141			1	GD05820140	82 $\Omega$
R146	1	1		GD05560140	56 $\Omega$
R146			1	GD05150140	15 $\Omega$
R151	1	1	1	GD05102140	1K $\Omega$
R152	1	1	1	GD05820140	82 $\Omega$
R154	1	1	1	GD05820140	82 $\Omega$
R168	1	1	1	RA01030510	10K $\Omega$ Trim., Play back EQ.
R176	1	1	1	RA05030280	50K $\Omega$ Trim., Play back Level
R190	1	1		GD05822140	8.2K $\Omega$
R190			1	GD05272140	2.7K $\Omega$
R219	1	1	1	GD05472140	4.7K $\Omega$
R220	1	1	1	GD05392140	3.9K $\Omega$
R221	1	1	1	GD05103140	10K $\Omega$
R223	1	1	1	RA02030170	20K $\Omega$ Trim., Rec. Level Adj.
R224	1	1	1	RA02030170	20K $\Omega$ Trim., Rec. Level Adj.
R240	1	1	1	GD05100140	10 $\Omega$
R241	1	1		GD05560140	56 $\Omega$
R241			1	GD05820140	82 $\Omega$
R246	1	1		GD05560140	56 $\Omega$
R246			1	GD05150140	15 $\Omega$
R254	1	1	1	GD05820140	82 $\Omega$
R268	1	1	1	RA01030510	10K $\Omega$ Trim., Play back EQ.
R276	1	1	1	RA05030280	50K $\Omega$ Trim., Play back Level
R290	1	1		GD05822140	8.2K $\Omega$
R290			1	GD05272140	2.7K $\Omega$
R314	1	1	1	RA01030510	10K $\Omega$ Trim., CrO <sub>2</sub> Bias Adj.
R316	1	1	1	RA05030280	50K $\Omega$ Trim., FeCr Bias Adj.
R318	1	1		RA05020160	5K $\Omega$ Trim., Metal Bias Adj.
R318			1	RA05020300	5K $\Omega$ Trim., Metal Bias Adj.
R327	1	1	1	RA01020350	1K $\Omega$ Trim., High-Speed Adj.

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	N		
Q107	1	1		HT320011K0	<b>PK11-SEMICONDUCTORS</b> Transistor 2SC2001(K)
Q107			1	HT402272A0	Transistor 2SD227(Q or V)
Q207	1	1		HT320011K0	Transistor 2SC2001(K)
Q207			1	HT402272A0	Transistor 2SD227(Q or V)
<b>PK11-MISCELLANEOUS</b>					
J101	57	47	47	YP10001130	Plug, Wire Wrap
J303	1	1		YT02040260	Terminal, (4P) RCA
J303			1	YT02050020	Terminal, (4P) RCA and DIN
<b>P400-POWER SUPPLY &amp; BIAS OSC CIRCUIT BOARD</b>					
p400	1	1	1	YF42790042	P.W. Board, Power Supply & Bias OSC
			1	ZZ42800040	P.W. Board Assembly
			1	ZZ42808040	P.W. Board Assembly
<b>P400-CAPACITORS</b>					
△ C424	1	1	1	EA10802530	Elect 1000 $\mu$ F 25V
C431	1	1		DF75183510	Film 0.018 $\mu$ F $\pm$ 5%
C431			1	DF75473510	Film 0.047 $\mu$ F $\pm$ 5% 100V
C449	1	1	1	EA10802530	Elect 1000 $\mu$ F 25V
<b>P400-SEMICONDUCTORS</b>					
Q421	1	1		HT403131F0	Transistor 2SD313(F)
Q421			1	HT407181B0	Transistor 2SD718(O)
P455	4	4	4	3444118050	Spacer, Stearite
<b>P800-TIMER RELAY CIRCUIT BOARD</b>					
P800	1	1	1	YF42790050	P.W. Board, Timer Relay
	1	1		ZZ42790050	P.W. Board Assembly
			1	ZZ42798050	P.W. Board Assembly
<b>P800-MISCELLANEOUS</b>					
C802			1	DF17223800	Film 0.022 $\mu$ F 1000V
△ L802	1	1		LY10120140	Relay, G2W-1112V UL. CSA.
△ L802			1	LY10120150	Relay, G2W-1112V SEMCO
<b>P900-FUSE CIRCUIT BOARD</b>					
P900			1	WF42790022	P.W. Board, Fuse
			1	ZZ42798020	P.W. Board Assembly
△ F901			1	FS10100800	Fuse 1A
△ F902			1	FS10200800	Fuse 2A Logic
△ F903			1	FS10080800	Fuse 0.8A Motor
△ F904			1	FS10140800	Fuse 1.4A LED Meter
△ F905			1	FS10080800	Fuse 0.8A E SP
J911					
J920			10	YJ08000200	Jack, Fuse Clip

