Film-Tech

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SONY

SDDS Player System

DIGITAL FILM SOUND DECODER

DFP-D2000

DIGITAL FILM SOUND READER

DFP-R2000

SDDS

Sony Dynamic Digital Sound

MAINTENANCE MANUAL

1st Edition

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer :

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 3.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 5.25 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 20 V AC range are suitable. (See Fig. A)

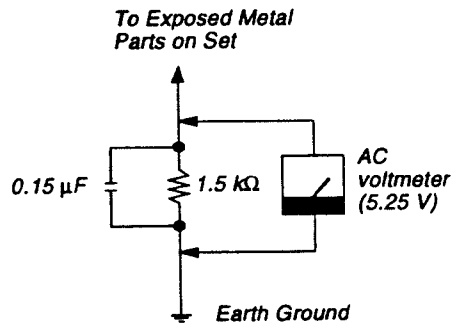


Fig. A. Using an AC voltmeter to check AC leakage.

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Vorsicht!

Explosionsqefahr bei unsachgemäßen Austaush der Batterie.

Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien mach Angaben des Herstellers.

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

DIGITAL FILM SOUND READER

DFP-R2000

TABLE OF CONTENTS

SECTION 1
SERVICE OVERVIEW

1-1. INSTALLATION

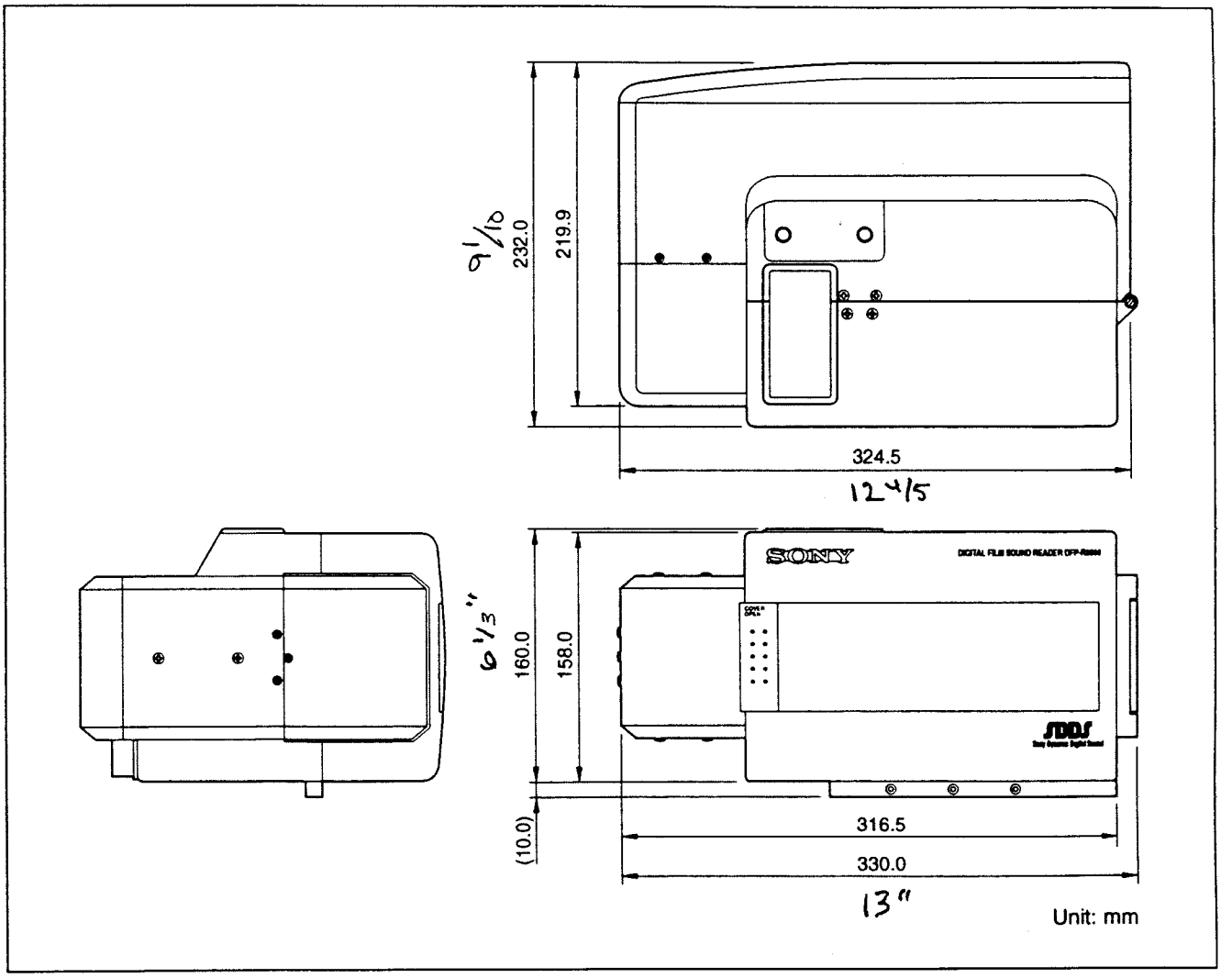
1-1-1. Installation Conditions

Operating temperature: 5 °C to 40 °C
Operating humidity : 10 % to 90 % (Relative humidity)
Storage temperature : –20 °C to +60 °C
Mass (Weight) : 10 kg

Locations to avoid

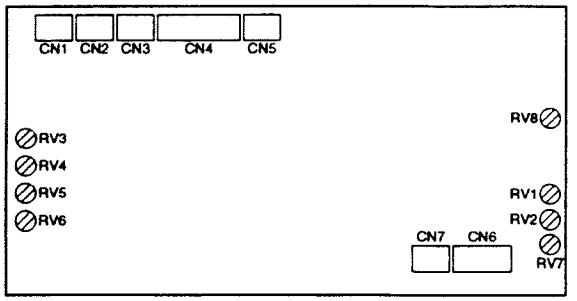
- Areas where the unit will be exposed to direct sunlight or any other strong lights.
- Dusty areas or areas where it is subject to vibration.
- Areas with strong electric or magnetic fields.
- Areas near heat sources.
- Areas where is subjected to electricity noise.
- Areas where is subjected to static electricity noise.

1-1-2. Dimensions



1-1-3. Volume setting on RF-67 board

RF-67 Board



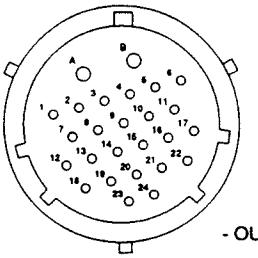
RF-67 BOARD (A SIDE)

Volume

RV1: VIDEO 1 Clamp Level Adjustment
RV2: VIDEO 2 Clamp Level Adjustment
RV3: Light Source LED 4 Current Adjustment
RV4: Light Source LED 3 Current Adjustment
RV5: Light Source LED 2 Current Adjustment
RV6: Light Source LED 1 Current Adjustment
RV7: VIDEO 2 Gain Adjustment
RV8: CCD DATA Output Amplitude Adjustment

1-1-4. Input/Output Signals of READER I/O Connector

READER I/O (ROUND TYPE (F) 26P, MALE)



- OUTSIDE VIEW -

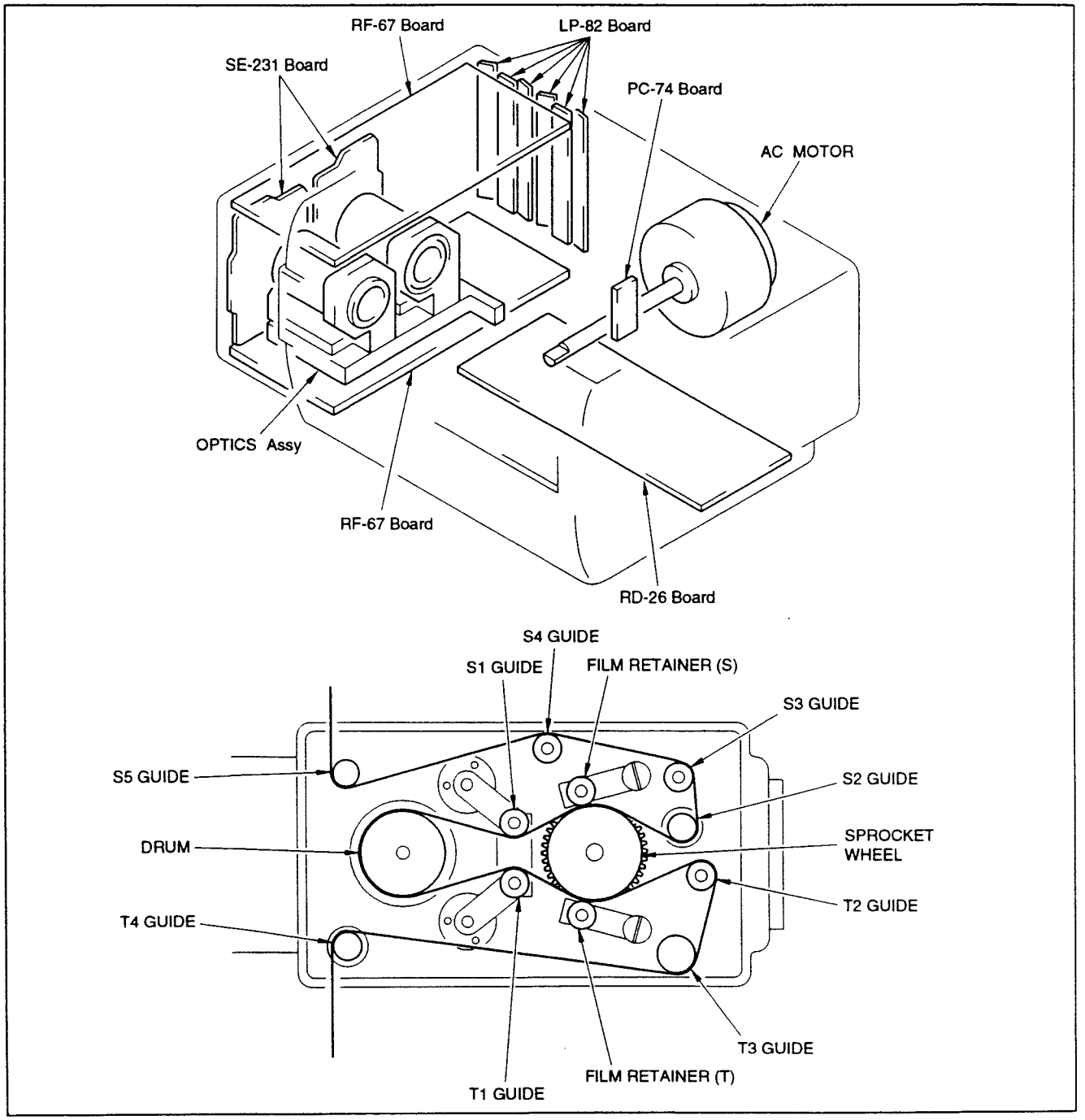
Pin No.	I/O	Signal Name	Signal Level	Function
A	IN	DC 24 V	+24 V	POWER SUPPLY
B	———	GND	———	Ground
1	OUT	CCD DATA	75 Ω/1 V	CCD DATA Sch
2	———	GND	———	CCD DATA Sch (Ground)
3	———	GND	———	TRACKING Sch (Ground)
4	IN	TRACKING	75 Ω/1 V	TRACKING Sch
5	IN	CCD CLOCK	75 Ω/1 V	CCD CK 8 MHz
6	———	GND	———	CCD CK 8 MHz (Ground)
7	OUT	FG	75 Ω/1 V	FG
8	———	GND	———	FG (Ground)
9	———	N.C	———	Not CONNECTION
10	IN	STROBO	75 Ω/1 V	STROBE FOR SERIAL COMMUNICATION
11	———	GND	———	STROBE (Ground)
12	OUT	MODE 1	GND	MODE DISCRIMINATION FOR PROCESSOR CONNECTION
13	IN	SCK	75 Ω/1 V	CLOCK FOR SERIAL COMMUNICATION
14	———	READER	———	OPTION
15	———	GND	———	Ground
16	———	GND	———	CCD DATA Pch (Ground)
17	———	GND	———	SERIAL COMMUNICATION DATA (Ground)
18	IN	TRACKING	75 Ω/1 V	TRACKING Pch
19	———	GND	———	TRACKING Pch (Ground)
20	OUT	P TRACKING	75 Ω/1 V	TRACKING FOR PROCESSOR CONNECTION
21	OUT	CCD DATA	75 Ω/1 V	CCD DATA Pch
22	———	GND	———	Ground
23	OUT	SERIAL DATA	75 Ω/1 V	SERIAL COMMUNICATION DATA
24	IN	STROBO	75 Ω/1 V	STROBE FOR SERIAL COMMUNICATION
SHELL	———	GND	———	Ground for 13 and 20 Pins

1-1-5. Connection Connector and Cable

When connecting cables to the connectors on the connector panel, use the connectors and cables or equivalent with each other as listed below.

