

ROTEL *hifi*

STEREO COMPACT DISC PLAYER

RCD-930AX

TECHNICAL MANUAL

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Safety Caution

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

THIS SET EMPLOYS A LASER. THEREFORE, BE SURE TO FOLLOW CAREFULLY THE INSTRUCTIONS BELOW WHEN SERVICING.

WARNING !!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

LASER WARNING LABEL

THE LABEL SHOWN BELOW ARE AFFIXED.

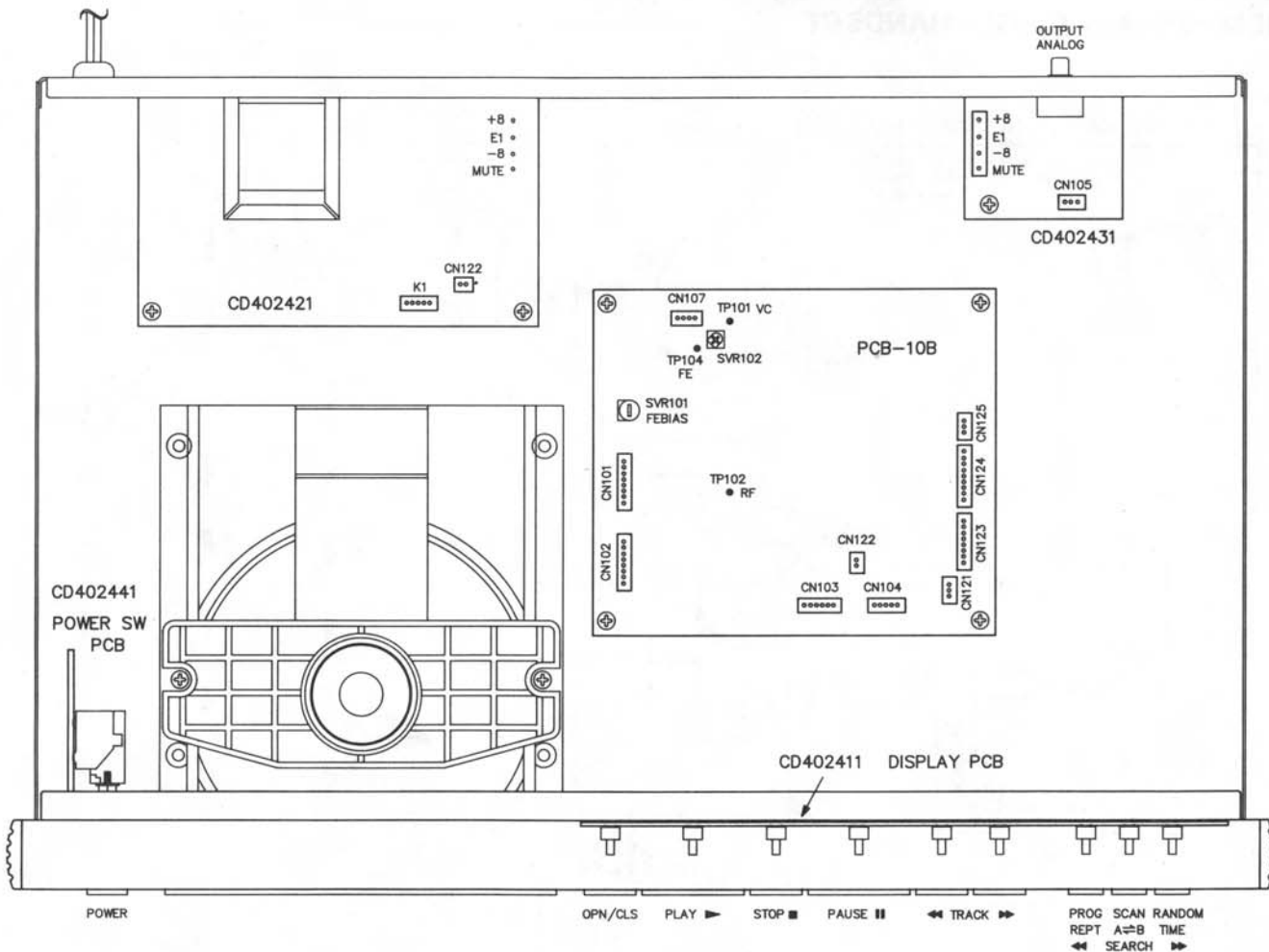
CAUTION

INVISIBLE LASER RADIATION WHEN OPEN, DO NOT STARE INTO BEAM.

DANGER

INVISIBLE LASER RADIATION WHEN OPEN, AVOID DIRECT EXPOSURE TO BEAM.

Chassis Layout



SPECIFICATIONS

RCD 930AX COMPACT DISC PLAYER

Frequency response
 Total Harmonic Distortion + Noise
 Channel Separation
 Signal to noise ratio
 Speed accuracy, wow and flutter
 Digital to analog converter

20-20,000 Hz \pm 0.8 dB
 <0.01% @ 1 kHz
 > 90 dB @ 1 kHz
 > 90 dB
 Quartz crystal accuracy
 1 Bit Pulse Width Modulated

Power requirements

115 volts AC 50/60 Hz
 230 volts AC 50/60 Hz

Power consumption

30 watts

Weight

4.2 kg's/ 9.2 Lbs

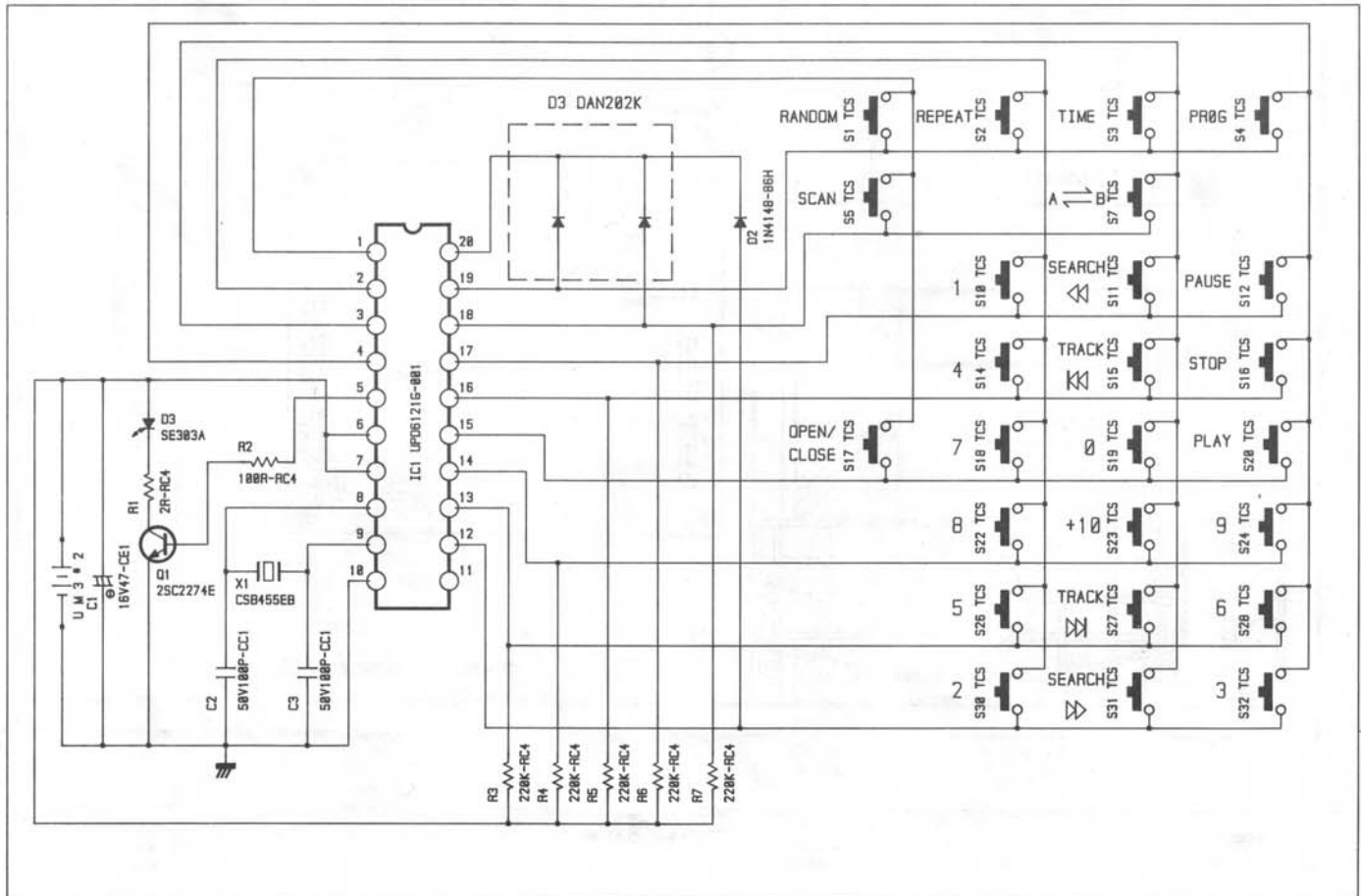
Dimensions

440 mm (W) x 72 mm (H) x 298 mm (D)
 17-3/8" (W) x 3-5/8" (H) x 11-3/4" (D)

All specifications are accurate at the time of printing. Rotel reserves the right to make improvements without notice.

