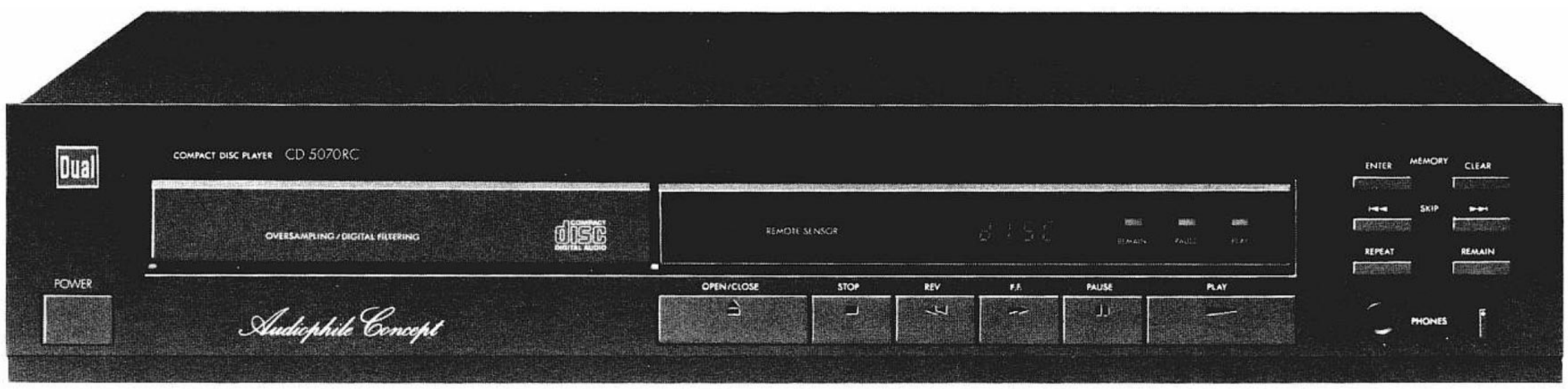
Dual

Service-Anleitung
Service Manual
Instructions de Service

CD 5070 RC



Technische Daten Meßwerte = typische Werte	**Technical data** Measured values = typical values	**Caractéristiques techniques** Valeurs mesurées = valeurs typiques	**Dati tecnici** Valori di misuri = valori tipici	CD 5070 RC
Frequenzbereich	**Frequency response**	**Courbe de réponse**	**Banda do Frequenza**	5–20 000 Hz
Geräuschspannungsabstand	**Signal to noise ratio**	**Rapport signal/bruit**	**Rapporto segnale disturbo**	96 dB
Dynamikbereich	**Dynamic range**	**Dynamique**	**Dinamica**	96 dB
Übersprechdämpfung (1 kHz)	**Crosstalk (1 kHz)**	**Diaphonie (1 kHz)**	**Diafonia**	92 dB
Klirrfaktor (1 kHz)	**Harmonic distortion (1 kHz)**	**Distorsion harmonique (1 kHz)**	**Distorsione atmonica**	0,003 %
Gleichlaufschwankungen	**Wow and flutter**	**Tolérance de vites**	**Toleranza di velocità**	> 0,001 %
Ausgangsspannung	**Output voltage**	**Tension de sortie**	**Tensione di uscita**	2 V
Max. programmierbare Musiktitel	**Max. music title programming**	**Titres de musique au max. programmé**	**Programmazione di pezzi musicale**	16
D/A Wandler	**D/A Converter**	**D/A Convertisseur**	**Quantizzazione**	16 Bit linear (Single)
Abtastfrequenz	**Sampling frequency**	**Fréquence de pick-up**	**Frequenza di campionatura**	88,2 kHz
Abtastsystem	**Pick up**	**Pick up**	**Testina di lettura**	3-Strahl-Laser 3-beam optical pick up
Leistungsaufnahme	**Power consumption**	**Consommation**	**Potenza assorbita**	15 W
Netzspannung	**Mains voltage**	**Tension secteur**	**Tensione di rete**	Model Europe 220 V (240 V) 50 Hz

Dual GmbH · Postfach 1144 · 7742 St. Georgen/Schwarzwald

921 584 1089

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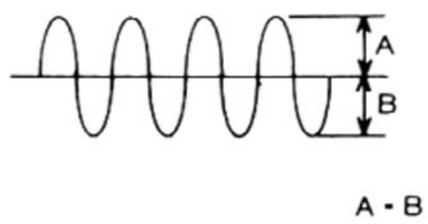
Abgleichanleitung CD 5070 RC

Signalquelle Signal source	Einstellung Gerät Unit adjustment	Meßgerät Anschluß Testgear connection	Abgleichposition Alignment position	Abgleich, Bemerkung Alignment, Remarks
	PLL			
	Power: On 1. TP. ASY mit GND brücken Bridge over TP. ASY with GND	Frequenzzähler an TP-PLL Frequency counter to TP-PLL	RV 301	4,321 MHz ± 10 kHz
	2. Brücke entfernen remove jumber			
	EF-Balance			
Test Sample 5 A	1. Lötbrücke JP 98–JP 99 auftrennen Cut off the soldering JP 98–JP 99 2. Play 3. TEST mit GND brücken Bridge over TEST with GND 4. Repeattaste drücken Press button REPEAT Display: ONE-REPEAT	Oscilloscope an/to TP–TE	RV 101	
	Nach Abgleich: Brücke JP 98–JP 99 verbinden Brücke TEST–GND trennen after Alignment: Bridge over JP 98–JP 99 Remove jumper TEST–GND			
	LPF (Low Pass Filter)			
Tongenerator 24 kHz 1 Vss an/to R 512 L	Power: off	Oscilloscope an/to R 513 L	FL 501 L	Minimum
R 512 R		R 513 R	FL 501 R	
	Test (nach Austausch des Pick-up) test (after change of pick up)			
	EFM-Signal			
Disc	Play	Oscilloscope an/to C 102	Regler an Pick-up Controller to pick up	1,4 Vss
	nach Austausch des Disc-Motors after change of disc motor			
	Abstand Plattentelleroberkante – Chassis distance platter upper edge – chassis	13,7 mm		
Endkontrolle: Testsample 5 A Titel Nr. 9 und 17 Final test: Play titel no. 9 and 17				

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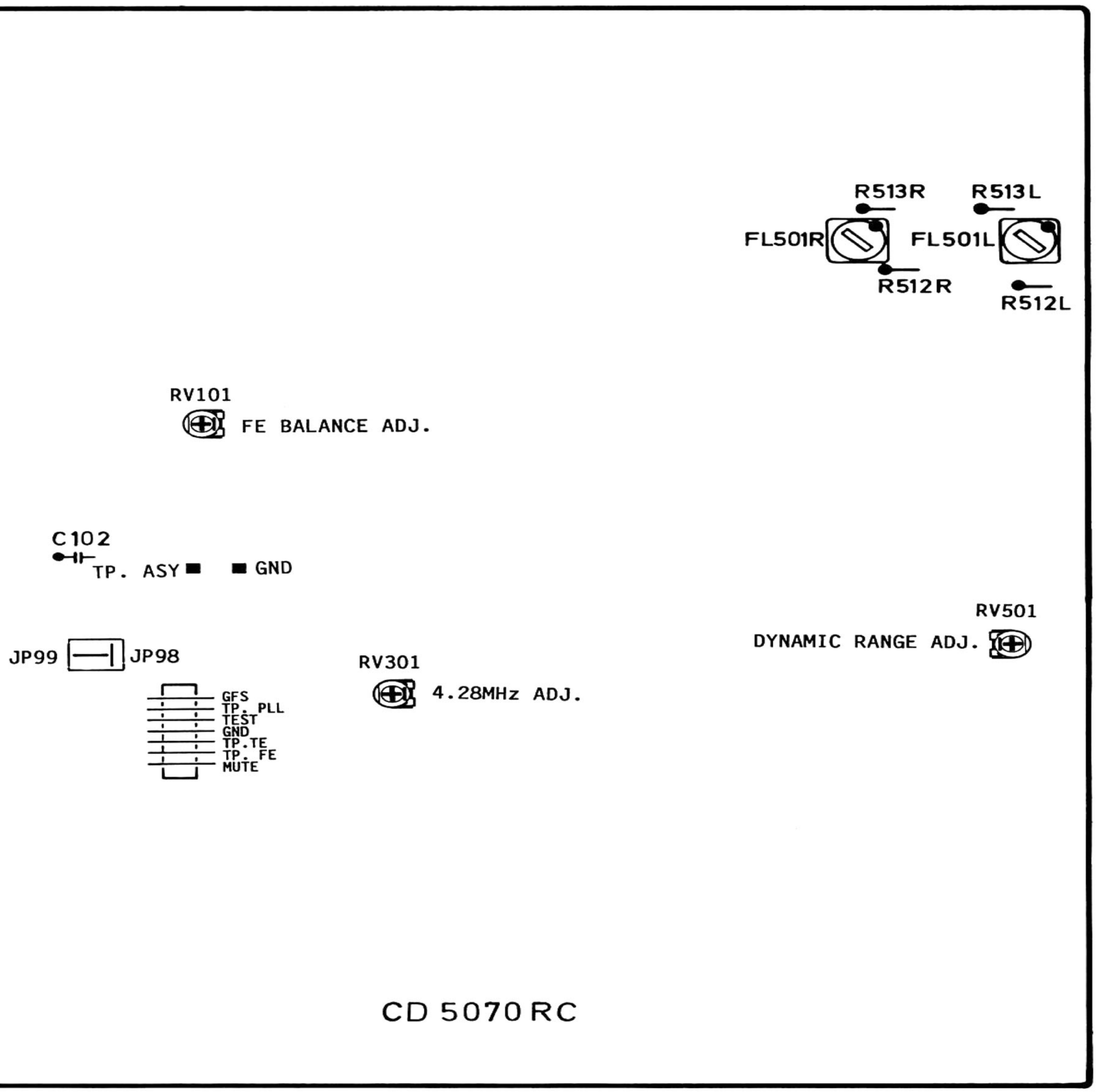