DFP-R2000 Side Connector		Matching Connector/Cable	
Panel Indication	Type	Type	Sony Part No.
READER I/O	Round Type 26P, MALE	CCZ-A 25 Cable (25 m)	DFP-R2000 Supplied accessory or Optional accessory

1-2. MAIN PARTS LOCATION



1-3. CIRCUIT CONFIGURATION

Name	Function
LP-82	LED BLOCK BOARD
PC-74	PHOTO COUPLLER BOARD
RD-26	DC-DC CONV/FG SHAPER/CHECK SIG PARA → SIRI BOARD
RF-67	CCD RF AMP/TIMING GEN/LED DRIVER BOARD
SE-231	CCD DRIVER/BUFFER AMP BOARD

1-4. REMOVAL OF ~~SLIDE~~ SIDE COVER/REAR LID REMOVAL

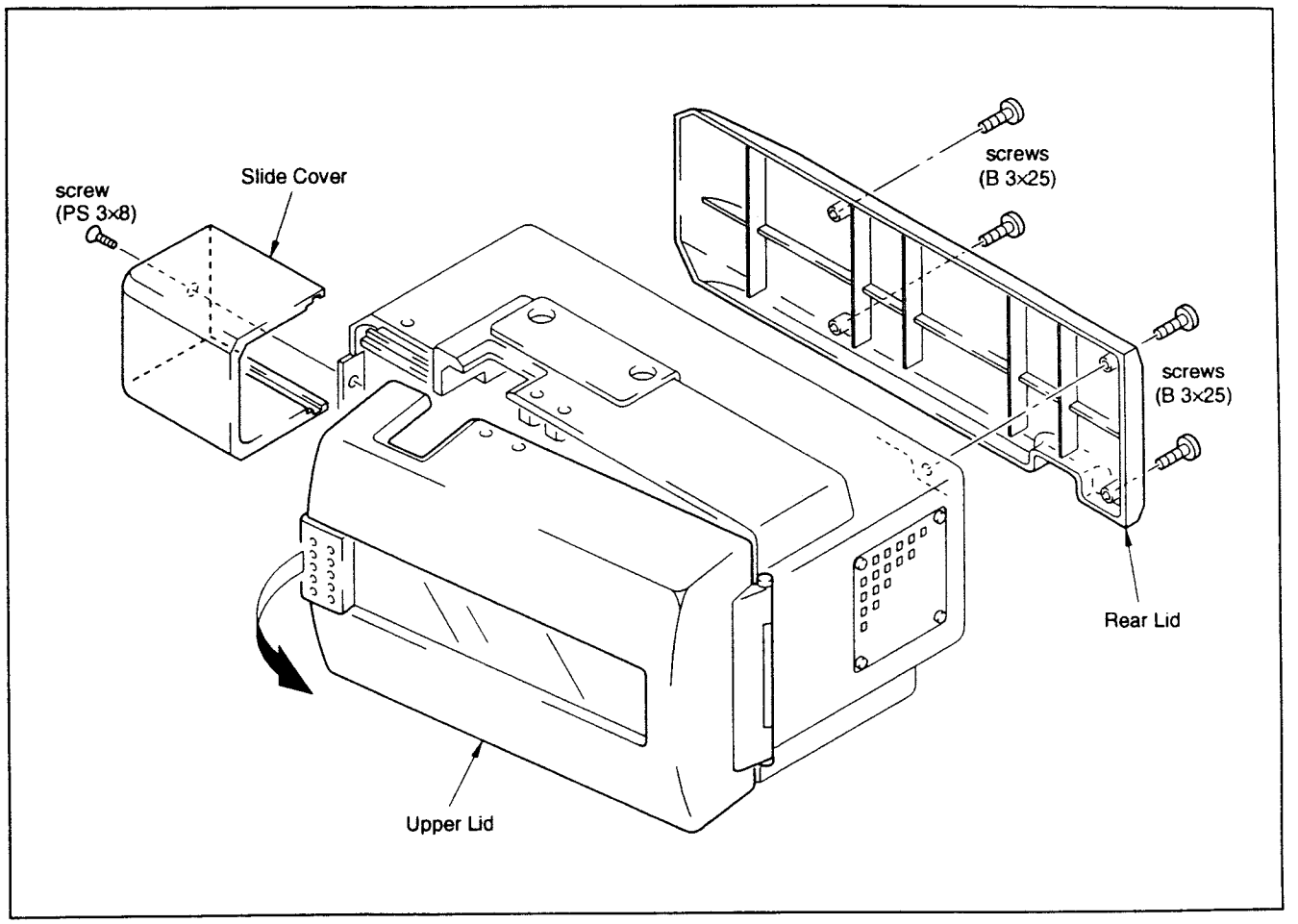
Slide Cover

(1) Open the Upper Lid direction of arrow.

(2) Remove the screw (PS 3×8) to remove the ~~Slide~~ side Cover.

Rear Lid

Remove the four screws (B3 × 25) to remove the Rear Lid.



1-5. MAINTENANCE TOOL

Name	Part No.	Remarks
Guide Height Adjustment Tool	J-6187-860-A	
Sprocket Height Adjustment Tool	J-6187-870-A	
Eccentric Driver	J-6187-880-A	
L Shaped Hex, Wrenche	J-6187-890-A	

• **Cleaning of Film Running Surface of Drum**

Clean the film running surface of the drum before film setting.
Tools and procedures are the same as previously mentioned.
Clean the shaded portions shown in the index. (Refer to the index of section 2-1)

• **Cleaning of Lens**

Clean the lens before film setting. The lens is the most important part in the unit.
Be sure to clean the one.

Procedure

1. Dust the lens with a blower brush(standard products). (Refer to the index of section 2-1)

2-2. Periodic Check

2-2-1. Periodic Check Parts List

The replacement hours shown in the following list are not the guarantee term parts.
Use this list as guidelines for the maintenance and inspection. The replacement hours of the parts vary depending on the operation environment and conditions of the unit.

Note

The replacement hours shown in the following list are tentative.

○ : Check & Cleaning
△ : Check
◇ : Check (Adjustment)
◆ : Replacement
☆ : Replacement

No	Check Item	(Note1) C.C.F.S.	Inspection Hours(h)			Part No.	Q'ty
			2500	5000	7500		
	(LED ASSEMBLY BLOCK)						
1	LED ASSEMBLY	—	◇	◇	◇	A-8263-459-	2
	(GUIDE ASSEMBLY, ROLLER BLOCK)						
2	GUIDE ASSEMBLY, ROLLER	○	△	△	☆	X-3167-637-	5
3	GUIDE (M) ASSEMBLY, ROLLER	○	◇	◇	☆	X-3167-484-	2
4	GUIDE (L) ASSEMBLY, ROLLER	○	△	△	☆	X-3167-638-	2
	(SPROCKET BLOCK)						
5	SPROCKET(32)	○	◇	◇	☆	3-185-137-	1
6	ROLLER, FILM RETAINER	○	◆	◆	☆	3-185-158-	2
7	AC MOTOR	—	△:7500h ☆:15000h			1-698-490-	1
	(TENSION REGULATOR BLOCK)						
8	TENSION REGULATOR, SUB ASSEMBLY	—	—	—	☆	X-3167-481-	1
9	TENSION REGULATOR, (B) SUB ASSEMBLY	—	—	—	☆	X-3167-617-	1
	(DRUM BLOCK)						
10	DRUM SUB ASSEMBLY	—	—	—	☆	X-3167-485-	1
11	HOLDER SUB ASSEMBLY, DRUM	—	—	—	☆	X-3167-501-	1
	(CHASSIS)						
12	MOTOR, DC FAN	—	△:7500h ☆:15000h			1-698-447-	1

• Refer to the section 3 for part replacement.

(Note 1) "C.C.F.S." means "Checking and Cleaning before Film Setting." (Refer to the section 2-1)

SECTION 5
BLOCK DIAGRAM AND DESCRIPTIONS

概要

SDDS PLAYERシステムは、READER DFP-R2000とDECODER DFP-D2000の2つの装置から構成される。
映画フィルム上に記録されたデーターは、READER DFP-R2000においてCCDを用いて、Sトラック/Pトラックごとに読みだされる。読みだされたデーターは、専用ケーブルでDECODER DFP-D2000に送られ、波形等化後デジタル信号化され、エラー訂正処理される。エラー訂正された信号はATRAC DECODERにおいて圧縮された信号から通常のリニアPCM信号になり、DSPブロックで信号処理をされた後D/Aコンバートされ、アナログ信号として出力される。
なお、READER DFP-R2000、接続ケーブルおよびチェンジ・オーバー・キットをSDDS PLAYERシステムに加えるのみで、DECODER DFP-D2000は無変更で、チェンジ・オーバー対応が可能となっている。

DFP-R2000

DFP-R2000は、次の基板から構成されている。

- RD-26 Board
- RF-67 Board
- SE-231 Board

これらの基板の主な機能を以下に示す。

RD-26 Board

DC-DCコンバータ、シリアルインタフェース、フィルムFG出力整形、ファン停止検出、ブレーキ電流断検出

RF-67 Board

CCDのODD、EVEN出力の合成、CCD駆動用パルスの生成、LEDパルスドライバ
CCD出力、LED電流、電源電圧の異常検出
(以上フィルムP, S両サイドの為2系統持つ)

SE-231 Board

CCD駆動用クロックドライバ、CCD出力プリアンプ等

DESCRIPTIONS

An SDDS player system consists of reader DFP-R2000 and decoder DFP-D2000. The data recorded in a cinema film is read in reader DFP-R2000 for every S track and P track using a CCD. The read data is sent to decoder DFP-D2000 using a dedicated cable, processed as a digital signal after waveform equalization, then error-corrected. The error-corrected signal is converted into an ordinary linear PCM signal from a compressed signal in an ATRAC decoder, converted from digital to analog after it has been processed in a DSP block, and output as an analog signal.
Decoder DFP-D2000 can cope with the changeover without a change by only adding a reader DFP-R2000 connection cable and changeover kit to the SDDS player system.

DFP-R2000

The DFP-R2000 consists of the following boards.

- RD-26 board
- RF-67 board
- SE-231 board

The major functions of these boards are described below.

RD-26 board

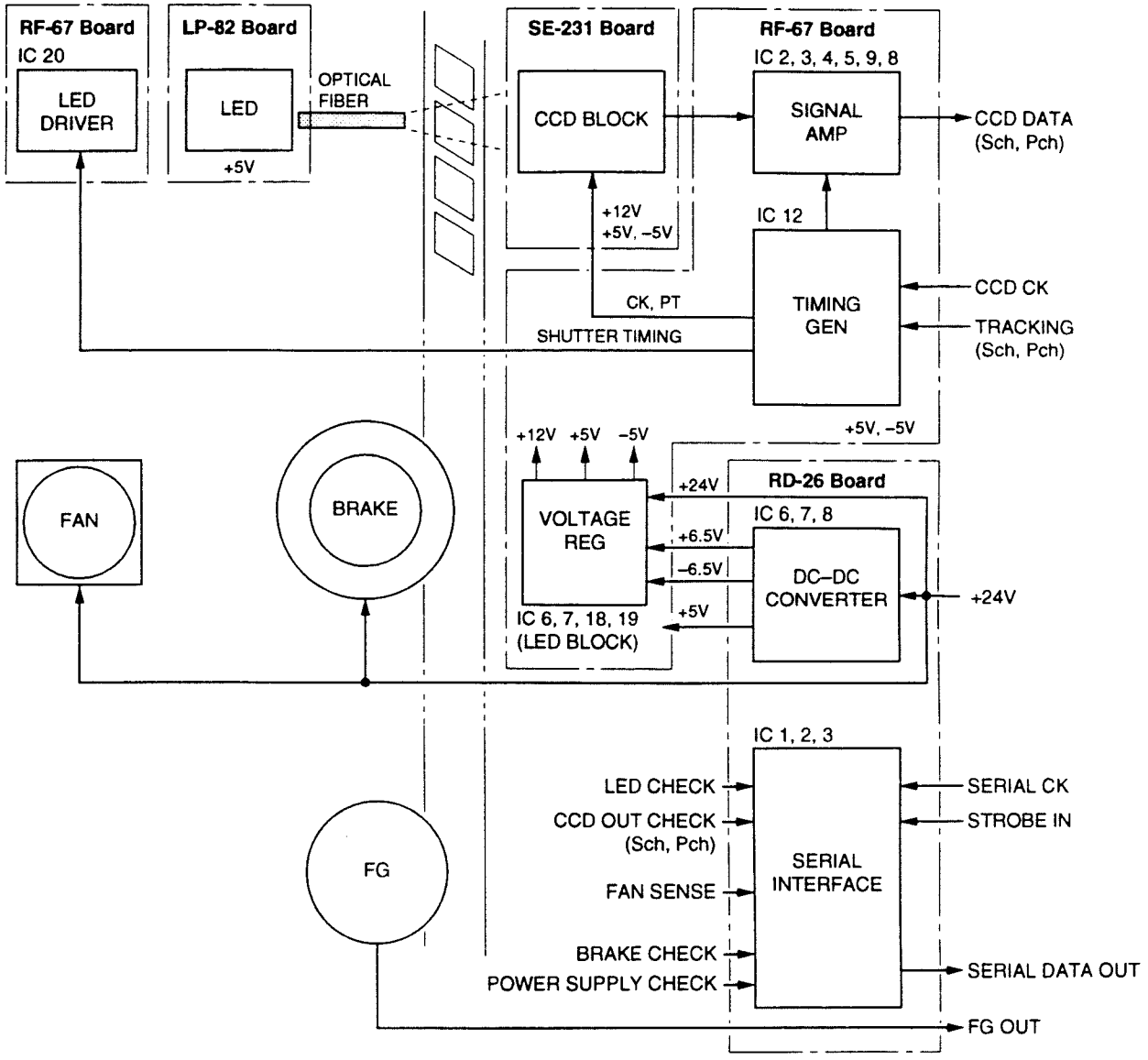
This board mounts a DC-DC converter and serial interface. It also shapes the film FG output waveform, and detects the fan stop and brake current-off operation.