(W01-99)

Assembly and Wiring

(T01-99)

Adjustment

(X01-00)

Correction

## MODEL SD 9000 TECHNICAL SPECIFICATIONS (DIN)

Style .....	Direct Load	
Tape Drive System .....	Single Capstan Drive	
Cartridge .....	Philips type compact cassette	
Track System .....	Compatible Stereo 4-track 2-channel	
Tape Speed .....	4.75 cm/sec. & 9.5 cm/sec.	
Heads .....	3 Head System	
Composition .....	Rec/Play: Sendust Alloy	
	Erase: Ferrite	
Motor .....	DC Servo Controlled Motor x 2	
Meters .....	LED Peak x 2	
Recording System .....	AC Bias	
Erasing System .....	AC Erase	
Semiconductor Complement		
Transistors .....	132	
Diodes .....	119	
IC's .....	16	
LED's .....	15	
Overall Frequency Response (Dolby off):	Tape Speed:	Tape Speed:
Ferric Oxide Tape .....	at 20 dB for 4.75 cm/sec.	at 10 dB for 9.5 cm/sec.
CrO <sub>2</sub> Tape .....	25 Hz ~ 16 kHz (±3 dB)	25 Hz ~ 18.5 kHz (±3 dB)
Fe-Cr Tape .....	25 Hz ~ 17.5 kHz (±3 dB)	25 Hz ~ 19 kHz (±3 dB)
Metal Tape .....	25 Hz ~ 18 kHz (±3 dB)	25 Hz ~ 19.5 kHz (±3 dB)
	25 Hz ~ 18.5 kHz (±3 dB)	25 Hz ~ 20.5 kHz (±3 dB)
Total Harmonic Distortion		
Ferric Oxide Tape .....	2%	
CrO <sub>2</sub> Tape .....	2.5%	
Fe-Cr Tape .....	2.5%	
Metal .....	2.5%	
	Tape Speed: 4.75 cm/sec.	Tape Speed: 9.5 cm/sec.
Wow and Flutter (DIN WTD) .....	0.10%	0.07%
Fast Rewind Time .....	60 sec.	
Fast Forward Time .....	60 sec.	
AC Line Voltage .....	220V AC, 50 Hz	
	(E/N versions are featuring an external voltage selector for use on 110/220V. T/A versions 220/240V AC, 50/60 Hz.)	
Power Consumption .....	63W	
Dimensions (W x H x D) .....	416 mm x 146 mm x 243 mm	
Weight .....	9.1 kg	