REMOTE CONTROL HANDSET

SCHEMATIC DIAGRAM MODEL NO. RR-925



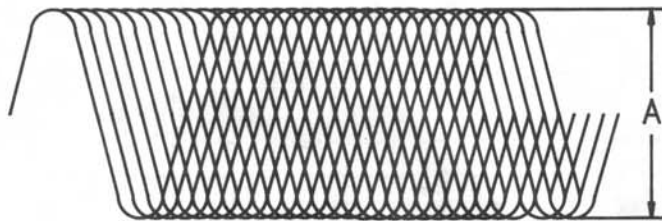
ADJUSTMENTS

REFERENCE DISC FOR ADJUSTMENTS: CBS/SONY YEDS-18 (TYPE 4).

THE ORDER OF ADJUSTMENT IS AS FOLLOWS:

1. RF LEVEL (PLAY)

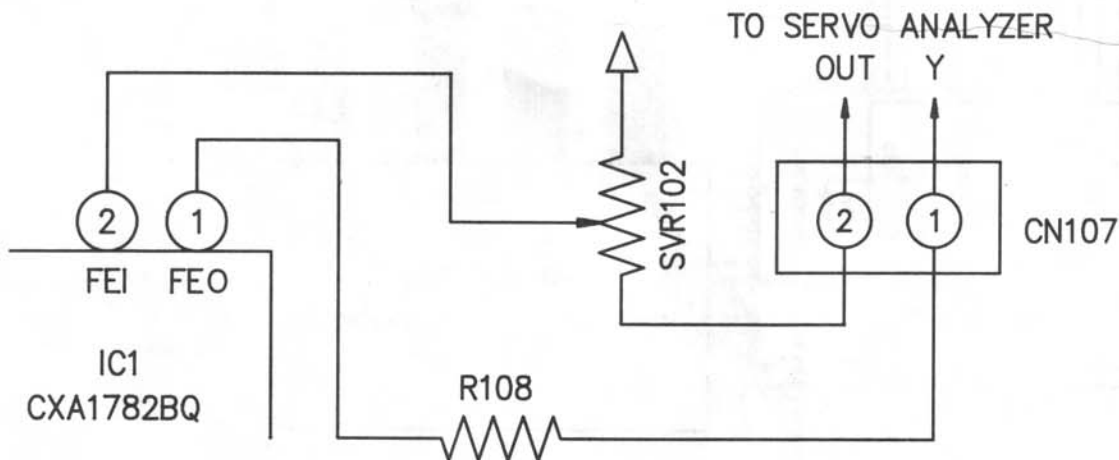
- OBSERVE THE RF SIGNAL WITH AN OSCILLOSCOPE HAVING MORE THAN 40 MHz RANGE, CONNECT THE PROBE TO TP102(RF) AND PROBE GND TO TP101(VC).
- ADJUST SVR101 TO OPTIMIZE THE RF.



$$A = 1.0^{+0.2}_{-0.1} \text{ V}_{p-p}$$

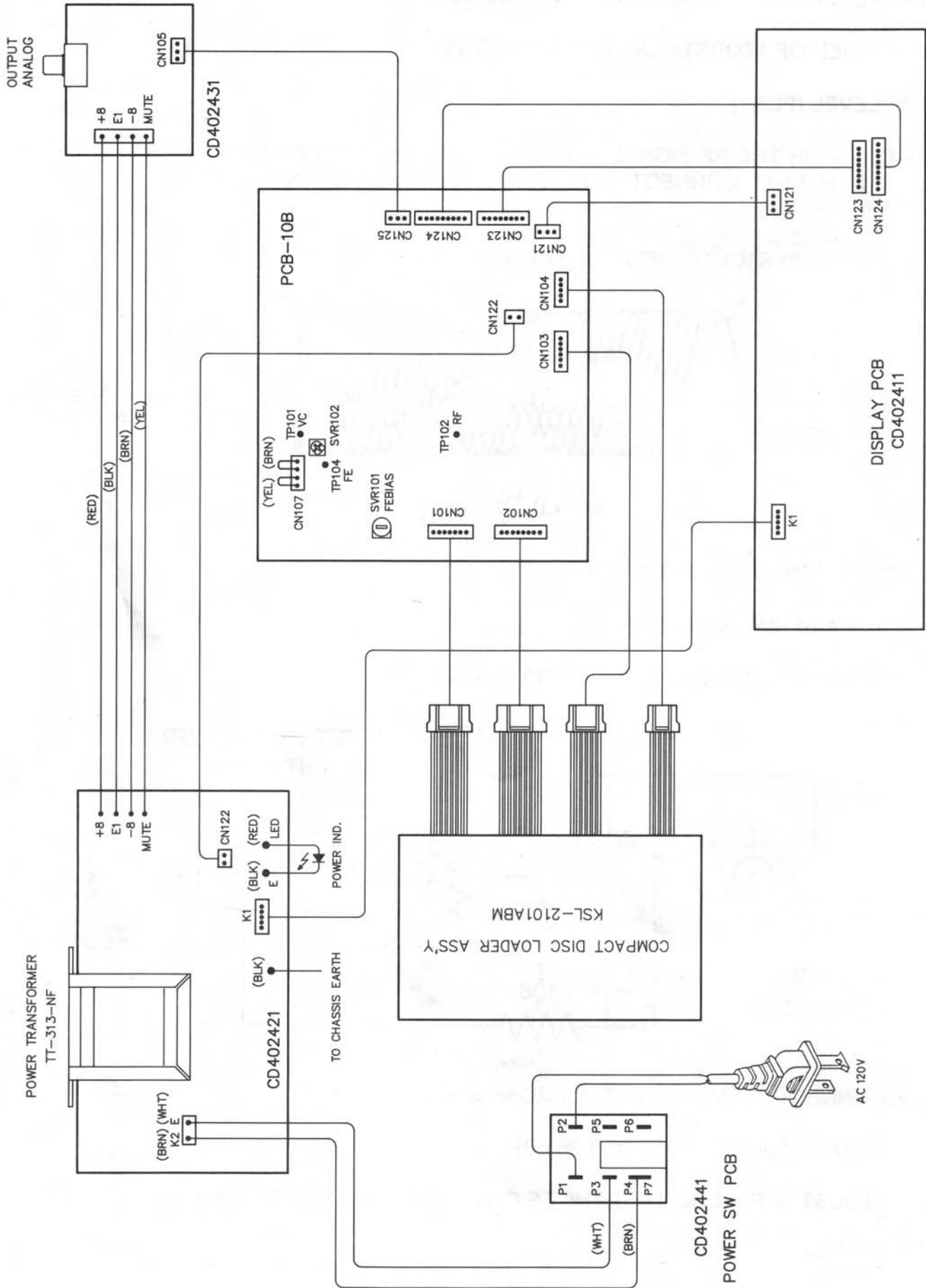
2. FOCUS SERVO GAIN (PLAY)

- USE A SERVO ANALYZER.
- CONNECT UP THE CIRCUIT AS SHOWN BELOW:



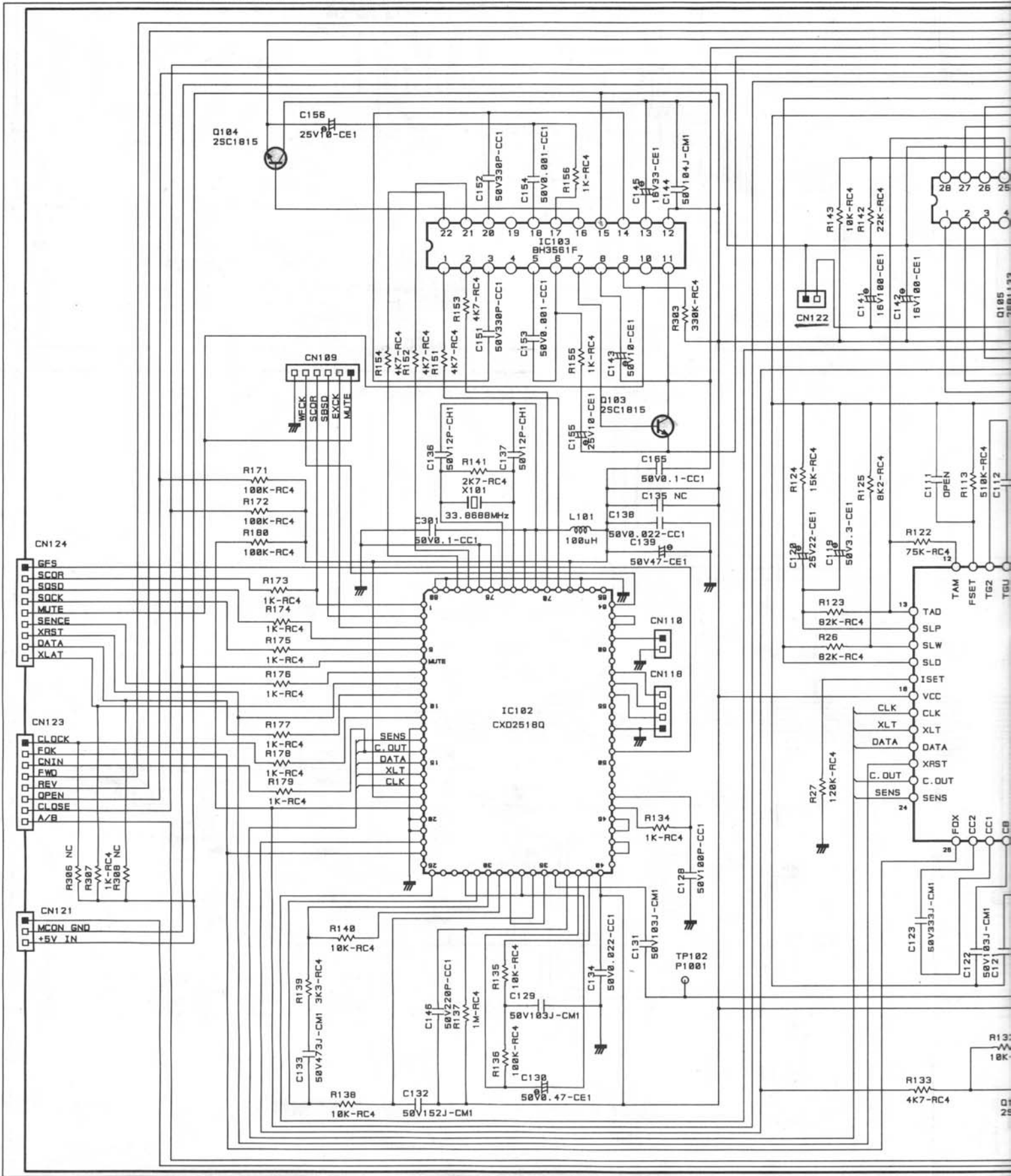
- CONNECT SERVO ANALYZER PROBE GND TO TP101(VC).
- INPUT AMOUNT : 50mV rms (-26 dB)
- ADJUST SVR102 SO THAT THE FE GAIN IS AROUND 0 dB AT 1kHz.

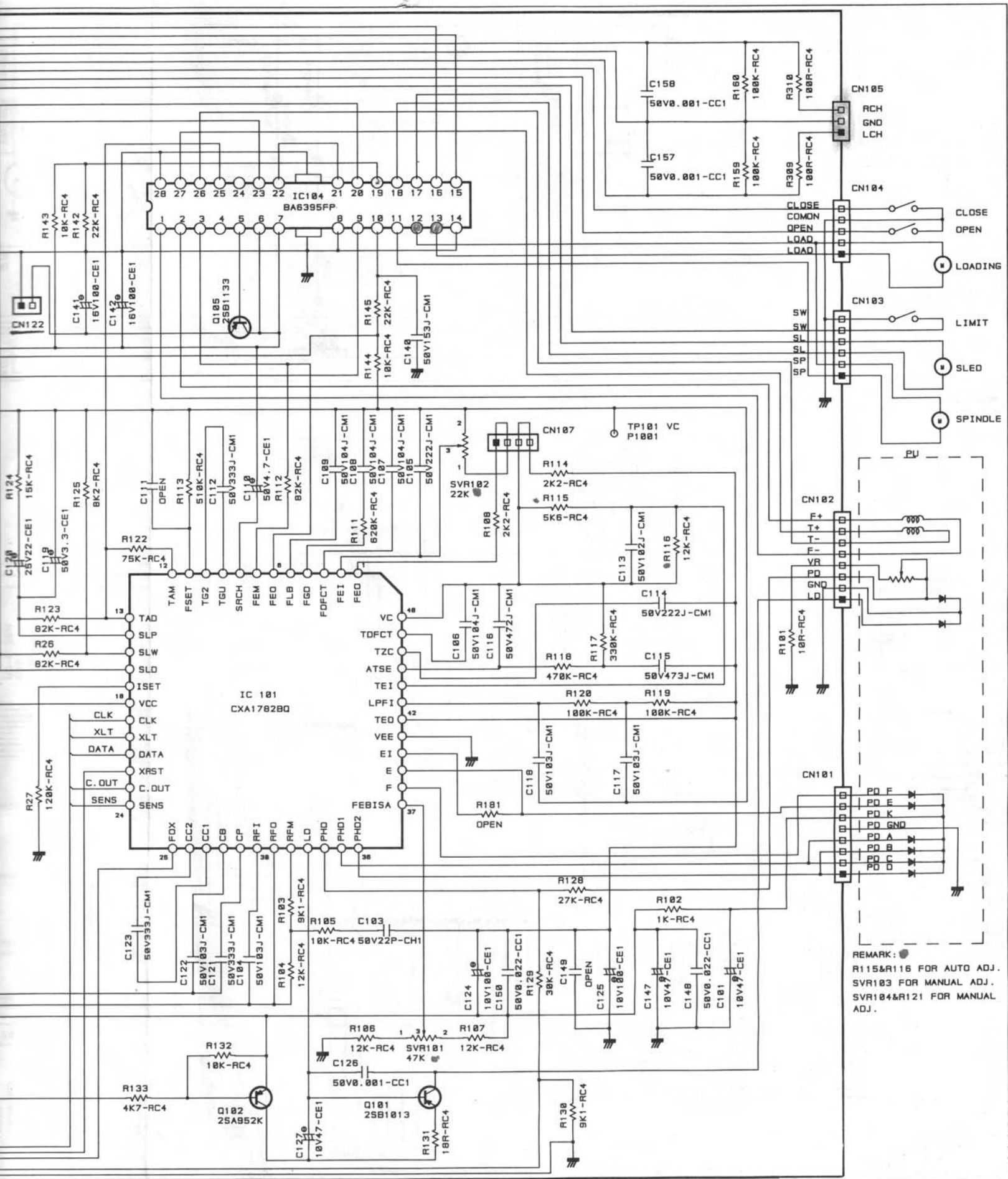
Wiring Diagram



Schematic Diagram

SCHEMATIC DIAGRAM MODEL NO. RCD-930AX (1/2)

