

Service Manual

ORDER NO.
CRT2183

CD PLAYER

YPM-2136ZF WL



- This additional service manual is designed to be used together with Model YPM-1016ZF/UC Service Manual CRT2111. Refer to it for finding parts numbers and adjustment, etc. which are not shown in this manual.
- See the separate manual CX-597(CRT1829) for the CD mechanism description, disassembly and circuit description.
- The CD mechanism employed in this model is one of S7 series.
- **CD Player Service Precautions**
 1. For pickup unit(CXX1232) handling, please refer to "Disassembly"(CX-597 Service Manual CRT1829). During replacement, handling precautions shall be taken to prevent an electrostatic discharge(protection by a short pin).
 2. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

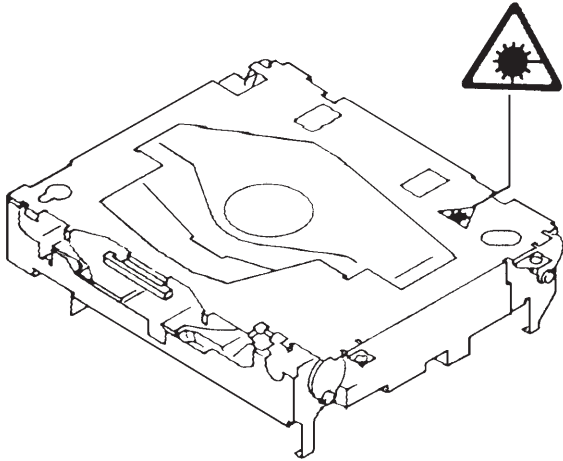
1. Safety Precautions for those who Service this Unit.

- **When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

Caution:

1. **During repair or tests, minimum distance of 13cm from the focus lens must be kept.**
2. **During repair or tests, do not view laser beam for 10 seconds or longer.**

2. **The triangular label is attached to the mechanism unit frame.**



4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.

Wavelength = 800 nanometers

● CD MECHANISM MODULE SECTION PARTS LIST

NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

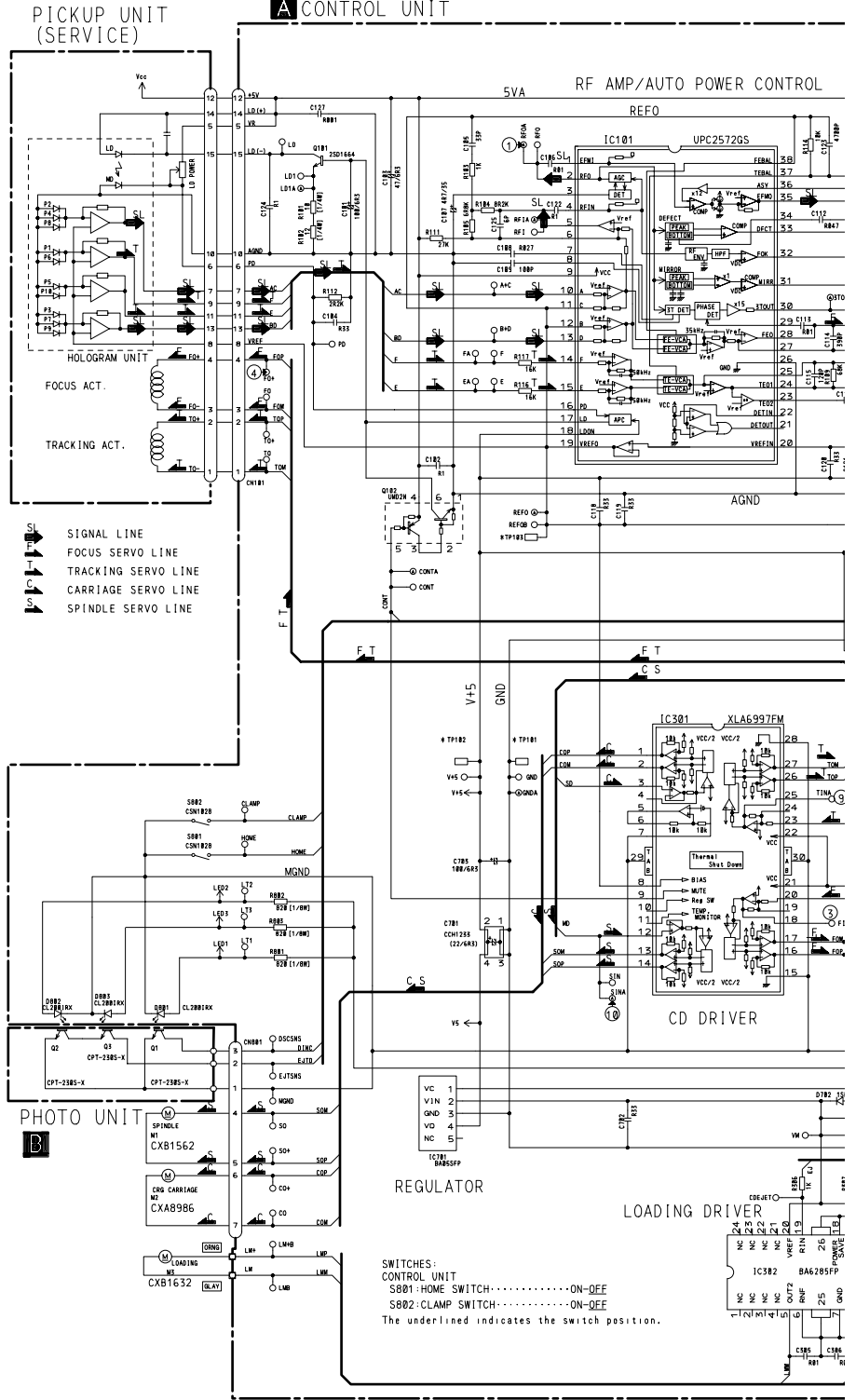
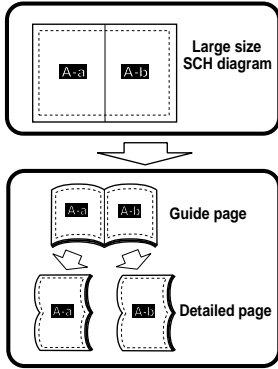
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Control Unit	CWX2158	46	Connector (CN901)	CKS3422
2	Pickup Unit (Service)	CXX1232	47	Connector (CN801)	CKS2196
3	Screw	IMS26P050FMC	48	Spring	CBH1832