# PARTS LIST SD7



# **marantz**

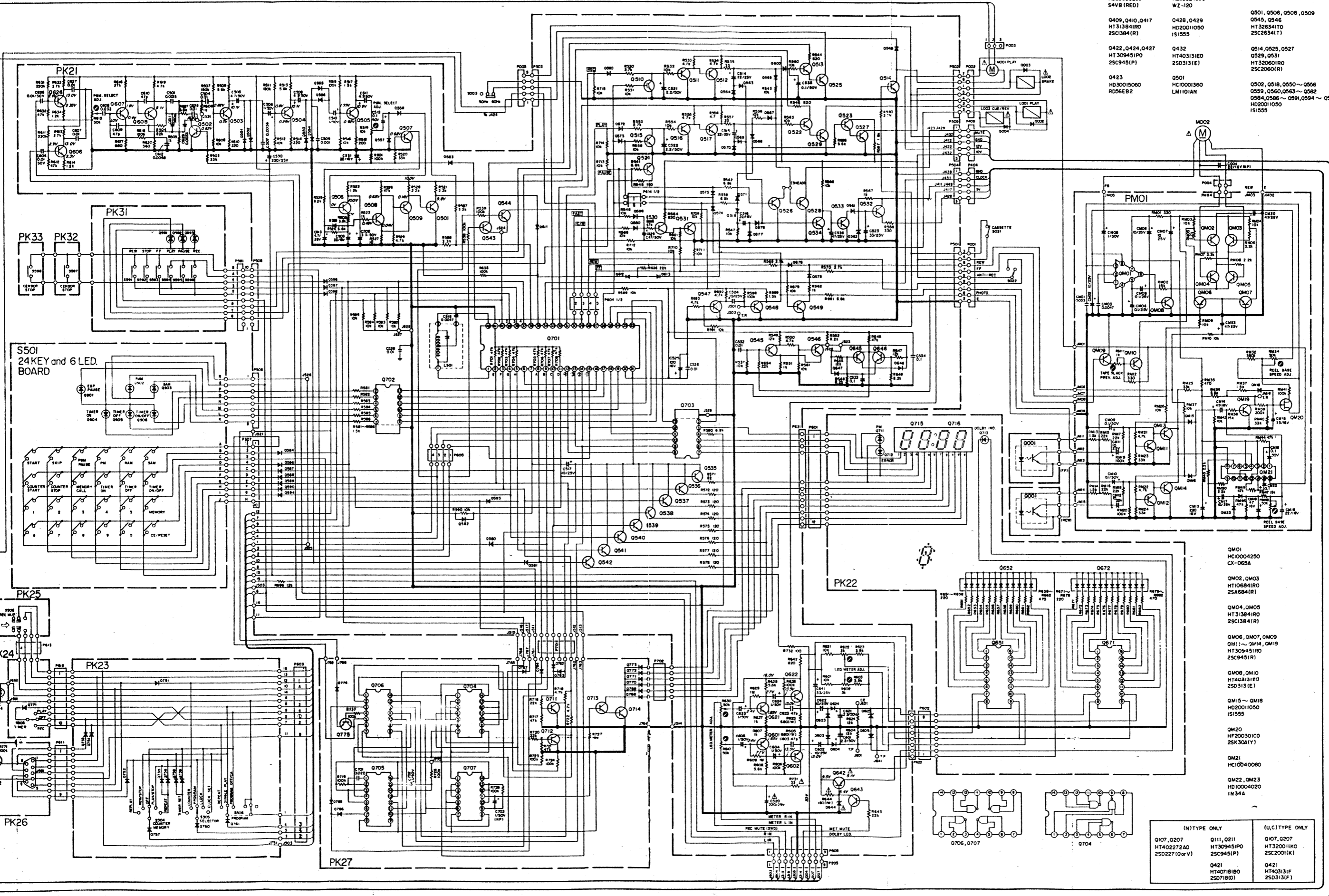
SINCE ONLY THE UNIDENTICAL PARTS BETWEEN THE ORIGINAL MODEL  
ARE LISTED. PLEASE USE THIS MANUAL (FLYSHEET) WITH THE ORIGINAL  
MODEL SD9000 SERVICE MANUAL.

REF. DESIG.	SD9000(N) PART NO.	QTY.	SD7 PART NO.	QTY.	DESCRIPTION
A	4280063430	1	4280063450	1	FRONT PANEL ASSY
B	4279053400	1	4279053430	1	COVER ASS'Y
C	4280053410	1	4280053440	1	HEAD COVER ASS'Y
D	4279063420	1	4279063450	1	ESCUTCHEON ASS'Y
E	4279302400	1	4279302420	1	DIAL ASS'Y
S501	SK10240010	1	SK10240030	1	KEYBOARD SW 24
001V			2269253510	2	HANDLE
007V			51217069E9	4	L.K.HEAD SCREW
008V			59051208B0	4	WASHER
009V			51147019B0	4	O.C.H.M.SCREW
010V			54120500E0	4	DOUGHWOT WASHER.
011V			51280410U0	6	B.H.TAP SCREW
012V			2945811020	1	POLYETHY BAG
013V			9012020010	2	POLYETHY BAG
018V			2461801100	1	PACKING CASE
019V			2269851010	1	INSTRUCTIONS
015B	4279259010	1	4279259020	1	BUSHING
018B	4279154020	6	4279154090	6	KNOB
026B	4276259010	1	4276259050	1	BUSHING
031B	2127259010	1	2127259110	1	BUSHING
001B	4279053010	1	4279053060	1	COVER
008B	4279063030	1	4279063160	1	ESCUTCHEON
011B	4279063060	1	4279063180	1	ESCUTCHEON
012B	4279063070	1	4279063190	1	ESCUTCHEON
014B	4279063040	1	4279063170	1	ESCUTCHEON
027B	4279154070	1	4279154100	1	KNOB
044B	4278154010	1	4278154070	1	KNOB
045B	4278154020	2	4278154080	2	KNOB
046B	4278154030	2	4278154090	2	KNOB
901B	4280063020	1	4280063040	1	ESCUTCHEON
902B	4279118010	2	4279118030	2	SPACER
903B	4279053030	1	4279053070	1	COVER
904B	4279158060	1	4279158070	1	WINDOW
906B	4279154010	4	4279154110	4	KNOB
907B	4276154010	2	4276154070	2	KNOB
908B	4276154010	3	4276154070	3	KNOB
909B	2970154020	3	2970154320	3	KNOB
926B	4280160020	1	4280160040	1	BRACKET
001U	4279809010	2			CUSHION
001U			4280801040	1	PACKING CASE
002U			4279809010	2	CUSHION
004U			2918107150	1	SHEET
005U			9090909040	1	POLYETHY SHEET
006U			2731821010	1	SILICAGEL
008U			4280809010	1	CUSHION
010U			9526019030	2	SERIAL NO CARD
901U	4280801020	1			PACKING CASE
903U	2918107150	1			SHEET
905U	9526019030	2			SERIAL NO CARD
906U	9090909040	1			POLYETHY SHEET
910U	2731821010	1			SILICAGEL
001T	4279851310	1	4279851350	1	INSTRUCTIONS
002T	4280851360	1	4280851360	1	INSTRUCTIONS
003T	4280851350	1			INSTRUCTIONS