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Reglages · Reglazione · CD 5070 RC

Source de signal Fonte segnale	Réglage de l'appareil Apparecchio a tarare	Branchement de l'appareil de mesure Collegamento strumento misurazione	Position d'alignement Posizione di taratura	Remarque d'alignement Osservazioni sulla taratura
	PLL			
	Power: ON 1. Ponter TP, ASY, avec GND 1. Ponticellare TP, ASY, con GND	Compteur de fréquences en TP-PPL Contatore frequenza su TP-PPL	RV 301	4,321 MHz ± 10 kHz
	2. Enlever le pont 2. Togliere il ponte			
	EF-Balance			
Echantillon de test 5 A Test Sample 5 A	1. Couper la liaison JP 98–JP 99 avec un fer à souder 1. Dissaldare ponte JP 98–JP 99 2. Play (marche) 2. Play 3. Ponter TEST avec GND 3. Ponticellare TEST con GND 4. Appuyer sur la touche REPEAT (répétition) 4. Premere il tasto REPEAT Affichage: ONE REPEAT Display: ONE-REPEAT	Oscilloscope en TP–TE Oscilloscopio a TP–TE	RV 101	A B A - B
	Après l'alignement: ponter JP 98–JP 99 couper le pont TEST–GND Dopo la taratura: collegare il ponte JP 98–JP 99 dissaldare il ponte TEST–GND			
	LPF (Low Pass Filter) (Filtre passe-bas) LPF (filtro passabasso)			
Générateur de son 24 kHz 1 Vcc en A 512 L Generatore audio 24 kHz 1 Vss su R 512 L	Power: off	Oscilloscope en R 513 L Oscilloscopio a R 513 L	FL 501 L	Minimum
C 512 R		R 513 R	FL 501 R	
	Test (après changement du pick-up) Test (dopo la sostituzione del Pick-up)			
	EFM-Signal			
Disc Disco	Play (marche) Play	Oscilloscope en C 102 Oscilloscopio su C 102	Réglage en pick-up Regulatore sul Pick-up	1,4 Vss 1,4 pp
	après changement du disque-motor dopo la sostituzione del motor disco			
	Distance plateau à disques au bord supérieur-chassis Distanzia dal porto superiore piatto del disco al delaio	13,7 mm		
Contrôle final: échantillon de test 5 A, lecture des titres 9 et 17 Controllo finale: Test Sample 5 A Titolo N° 9 e 17				

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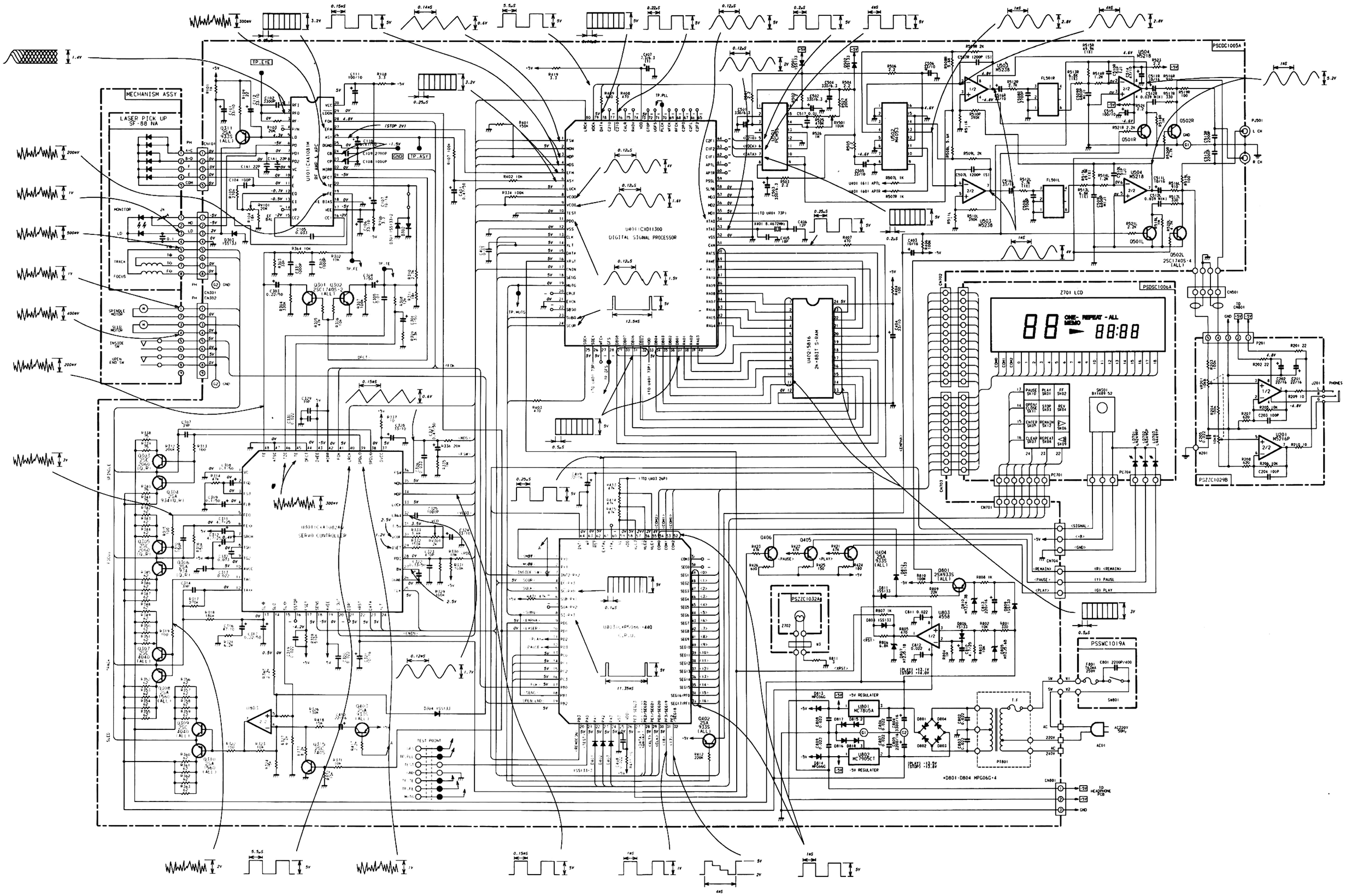
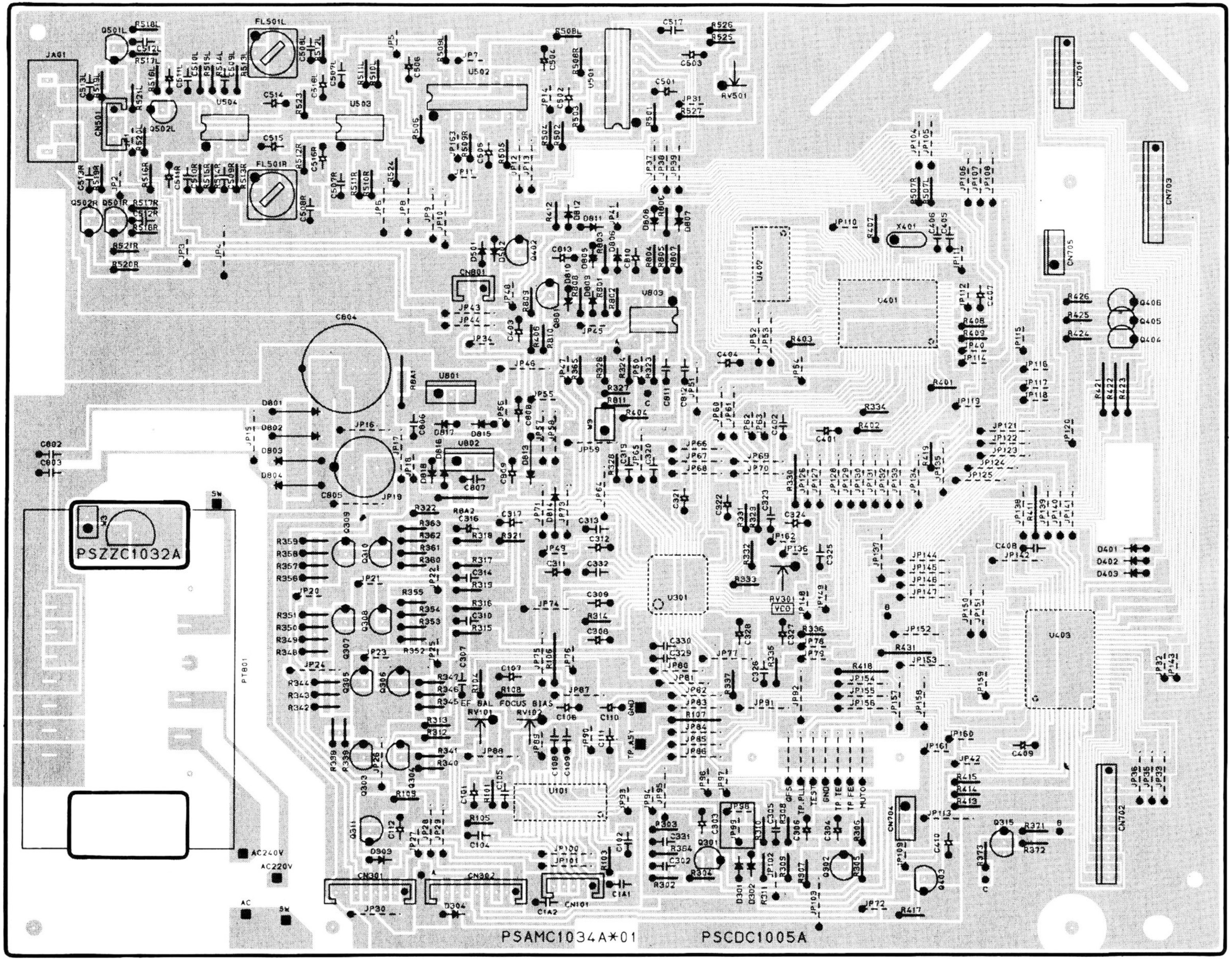