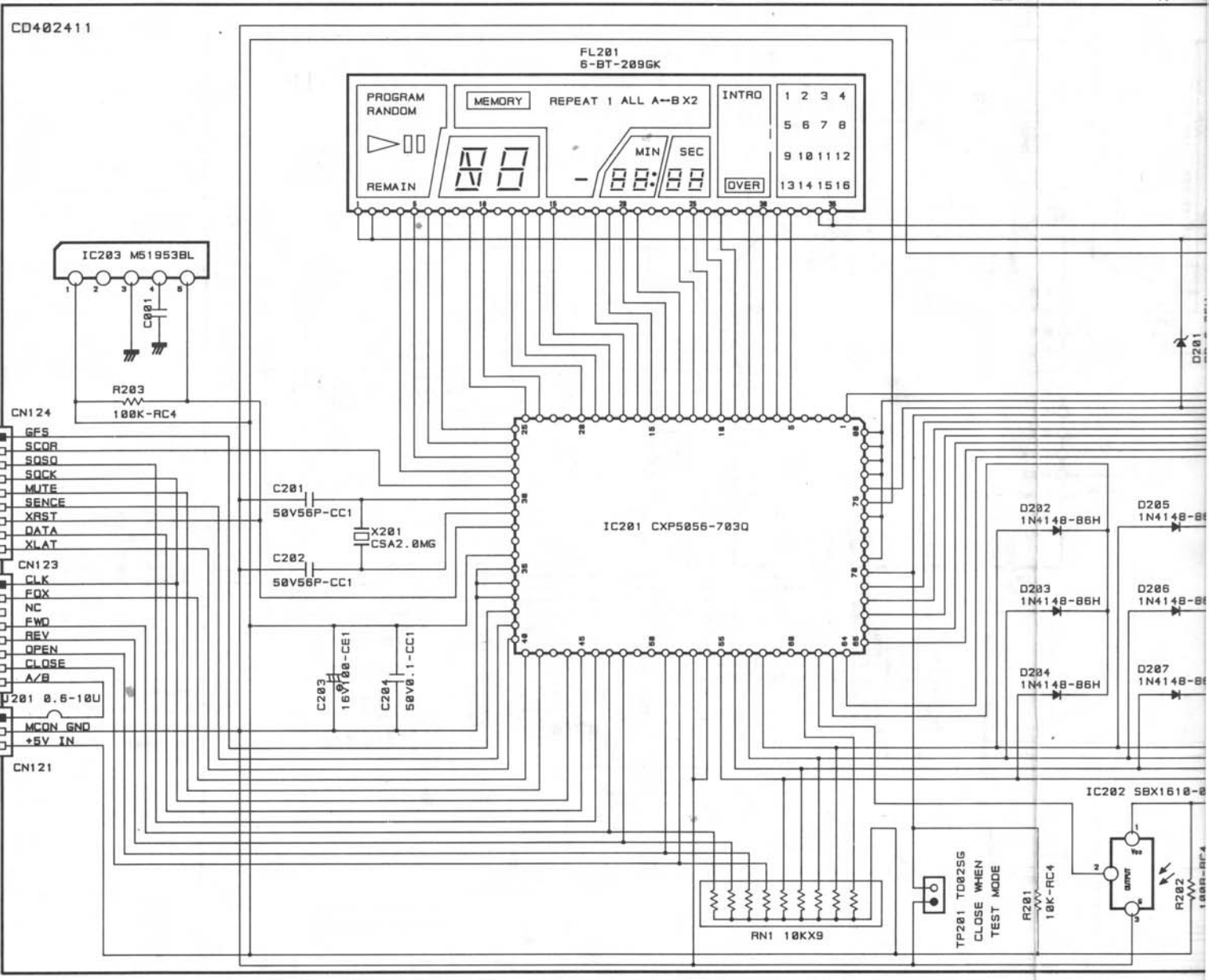
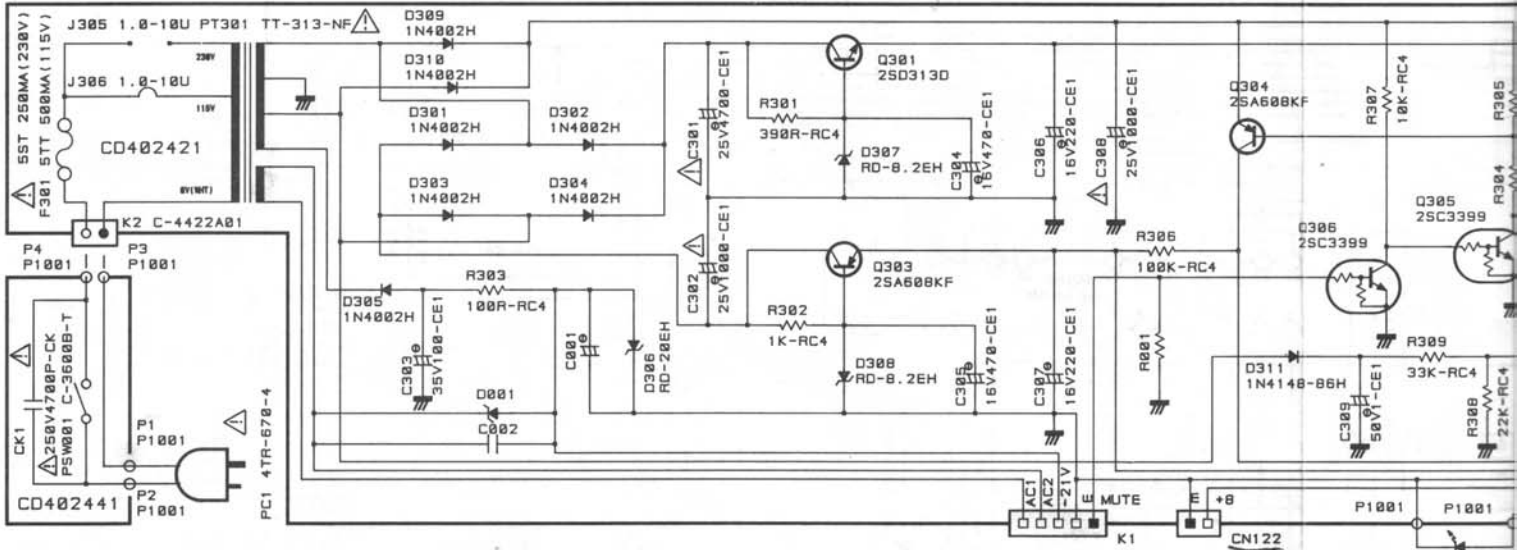


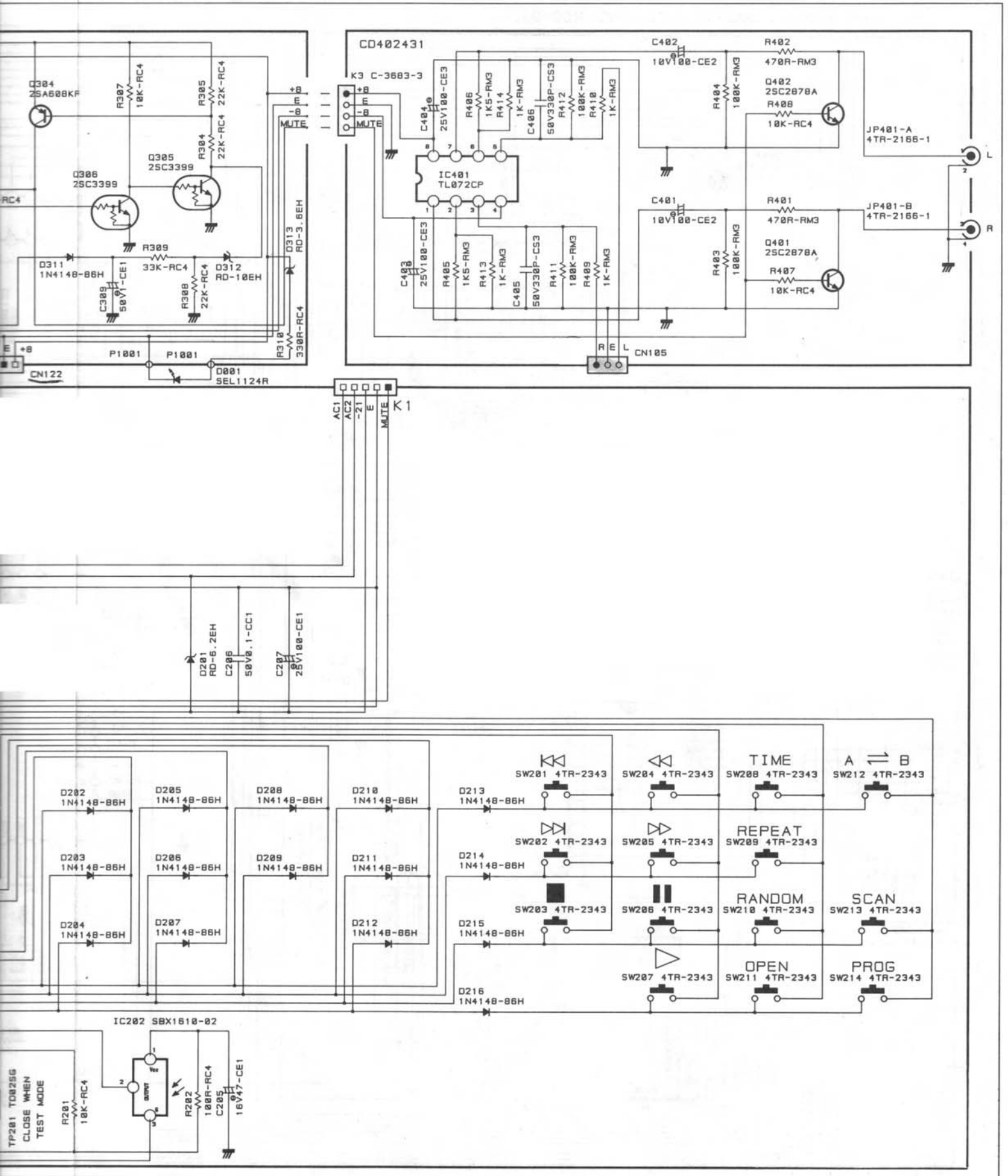


REMARK: ●
 R115&R116 FOR AUTO ADJ.
 SVR103 FOR MANUAL ADJ.
 SVR104&R121 FOR MANUAL ADJ.