RF-67 board

This board synthesizes the odd and even output signals of a CCD, generates a CCD drive pulse, and mounts an LED pulse driver.
It also detects the abnormality of a CCD output signal, LED current, and supply voltage.
(This board has two systems because of film P and S sides.)

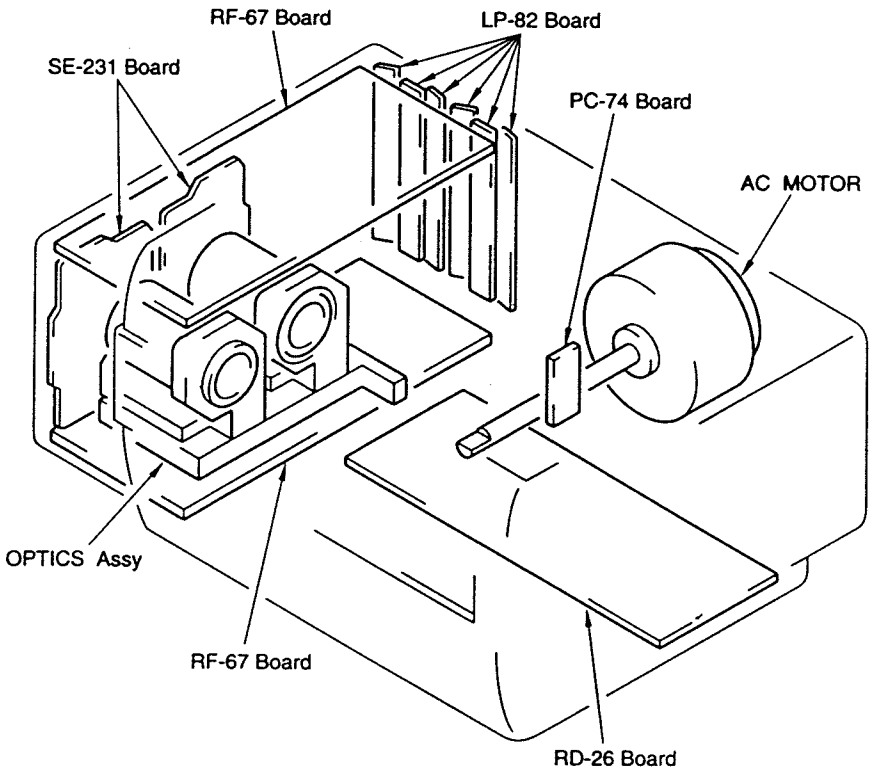
SE-231 board

This board mounts a CCD drive clock driver and CCD output preamplifier.

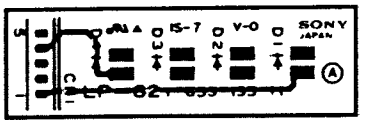


READER BLOCK DIAGRAM
DFP-R2000

SECTION 6
BOARD LAYOUTS

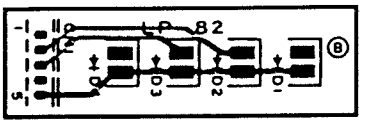


LP-82; LED BLOCK BOARD



1-653-135-11 A SIDE

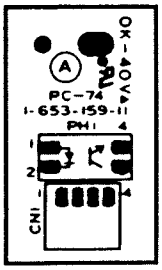
A Side is the same as Component Side.



1-653-135-11 B SIDE

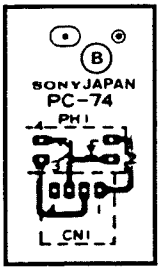
B Side is the same as Soldering Side.

PC-74; PHOTO COUPLLER BOARD



1-653-159-11 A SIDE

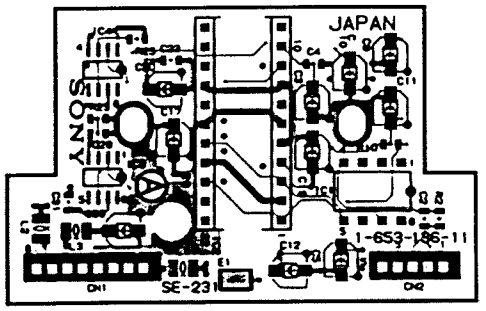
A Side is the same as Component Side.



1-653-159-11 B SIDE

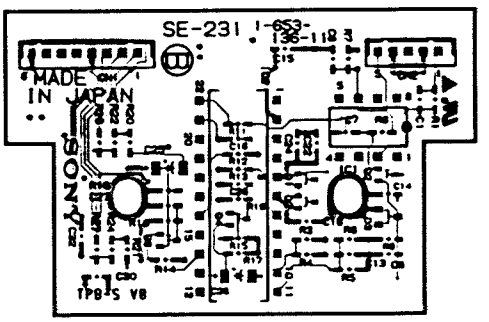
B Side is the same as Soldering Side.

SE-231; CCD DRIVER/BUFFER AMP BOARD



1-653-136-11 A SIDE

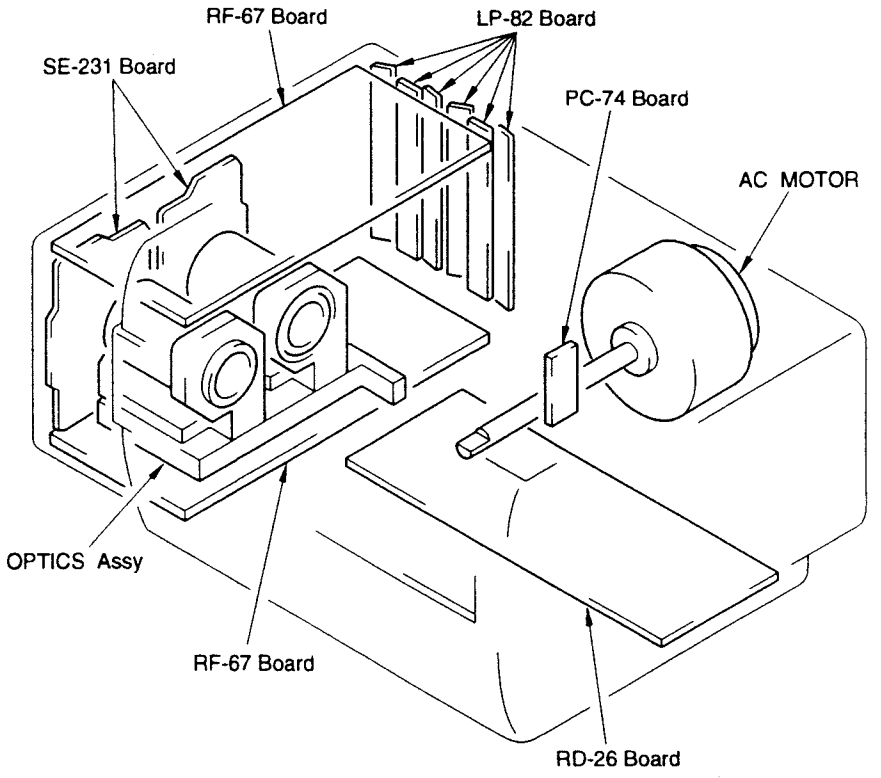
A Side is the same as Component Side.



1-653-136-11 B SIDE

B Side is the same as Soldering Side.

SECTION 7
SCHEMATIC DIAGRAMS



SECTION 2
PERIODIC MAINTENANCE AND INSPECTION

To make the most of the functions, fully realize the performances of this unit and to lengthen the life of the unit, check and clean the parts every time before film setting, and perform the periodic maintenance.

2-1. Checking and Cleaning before Film Setting

We recommend to perform the checking and cleaning for the main components before film setting every time before film setting.
Check that the each part shown in the index has not the scratch and dust, and perform the cleaning by the following procedures.

Notes

- Be sure to turn the power off before cleaning.
- Each block of the unit consists of the precision parts, and adjusts precisely.
  During cleaning, be careful not to damage against the parts, and not to apply an excessive force.

Tools

- Tooth brush (standard products)
- Cleaning cloth: J-6090-011-A

Preparation

- Turn the power off.

Procedures

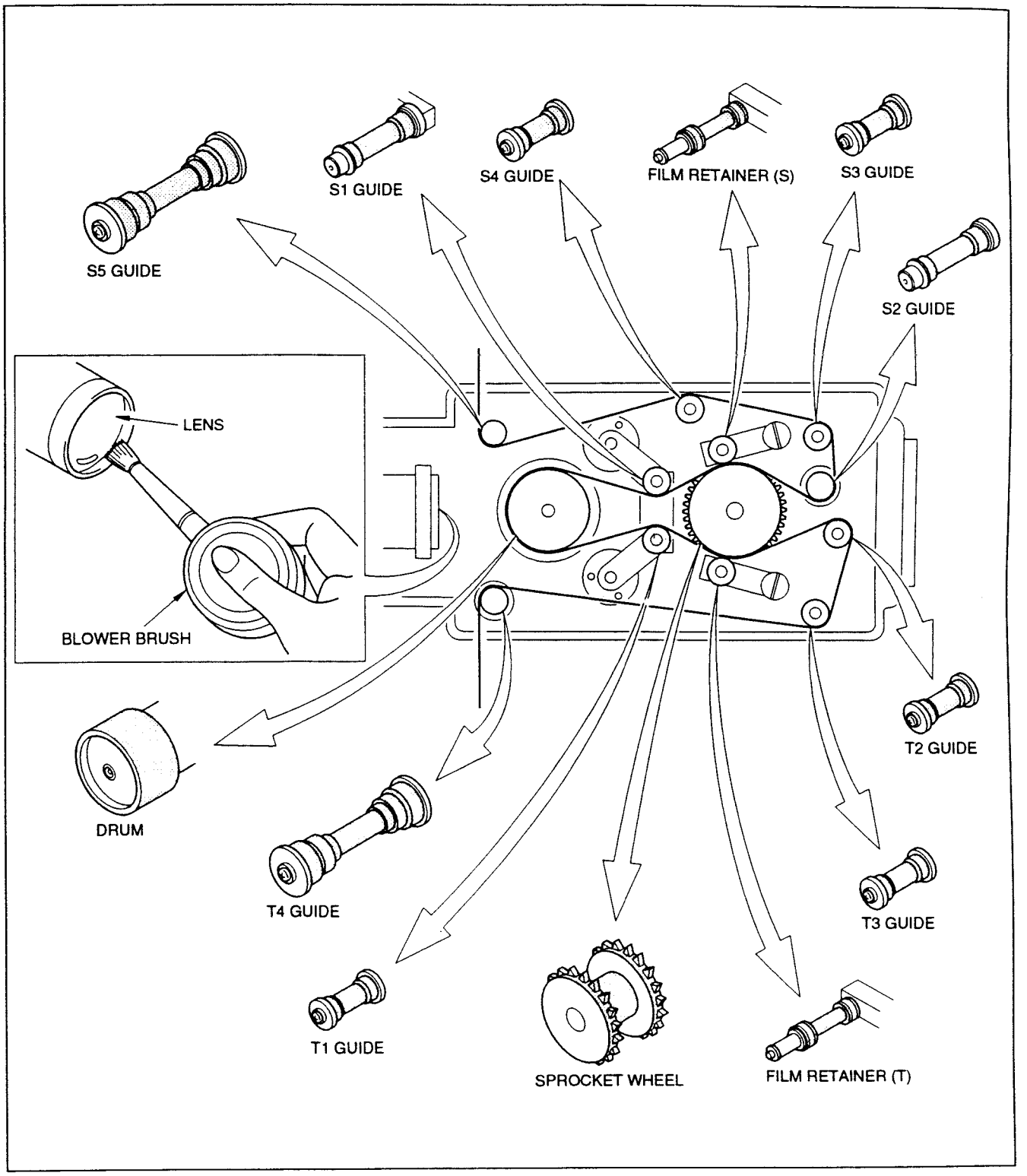
1. Dust the parts shown in the index using a tooth brush.