4	Screw	BMZ20P025FMC	49	Spring	CBH1833
5	Screw	BMZ20P040FMC	50	Roller	CLA2627
6	Screw	BSZ20P040FMC	51	Arm	CNV4136
7	Screw (M2X3)	CBA1077	52	Arm Unit	CXA8565
8	Screw (M2X2)	CBA1250	53	Bracket	CNC6056
9	Screw (M2X5)	CBA1296	54	Load Motor Unit (M3)	CXB1631
10	Screw (M2X3.85)	CBA1362	55	Screw	JFZ20P025FMC
11	Spring	CBH1724	56	Arm	CNV4120
12	Spring	CBH1729	57	Roller	CNV4509
13	Spring	CBH1730	58	Gear Unit	CXA8701
14	Spring	CBH1731	59	Screw (M2X5)	CBA1296
15	Spring	CBH1732	60	Frame	CNC6844
16	Spring	CBH1745	61	Damper	CNV3974
17	Spring	CBH1848	62	Spring	CBH1736
18	Spring	CBH1849	63	Spring	CBH1863
19	Spring	CBH1939	64	Spring	CBH1945
20	Spring	CBL1214	65	Spring	CBL1269
21	Roller	CLA2627	66	Arm	CNC5799
22	Frame	CNC6670	67	Lever	CNC6054
23	Bracket	CNC5871	68	Spacer	CNM3315
* 24	Bracket	CNC6376	69	Sheet	CNM4849
25	Cushion	CNM3917	70	Arm	CNV4122
26	Sheet	CNM4873	71	Arm	CNV4123
* 27		72	Arm	CNV4124
28	PCB	CNP4230	73	Arm	CNV4125
29	Bearing	CNR1415	74	Arm	CNV4138
30	Belt	CNT1071	75	Arm	CNV4139
31	Damper	CNV3974	76	Clamper	CNV4140
32	Gear	CNV4128	77	Screw (M2X2)	CBA1250
33	Gear	CNV4129	78	Connector	CDE4576
34	Gear	CNV4857	79	Arm	CNC5801
35	Gear	CNV4131	* 80	Gathering PCB	CNX2533
36	Holder	CNV4663	81	Photo-transistor (Q1,2,3)	CPT-230S-X
37	Holder	CNV4664	82	Elbo Arm Assy	CXA8889
38	Guide	CNV4484	83	Load Motor Assy	CXB1632
39	Screw Unit	CXA8699	84	LO Arm Assy	CXA8892
40	CRG Motor Unit (M2)	CXA8986	85	Shaft	CLA3133
41	Motor Unit (M1)	CXB1562	86	Guide Arm Assy	CXA9416
42	Lever Unit	CXB1263	87	F Frame Assy	CXB1068
43	Chassis Unit	CXB1264	88	Bracket	CNC6913
44	Screw	JGZ17P025FZK	89	Screw	BSZ26P050FMC
45	Connector (CN101)	CKS1953	90	Bracket	CNC7482