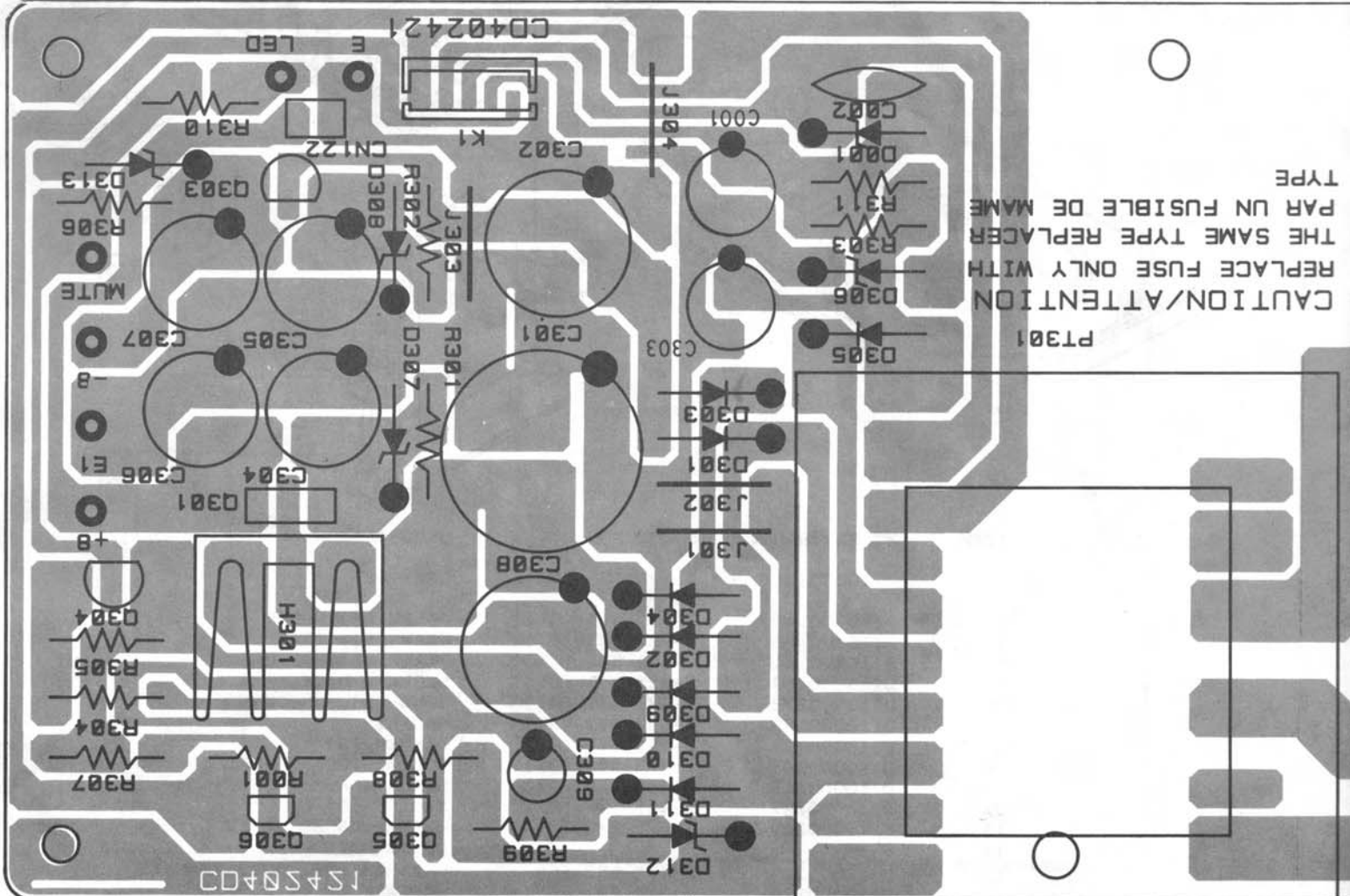
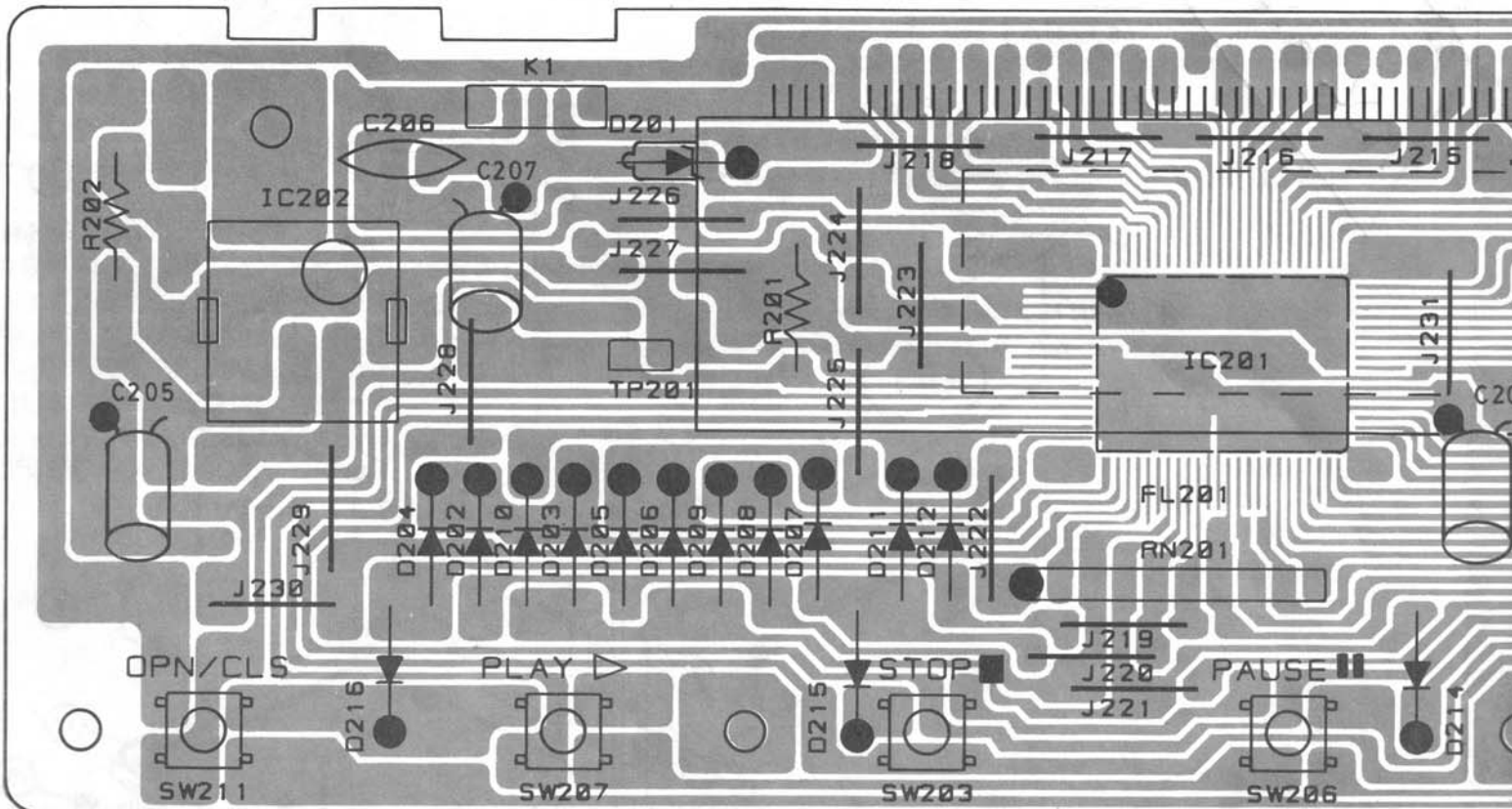
Schematic Diagram