MECHANISM ASSY
LASER PICK UP
SF-88 NA
U101:CXA1081M
RF AMP & APC
U401:CXD1130Q
DIGITAL SIGNAL PROCESSOR
U402:5816
2k-4BIT S-RAM
U501:CXA1082AQ
SERVO CONTROLLER
PSCDC1005A
PSDSC1006A
Z701 LCD
PSZZC1029B
PSSWC1019A
PSZZC1032A
U801
MC78U5A
U802
MC7905CT
+5V REGULATOR
-5V REGULATOR
*D801-D804 MPG06G*4
PT801
SW801
AC01
J201
PHONES
PJ501
L CH
R CH
CN501
CN701
CN702
CN703
CN704
CN801
TO HEADPHONE PCB
TP:ETE
TP:PLL
TP:ASY
TP:MUTG
TEST POINT
MONITOR
TRACK
FOCUS
SPINDLE MOTOR
SLED MOTOR
INSIDE SW
OPEN END SW
ONE- REPEAT - ALL
MEMO
PAUSE
PLAY
FF
OPEN/CLOSE
STOP
REV
ENTER
PROGRAM
CLEAR
REPEAT
(SIGNAL)
(B)
(GND)
(R) (REMAIN)
(Y) PAUSE
(G) PLAY
(STOP) 2V
(PLAY) 4.3V
(PAUSE) 4.3V
(STOP) +13.5V
(STOP) -13.5V
(PLAY) +14.6V
(PLAY) -14.6V



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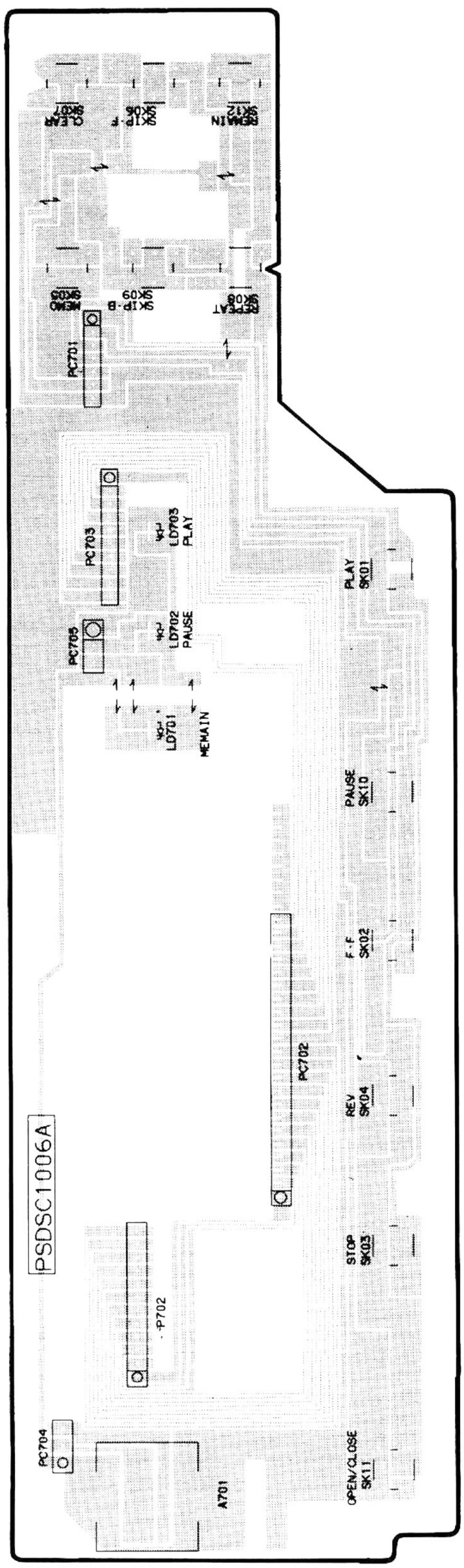
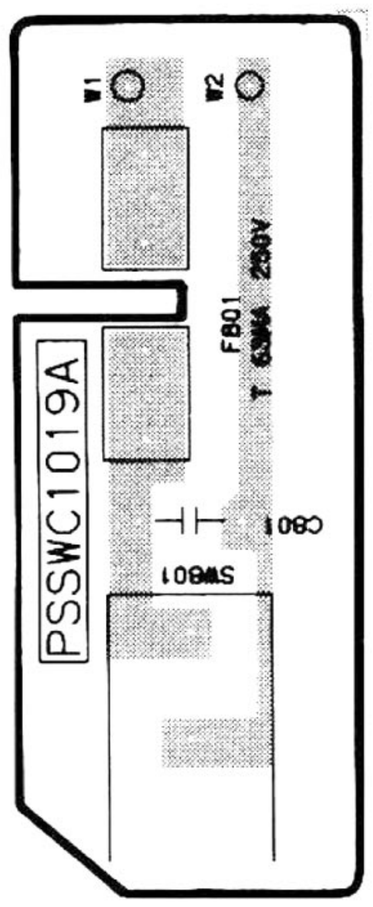
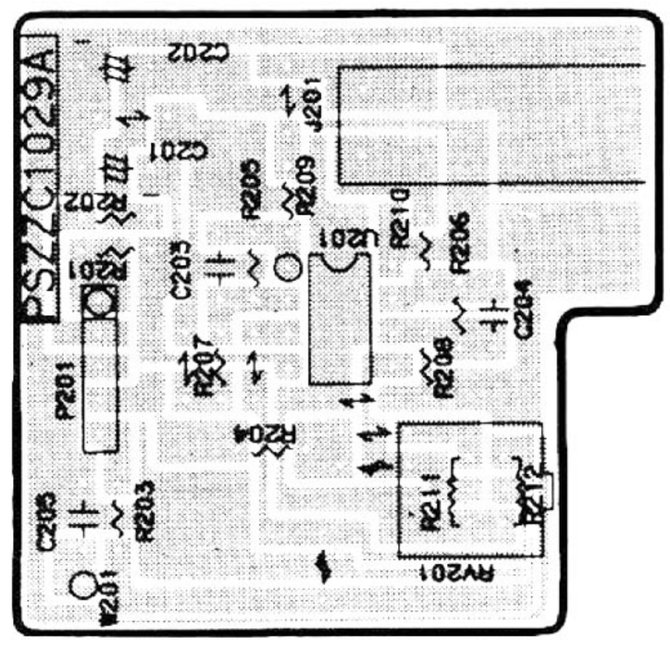
Displayplatte
Display board