3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM (GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

A-a



A-b

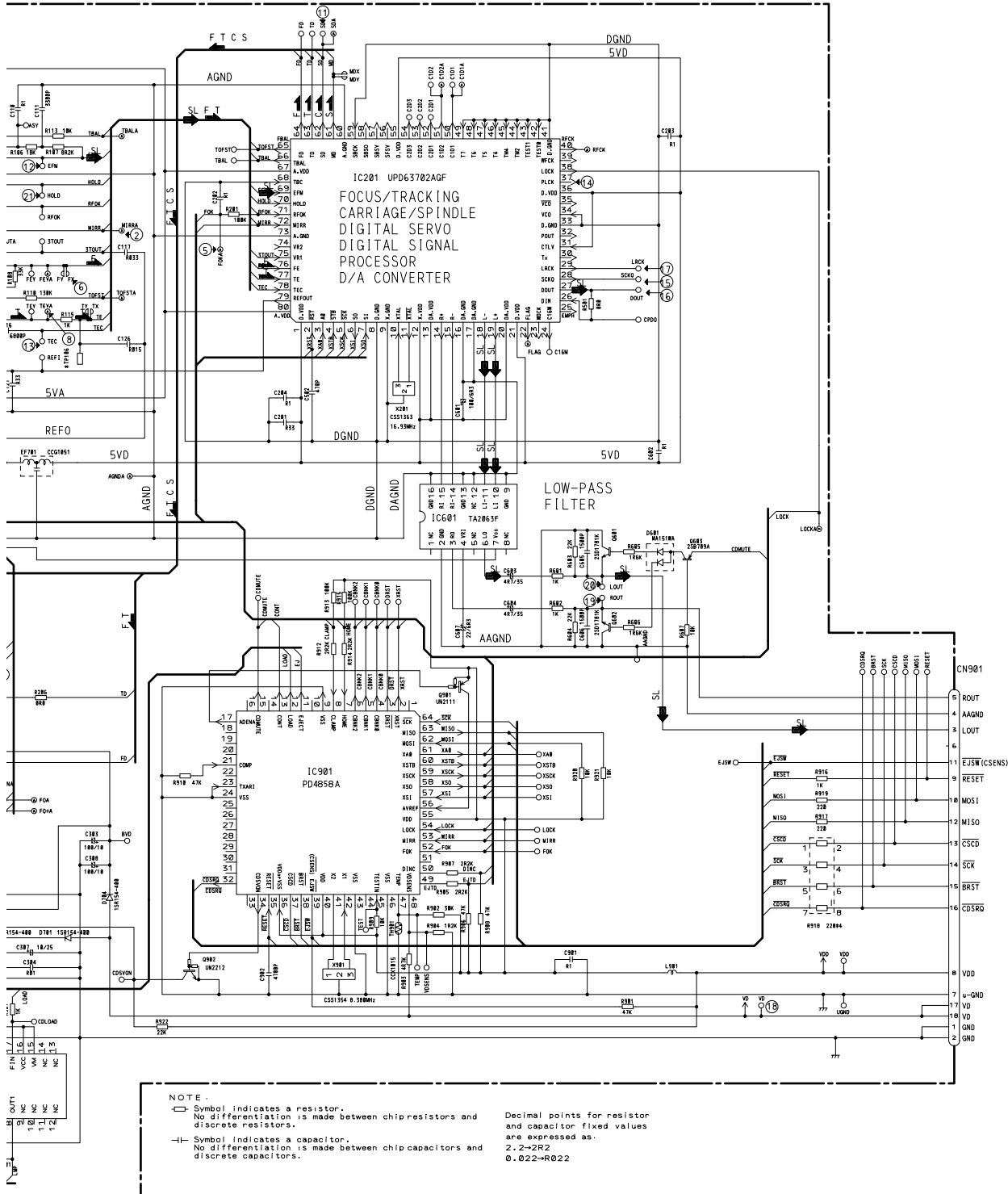


Fig. 2

A

B

C

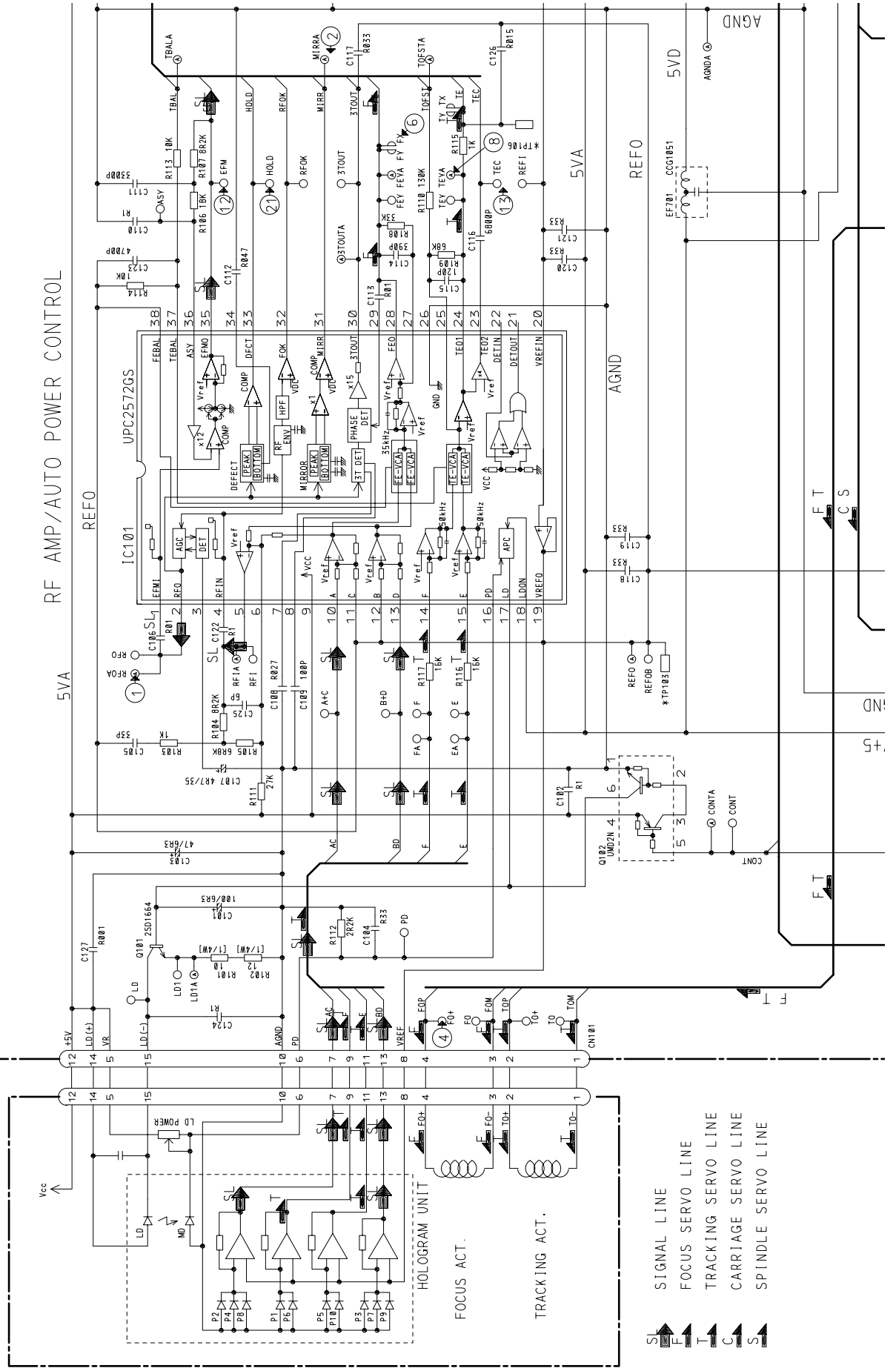
D

A-a A-b

CONTROL UNIT

PICKUP UNIT (SERVICE)