   Note

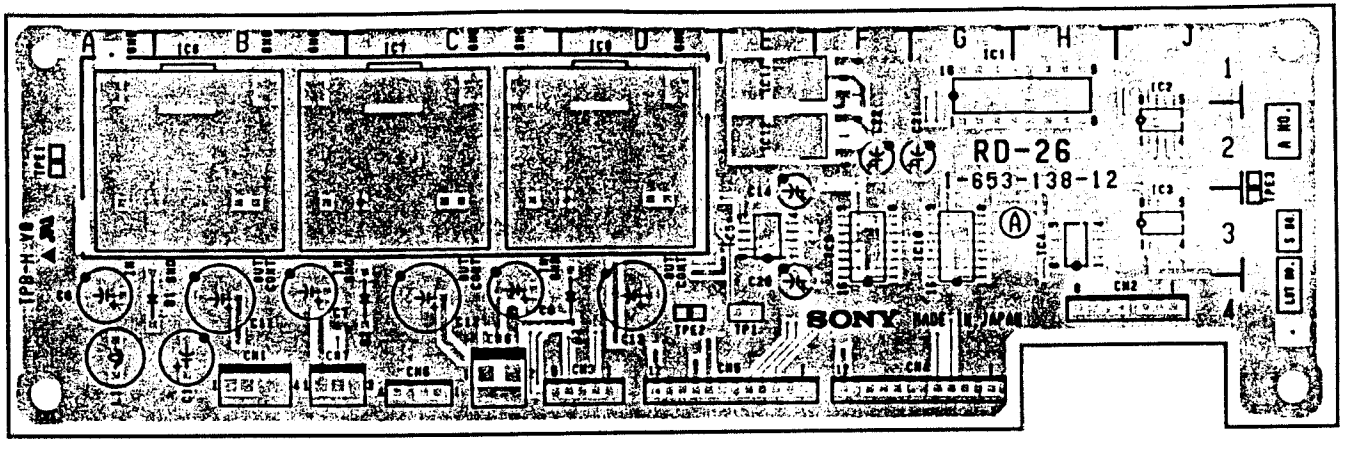
   Be careful not to scratch the parts by rubbing hard using a tooth brush.

2. Clean the shaded portions shown in the index using a dry cleaning cloth.

Index


S5 GUIDE
S1 GUIDE
S4 GUIDE
FILM RETAINER (S)
S3 GUIDE
S2 GUIDE
LENS
BLOWER BRUSH
DRUM
T4 GUIDE
T1 GUIDE
SPROCKET WHEEL
FILM RETAINER (T)
T3 GUIDE
T2 GUIDE

RD-26; DC-DC CONV/FG SHAPER/CHECK SIG PARA → SIRI BOARD



1-653-138-12 A SIDE

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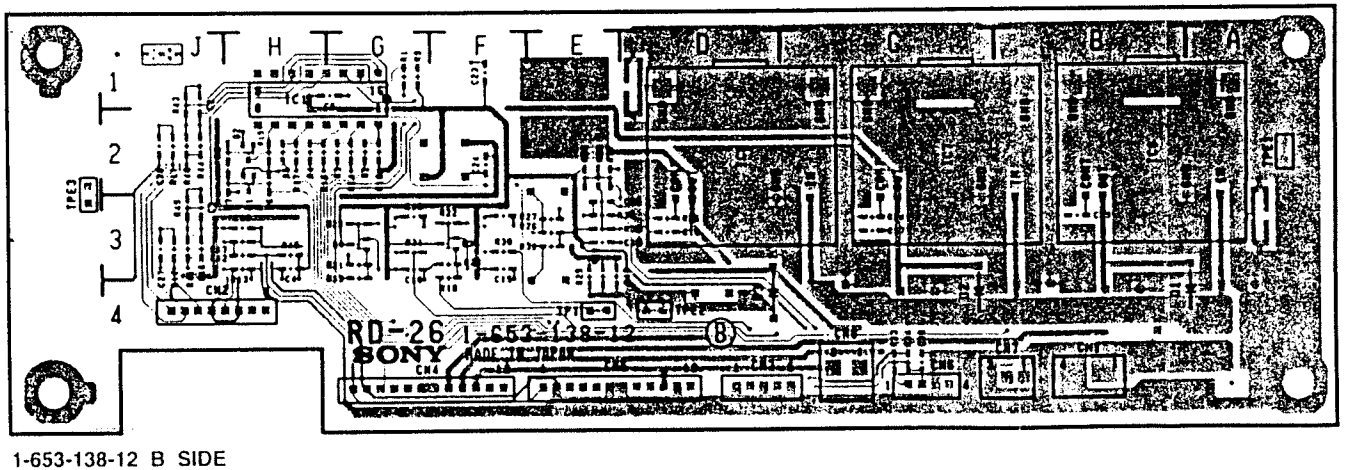
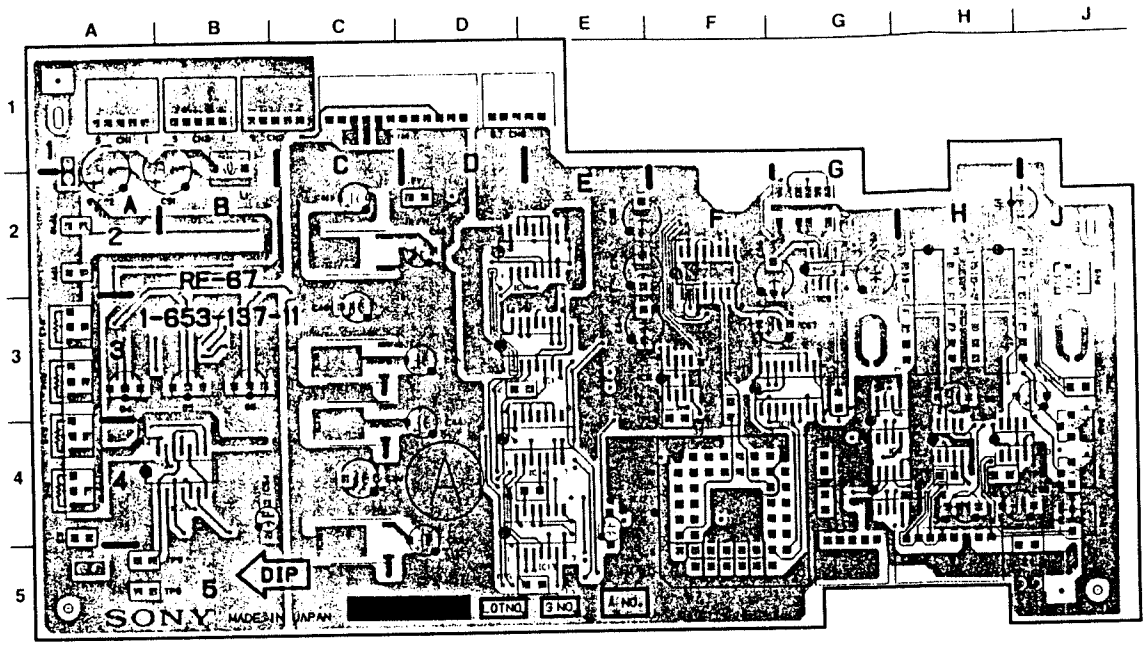


1-653-138-12 B SIDE

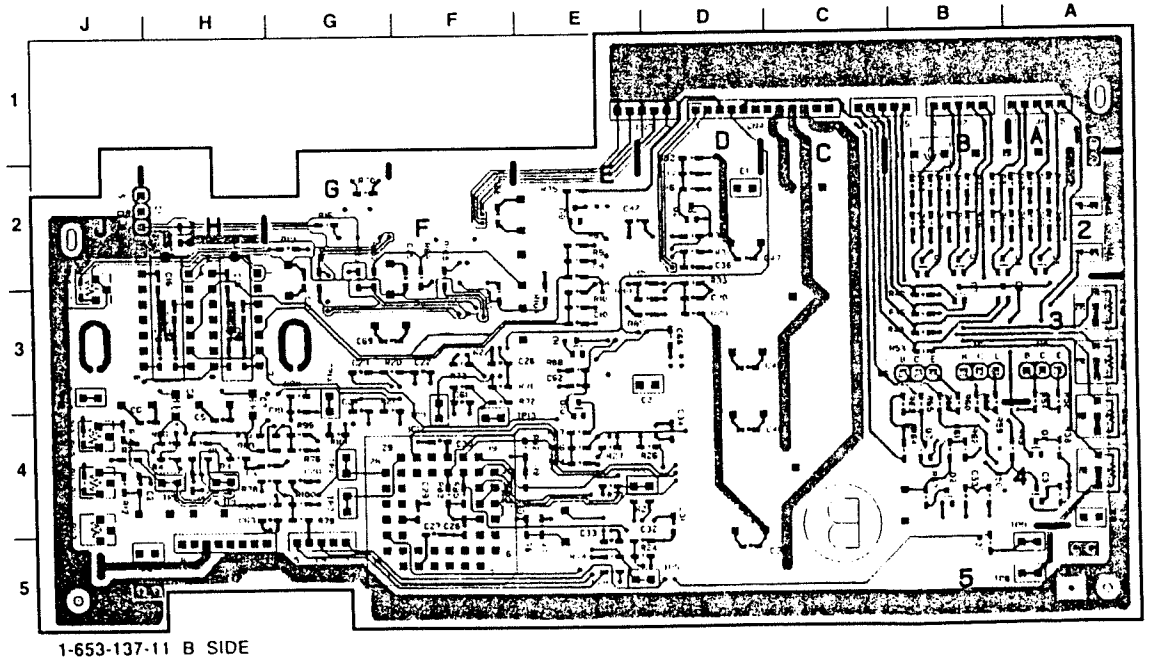
B Side is the same as Soldering Side.

RF-67; CCD RF AMP/TIMING/LED DRIVER BOARD



1-653-137-11 A SIDE

A Side is the same as Component Side.