Netzschalterplatte
Power switch board



Kopfhörerplatte
Head phone board



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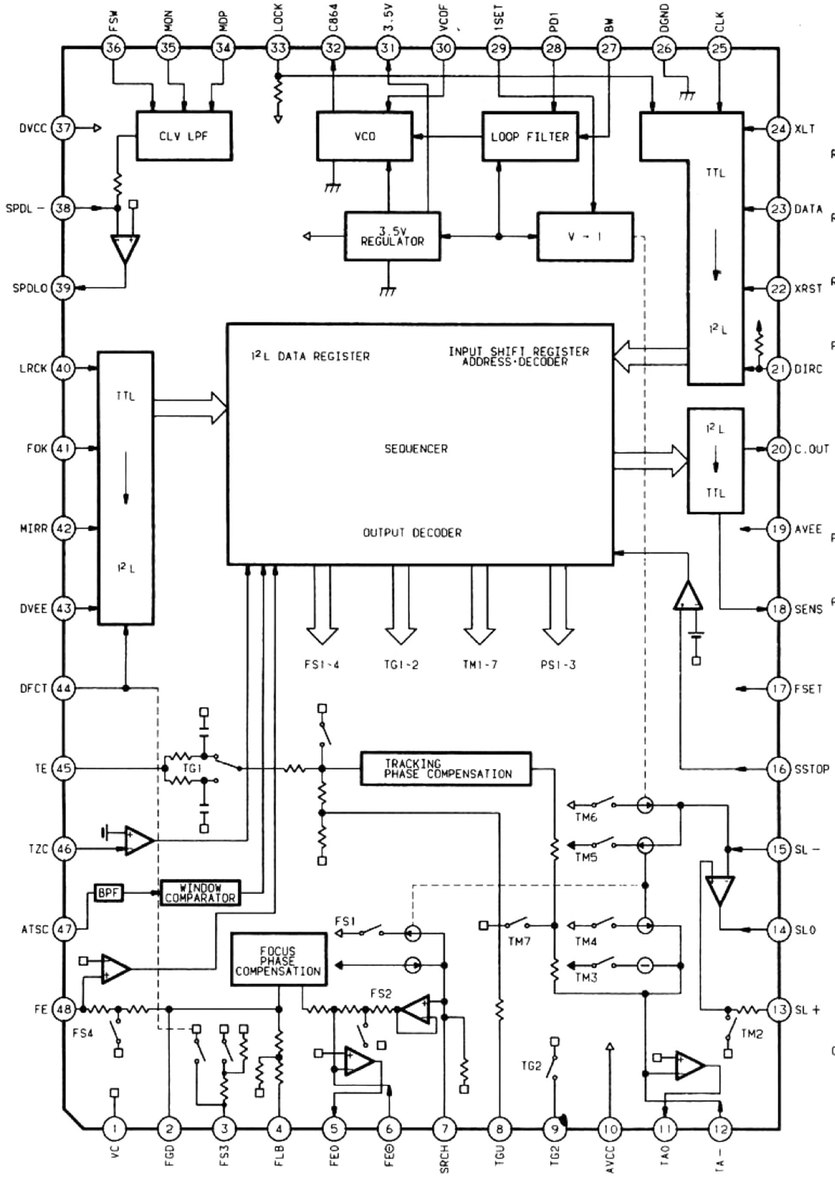
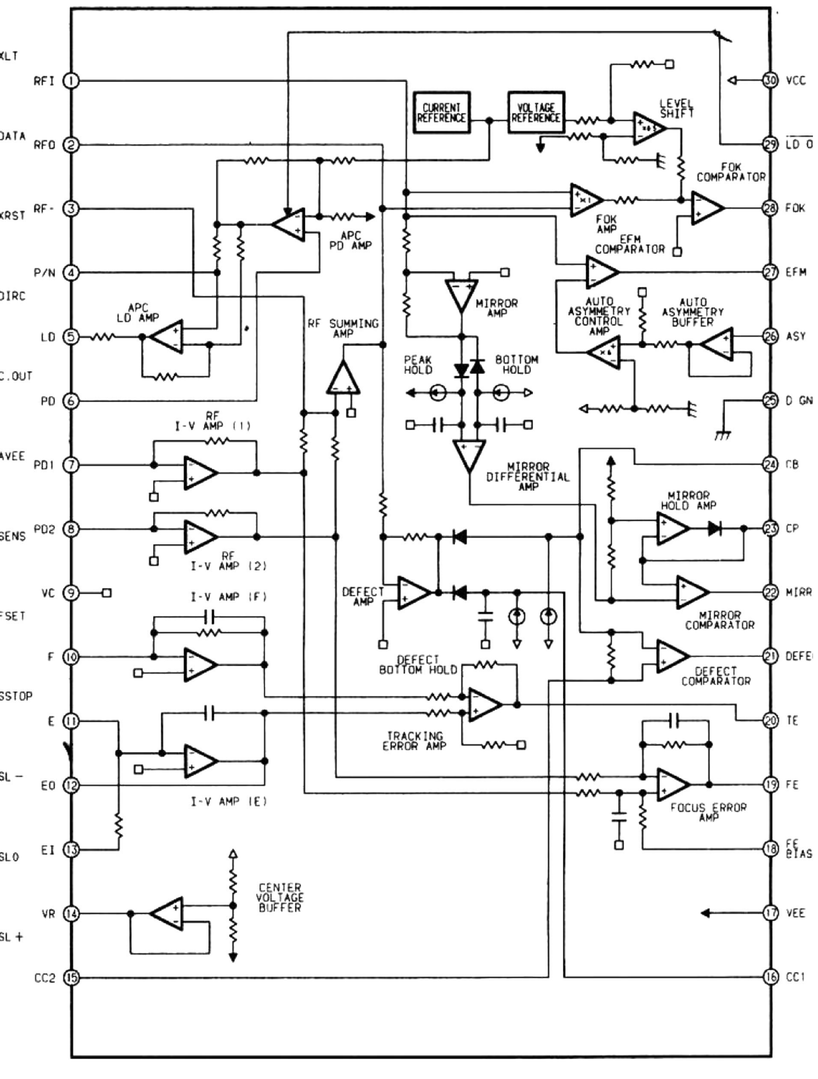
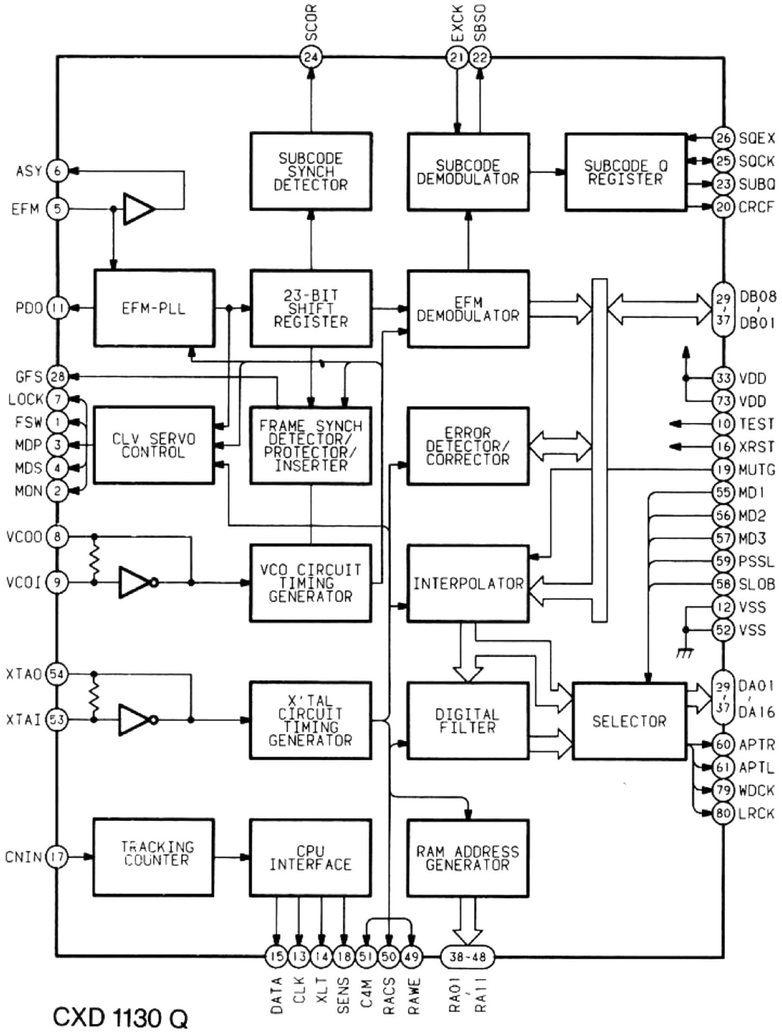