RF AMP/AUTO POWER CONTROL



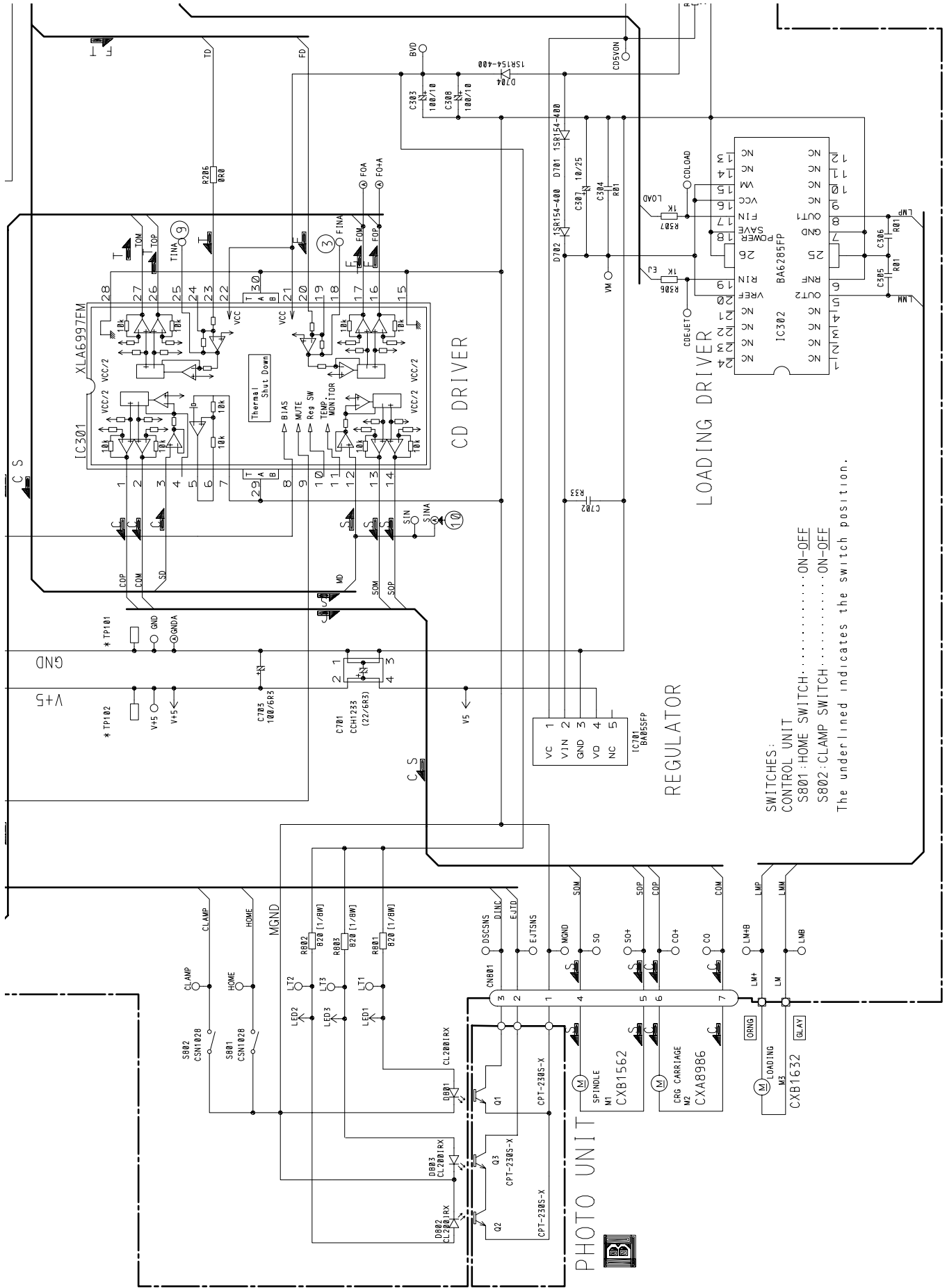
- ▲ SIGNAL LINE
- ▲ FOCUS SERVO LINE
- ▲ TRACKING SERVO LINE
- ▲ CARRIAGE SERVO LINE
- ▲ SPINDLE SERVO LINE
- CONTA
- CONT
- ▲ F.T

