Service Document
Exchange Set

RRCD 1310

Service Manual

Sicherheit Safety

Materialnr./Part No. 720108000001

⚠ Es gelten die Vorschriften und Sicherheitshinweise gemäß dem Service Manual "Sicherheit", Materialnummer 720108000001, sowie zusätzlich die eventuell abweichenden, landesspezifischen Vorschriften!

⚠ The regulations and safety instructions shall be valid as provided by the "Safety" Service Manual, part number 720108000001, as well as the respective national deviations.

Dieses Service Dokument ist nur in Datenform verfügbar
This Service Document is only available as data

Änderungen vorbehalten/Subject to alteration

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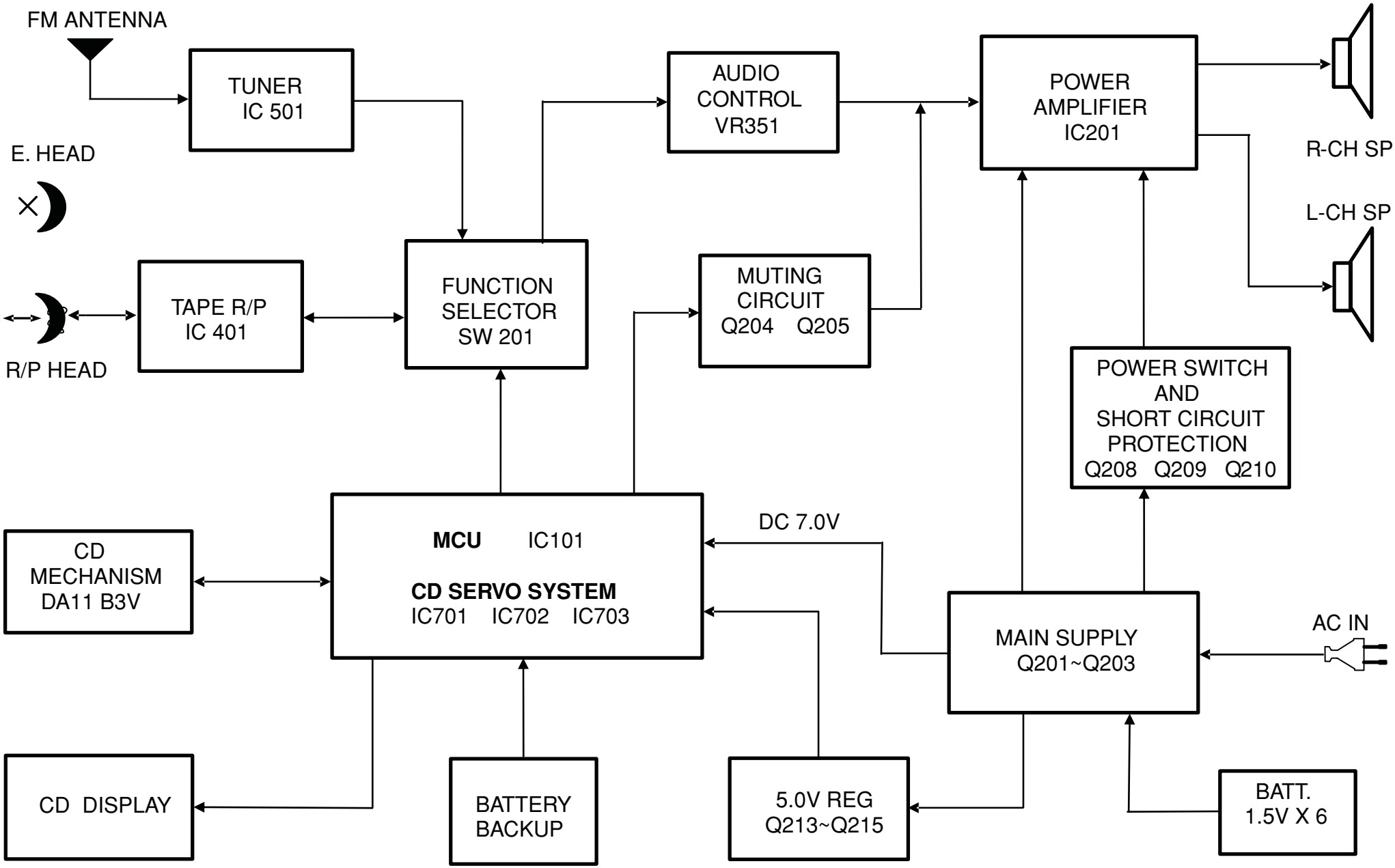
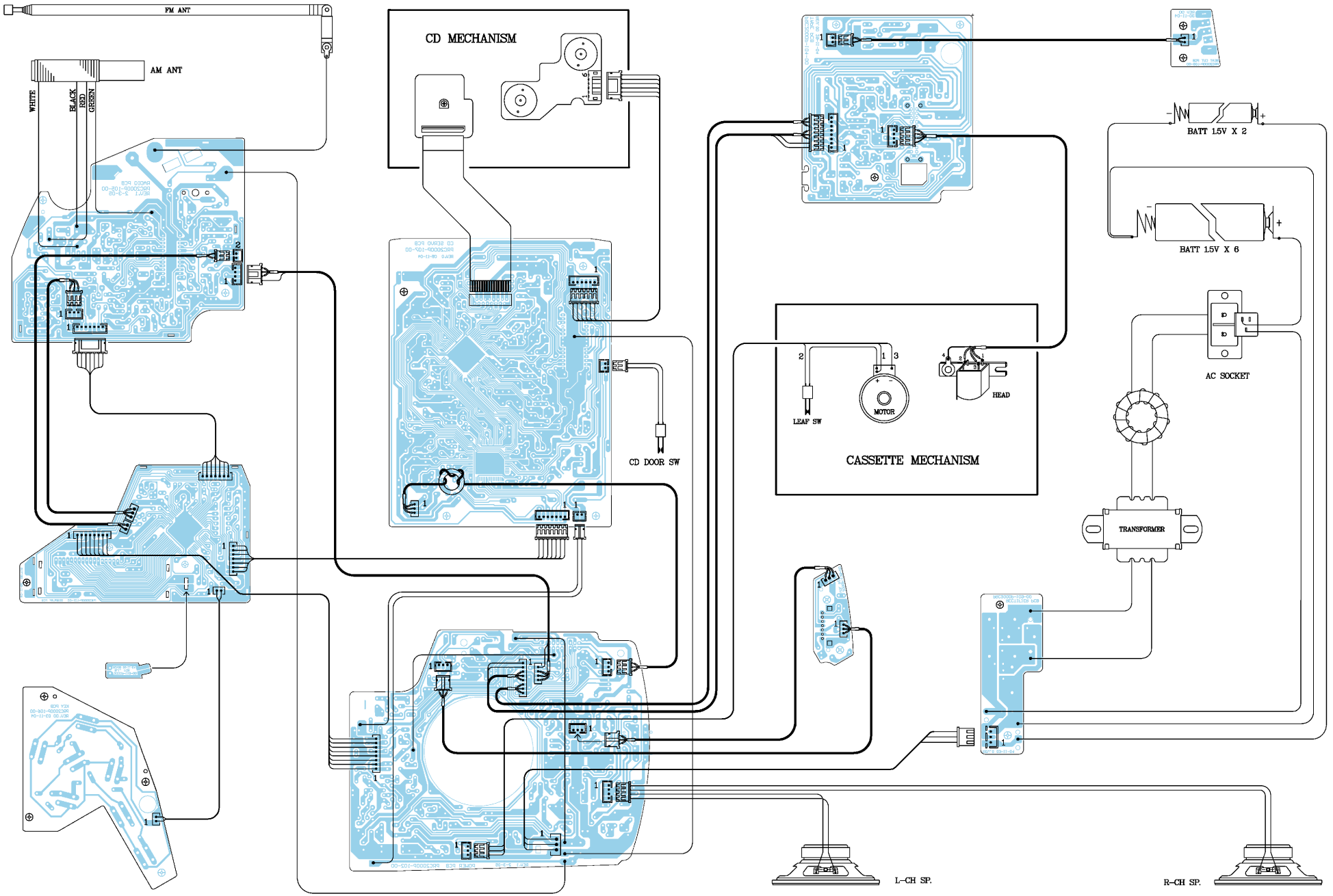