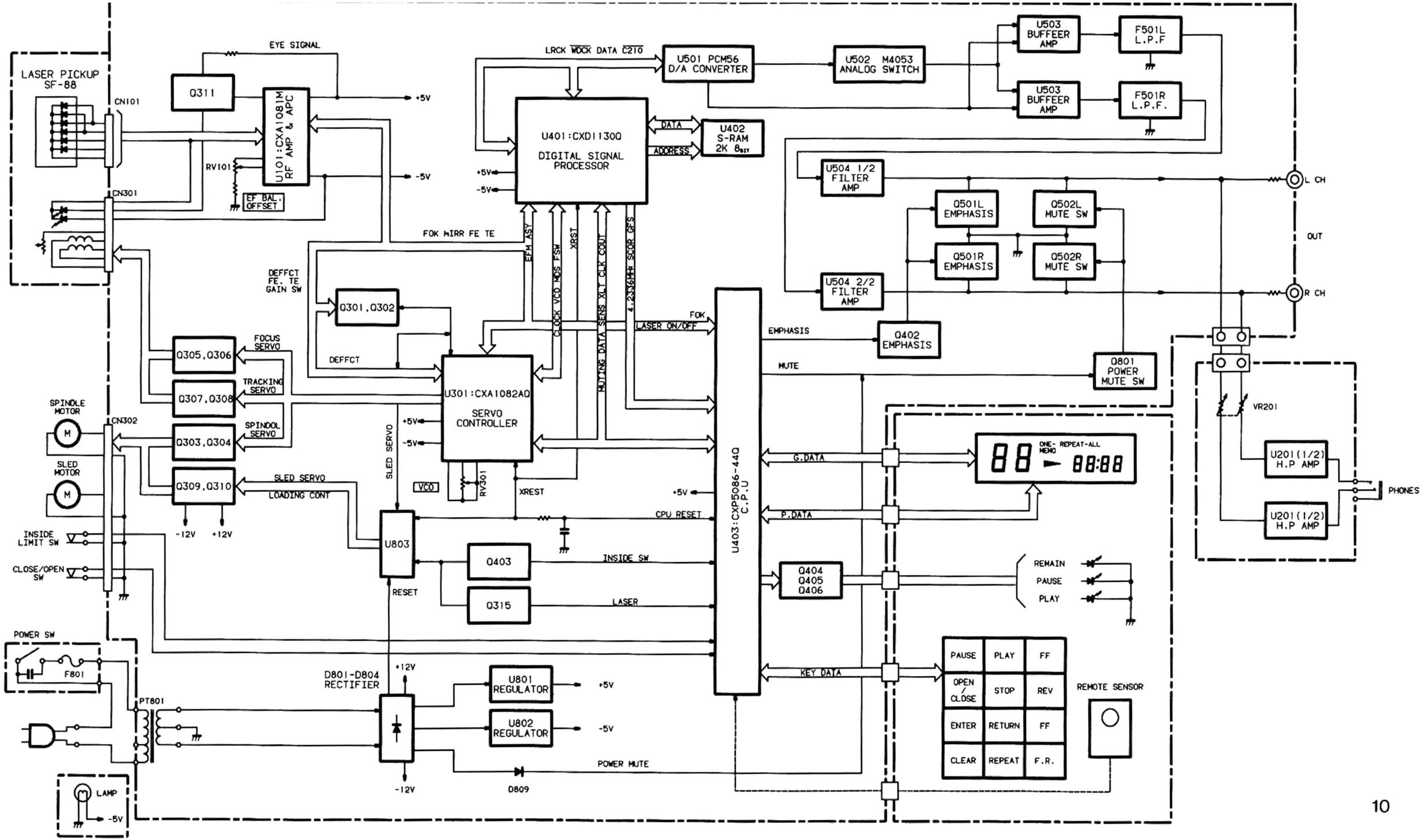
CXA 1082 Q

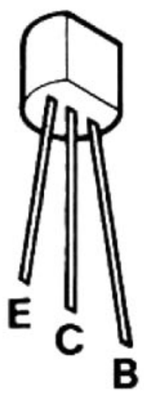


CXA 1081 M

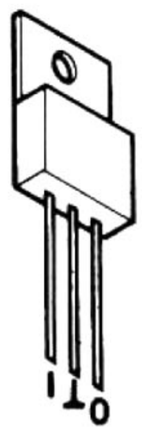


CXD 1130 Q

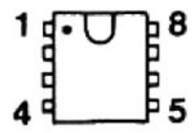

LASER PICKUP SF-88
CN101
CN301
EYE SIGNAL
Q311
U101:CXA1081M RF AMP & APC
RV101
EF BAL. OFFSET
+5V
-5V
LRCK WDCK DATA C2TO
U501 PCM56 D/A CONVERTER
U502 M4053 ANALOG SWITCH
U503 BUFFEER AMP
U503 BUFFEER AMP
F501L L.P.F
F501R L.P.F.
U401:CXD1130Q DIGITAL SIGNAL PROCESSOR
DATA
ADDRESS
U402 S-RAM 2K 8BIT
U504 1/2 FILTER AMP
U504 2/2 FILTER AMP
Q501L EMPHASIS
Q501R EMPHASIS
Q502L MUTE SW
Q502R MUTE SW
L CH
OUT
R CH
FOK MIRR FE TE
EFM ASY
CLOCK VCO MDS FSW
XRST
MUTING DATA SENS XLT CLK COUT
4.2336MHz SCOR GFS
DEFFCT FE. TE GAIN SW
Q301,Q302
DEFFCT
FOK
LASER ON/OFF
EMPHASIS
MUTE
Q402 EMPHASIS
Q801 POWER MUTE SW
FOCUS SERVO
Q305,Q306
TRACKING SERVO
Q307,Q308
SPINDOL SERVO
Q303,Q304
SLED SERVO
LOADING CONT
Q309,Q310
SPINDLE MOTOR
SLED MOTOR
CN302
U301:CXA1082AQ SERVO CONTROLLER
SLED SERVO
VCO
RV301
XREST
U803
RESET
-12V
+12V
CPU RESET
Q403
INSIDE SW
Q315
LASER
INSIDE LIMIT SW
CLOSE/OPEN SW
U403:CXP5086-44Q C.P.U
G.DATA
P.DATA
KEY DATA
Q404
Q405
Q406
REMAIN
PAUSE
PLAY
ONE- REPEAT-ALL
MEMO
88
88:88
PAUSE
PLAY
FF
OPEN / CLOSE
STOP
REV
ENTER
RETURN
FF
CLEAR
REPEAT
F.R.
REMOTE SENSOR
VR201
U201(1/2) H.P AMP
U201(1/2) H.P AMP
PHONES
POWER SW
F801
PT801
D801-D804 RECTIFIER
U801 REGULATOR
U802 REGULATOR
POWER MUTE
D809
LAMP



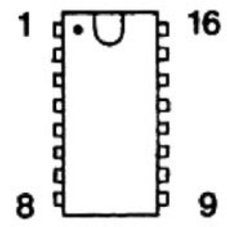
2SC 1740 S
2SC 2060 Q
2SA 934 R
2SA 933 S
2SA 1560
2SC 4040



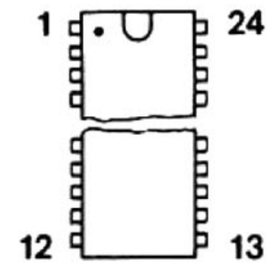
NJM 78M 05A
MC 7905 CT



BA 5238
BA 5128



MC 14053 B



IC 5816

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Zusatzplatine

bis Geräte-Nr. 15 901

Wenn bei Geräten bis zur oben genannten Geräte-Nr. CD-Platten mit weniger als 4 Titeln nicht abgetastet werden, sind folgende Änderungen durchzuführen. (Bei Geräten mit einem grünen oder orangefarbenen Aufkleber neben dem Typenschild ist diese Änderung bereits durchgeführt.)

a) Grundplatte ausbauen
b) nach Zeichnung eine Leiterbahn auftrennen
c) Leitungen nach Zeichnung anlöten
d) Grundplatte einbauen
e) Zusatzplatine an die rechte Seitenwand kleben
f) Buchsenleisten mit der Zusatzplatine verbinden
g) Gerät überprüfen

Der Umbausatz (Zusatzplatine + Leitungen) ist unter der Art.-Nr. 283 291 erhältlich.

Es werden zwei unterschiedliche Zusatzplatinen verwendet:

1. Platine bestückt mit 2 IC's
2. Platine bestückt mit 12 IC's
   Bei der 2. Platine entfallen drei Leitungen, siehe Skizze

Die Artikel-Nr. für IC U 401 CXD 1130 Q
bis oben stehender Geräte-Nr. 283 148
ab oben stehender Geräte-Nr. 283 292

Supplementary circuit board

to instrument number 15 901

Complaint: Compact discs with less than four titles are not scanned. Remedial measures: CD players in the finished goods stockroom at DUAL are furnished with a supplementary circuit board. All CD players which have been altered in this manner are identified by a green or orange sticker beside the type plate.
Correspondingly numbered CD players for which complaints are received shall be altered as described in the following:

a) The base plate is removed.
b) A conductive track is separated as indicated in the accompanying drawing.
c) The leads are soldered as indicated in the drawing.
d) The base plate is reinstalled.
e) The supplementary circuit board is cemented to the right-hand side wall.
f) The female contact blocks are connected with the supplementary circuit board.
g) The CD player is checked.

The conversion kit (supplementary circuit board and leads) is available under part number 283 291.

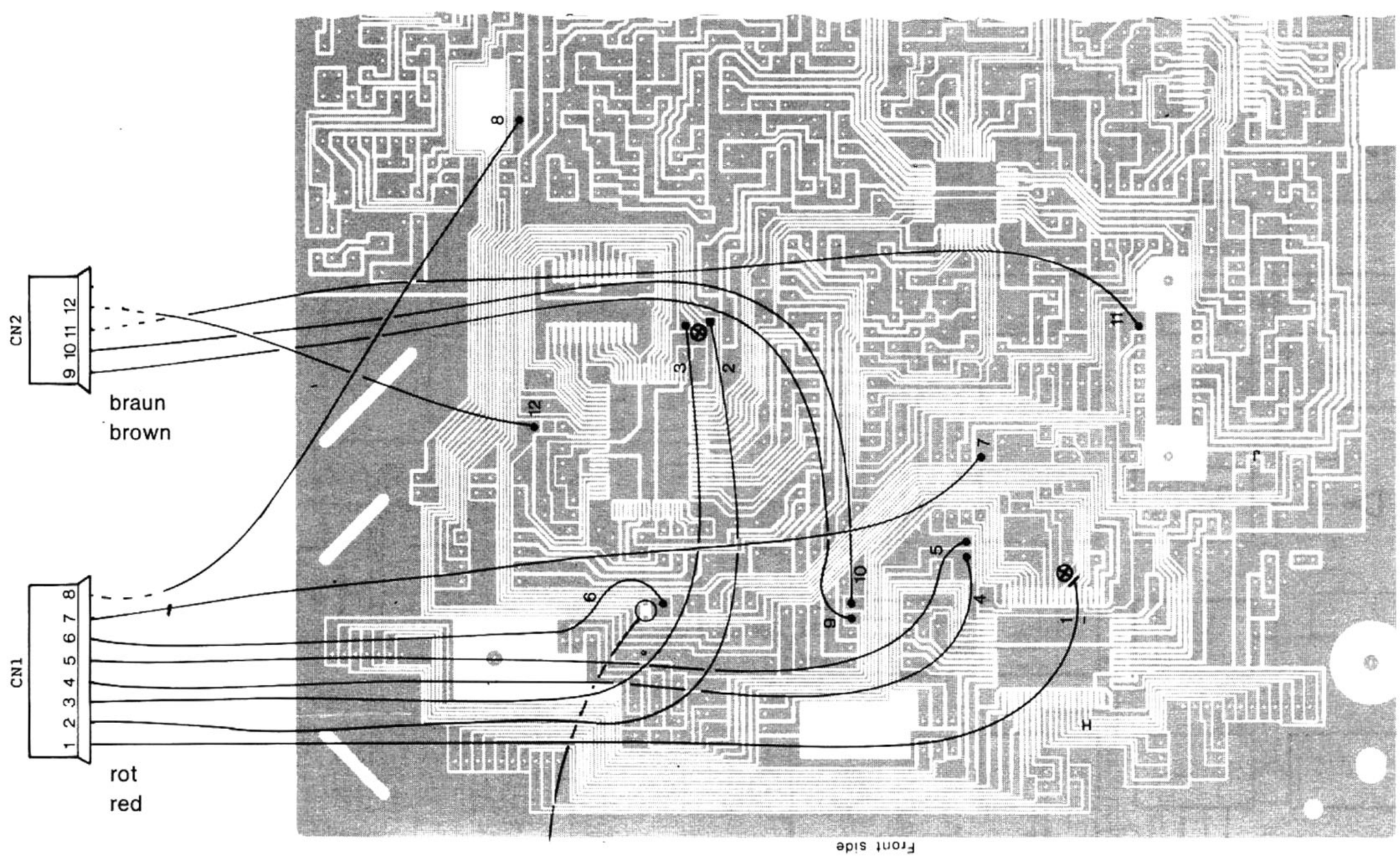
Two different supplementary circuit boards are employed:

1. circuit board equipped with two IC,s;
2. circuit board equipped with twelve IC,s.