A

B

C

D

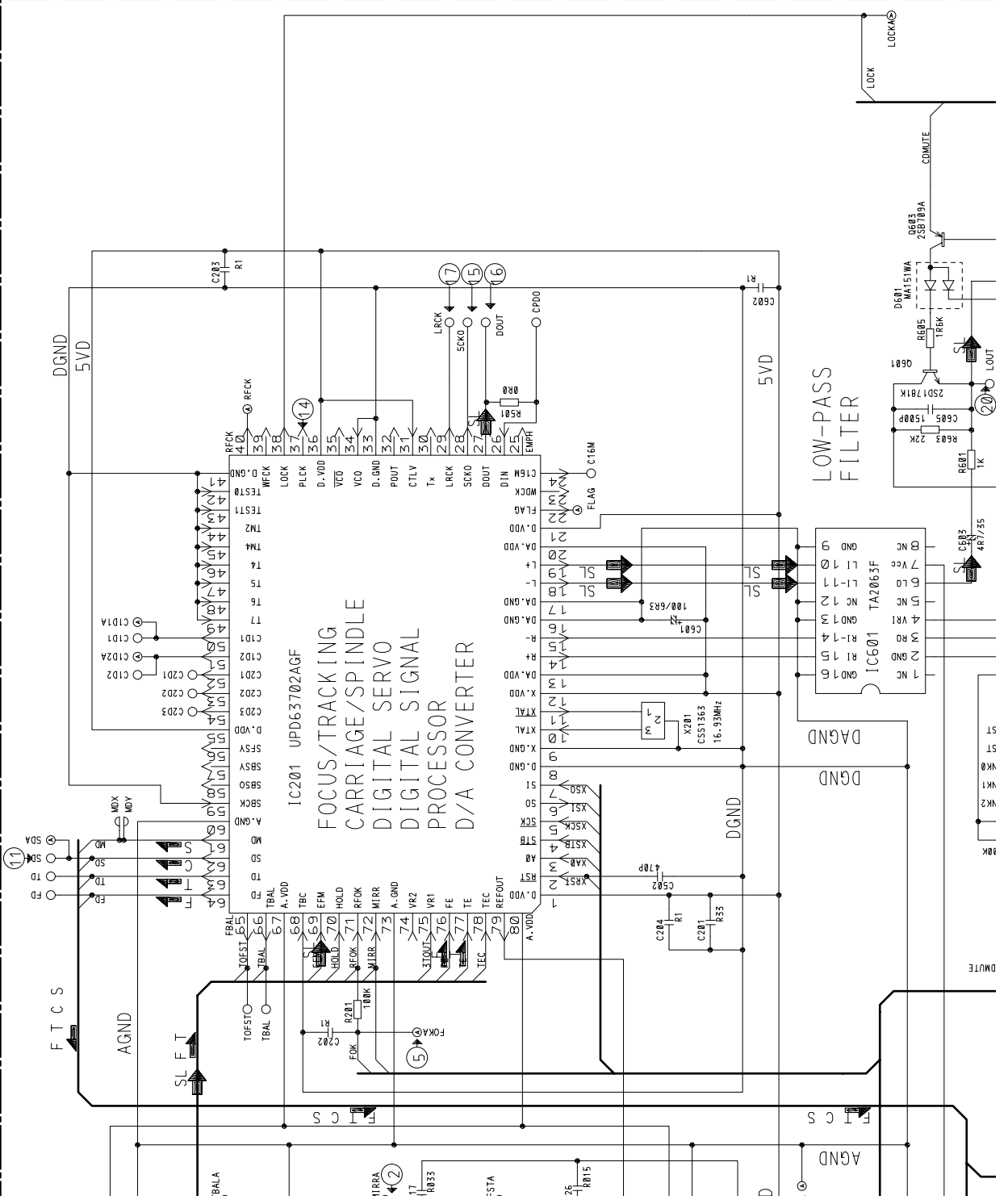


SWITCHES:
 CONTROL UNIT
 S801: HOME SWITCH.....ON-OFF
 S802: CLAMP SWITCH.....ON-OFF
 The underlined indicates the switch position.

A-a A-b

Fig. 3

A-a B



A

B

C

D

2

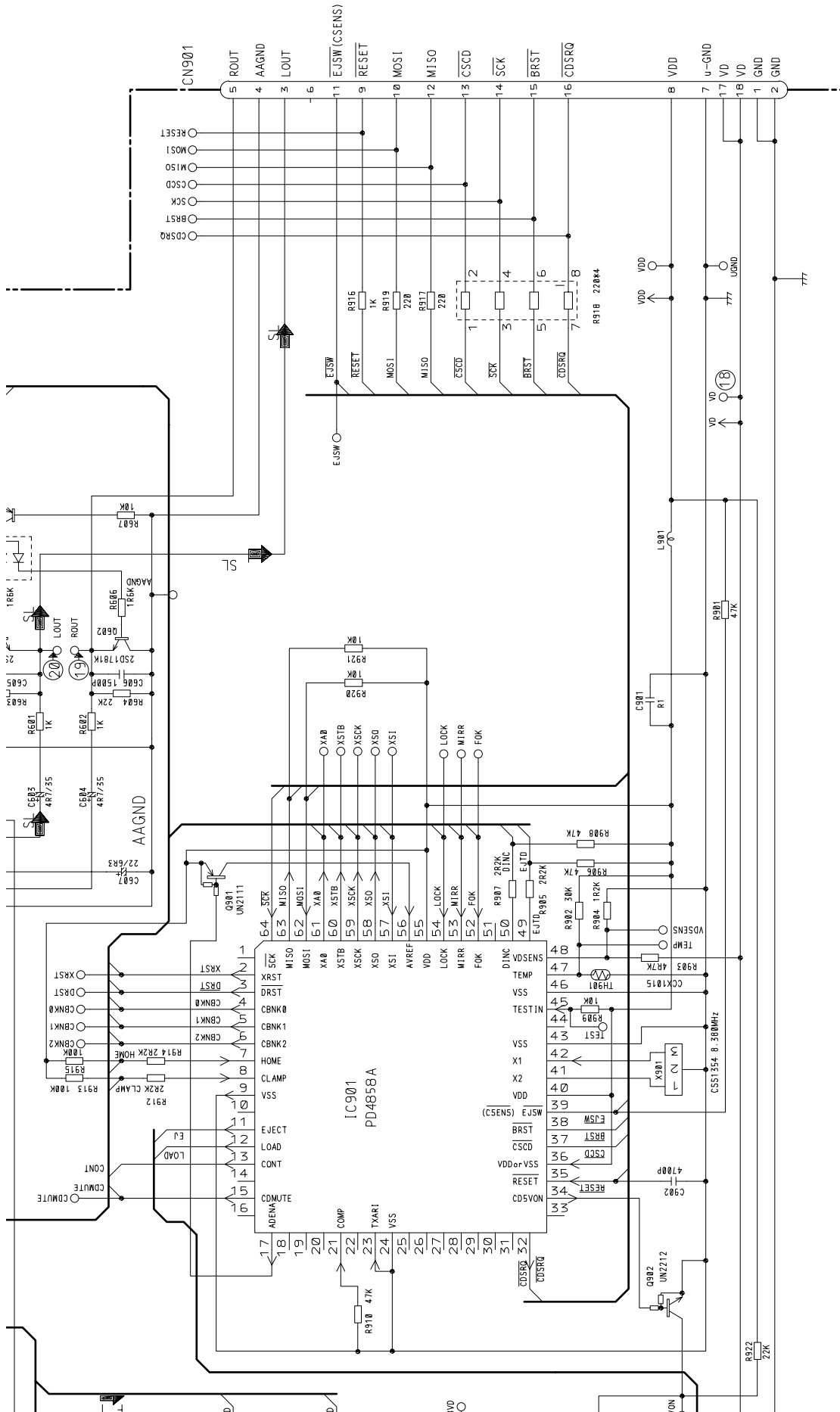
3

4

2

3

4



NOTE .
 □ Symbol indicates a resistor.
 No differentiation is made between chip resistors and discrete resistors.
 ⊕ Symbol indicates a capacitor.
 No differentiation is made between chip capacitors and discrete capacitors.