0001 H110001030 PHOTO COUPLER  
 0002~0004 HD20023100 JOE-ILF  
 0714 H110009300 AR21320  
 0101~0103, 0105, 0106 0106, 0112, 0118, 0119 HT314001E0  
 0101~0103, 0105, 0106 0114~0116, 0118, 0119 HT309451P0  
 0120, 0121 HD30030090 W2177  
 0201~0203, 0205, 0206 0206, 0212, 0213, 0217 HT314001E0  
 0201~0203, 0205, 0206 0214~0216, 0218, 0219 HT309451P0  
 0204, 0209, 0210 HD30030090 W2177  
 0301, 0302 HD2001050 15155  
 0303, 0304, 0306, 0309 HT309451P0  
 0305 HT403131E0 25D3131E1  
 0307 HD30033090 W2052  
 0308 HD30037090 Y2052C  
 0401, 0411, 0413, 0419 HD20020080 MI-151R  
 0402, 0412, 0414, 0420 HD20020080 MI-151  
 0403, 0421 HT403131F0 25D3131F1  
 0404 HD30048090 WZ-210  
 0405 HD20008290 54VB (RED)  
 0409, 0410, 0417 HD20011050 25C1384(R)  
 0422, 0424, 0427 HT309451P0 25C945(P)  
 0423 HD30015060 RD56EB2  
 0426 HD30024090 WZ-120  
 0428, 0429 HD20011050 151555  
 0432 HT403131E0 25D3131E1  
 0433 HT320601R0 25C2060(R)  
 0501 HC10001360 LM101AN  
 0502, 0518, 0550~0506 0559, 0560, 0563~0582 0584, 0596~0591, 0594~0599 HD2001050 151555  
 0592, 0598 HD10004020 1N34A  
 0561 HD30013060 RO1IEB3  
 0582 HD30014060 RD24EB2  
 0591 HI10015020 LN3176P  
 0592 HI10016020 LN4177P  
 0593 HI10014020 LN2178P  
 0600, 0601~0603 0647, 0648 HD2001050 151555  
 0601, 0602, 0606~0608 0621, 0622, 0626, 0643 HT32634150 25C2634151  
 0603, 0604, 0623, 0624 HD10004020 1N34A  
 0605, 0625 HD30031090 W2081  
 0642 HT403131E0 25D3131E1  
 0644 HD30033090 W2052  
 0645, 0646 HT309451P0 25C945(P)  
 0651, 0671 HC10001320 L.E.D.  
 0652, 0672 HI11201320 L.E.D.  
 0701 HC10027060 µPD546C  
 0702, 0703 HC10016060 µPA57C  
 0704 HC40230040 µPD4023C or MC4023  
 0705 HC45280090 µPD4528C or MC4528B  
 0706, 0707 HC40100100 µPD4011C or MC14011  
 0711~0713, 0775 HT32634150 25C2634151  
 0714 HT320601R0 25C2060(R)  
 0715, 0716 HI10021020 LN524RK  
 0751~0761 0762~0774 HD2001050 151555  
 0801 HD20022100 JOE-1, FA  
 0802 HT106841R0 25A684(R)  
 0803, 0804 HT309451P0 25C945(P)  
 0901~0904 HT314001E0 25C14001E1  
 0711~0713 HI10014020 1N34A  
 0714 HI10009300 AR21320  
 0772 HT107331P0 25A733



(N)TYPE ONLY		(U,C)TYPE ONLY	
Q107, Q207	Q111, Q211	Q107, Q207	Q107, Q207
HT402272A0	HT309451P0	HT320011K0	HT320011K0
25D227 (or V)	25C945(P)	25C2001(K)	25C2001(K)
	Q421	Q421	Q421
	HT407181B0	HT403131F	25D3131F1
	25D718(B)		

Components and wiring are subject to change for modification without notice.

Important  
 Use the parts  
 number

- SWITCHES**
- S301: TAPE SELECTOR (NORMAL)
  - S302: TAPE SELECTOR (Special/CrO)
  - S303: TAPE SELECTOR (FeCr)
  - S304: TAPE SELECTOR (Metal)
  - S305: TAPE SPEED SWITCH (STANDARD)