Four leads are unnecessary in the case of the second circuit board. Refer to the sketch.

The part number for IC U 401 CXD 1130 Q is 283 148 for CD players up to the number indicated above, and 283 292 for CD players beginning with the number indicated above.

Grundplatte, Leiterseite
Base plate, conductor side



Leiterbahn unterbrechen
Sever conductive track

⊗ Eventuell Schutzlack entfernen
Remove protective lacquer, if necessary

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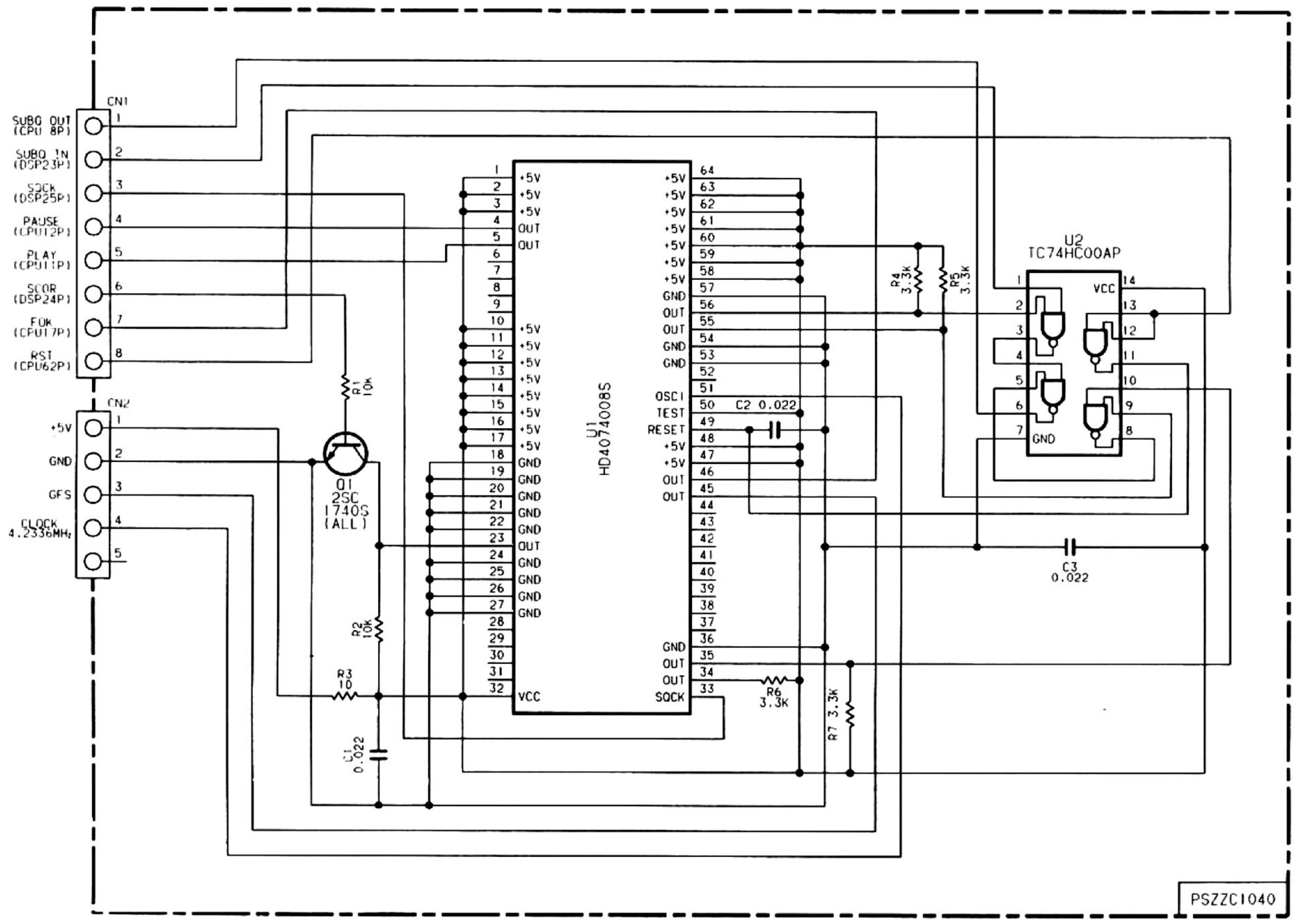
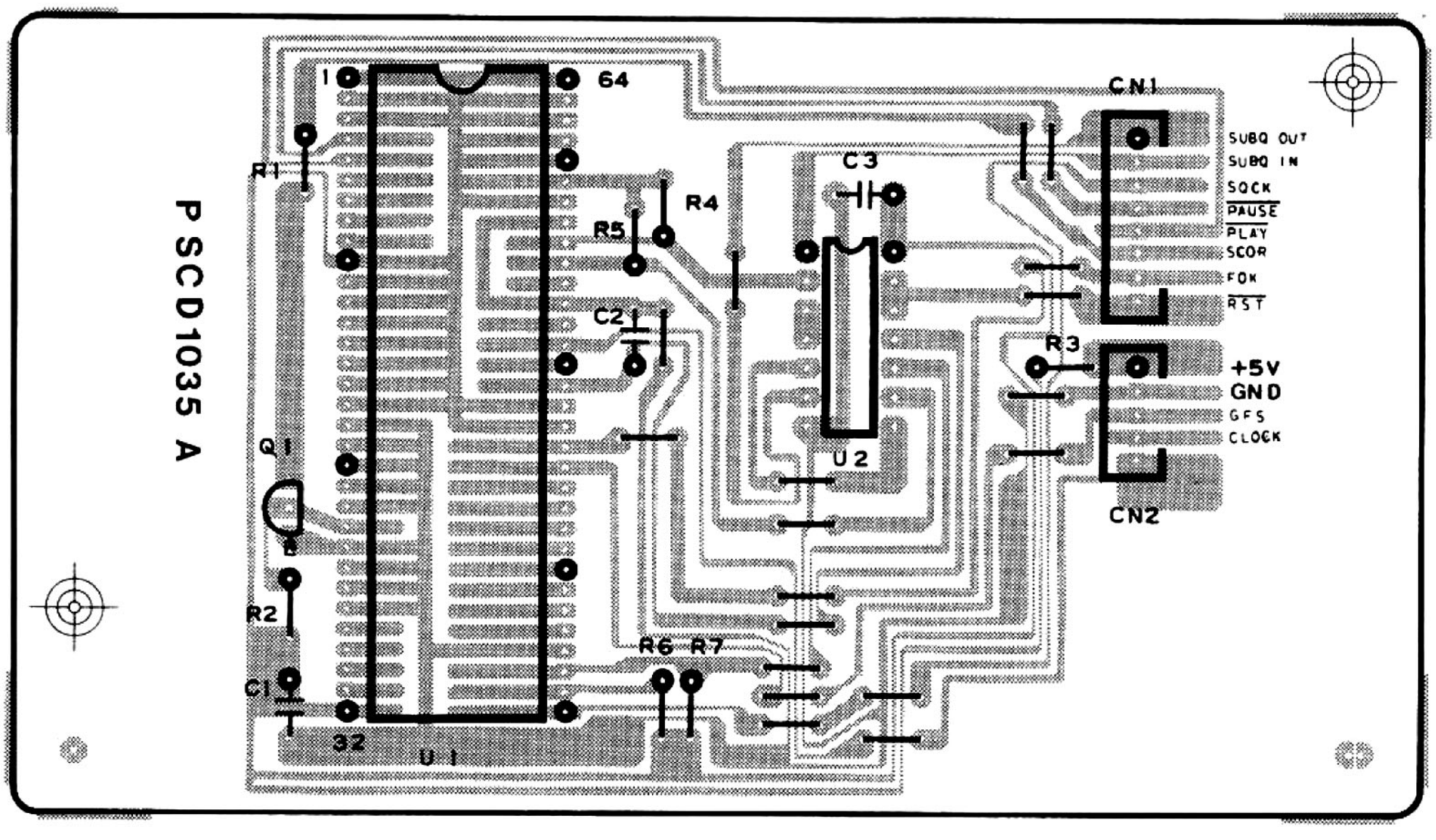
Zusatzplatine 1
Supplementary circuit board 1