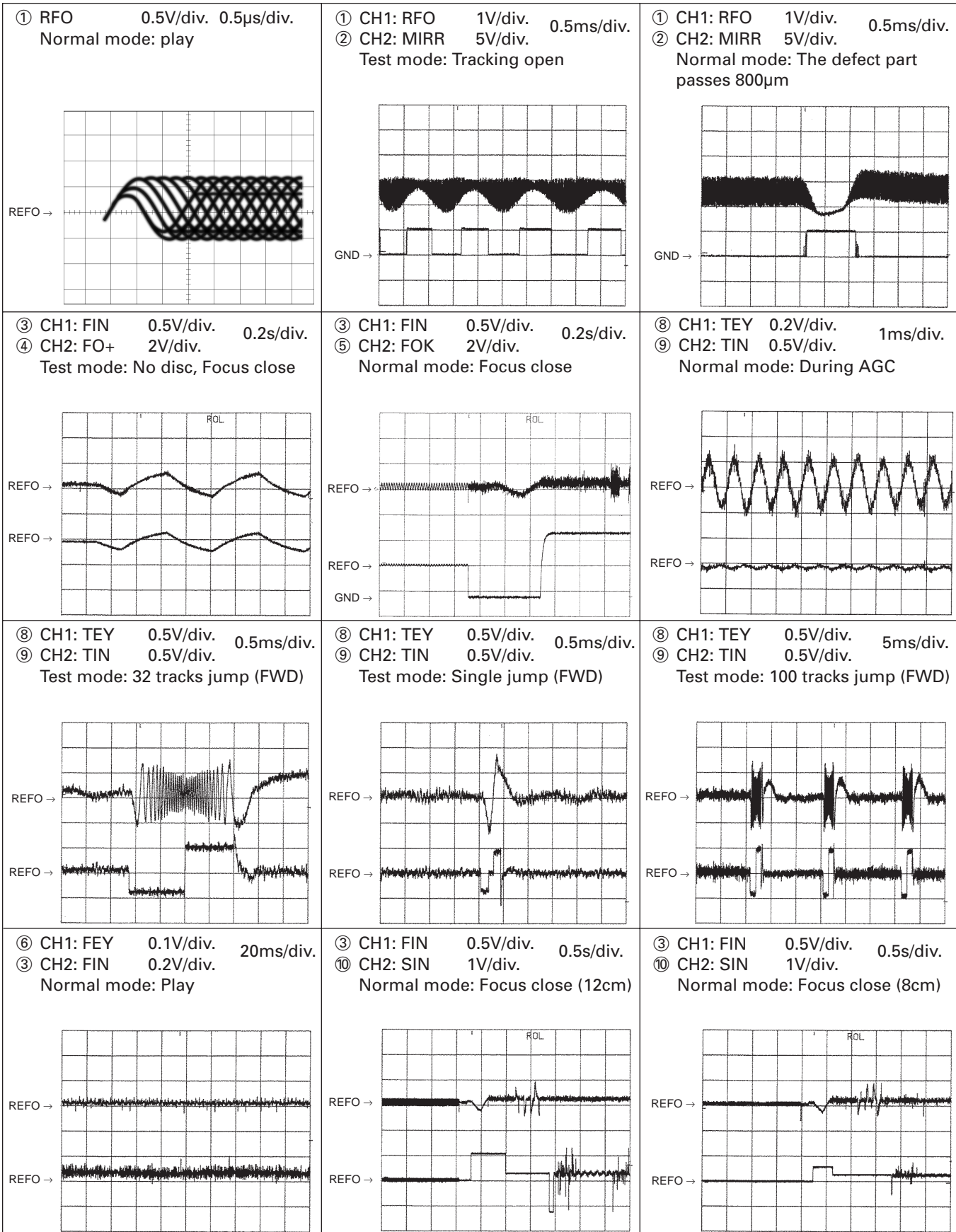
Decimal points for resistor and capacitor fixed values are expressed as:
 2.2→2R2
 0.022→R022