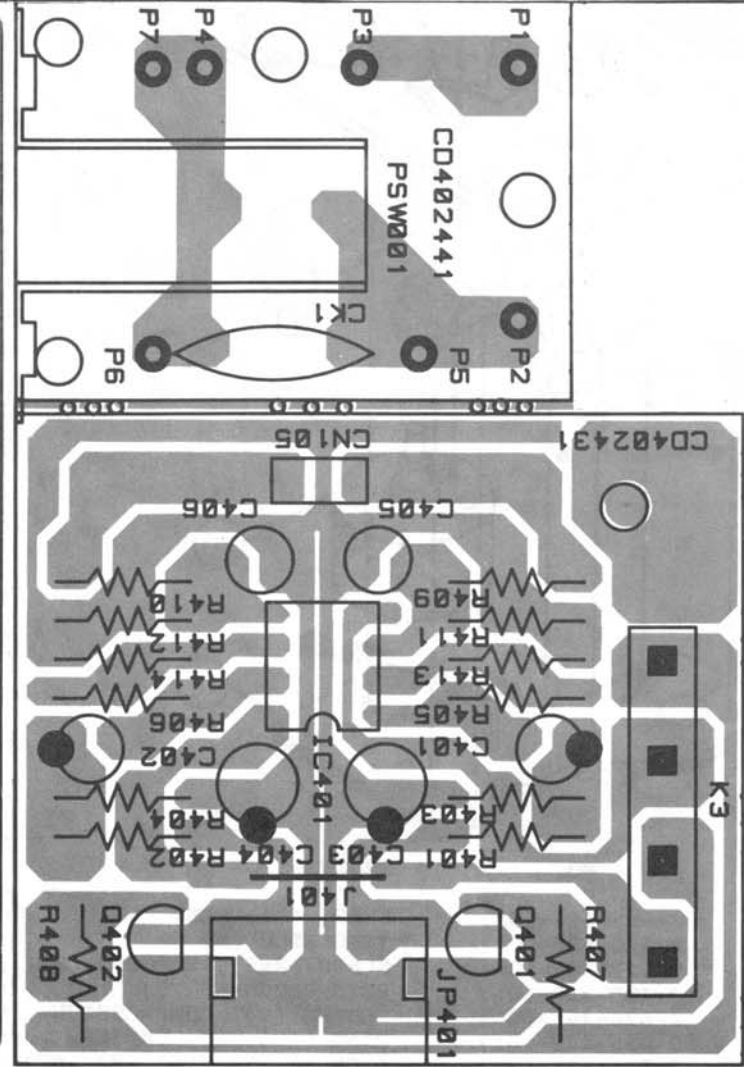
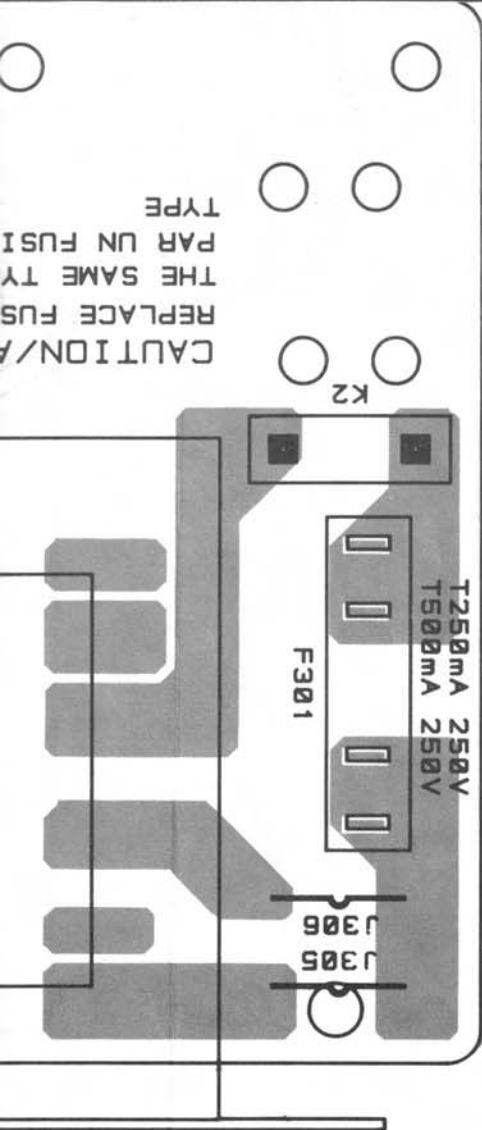
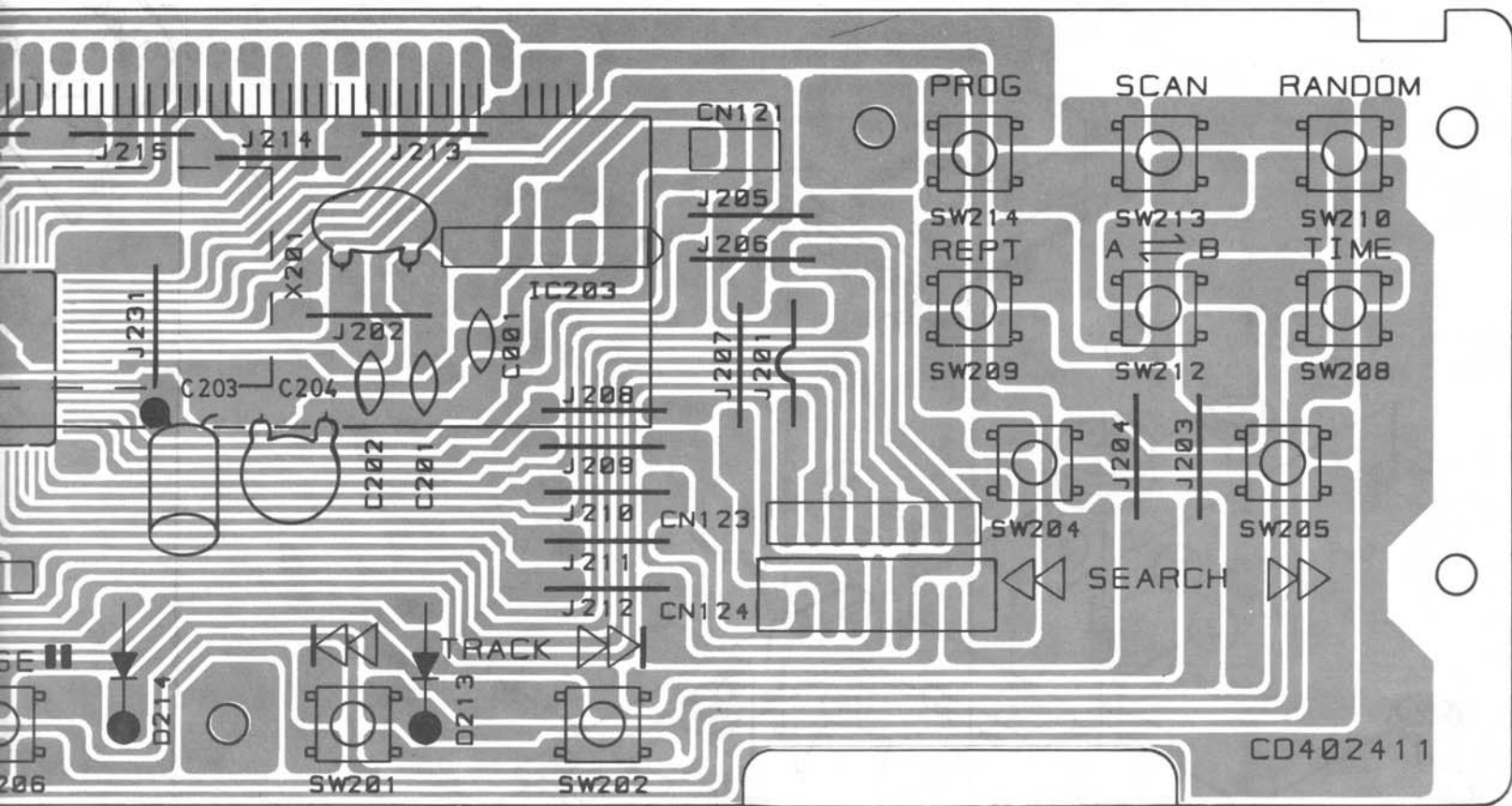
SCHEMATIC DIAGRAM MODEL NO. RCD-930AX (2/2)