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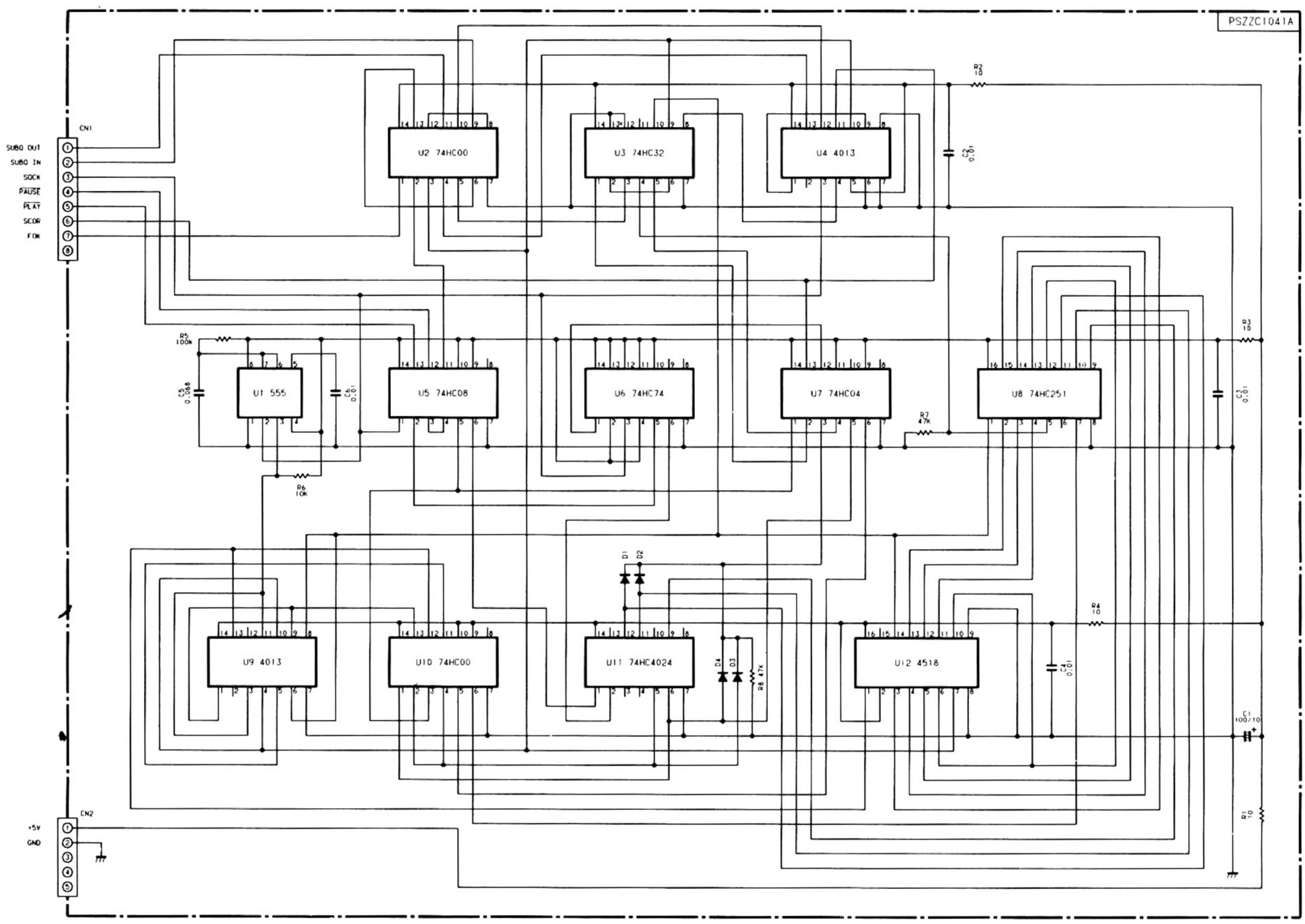
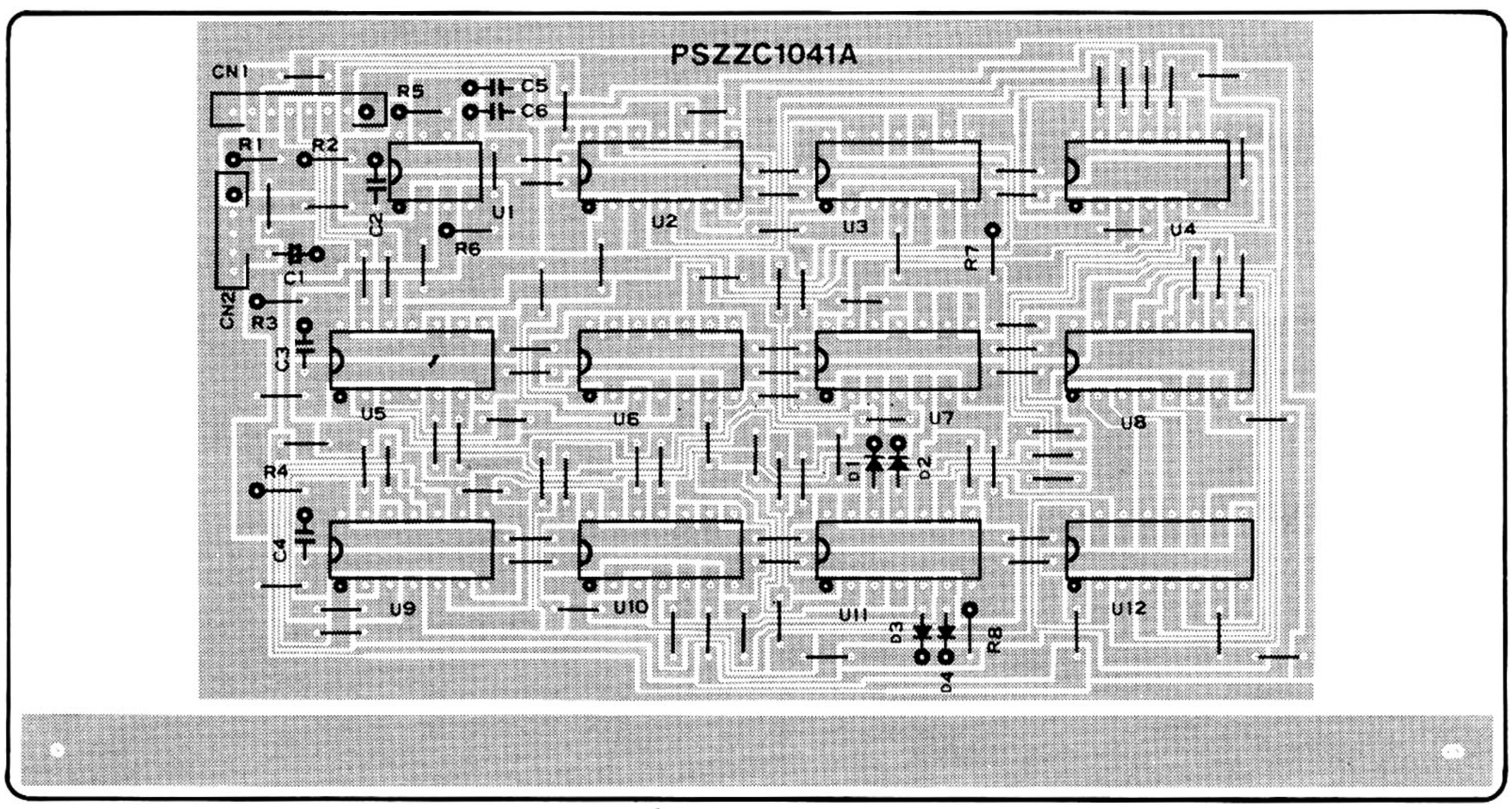
Zusatzplatine 2
Supplementary circuit board 2





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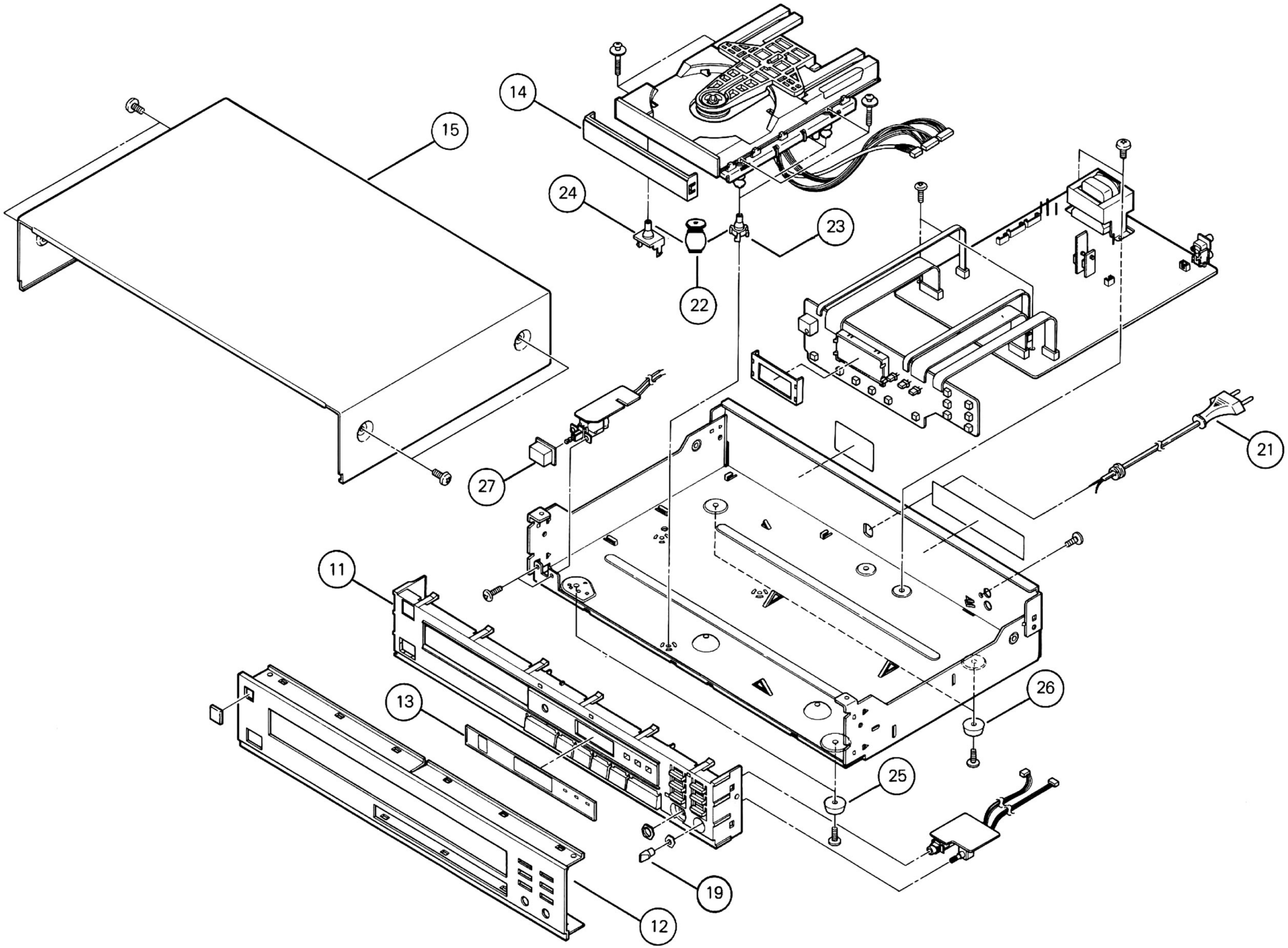