1-653-137-11 B SIDE

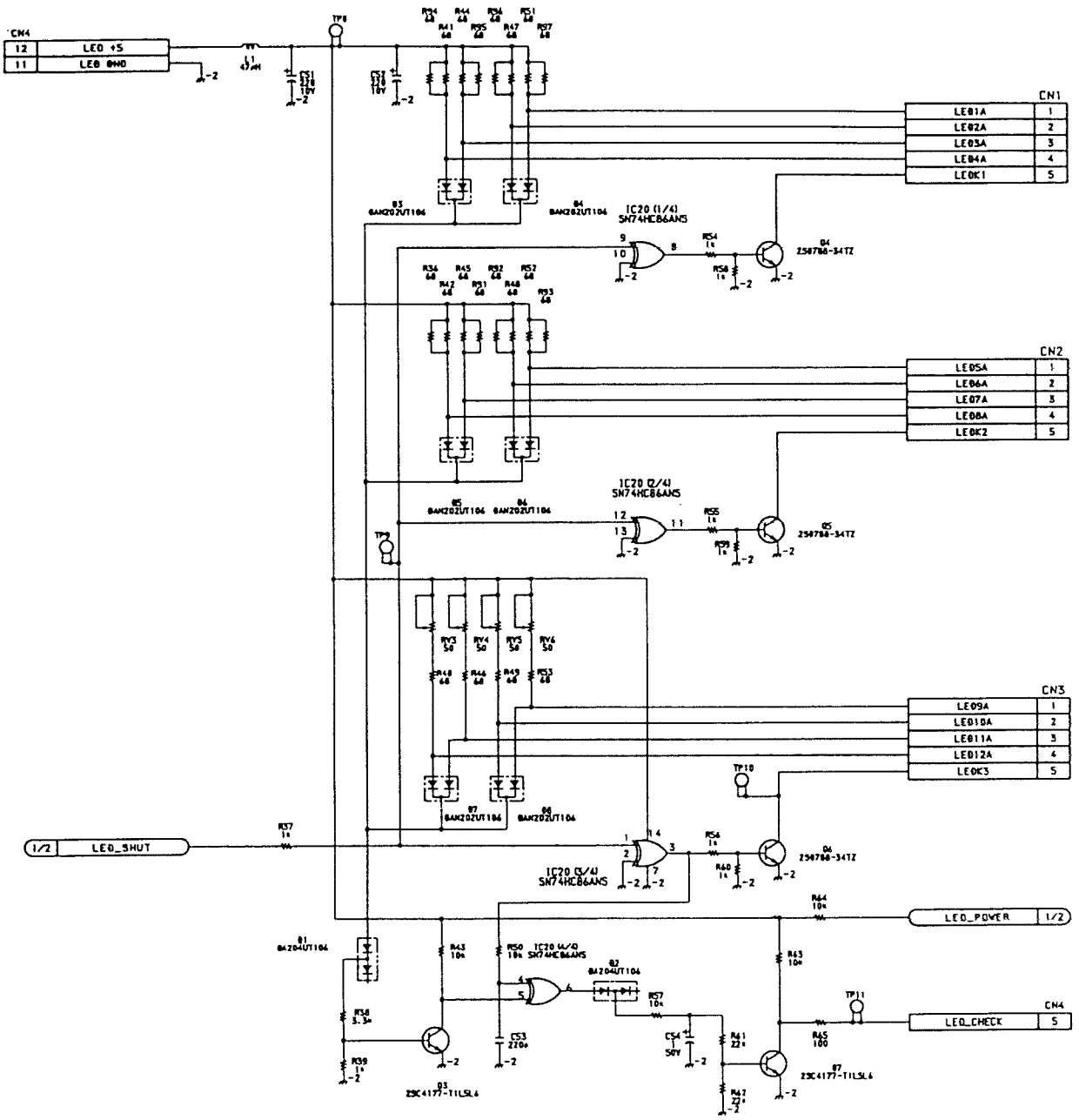
B Side is the same as Soldering Side.

RF-67 (1-653-137-11)

*Soldering Side

CN1	A-1	TP2	H-4
CN2	B-1	TP3	F-3
CN3	C-1	TP4	G-4
CN4	C-1	TP5	D-5
CN5	D-1	TP6	D-4
CN6	H-5	TP7	G-4
CN7	G-5	TP8	A-5
		TP9	A-5
D1	A-4	TP10	A-2
D2	B-4	TP11	A-2
D3	A-2	TP12	K-3
D4	A-2	TP13	F-4
D5	B-2	TP14	G-3
D6	B-2		
D7	B-3		
D8	A-3		
D9	E-2		
D10	E-3		
D11	E-3		
E1	D-2		
E2	D-3		
E3	A-4		
E4	K-5		
FL1	G-2		
IC1	D-3		
IC2	H-4		
IC3	H-4		
IC4	H-2		
IC5	H-2		
IC6	G-4		
IC7	G-4		
IC8	F-3		
IC9	G-2		
IC10	F-3		
IC11	F-3		
IC12	F-4		
IC13	D-5		
IC14	D-4		
IC15	D-2		
IC16	C-4		
IC17	C-4		
IC18	C-3		
IC19	C-2		
IC20	A-4		
Q1	K-2		
Q2	D-2		
Q3	A-4		
Q4	A-3		
Q5	B-3		
Q6	B-3		
Q7	B-4		
RV1	K-4		
RV2	K-4		
RV3	A-3		
RV4	A-3		
RV5	A-4		
RV6	A-4		
RV7	K-4		
RV8	K-2		
TP1	H-4		

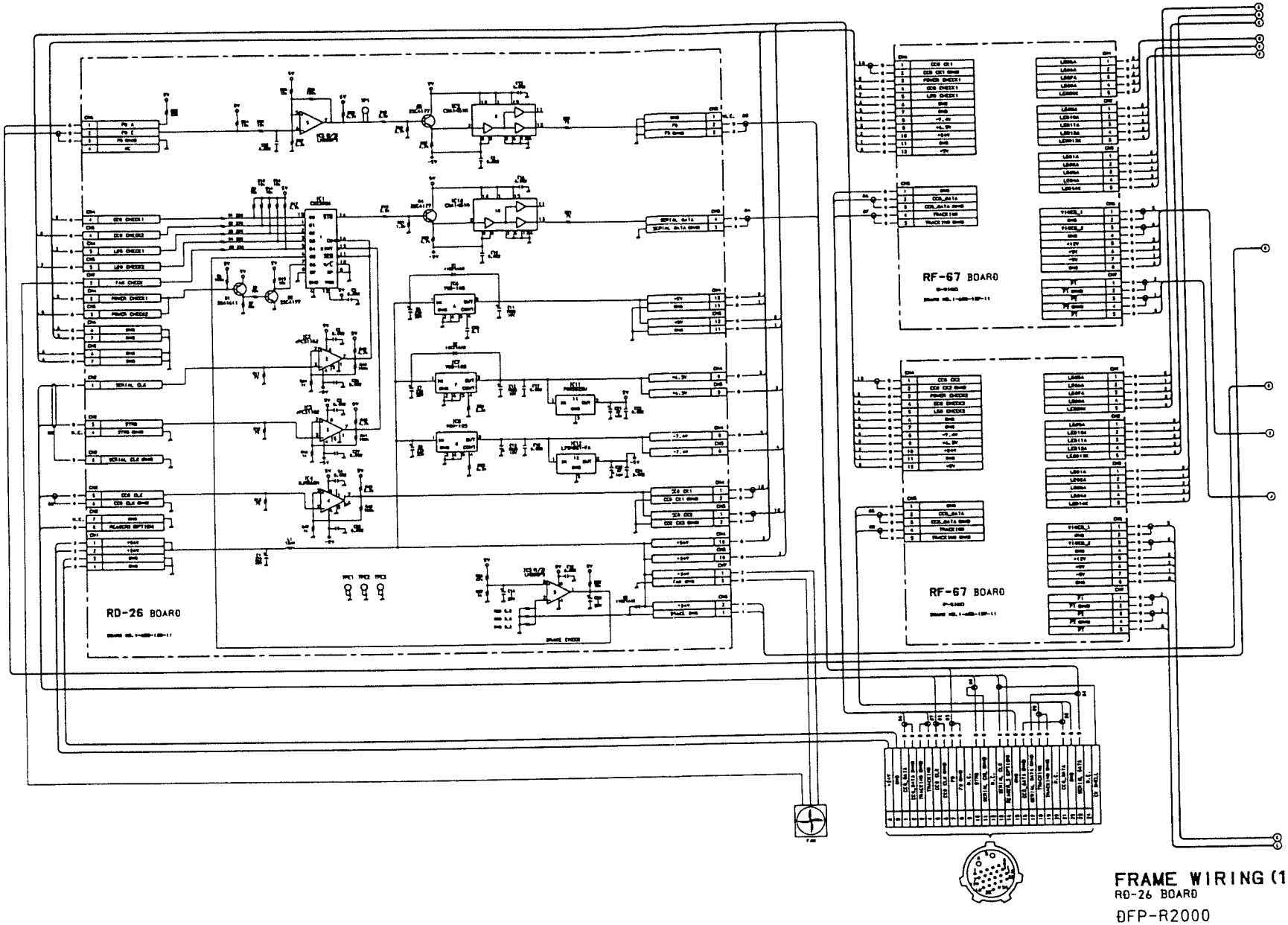
CCD RF AMP/TIMING GEN/LED DRIVER



RF-67 (2/2)
1-653-137-11
DFP-R2000

A | B | C | D

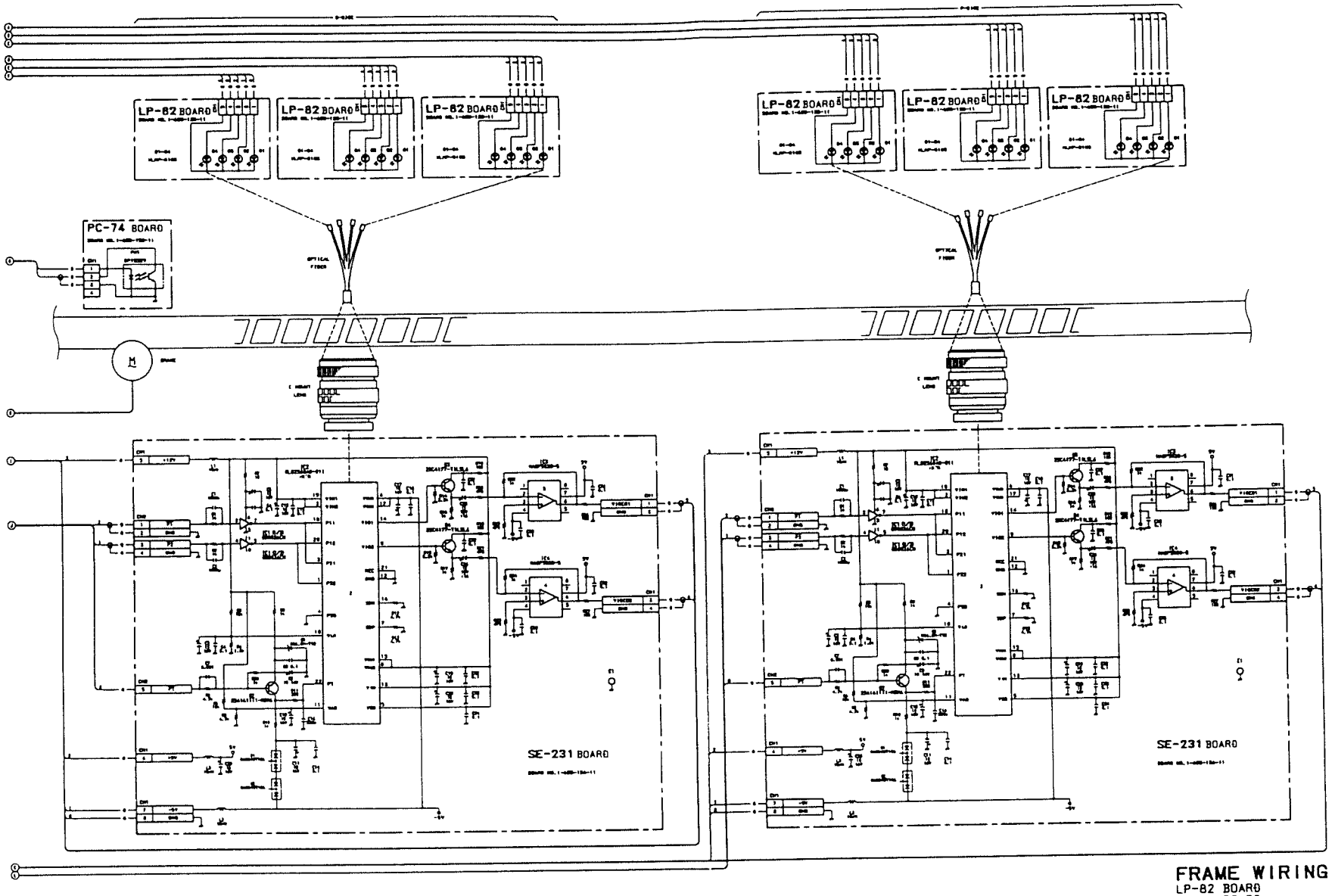
FRAME WIRING (1/2)



FRAME WIRING (1/2)
RD-26 BOARD
ØFP-R2000

7-7

FRAME WIRING (2/2)



FRAME WIRING (2/2)
LP-82 BOARD
PC-74 BOARD
SE-231 BOARD
ΘFP-R2000

7-9

SECTION 9
SPARE PARTS

9-1. NOTES ON SPARE PARTS

(1) Safety Related Components Warning

Components marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation.
Replace these components with Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

(2) Standardization of Parts

Repair parts supplied from sony Parts Center may not be always identical with the parts which actually in use due to "accommodating the improved parts and/or engineering changes" or "standarzation of genuine parts".
This manual's exploded views and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present".

(3) Stock of Parts

Parts marked with "o" SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

(4) Units for Capacitors, Inductors and Resistors

The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified.