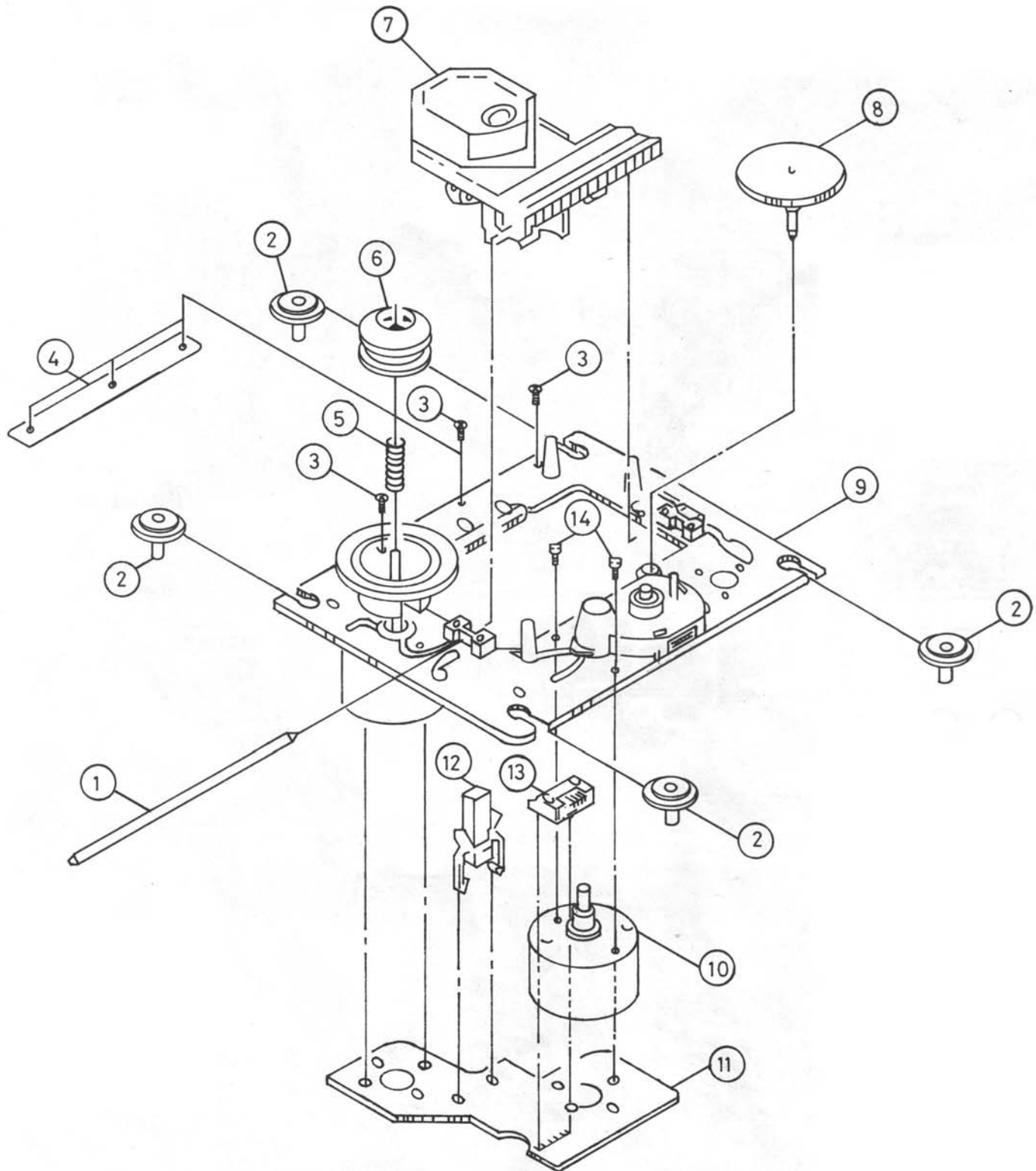


Printed Circuit Boards

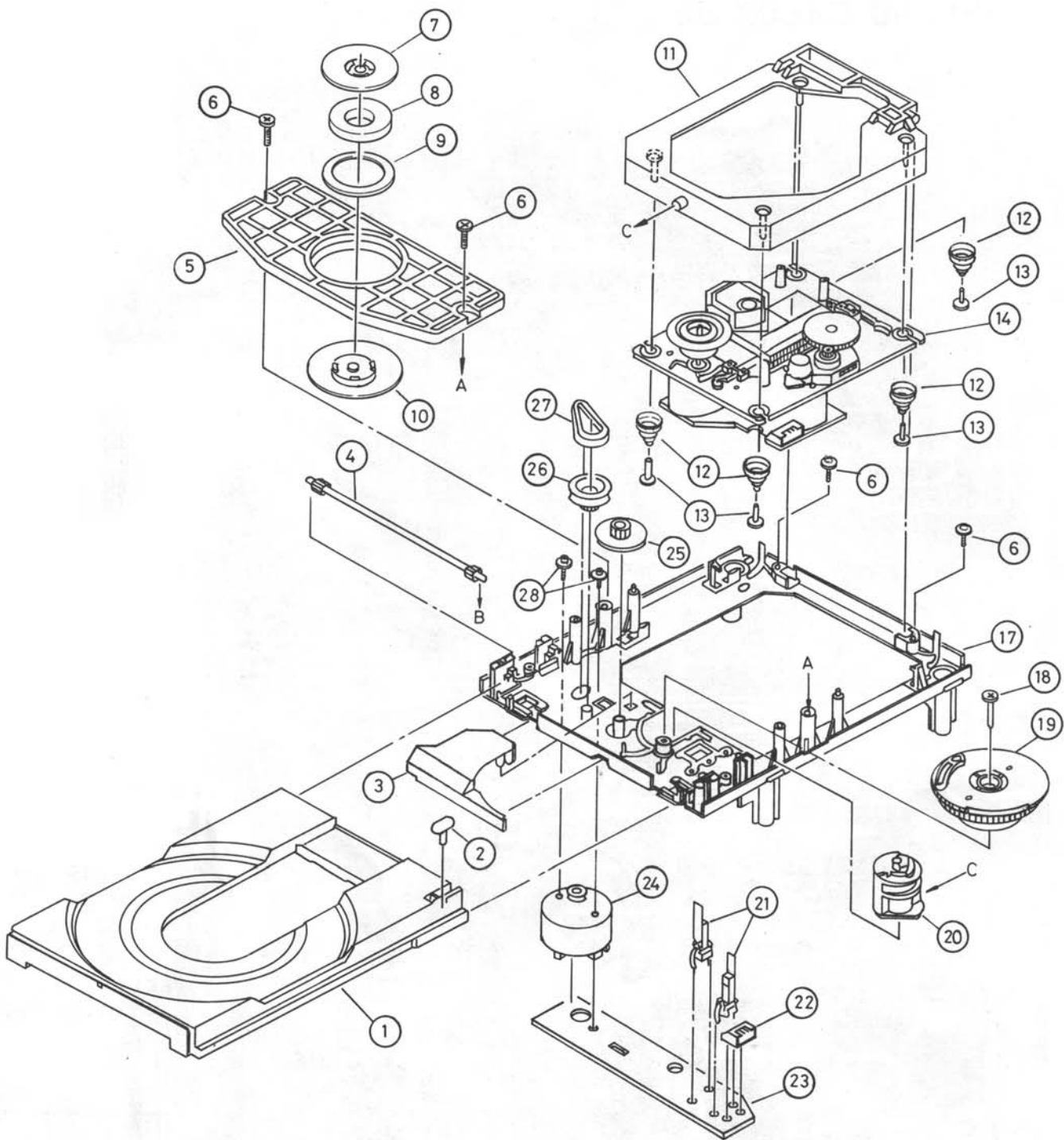




Disassembly Diagram



ITEM	RT PART NO.	SPEC. NO.	DESCRIPTION
1	DI10000010	2-625-464-(01)	SHAFT (S), SLED
2	DI10000021	2-625-538-(01)	INSULATOR (S)
3	DI10000343	2-641-386-(01)	SCREW (2x5), TAPPING (S)
4	DIDI100033	2-625-625-(01)	REINFORCEMENT (S)
5	DI10000045	2-626-465-(01)	SPRING (S), COMPRESSION
6	DI10000057	2-626-477-(01)	RING (LO) (S), CENTER
7	DI00000069	8-848-127-(31)	PICK UP KSS-210A (S) (RP)
8	DI10000070	2-626-462-(01)	GEAR (A) (S)
9	DI10000082	X-2625-133-(2)	CHASSIS ASS'Y (MB), TT
10	DI10000094	X-2625-132-(1)	GEAR ASS'Y (MB), MOTOR
11	DI10000100	1-639-678-(13)	PC BOARD, MOTOR (6P) (S)
12	DI00000112	1-572-085-(12)	SWITCH LEAF
13	DI10000124	1-564-722-(11)	PIN, CONNECTOR 6P
14	DI10000355	7-621-255-(15)	SCREW+P 2x3