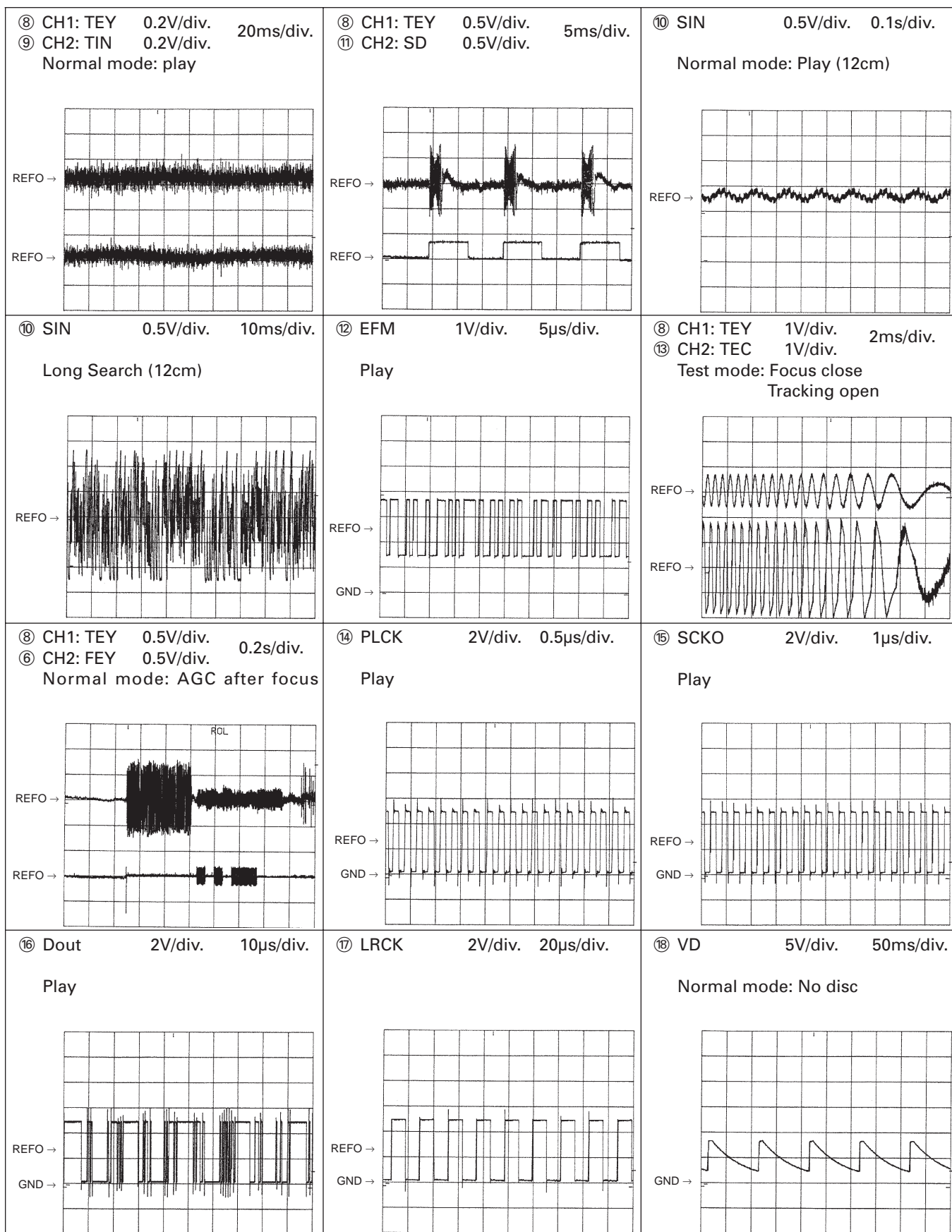
A-a A-b

Fig. 4

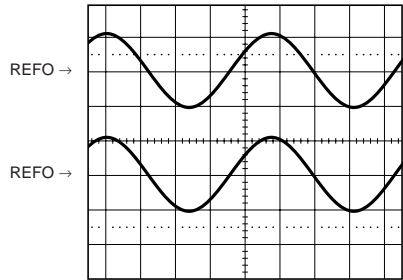
Note:1. The encircled numbers denote measuring points in the circuit diagram.
 2. Reference voltage
 REFO:2.5V

● **Waveforms**

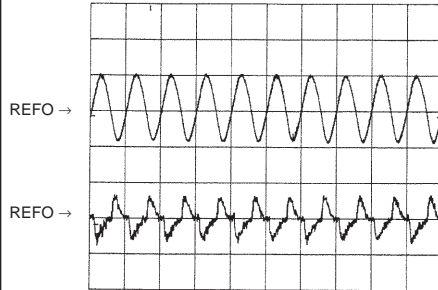




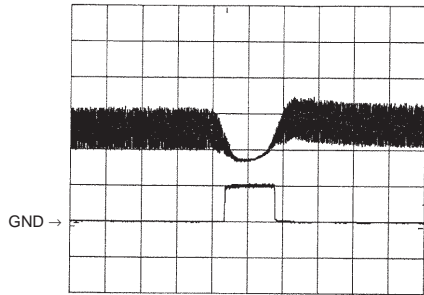
⑱ CH1: R OUT 1V/div. 0.2ms/div.
 ⑳ CH2: L OUT 1V/div.
 Normal mode: Play (1kHz 0dB)



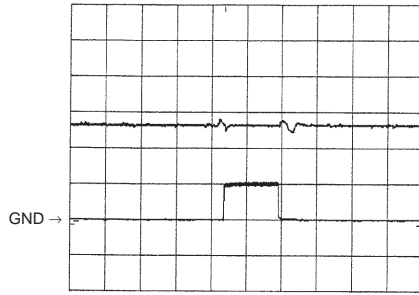
⑥ CH1: FEY 0.2V/div. 1ms/div.
 ③ CH2: FIN 0.5V/div.
 Normal mode: During AGC



① CH1: RFO 1V/div. 0.5ms/div.
 ⑳ CH2: HOLD 5V/div.
 Normal mode: The defect part passes
 800μm



③ CH1: FIN 1V/div. 0.5ms/div.
 ㉑ CH2: HOLD 5V/div.
 Normal mode: The defect part passes
 800μm