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Ersatzteile · Replacement parts · Pièces détachées · CD 5070

Pos.	Art.-Nr.	Bezeichnung
11	283 188	Frontrahmen
12	283 189	Frontblende
13	283 185	Anzeigefenster
14	283 186	Abdeckung
15	283 187	Gehäuseblech
19	283 154	Knopf Volume
21	232 996	Netzkabel Europa
22	283 306	Dämpfungsteil
23	283 307	Halter
25	283 308	Fuß vorn
26	283 309	Fuß hinten
27	283 191	Knopf Power
		Displayplatte
LD 701	283 192	LED LN 249 RP rot
LD 702	283 193	LED LN 349 GP grün
LD 703	283 194	LED LN 449 YP gelb
SK 1	283 137	Schalter
bis		
SK 12	283 137	Schalter
SNS 1	283 118	IR-Empfänger
Z 701	283 161	Display LTP 5Q 6021 A
		Kopfhörerplatte
J 201	283 159	Kopfhörerbuchse
RV 201	283 136	Steller 10 K
U 201	283 140	IC M 5216 P
		Grundplatte
D 301/4	281 494	Diode 1 SS 133 HV
D 401/3	281 494	Diode 1 SS 133 HV
D 801	283 120	Diode MPG06G
bis		
D 804	283 120	Diode MPG06G
D 813/14	283 120	Diode MPG06G
D 805	283 121	Diode MTZJ4.3B
D 807	283 122	Diode MTZJ5.1B
D 810	283 123	Diode MTZJ5.GB
FL 501 L/R	283 195	LC Filter (20 kHz)
PT 801	283 139	Netztrafo 220 V/240 V
PJ 501	283 160	Cinchbuchse
Q 301/2/3	269 146	Transistor 2 SC 1740 S
Q 501/2	269 146	Transistor 2 SC 1740 S
Q 303/5	269 095	Transistor 2 SC 2060 Q
Q 304/6	281 504	Transistor 2 SA 934 R
Q 307/9	283 133	Transistor 2 SC 4040
Q 308/10	283 132	Transistor 2 SA 1560
Q 311	281 505	Transistor 2 SA 933 S
Q 402/6	281 505	Transistor 2 SA 933 S
Q 801	281 505	Transistor 2 SA 933 S
RV 101	283 134	Steller 2 K
RV 301	283 135	Steller 20 K

Pos.	Art.-Nr.	Bezeichnung
RV 501	283 196	Steller 100 Ohm
U 101	283 143	IC CXA 1081 M
U 301	283 144	IC CXA 1082 Q
U 401	283 148	IC CXD 1130 Q (bis Geräte-Nr. 15901)
U 401	283 292	IC CXD 1130 Q Ausführung 2 (ab Geräte-Nr. 15901)
U 402	283 147	IC 5816
U 403	283 146	IC CXP 5086 H
U 501	282 705	IC PCM 56 P
U 502	279 913	IC MC 14053 B MOS
U 503	283 197	IC BA 52 38
U 504	283 198	IC BA 51 28
U 801	271 075	IC NJM 78 M 05 A
U 802	283 142	IC MC 7905 CT
U 803	236 299	IC RC 4558 D
X 401	283 158	Quarz 8. 4672 WHZ
Z 702	283 162	Lampe 6 V/200 MA
SW 801	283 138	Netzschalter
	283 190	**Mechanik**
1	283 125	Pick up
2	283 168	Schalter
3	283 126	Schalter
4	283 266	Motor
5	283 267	Motor
10	283 129	Plattenteller
11	283 130	Schaltarm
12	283 169	Magnet
13	283 171	Schublade
15	283 170	Disc-Halter
17	283 268	Belag
19	283 173	Zahnrad
20	283 131	Motorritzel
21	283 176	Zahnrad
22	283 177	Zahnstange
23	283 269	Zahnrad
24	283 270	Zahnrad
25	283 271	Zahnrad
26	283 272	Riemen
27	283 178	Plattenhaltearm
28	283 273	Riemenrad
29	283 179	Plattenhalter links
30	283 180	Plattenhalter rechts
33	283 274	Achse
34	283 182	Schenkelfeder L
35	283 181	Schenkelfeder R
36	283 183	Zugfeder
37	283 184	Zugfeder
	282 992	Bedienungsanleitung CD 5070
	283 199	Faltschachtel
	283 200	Seitenteil links
	283 201	Seitenteil rechts
	226 817	Cinchkabel
	283 202	Fernbedienung/Remote control

Änderungen vorbehalten! Subject to change! Sous réserve de modification!

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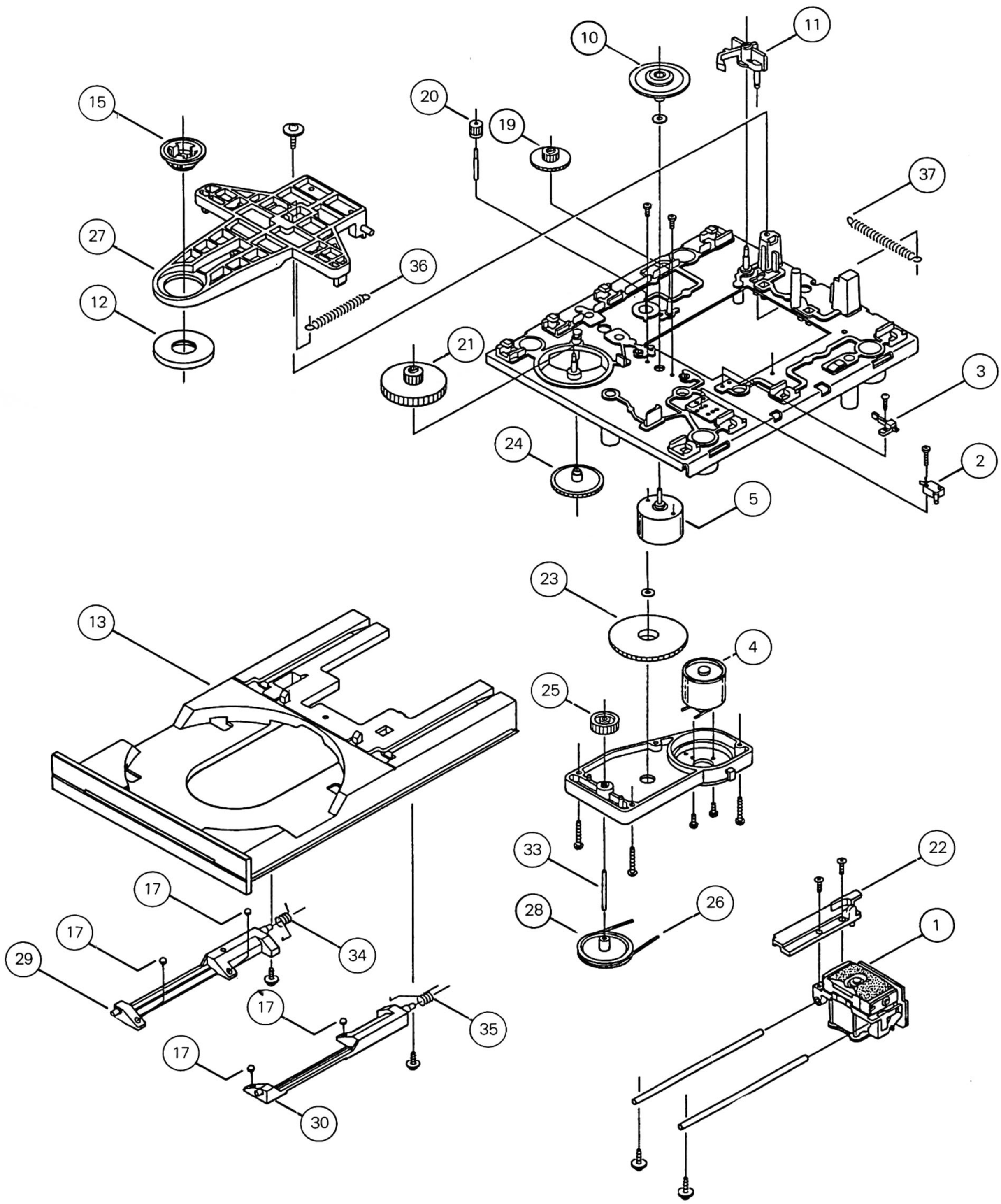

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