ITEM	RT PARTS NO.	SPEC. NO.	DESCRIPTION
1	DI10000136	2-625-550-(03)	TRAY (S)
2			
3	DI10000148	2-625-544-(01)	COVER (S), GEAR
4	DI10000150	2-625-535-(01)	GEAR (S), TRAY
5	DI10000161	2-626-546-(01)	PLATE (S), CHUCKING
6	DI10000367	2-625-537-(01)	SCREW + P TP WH 2.6x7
7	DI10000173	2-625-537-(01)	YOKE (S), CHUCKING
8	DI10000185	1-452-483-(21)	MACNET
9	DI10000197	2-625-541-(02)	DAMPER (S)
10	DI10000203	2-625-548-(02)	PULLEY (G), CHUCKING
11	DI10000215	X-2625-227-(2)	CHASSIS ASS'Y (G), SUB
12	DI10000227	2-825-539-(01)	SPRING (S)
13	DI10000239	2-625-730-(01)	WASHER BASED SCREW
14			DRIVE UNIT
17	DI10000240	2-625-552-(06)	CHASSIS (S), OUTSERT MAIN
18	DI10000379	3-319-501-(51)	SCREW+P TP WH 2.6x16
19	DI10000252	2-625-547-(03)	GEAR (S), DRIVE
20	DI10000264	2-625-545-(04)	CAM (S), CONTROL
21	DI10000276	1-572-086-(11)	SWITCH, LEAF
22	DI10000288	1-564-721-(11)	PIN, CONNECTOR 5P
23	DI10000290	1-640-523-(12)	PC BOARD LOADING
24	DI10000306	X-2625-117-(1)	MOTOR ASS'Y, LOADING
25	DI10000318	2-625-534-(02)	GEAR(S), MIDWAY
26	DI10000320	2-625-536-(02)	PULLEY (S), LOADING
27	DI10000331	3-653-387-(01)	BELT, LM
28	DI10000380	2-625-279-(01)	SCREW+B2.6x2.5

Parts List

NOTE: THE COMPONENTS IDENTIFIED BY Δ MARK ARE FOR SAFETY. REPLACE ONLY WITH ORIGINAL PARTS. DO NOT SUBSTITUTE.

SYMBOL	PARTS NO.	DESCRIPTION
CD402411 PCB ASSEMBLY		
R201	RD51002827	R, CARBON 10K 1/4W J
R202	RD51000820	R, CARBON 100 1/4W J
R203	RD51003820	R, CARBON 100K 1/4W J
RN201	RN11002093	THICK FILM RS NETWORK RA8-103-9K
C201, 202	CC45612434	CAP, CERAMIC 50V 56P
C203	CE41005166	CAP, ELEC. 16V 100uF
C204	CC01008458	CAP, CERAMIC 50V 0.1uF
C205	CE04706168	CAP, ELEC. 16V 47uF
C206	CC01008458	CAP, CERAMIC 50V 0.1uF
C207	CE41005257	CAP, ELEC. 25V 100uF
X201	DH00000014	CERAMIC RESONATOR CSA2.0MG
FL201	DD40001439	FL TUBE 6-BT-209GK
D201	DD20000181	DIODE RD-6.2E
D202-216	DD80000021	DIODE IN4148
IC201	IC00003768	CXP5056-703Q
IC202	IC00002030	REMOTE RECEIVER SBX1610-02
IC203	IC00003793	IC M51953BL
SW201-214	SH60000240	KEY BOARD SW 4TR-2343
CD402421 PCB ASSEMBLY		
R301	RD53900821	R, CARBON 390 1/4W J
R302	RD51001823	R, CARBON 1K 1/4W J
R303	RD51000820	R, CARBON 100 1/4W J
R304, 305	RD52202824	R, CARBON 22K 1/4W J
R306	RD51003820	R, CARBON 100K 1/4W J
R307	RD51002827	R, CARBON 10K 1/4W J
R308	RD52202824	R, CARBON 22K 1/4W J
R309	RD53302826	R, CARBON 33K 1/4W J
R310	RD53300829	R, CARBON 330 1/4W J
C301	CE03304162	CAP, ELEC. 16V 3300uF Δ
C302	CE01004254	CAP, ELEC. 25V 1000uF Δ
C303	CE01005350	CAP, ELEC. 35V 100uF
C304, 305	CE04705164	CAP, ELEC. 16V 470uF
C306, 307	CE02205164	CAP, ELEC. 16V 220uF
C308	CE01004254	CAP, ELEC. 25V 1000uF Δ
C309	CE41007503	CAP, ELEC. 50V 1uF
D301-305	DD80000033	DIODE IN4002-TB
D306	DD20000028	DIODE RD-20E
D307, 308	DD20000417	DIODE RD-8.2E
D309, 310	DD80000033	DIODE IN4002-TB
D311	DD80000021	DIODE IN4148-86
D312	DD20000144	DIODE RD-10E
D313	DD20000107	DIODE RD-3.6E
Q301	TR30000029	TRANSISTOR 2SD313D
Q303, 304	TR11000015	TRANSISTOR 2SA608KF
Q305, 306	TR31000101	TRANSISTOR 2SC3399-AC
PT301	PT31310103	POWER TRANSFORMER TT-313-NF Δ
F301	FU25000016	FUSE 250V 500mA UL/CSA Δ
	FU23000384	FUSE 250V T250mA (S) Δ
CD402431 PCB ASSEMBLY		
R401, 402	RM14700718	R, METAL MRS25470R 0.6W
R403, 404	RM11003713	R, METAL MRS25100K 0.6W
R405, 406	RM11801710	R, METAL MRS251K8 0.6W
R407, 408	RD51002827	R, CARBON 10K 1/4W J
R409, 410	RM11001716	R, METAL MRS251K 0.6W
R411, 412	RM11003713	R, METAL MRS25100K 0.6W
R413, 414	RM11001716	R, METAL MRS251K 0.6W
C401, 402	CE41005105	CAP, ELEC. 10V 100uF
C403, 404	CE51005679	CAP, ELEC. 25BGF100M
C405, 406	CS43311421	CAP, STYROL 50V 330P
Q401, 402	TR31000149	TRANSISTOR 2SC2878-A/B
IC402	IC00002235	IC TL-072CP

SYMBOL	PARTS NO.	DESCRIPTION
CD402441 PCB ASSEMBLY		
CK1	CK00000035	SPARK KILLER DE7150F472M Δ
PSW001	SH40000120	POWER SW C-3600B-T Δ
OTHERS		
	AF50000054	FRONT CHASSIS 2TQO-2D#2
	AM00002256	CHASSIS BODY 2TQR-2#3A
	AR50000149	PRINTED REAR CHASSIS TRP-665
	DI00001387	CD MECHANISM KSL-2101ABM
	FT00000229	PLASTIC FOOT 4TSH-19#2 50F \times 14H
	SC00000027	AC CORD STOPPER SR-4N-4 Δ
	CD00000218	AC CORD SPT-2 AWG#18 4TR-670#4 Δ
	CD00000322	AC POWER CORD 4TR-2757 Δ
	CD00000048	AC POWER CORD 4TR-1037 Δ
	CD00000528	AC POWER CORD 4TR-3083 Δ
	CD00000115	AC POWER CORD C-3763-T Δ
	NP00001949	NAME STICKER 4TR-2828A#1 AC120V TNP-382
	NP00001962	NAME STICKER 4TR-2828A#3 AC240V TNP-384
	NP00002127	NAME STICKER 4TR-2828A#9 AC230V TNP-396
	NP00002012	NAME STICKER 4TR-2828A#6 AC100V TNP-391
	NP00001950	NAME STICKER 4TR-2828A#2 AC220V TNP-383
	AA50000168	FRONT PANEL 2TQR-1#1 TFP-731
	AW00000769	PANEL WINDOW 4TQO-7#1
	BU00001145	POWER RING W/LED 4TQF-13 14 \times 14
	KB20002796	TACT BUTTON 3 KEY 3TQP-2
	KB20002711	TACT BUTTON 6 KEY 3TQK-8
	KB20002784	TACT BUTTON 2 KEY 3TQO-4
	OM10001272	ORNAMENTAL SIDE BOARD 4TR-2797#2
	KB20002681	POWER BUTTON 4TQF-15 14 \times 14
	DD40000095	LED SEL1124R/LN224R
	OM70000065	PUSH BUTTON CONNECTOR 4TTL-15
	SN00000179	BUTTON SPRING 4TR-1988A#2
	AG00000469	REMOTE CONTROL HANDSET RR-925
	AU00001316	TOP COVER (POLY) 3TTF-5#9
	OM10001820	PLASTIC DOOR 4TPI-2 TFP-733
	OM70000454	FILTER BOARD 4TSJ-9A#7
	OM70000193	FILTER BOARD 4TSJ-9#3
	SR00000882	UPPER COVER SPACER 4TR-2418
	SR00000961	RUBBER CAP 4TTV-8 6.6MM
	MN10003566	OWNER'S MANUAL RCD-930AX
	PL00001130	STYROL SIDE MOULDING 2TQR-4 TZ-186
	TN10004633	INSIDE CARTON 4TPI-4