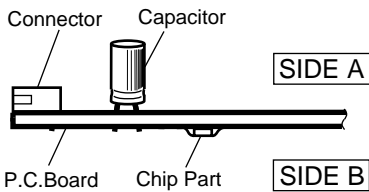


4. PCB CONNECTION DIAGRAM

4.1 CONTROL UNIT, PHOTO UNIT

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



A CONTROL UNIT

SIDE A

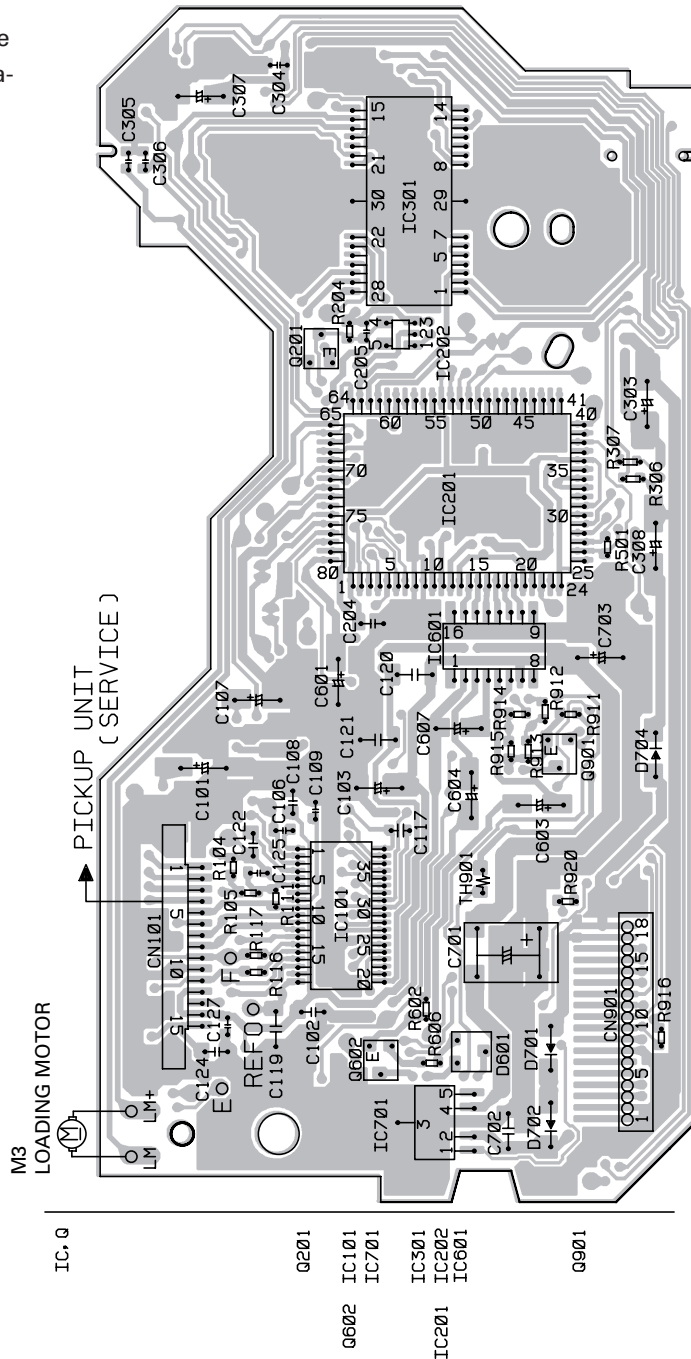


Fig. 5

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/OSOOOJ,RS1/OOSOOOJ

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
A Unit Number : CWX2158 Unit Name : Control Unit		R 307	RS1/16S102J
		R 501	RS1/16S0R0J
		R 601	RS1/16S102J
		R 602	RS1/16S102J
		R 603	RS1/16S223J
MISCELLANEOUS			
IC 101 IC	UPC2572GS		
IC 201 IC	UPD63702AGF	R 604	RS1/16S223J
IC 301 IC	BA6997FM	R 605	RS1/16S162J
IC 302 IC	XRA6285FP	R 606	RS1/16S162J
IC 601 IC	TA2063F	R 607	RS1/16S103J
		R 801	RS1/8S821J
IC 701 IC	BA05SFP		
IC 901 IC	PD4858A	R 802	RS1/8S821J
Q 101 Transistor	2SD1664	R 803	RS1/8S821J
Q 102 Transistor	UMD2N	R 901	RS1/16S473J
Q 601 Transistor	2SD1781K	R 902	RS1/16S303J
		R 903	RS1/16S472J
Q 602 Transistor	2SD1781K		
Q 603 Transistor	2SB709A	R 904	RS1/16S122J
Q 901 Transistor	UN2111	R 905	RS1/16S222J
Q 902 Transistor	UN2212	R 906	RS1/16S473J
D 601 Diode	MA151WA	R 907	RS1/16S222J
		R 908	RS1/16S473J
D 701 Diode	1SR154-400		
D 702 Diode	1SR154-400	R 909	RS1/16S103J
D 704 Diode	1SR154-400	R 910	RS1/16S473J
D 801	CL200IRX	R 912	RS1/16S222J
D 802	CL200IRX	R 913	RS1/16S104J
		R 914	RS1/16S222J
D 803	CL200IRX		
L 901 Inductor	LCTB4R7K1608	R 915	RS1/16S104J
TH 901 Thermistor	CCX1015	R 916	RS1/16S102J
X 201 Ceramic Resonator 16.93MHz	CSS1363	R 917	RS1/16S221J
X 901 Resonator 8.380MHz	CSS1354	R 918	RA4C221J
		R 919	RS1/16S221J
S 801 Switch(Home)	CSN1028		
S 802 Switch(Clamp)	CSN1028	R 920	RS1/16S103J
EF 701	CCG1051	R 921	RS1/16S103J
		R 922	RS1/10S223J
RESISTORS		CAPACITORS	
R 101	RS1/8S100J	C 101	CEV101M6R3
R 102	RS1/8S120J	C 102	CKSQYB104K16
R 103	RS1/16S102J	C 103	CEV470M6R3
R 104	RS1/16S822J	C 104	CKSYB334K16
R 105	RS1/16S682J	C 105	CCSRCH330J50
R 106	RS1/16S183J		
R 107	RS1/16S822J	C 106	CKSRYB103K25
R 108	RS1/16S333J	C 107	CEV4R7M35
R 109	RS1/16S683J	C 108	CKSQYB273K50
R 110	RS1/16S134J	C 109	CCSRCH101J50
		C 110	CKSQYB104K16
R 111	RS1/16S273J		
R 112	RS1/16S222J	C 111	CKSRYB332K50
R 113	RS1/16S103J	C 112	CKSQYB473K16
R 114	RS1/16S103J	C 113	CKSRYB103K25
R 115	RS1/16S102J	C 114	CKSRYB391K50
		C 115	CCSRCH121J50
R 116	RS1/16S163J		
R 117	RS1/16S163J	C 116	CKSRYB682K25
R 201	RS1/16S104J	C 117	CKSRYB333K16
R 206	RS1/16S0R0J	C 118	CKSYB334K16
R 306	RS1/16S102J	C 119	CKSYB334K16

====Circuit Symbol and No.====	Part Name	Part No.
C 120		CKSYB334K16
C 121		CKSYB334K16
C 122		CKSQYB104K16
C 123		CKSRYB472K50
C 124		CKSQYB104K16
C 125		CCSRCH6R0D50
C 126		CKSRYB153K25
C 127		CCSRCH102J25
C 201		CKSYB334K16
C 202		CKSQYB104K16
C 203		CKSQYB104K16
C 204		CKSQYB104K16
C 303		CEV101M10
C 304		CKSRYB103K25
C 305		CKSRYB103K25
C 306		CKSRYB103K25
C 307		CEV100M25
C 308		CEV101M10
C 502		CKSRYB471K50
C 601		CEV101M6R3
C 602		CKSQYB104K16
C 603		CEV4R7M35
C 604		CEV4R7M35
C 605		CKSRYB152K50
C 606		CKSRYB152K50
C 607		CEV220M6R3
C 701	22μF/6.3V	CCH1233
C 702		CKSYB334K16
C 703		CEV101M6R3
C 901		CKSQYB104K16
C 902		CKSRYB472K50

B Unit Number :
Unit Name : Photo Unit

Q	1	Photo-transistor	CPT-230S-X
Q	2	Photo-transistor	CPT-230S-X
Q	3	Photo-transistor	CPT-230S-X

Miscellaneous Parts List

M	1	Pickup Unit(Service)	CXX1232
M	1	Motor Unit(Spindle)	CXB1562
M	2	CRG Motor Unit(Carriage)	CXA8986
M	3	Load Motor Unit>Loading)	CXB1632