FM ANTENNA
TUNER
IC 501
AUDIO
CONTROL
VR351
POWER
AMPLIFIER
IC201
R-CH SP
L-CH SP
E. HEAD
TAPE R/P
IC 401
R/P HEAD
FUNCTION
SELECTOR
SW 201
MUTING
CIRCUIT
Q204 Q205
POWER SWITCH
AND
SHORT CIRCUIT
PROTECTION
Q208 Q209 Q210
MCU IC101
CD SERVO SYSTEM
IC701 IC702 IC703
DC 7.0V
CD
MECHANISM
DA11 B3V
MAIN SUPPLY
Q201~Q203
AC IN
CD DISPLAY
BATTERY
BACKUP
5.0V REG
Q213~Q215
BATT.
1.5V X 6



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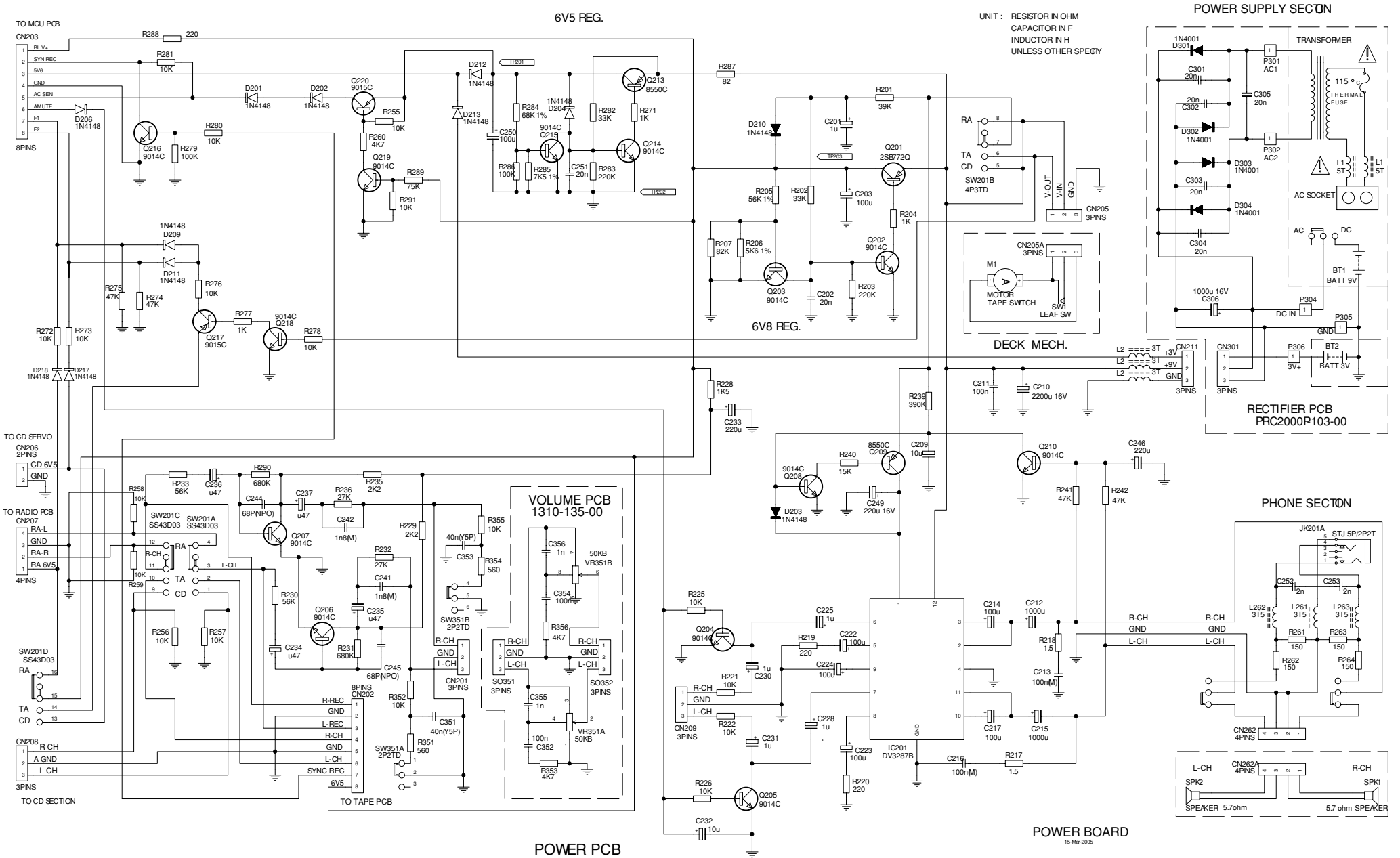
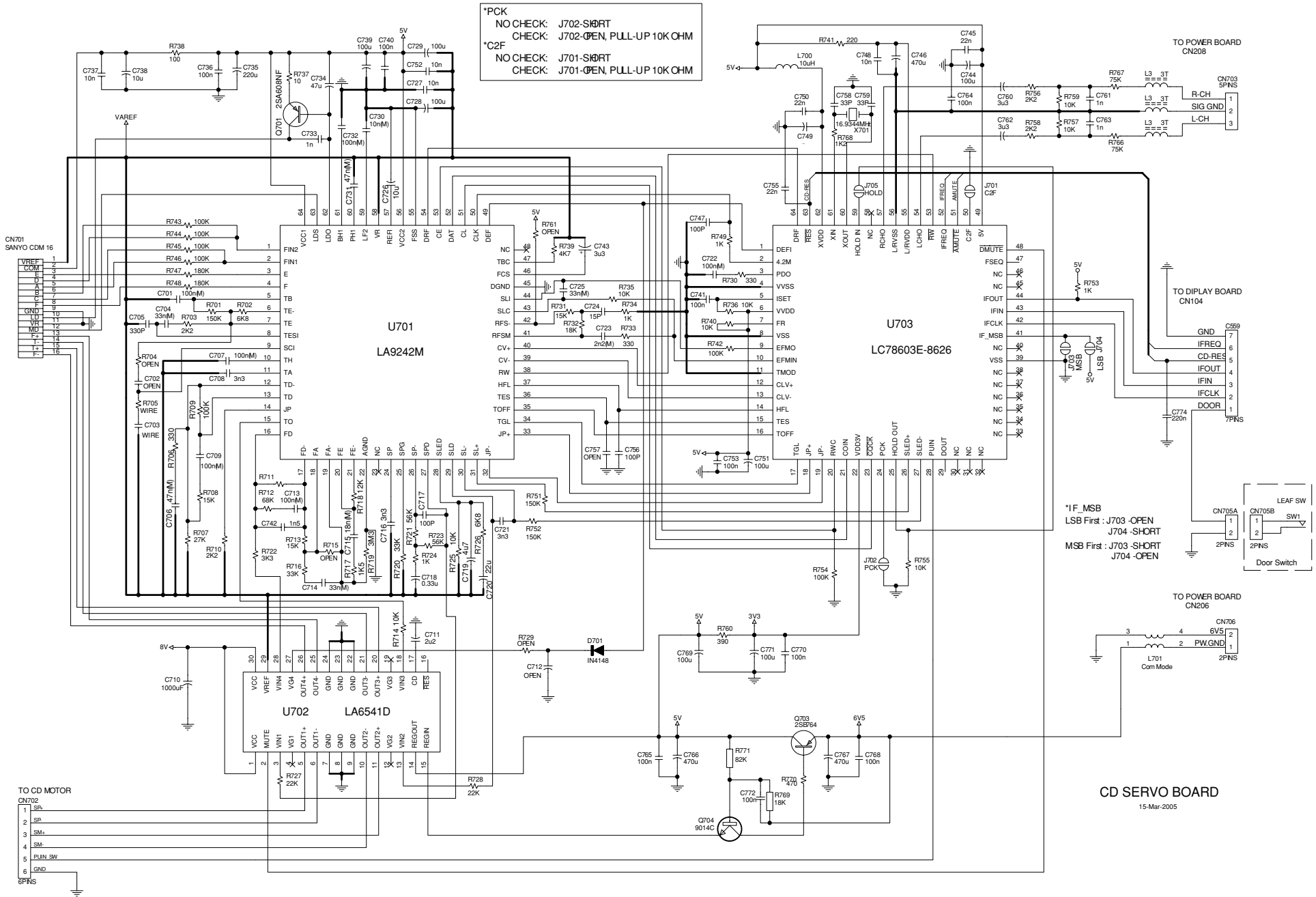
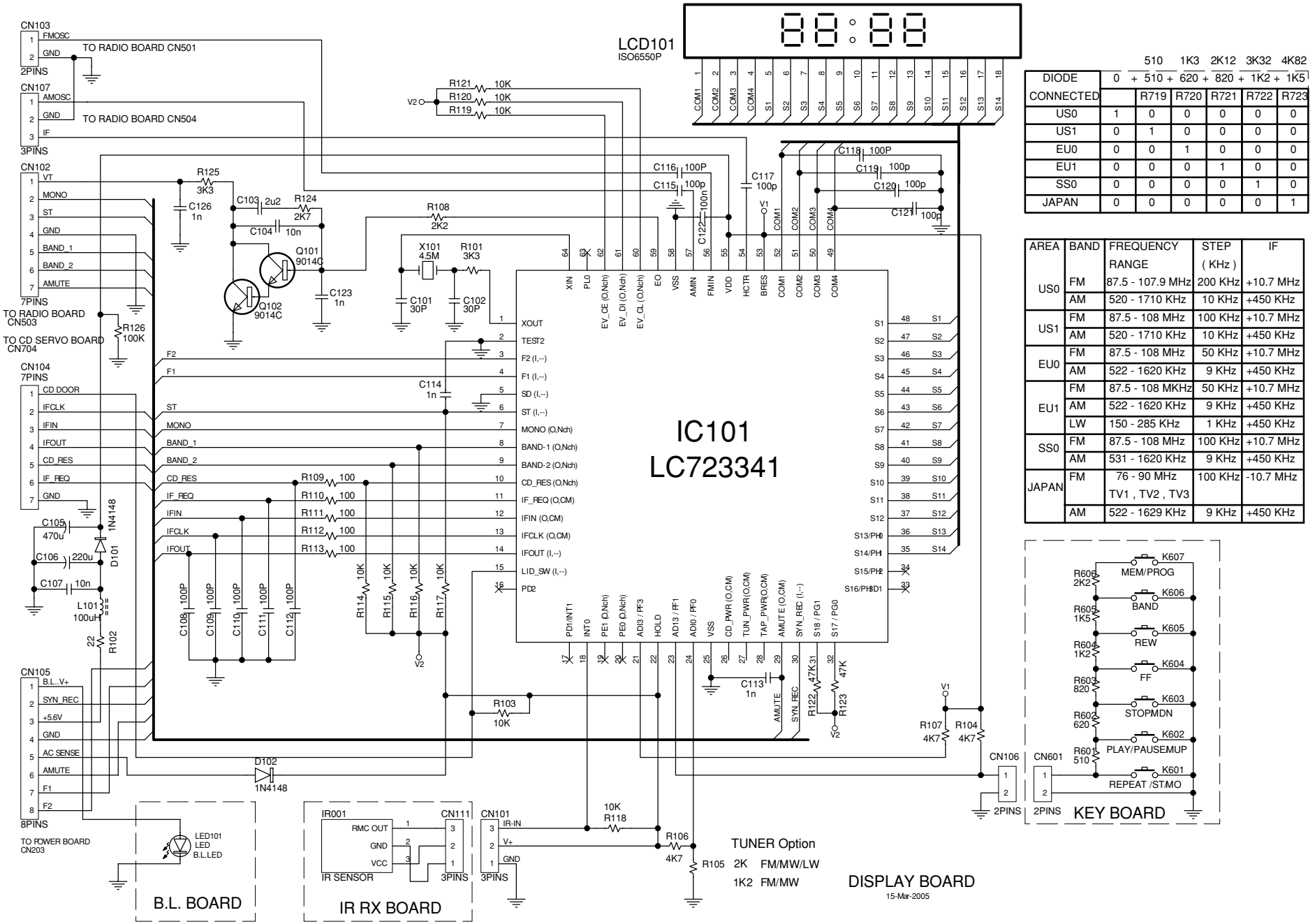
RRCD 1310