Capacitors : μF
Inductors : μH
Resistors : Ω

補修用部品注意事項

(1) 安全重要部品

回路図、分解図、電気部品表中、⚠印の部品は安全性を維持するために重要な部品です。従ってこれらの部品を交換するときには必ず指定の部品と交換して下さい。

(2) 部品の共通化

ソニーから供給される部品セットに実装されているものと異なることがあります。これは部品の共通化、改良等によるものです。
分解図や電気部品表には現時点での共通化された部品が記載されています。

(3) 部品の在庫

部品表のSP (Supply code) 欄にoで示される部品は交換頻度が低い部品ですので在庫していないことがあり、納期が長くなることがあります。

(4) コンデンサー、インダクター、抵抗の単位

回路図、分解図、電気部品表中、特に明記したものを除き、下記の単位は省略されています。

コンデンサー : μF
インダクター : μH
抵抗 : Ω

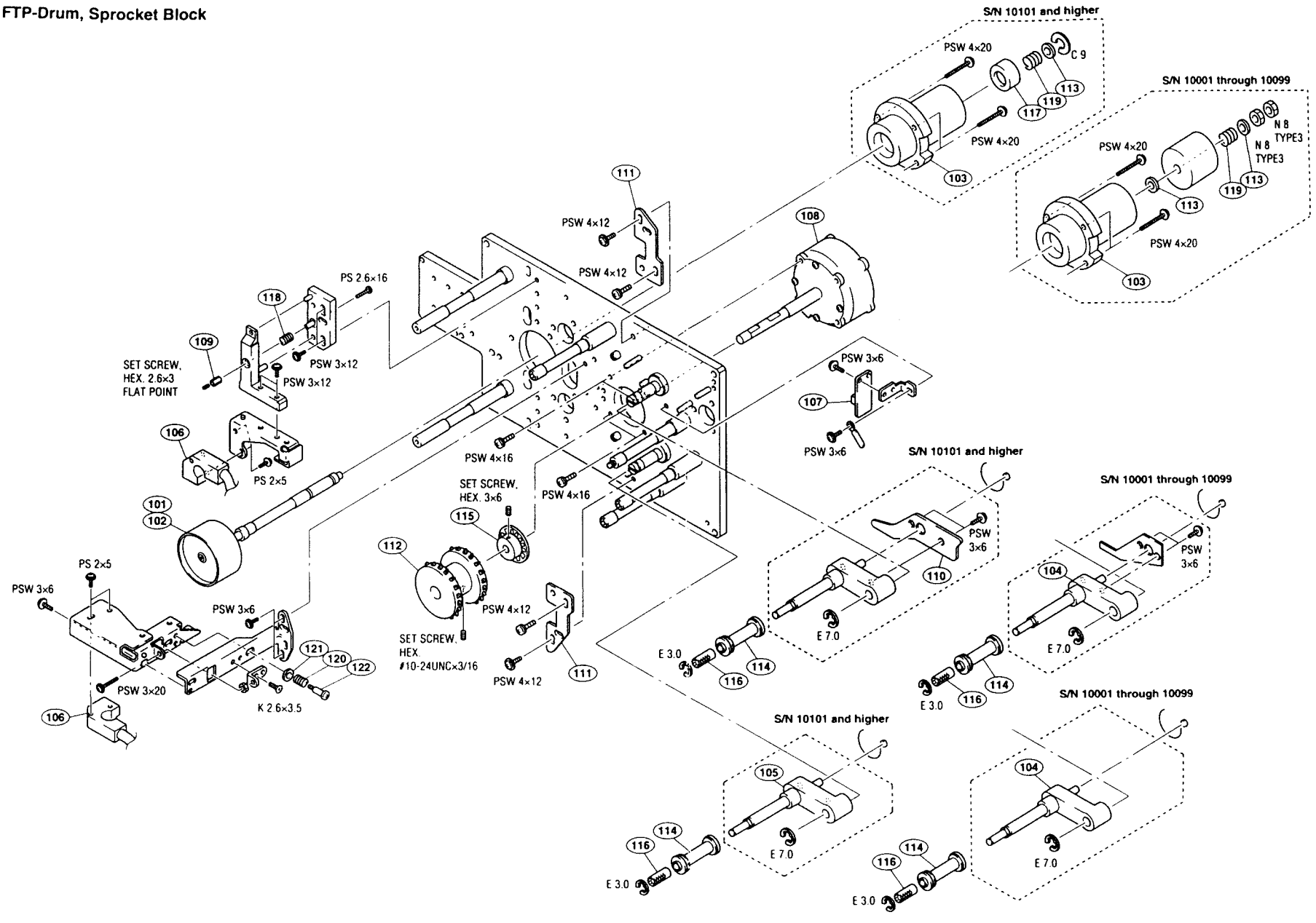
9-2. EXPLODED VIEWS

- Exploded views are composed of the following blocks
  - (1) Chassis Block
  - (2) FTP-Drum, Sprocket Block
  - (3) FTP-Guide Block
  - (4) Optics, LED Block

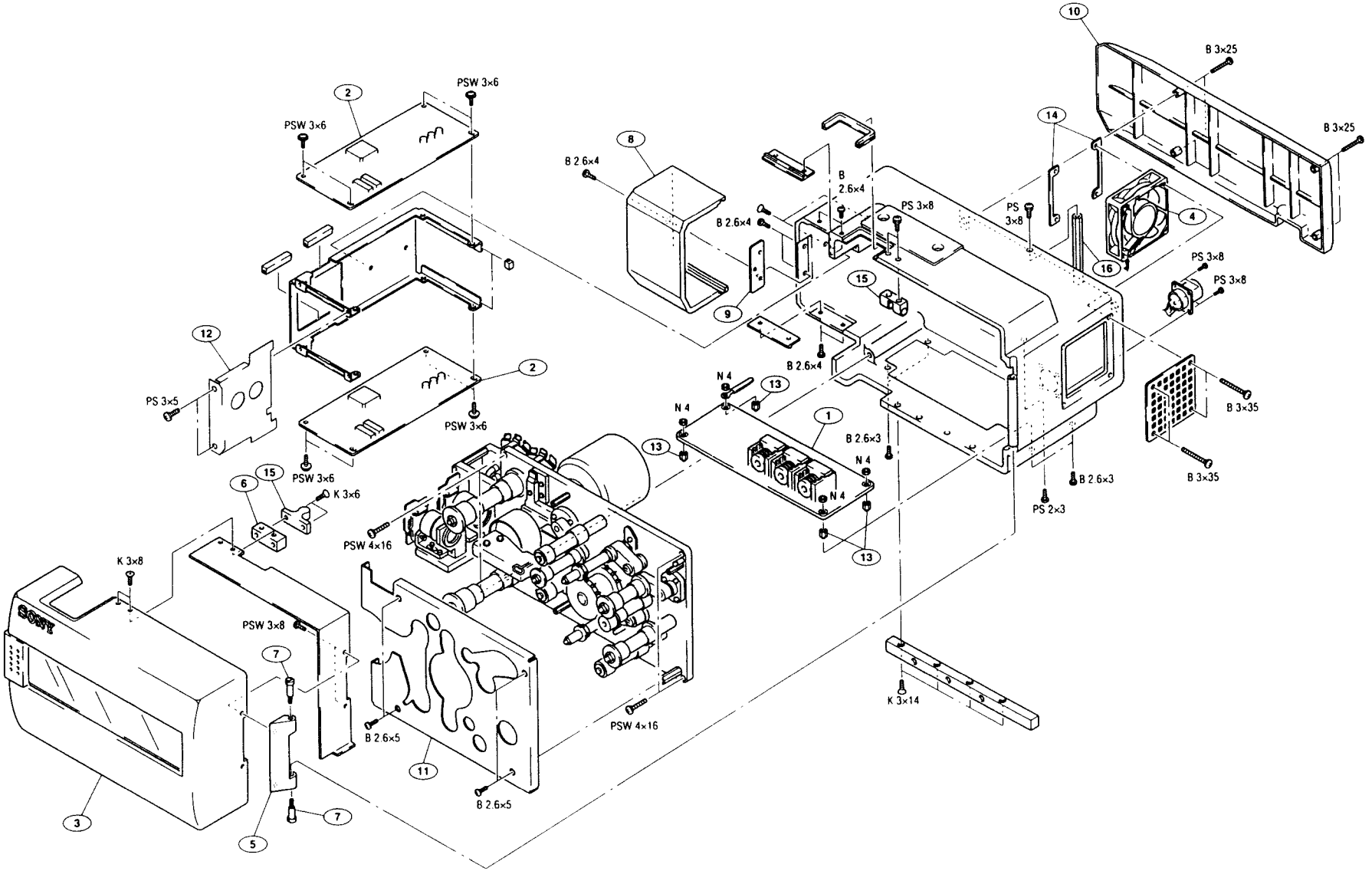
CHASSIS BLOCK

No.	Parts No.	SP	Description
1	A-8263-468-A	o	MOUNTED CIRCUIT BOARD, RD-26
2	A-8263-470-A	o	MOUNTED CIRCUIT BOARD, RF-67
3	X-3167-502-2	o	LID, UPPER ASSY
4	1-698-447-11	s	MOTOR, DC FAN
5	3-185-173-01	o	HINGE (A)
6	3-185-238-01	o	HOLDER, HINGE
7	3-185-239-01	s	SCREW, LID, UPPER FITTING
8	3-185-250-01	o	COVER, SLIDE
9	3-185-253-02	o	STOPPER, SLIDE
10	3-185-260-01	o	LID, REAR
11	--PENDING--	o	PLATE, PASS
12	3-186-558-01	o	COVER, OPT
13	3-186-815-01	s	SUPPORT, RD
14	3-675-897-00	o	BRACKET, FAN
15	3-692-463-01	o	STOPPER, LID
16	4-957-119-01	o	BOSS (POWER)

FTP-Drum, Sprocket Block



hassis Block



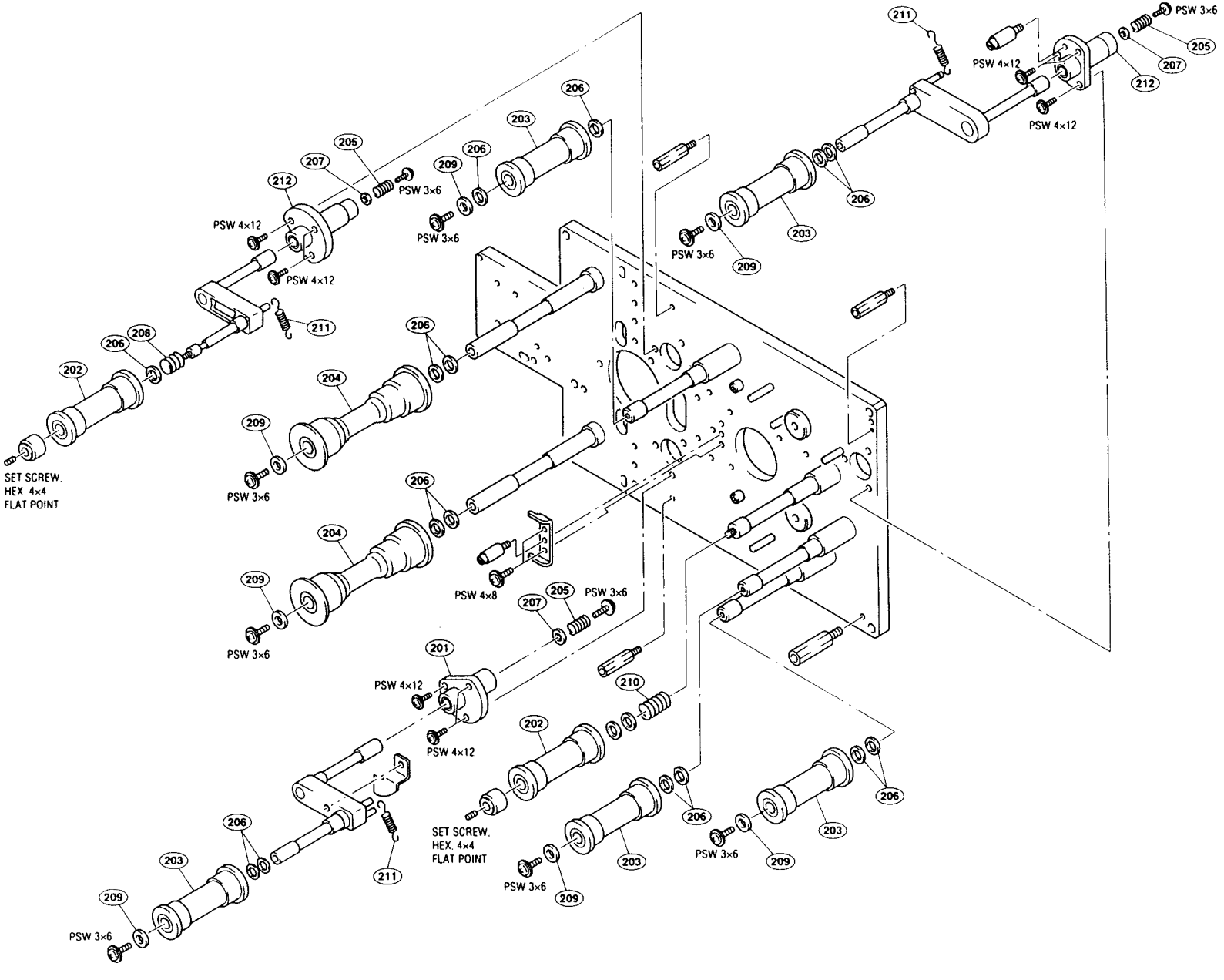
FTP-Drum, Sprocket BLOCK

No.	Parts No.	SP	Description
101	X-3167-485-1	s	DRUM SUB ASSY S/N 10001 through 10099
102	X-3167-485-2	s	DRUM SUB ASSY S/N 10101 and higher
103	X-3167-501-2	s	HOLDER SUB ASSY, DRUM
104	X-3167-623-1	s	PR (P) SUB ASSY S/N 10001 through 10099
105	X-3167-698-1	s	PR T (P) SUB ASSY S/N 10101 and higher
106	1-547-784-11	s	OPTICAL FIBER 4 BRANCHED
107	1-653-159-11	o	PRINTED CIRCUIT BOARD, PC-74
108	1-698-490-11	s	AC MOTOR
109	2-144-109-01	s	SHAFT (MAIN)
110	3-187-644-01	o	PR PLATE LEVER S/N 10101 and higher
111	3-187-645-01	o	PR STOPPER
112	3-185-137-01	s	SPROCKET (32)
113	3-185-149-01	o	SPACER (DIA 9.6)
114	3-185-158-11	s	ROLLER, FILM RETAINER
115	3-185-287-03	o	SLIT (32), SENSOR
116	3-186-589-01	o	SHAFT, PR KNOB
117	3-186-838-01	o	SPACER, BEARING
118	3-534-235-00	s	SPRING, COMPRESSION
119	3-565-497-01	s	SPRING COIL COMPRESSION
120	3-693-943-01	s	SPRING (#7, #8), COMPRESSION
121	3-701-441-21	s	POLY-SLIDER WASHER (d = 4, t = 0.5)
122	4-931-471-01	s	SCREW (STEP)

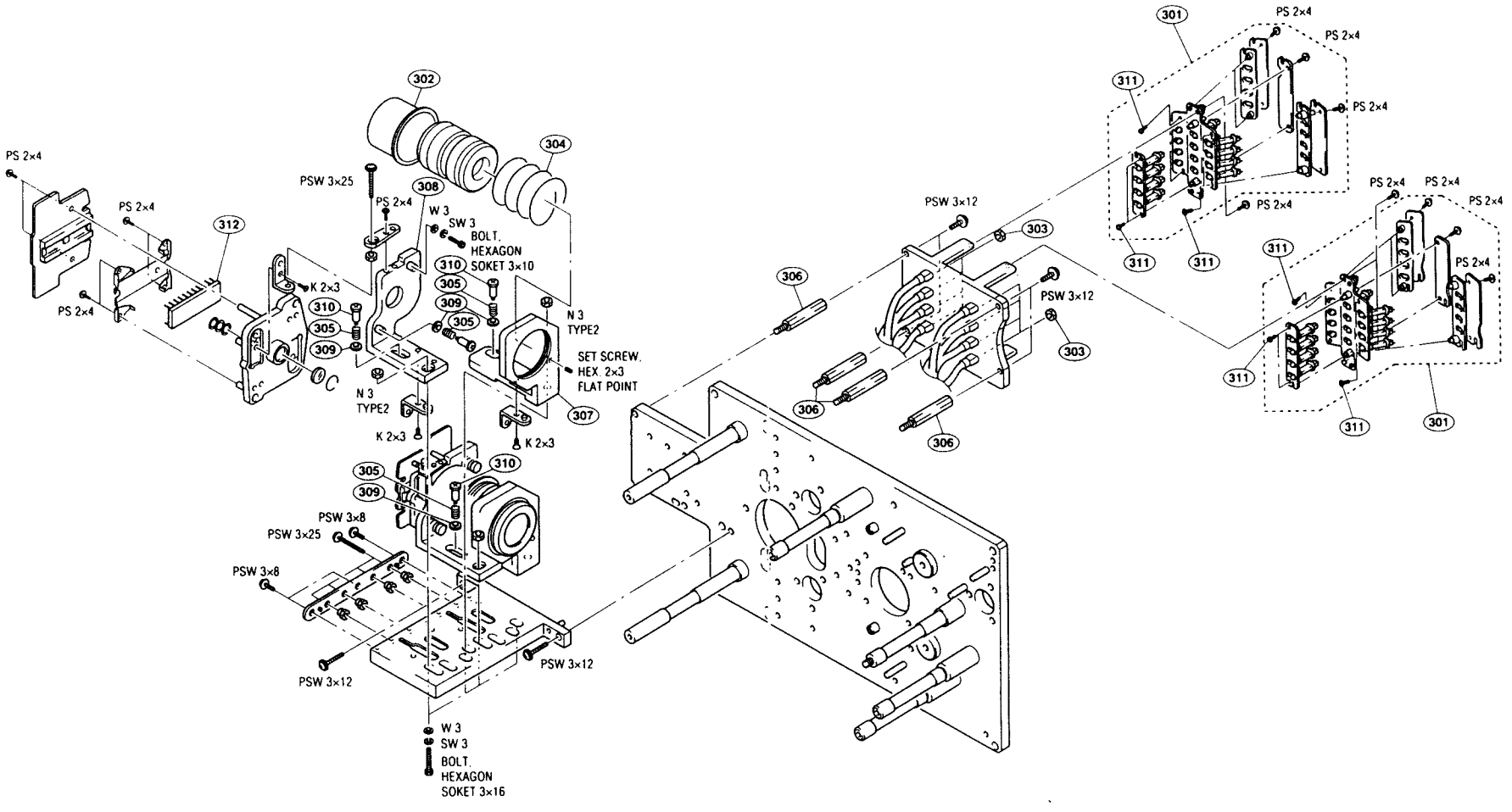
FTP-Guide BLOCK

No.	Parts No.	SP	Description
201	X-3167-617-1	s	TENSION REGULATOR B, SUB ASSY
202	X-3167-484-2	s	GUIDE (M) ASSY, ROLLER
203	X-3167-637-1	s	GUIDE ASSY, ROLLER
204	X-3167-638-1	s	GUIDE (L) ASSY, ROLLER
205	2-623-515-02	s	SPRING (A), COMPRESSION
206	3-185-161-01	o	SPACER (DIA 8)
207	3-185-167-01	o	SPACER (DIA 6)
208	3-186-836-01	s	SPRING, COMPRESSION
209	3-186-850-01	o	STOPPER (DIA 3)
210	3-558-379-02	o	SPRING, COMPRESSION
211	3-669-979-00	s	SPRING, TENSION
212	X-3167-481-2	s	TENSION REGULATOR, SUB ASSY

FTP-Guide Block



Optics, LED Block



9 - 8

OPTICS, LED BLOCK

No.	Parts No.	SP	Description
301	A-8263-459-A	s	LED ASSY
302	3-184-840-01	o	COVER, LENS
303	3-186-132-01	s	NUT M4
304	3-187-347-01	s	SPRING, COMPRESSION
305	3-539-237-00	s	SPRING (3), COMPRESSION
306	3-569-324-00	o	SUPPORT
307	3-707-313-01	o	CAP, FRONT
308	3-707-314-01	o	CAP, REAR
309	3-693-831-01	s	WASHER, GUIDE
310	4-931-471-01	s	SCREW (STEP)
311	7-627-553-37	s	SCREW, PRECISION P 2×3
312	8-759-276-01	s	IC RL0256DAG-011

9-3. ELECTRICAL PARTS LISTS

LP-82 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8263-459-A	s	LED ASSY
6pcs	7-628-253-05	s	SCREW +PS 2x4
CN1	1-564-004-11	o	CONNECTOR, PIN 5P
	1-506-470-11	s	CONNECTOR, PIN 5P (RED)
D1	8-719-030-06	s	DIODE HLMP-8103
D2	8-719-030-06	s	DIODE HLMP-8103
D3	8-719-030-06	s	DIODE HLMP-8103
D4	8-719-030-06	s	DIODE HLMP-8103

PC-74 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-653-159-11	o	PRINTED CIRCUIT BOARD, PC-74
CN1	1-564-014-11	s	CONNECTOR, PIN 4P
PH1	8-719-991-99	s	PHOTO INTERRUPTER GP1S52V

RD-26 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8263-468-A	o	MOUNTED CIRCUIT BOARD, RD-26
C1	1-126-949-11	s	ELECT 220uF 20% 35V
C2	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C3	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C4	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C5	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C6	1-126-949-11	s	ELECT 220uF 20% 35V
C7	1-126-949-11	s	ELECT 220uF 20% 35V
C8	1-126-949-11	s	ELECT 220uF 20% 35V
C9	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C10	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C11	1-126-926-11	s	ELECT 1000uF 20% 10V
C12	1-126-926-11	s	ELECT 1000uF 20% 10V
C13	1-126-926-11	s	ELECT 1000uF 20% 10V
C14	1-124-903-11	s	ELECT 1uF 20% 50V
C15 to C19	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C20	1-124-903-11	s	ELECT 1uF 20% 50V
C21	1-124-126-00	s	ELECT 47uF 20% 25V
C22	1-124-126-00	s	ELECT 47uF 20% 25V
C23 to C28	1-163-033-00	s	CERAMIC, CHIP 0.022uF 50V
C29	1-161-772-11	s	CERAMIC 0.1uF 10% 25V
C30	1-161-051-00	s	CERAMIC 0.01uF 10% 50V
CN1	1-506-703-11	o	CONNECTOR POST HEADER, ILG (4P)
CN2	1-564-007-11	o	CONNECTOR, PIN 8P
CN3	1-564-004-11	o	CONNECTOR, PIN 5P
CN4	1-564-011-11	o	CONNECTOR, 12P, MALE
CN5	1-506-477-11	s	CONNECTOR, 12P, MALE
CN6	1-506-469-11	s	CONNECTOR, 4P, MALE
CN7	1-506-702-11	o	CONNECTOR POST HEADER, ILG (3P)
CN8	1-564-320-00	s	CONNECTOR, PIN 2P
D1	8-719-200-02	s	DIODE 10E2
D2	8-719-200-02	s	DIODE 10E2
D3	8-719-200-02	s	DIODE 10E2
IC1	8-759-925-26	s	IC CX23026
IC2	8-759-101-12	s	IC UPC311G2
IC3	8-759-101-12	s	IC UPC311G2
IC4	8-759-702-08	s	IC NJM360M
IC5	8-759-988-13	s	IC LM393PS
IC6	1-467-844-11	s	CONVERTER UNIT, DC-DC
IC7	1-467-844-11	s	CONVERTER UNIT, DC-DC
IC8	1-467-843-11	s	CONVERTER UNIT, DC-DC
IC9	8-752-052-73	s	IC CXA1451M
IC10	8-752-052-73	s	IC CXA1451M
IC11	8-759-182-84	s	IC PQ05SZ5U
IC12	8-759-822-95	s	IC L79M05T-FA
L1	1-412-526-11	s	INDUCTOR 12uH
Q1	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q2	8-729-117-32	s	TRANSISTOR 2SC4177
Q3	8-729-117-32	s	TRANSISTOR 2SC4177
Q4	8-729-117-32	s	TRANSISTOR 2SC4177
R1 to R5	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R6	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W

(RD-26 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R7	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R8	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R9	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R10	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R11	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R12	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R13	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R14	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R15	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R16	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R17	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R18	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R19	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R20	1-216-059-00	s	METAL, CHIP 2.7K 5% 1/10W
R21	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R22	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R23	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R24	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R25	1-208-801-11	s	METAL, CHIP 6.2K 0.5% 1/10W
R26	1-216-089-91	s	METAL, CHIP 47K 5% 1/10W
R27	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R28	1-216-304-11	s	METAL CHIP 3.3 5% 1/10W
R29	1-216-304-11	s	METAL CHIP 3.3 5% 1/10W
R30	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R31	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R32	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R33	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R34	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R35	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R36	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R37	1-216-059-00	s	METAL, CHIP 2.7K 5% 1/10W
R38	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R39	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R40	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R41	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R42	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R43	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R44	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R45	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R46	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R47	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R48	1-216-304-11	s	METAL CHIP 3.3 5% 1/10W
R49	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W