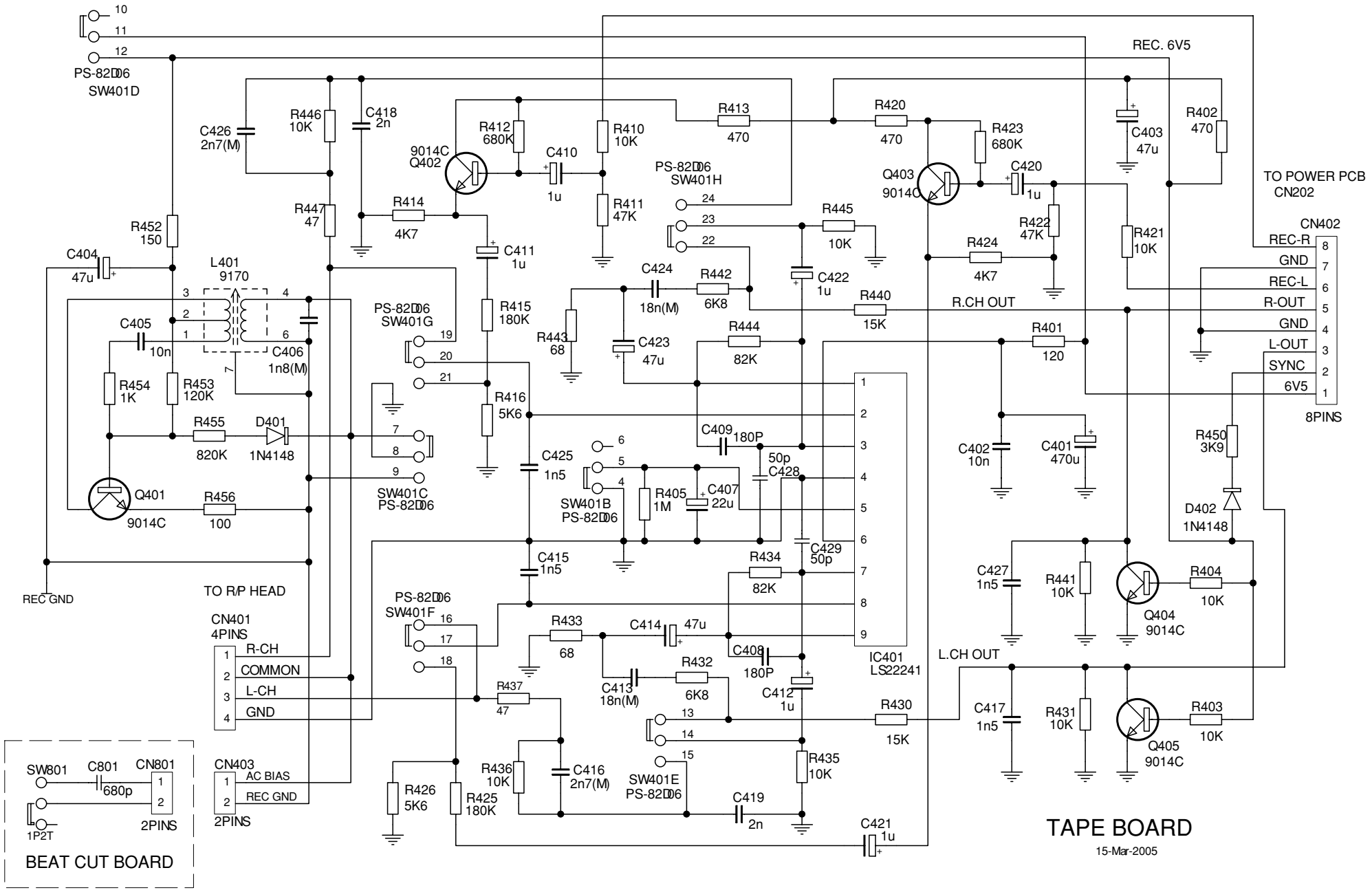

6V5 REG.
UNIT : RESISTOR IN OHM
CAPACITOR IN F
INDUCTOR IN H
UNLESS OTHER SPECIFY
POWER SUPPLY SECTION
TRANSFORMER
AC SOCKET
RECTIFIER PCB
PRC2000P103-00
6V8 REG.
DECK MECH.
MOTOR
TAPE SWITCH
LEAF SW
VOLUME PCB
1310-135-00
PHONE SECTION
POWER PCB
PRC2000P-102-00
POWER BOARD
15-Mar-2005
TO MCU PCB
TO CD SERVO
TO RADIO PCB
TO CD SECTION
TO TAPE PCB
SPEAKER 5.7ohm
5.7 ohm SPEAKER

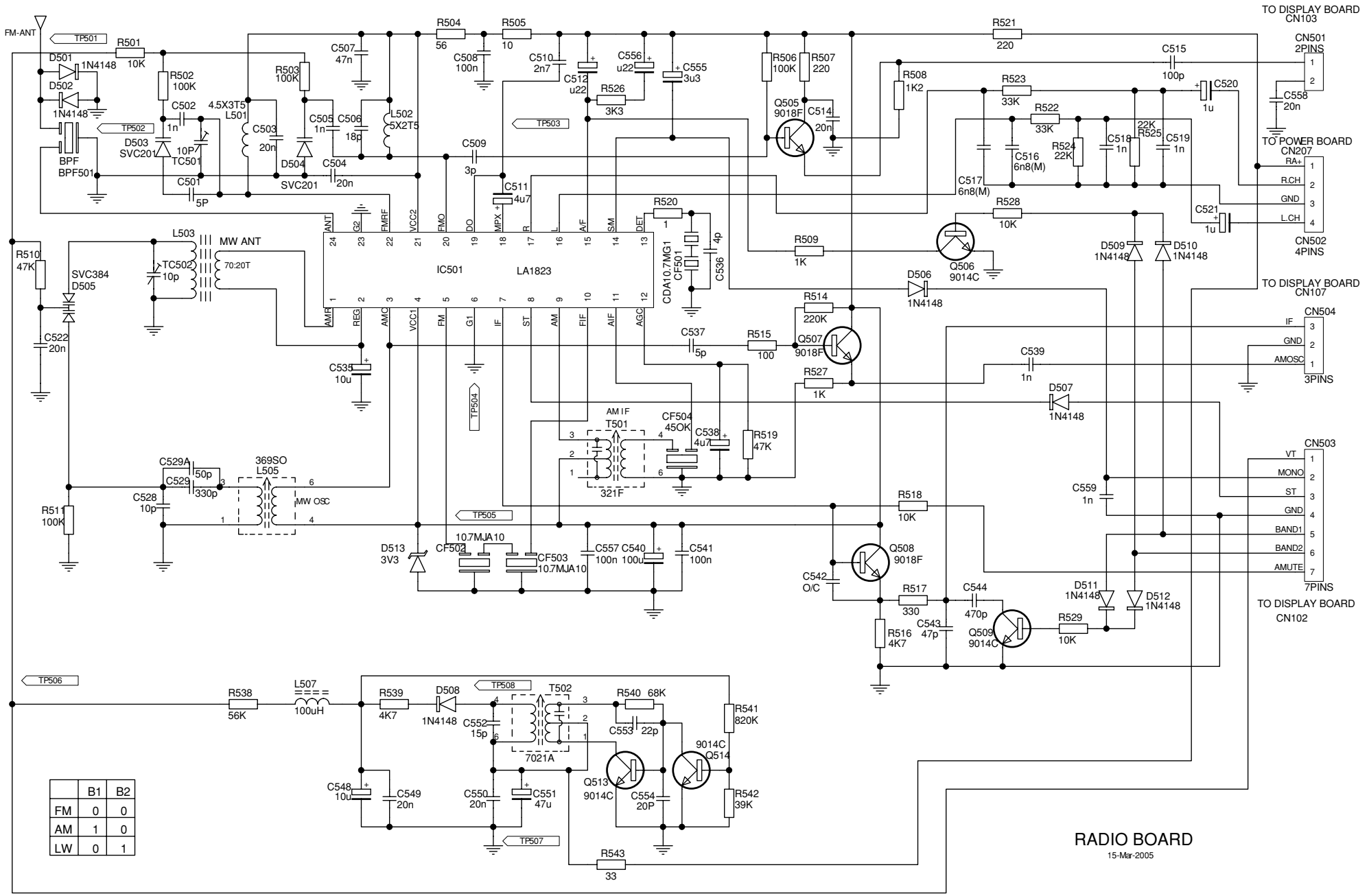

*PCK
NO CHECK: J702-SHORT
CHECK: J702-OPEN, PULL-UP 10K OHM
*C2F
NO CHECK: J701-SHORT
CHECK: J701-OPEN, PULL-UP 10K OHM
U701
LA9242M
U703
LC78603E-8626
U702
LA6541D
CN701
SANYO CDM 16
TO POWER BOARD
CN208
TO DIPLAY BOARD
CN104
TO POWER BOARD
CN206
TO CD MOTOR
CN702
*I F_MSB
LSB First : J703 -OPEN
J704 -SHORT
MSB First : J703 -SHORT
J704 -OPEN
Door Switch
CD SERVO BOARD
15-Mar-2005