RF-67 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8263-470-A	o	MOUNTED CIRCUIT BOARD, RF-67
C1	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C2	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C3	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C4	1-126-301-11	s	ELECT 1uF 20% 50V
C5	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C6	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C7	1-135-179-21	s	TANTALUM, CHIP 2.2uF 10% 16V
C8	1-135-179-21	s	TANTALUM, CHIP 2.2uF 10% 16V
C9	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C10	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C11	1-163-257-11	s	CERAMIC, CHIP 180PF 5% 50V
C12	1-163-257-11	s	CERAMIC, CHIP 180PF 5% 50V
C13 to C22	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C23	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C24	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C25 to C31	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C32	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C33	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C34 to C38	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C39	1-126-793-31	s	ELECT 33uF 20% 35V
C40	1-126-786-11	s	ELECT 47uF 20% 16V
C41	1-126-786-11	s	ELECT 47uF 20% 16V
C42	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C43	1-126-786-11	s	ELECT 47uF 20% 16V
C44	1-126-786-11	s	ELECT 47uF 20% 16V
C45	1-126-786-11	s	ELECT 47uF 20% 16V
C46	1-126-786-11	s	ELECT 47uF 20% 16V
C47	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C48	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C49	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C50	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C51	1-126-176-11	s	ELECT 220uF 20% 10V
C52	1-126-176-11	s	ELECT 220uF 20% 10V
C53	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C54	1-126-301-11	s	ELECT 1uF 20% 50V
C55	1-126-786-11	s	ELECT 47uF 20% 16V
C56	1-126-786-11	s	ELECT 47uF 20% 16V
C57	1-126-786-11	s	ELECT 47uF 20% 16V
C58	1-126-786-11	s	ELECT 47uF 20% 16V
C59	1-124-589-11	s	ELECT 47uF 20% 16V
C60	1-124-589-11	s	ELECT 47uF 20% 16V
C61	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C62	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C63	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C64	1-124-589-11	s	ELECT 47uF 20% 16V
C65	1-124-589-11	s	ELECT 47uF 20% 16V
C66	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C67	1-124-589-11	s	ELECT 47uF 20% 16V
C68	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C69	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C70	1-124-589-11	s	ELECT 47uF 20% 16V
CN1	1-506-484-11	s	CONNECTOR, 5P, MALE
CN2	1-506-484-11	s	CONNECTOR, 5P, MALE

(RF-67 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
CN3	1-506-484-11	s	CONNECTOR, 5P, MALE
CN4	1-506-491-11	s	CONNECTOR, 12P, MALE
CN5	1-506-484-11	s	CONNECTOR, 5P, MALE
CN6	1-506-487-11	s	CONNECTOR, 8P, MALE
CN7	1-506-484-11	s	CONNECTOR, 5P, MALE
D1	8-719-941-23	s	DIODE DA204U
D2	8-719-941-23	s	DIODE DA204U
D3 to D8	8-719-941-86	s	DIODE DAN202U
D9	8-719-941-23	s	DIODE DA204U
D10	8-719-941-23	s	DIODE DA204U
D11	8-719-941-23	s	DIODE DA204U
FL1	1-239-933-22	s	FILTER, LOW PASS
IC1	8-759-267-92	s	IC SN74HC04ANS
IC2	8-759-092-76	s	IC HA9P5020-5
IC3	8-759-092-76	s	IC HA9P5020-5
IC4	8-759-007-17	s	IC MC74HC4016N
IC5	8-759-007-17	s	IC MC74HC4016N
IC6	8-759-702-08	s	IC NJM360M
IC7	8-759-702-08	s	IC NJM360M
IC8	8-752-052-73	s	IC CXA1451M
IC9	8-759-092-76	s	IC HA9P5020-5
IC10	8-759-239-55	s	IC MC74HC123AF
IC11	8-759-101-12	s	IC UPC311G2
IC12	8-759-294-19	o	IC EPM7032-RF67-IC12-V1.1
IC13	8-759-267-92	s	IC SN74HC04ANS
IC14	8-759-268-61	s	IC SN74HC08ANS
IC15	8-759-925-81	s	IC SN74HC20ANS
IC16	8-759-821-60	s	IC L78M12T-FA
IC17	8-759-182-84	s	IC PQ05SZ5U
IC18	8-759-182-84	s	IC PQ05SZ5U
IC19	8-759-822-95	s	IC L79M05T-FA
IC20	8-759-239-23	s	IC TC74HC86AF
IS12	1-540-055-11	o	SOCKET, IC 44P
L1	1-412-533-21	s	INDUCTOR 47uH
Q1	8-729-105-72	s	TRANSISTOR 2SK523-L1
Q2	8-729-117-32	s	TRANSISTOR 2SC4177
Q3	8-729-117-32	s	TRANSISTOR 2SC4177
Q4	8-729-320-60	s	TRANSISTOR 2SD788-34
Q5	8-729-320-60	s	TRANSISTOR 2SD788-34
Q6	8-729-320-60	s	TRANSISTOR 2SD788-34
Q7	8-729-117-32	s	TRANSISTOR 2SC4177
R1	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R2	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R3	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R4	1-216-047-00	s	METAL, CHIP 820 5% 1/10W
R5	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R6	1-216-075-00	s	METAL, CHIP 12K 5% 1/10W
R7	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R8	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R9	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R10	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R11	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R12	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R13	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R14	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W

(RF-67 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R15	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R16	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R17	1-216-035-00	s	METAL, CHIP 270 5% 1/10W
R18	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R19	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R20	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R21	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R22	1-216-022-00	s	METAL, CHIP 75 5% 1/10W
R23	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R24 to R28	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R29	1-216-077-00	s	METAL, CHIP 15K 5% 1/10W
R30 to R35	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R36	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R37	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R38	1-216-061-00	s	METAL, CHIP 3.3K 5% 1/10W
R39	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R40	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R41	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R42	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R43	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R44 to R49	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R50	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R51	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R52	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R53	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R54	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R55	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R56	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R57	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R58	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R59	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R60	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R61	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R62	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R63	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R64	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R65	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R66	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R67	1-216-095-00	s	METAL, CHIP 82K 5% 1/10W
R68	1-216-101-00	s	METAL, CHIP 150K 5% 1/10W
R69	1-216-037-00	s	METAL, CHIP 330 5% 1/10W
R70	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R71	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R72	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R73	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R74	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R75	1-216-121-00	s	METAL, CHIP 1M 5% 1/10W
R76	1-216-037-00	s	METAL, CHIP 330 5% 1/10W
R77	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R78	1-216-121-00	s	METAL, CHIP 1M 5% 1/10W
R79	1-216-037-00	s	METAL, CHIP 330 5% 1/10W
R80	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R81	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R82	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R83	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R84	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W

(RF-67 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R85	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R86	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R87	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R88	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R89	1-216-037-00	s	METAL, CHIP 330 5% 1/10W
R90	1-216-037-00	s	METAL, CHIP 330 5% 1/10W
R91 to R97	1-216-021-00	s	METAL, CHIP 68 5% 1/10W
R98	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R99	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R100	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R101	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R102	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R103	1-216-666-11	s	METAL, CHIP 4.3K 0.5% 1/10W
R104	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R105	1-216-022-00	s	METAL, CHIP 75 5% 1/10W
R106	1-249-417-11	s	CARBON 1K 5% 1/4W
R107	1-247-855-11	s	CARBON 10K 5% 1/4W
R108	1-249-417-11	s	CARBON 1K 5% 1/4W
RV1	1-228-472-00	s	RES, ADJ, METAL 2K
RV2	1-228-472-00	s	RES, ADJ, METAL 2K
RV3	1-238-780-11	s	RES, ADJ, CERMET 50
RV4	1-238-780-11	s	RES, ADJ, CERMET 50
RV5	1-238-780-11	s	RES, ADJ, CERMET 50
RV6	1-238-780-11	s	RES, ADJ, CERMET 50
RV7	1-228-470-00	s	RES, ADJ, METAL 500
RV8	1-228-472-00	s	RES, ADJ, METAL 2K

SE-231 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8263-458-A	o	MOUNTED CIRCUIT BOARD, SE-231
C1	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C2	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C3	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C4	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C5	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C6	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C7	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C8	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C9	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C10	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C11	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C12	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C13	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C14	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C15	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C16	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C17	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C18	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C19	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C20	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C22	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C23	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C24	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C25	1-135-216-11	s	TANTAL 10uF 10% 10V
C26	1-135-216-11	s	TANTAL 10uF 10% 10V
C27 to C32	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C33	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
CN1	1-564-007-11	o	CONNECTOR, PIN 8P
CN2	1-564-004-11	o	CONNECTOR, PIN 5P
D1	8-719-941-23	s	DIODE DA204U
D2	8-719-941-23	s	DIODE DA204U
D3	8-719-157-36	s	DIODE RD6.8M-B
IC1	8-759-000-26	s	IC MMH0026CP1
IC3	8-759-092-76	s	IC HA9P5020-5
IC4	8-759-092-76	s	IC HA9P5020-5
IS2	1-526-657-21	s	SOCKET, IC (DP) 22P
L1	1-410-381-11	s	INDUCTOR CHIP 10UH
L2	1-410-381-11	s	INDUCTOR CHIP 10UH
L3	1-410-381-11	s	INDUCTOR CHIP 10UH
Q2	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q3	8-729-117-32	s	TRANSISTOR 2SC4177
Q4	8-729-117-32	s	TRANSISTOR 2SC4177
R1	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R2	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R3	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R4	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R5	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R6	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R7	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R8	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R9	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R10	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W

(SE-231 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R11	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R12	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R13	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R14	1-216-061-00	s	METAL, CHIP 3.3K 5% 1/10W
R15	1-216-061-00	s	METAL, CHIP 3.3K 5% 1/10W
R16	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R17	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R18	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R19	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R20	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R21	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R22	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R23	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R24	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R25	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R26	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R27	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R28	1-249-417-11	s	CARBON 1K 5% 1/4W

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-562-244-11	o	CONNECTOR, CIRCULAR 26P
1pc	1-698-447-11	s	MOTOR, DC FAN
1pc	1-698-490-11	s	MOTOR, AC
2pcs	1-547-784-11	s	OPTICAL FIBER 4 BRANCHED
CN1(to RD-26 board)			
	1-561-516-00	o	HOUSING, ILG 4P
	1-560-372-00	o	CONTACT, ILG, FEMALE AWG22-28
CN2(to RD-26 board)			
	1-569-201-11	o	HOUSING, 8P
	1-569-193-11	o	CONTACT, FEMALE AWG24-30
CN3(to RD-26 board)			
	1-569-198-11	o	HOUSING, 5P
	1-569-193-11	o	CONTACT, FEMALE AWG24-30
CN5(P) (to RF-67 board)			
	1-569-198-11	o	HOUSING, 5P
	1-569-193-11	o	CONTACT, FEMALE AWG24-30
CN5(S) (to RF-67 board)			
	1-569-198-11	o	HOUSING, 5P
	1-569-193-11	o	CONTACT, FEMALE AWG24-30
IC2(P) (in the CAMERA HEAD ASSY)			
	8-759-276-01	s	IC RL0256DAG-011
IC2(S) (in the CAMERA HEAD ASSY)			
	8-759-276-01	s	IC RL0256DAG-011

9-4. PACKING MATERIALS & ACCESSORIES

Ref. No. or Q'ty	Part No.	SP	Description
1pc			CABLE, CCZ-A25 25m
	(This assembly composed by the following parts.)		
1pc	1-564-183-21	o	PLUG, CIRCULAR 26P
1pc	1-564-184-21	o	SOCKET, CIRCULAR 26P
1pc	3-185-978-01	o	ADAPTOR, STOPPER
1pc	3-185-979-01	o	ADAPTOR, T (S)
1pc	3-185-980-02	o	ADAPTOR, B (S)
8pcs	3-185-981-01	o	HEXAGON UNIFIED SCREW 3/8 inch
1pc	3-185-982-01	o	ADAPTOR, P
2pcs	7-682-653-09	s	SCREW +PS 3x20

9-5. OPTIONAL FIXTURES

Part No.	SP	Description
J-6187-860-A	o	GUIDE HEIGHT ADJUSTMENT TOOL
J-6187-870-A	o	SPROCKET HEIGHT ADJUSTMENT TOOL
J-6187-880-A	o	ECCENTRIC DRIVER
J-6187-890-A	o	L SHAPED HEX. WRENCHE (3/32)
J-6187-990-A	o	MOTOR SHAFT POSITIONING TOOL
J-6188-000-A	o	THICKNESS GAUGE