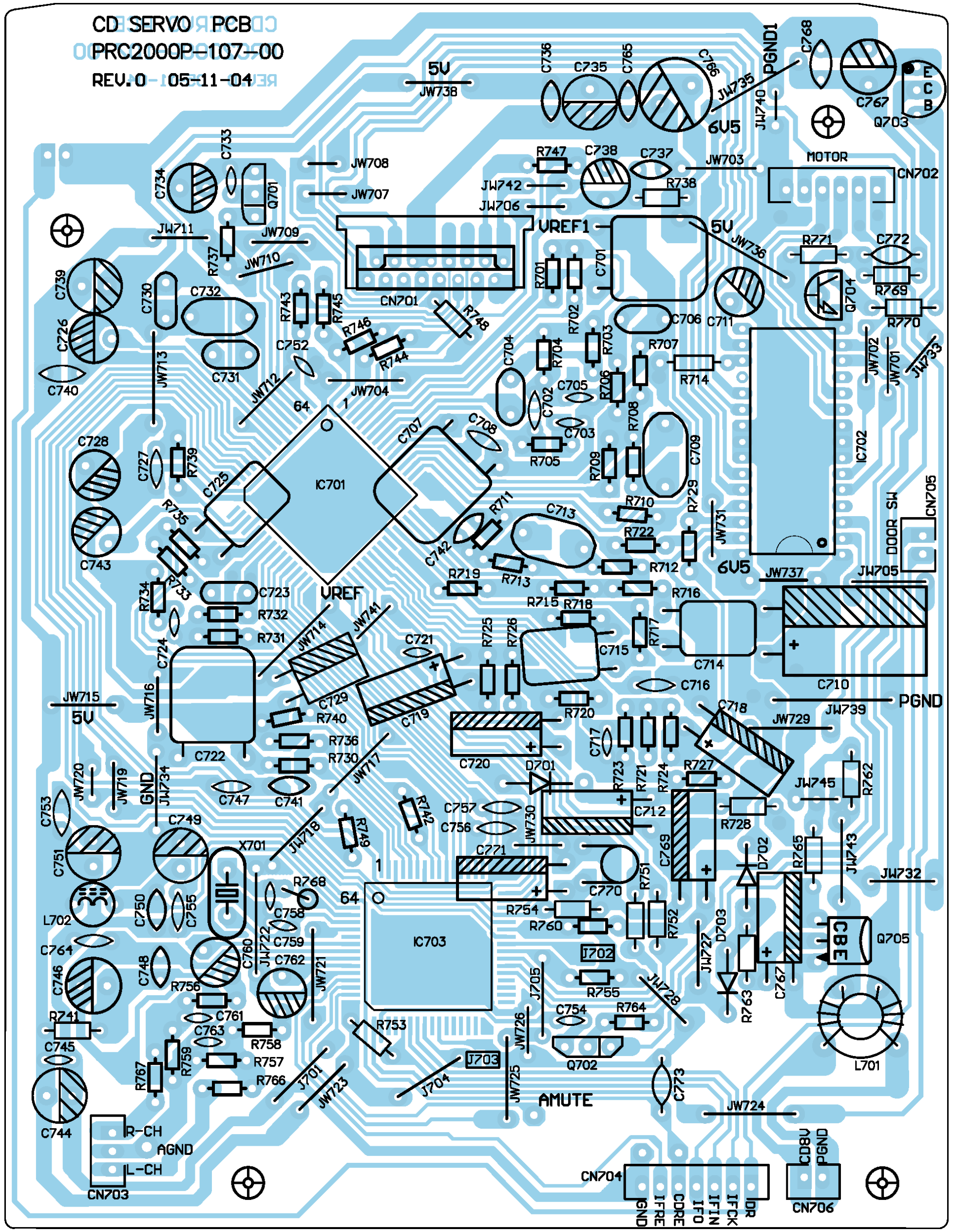


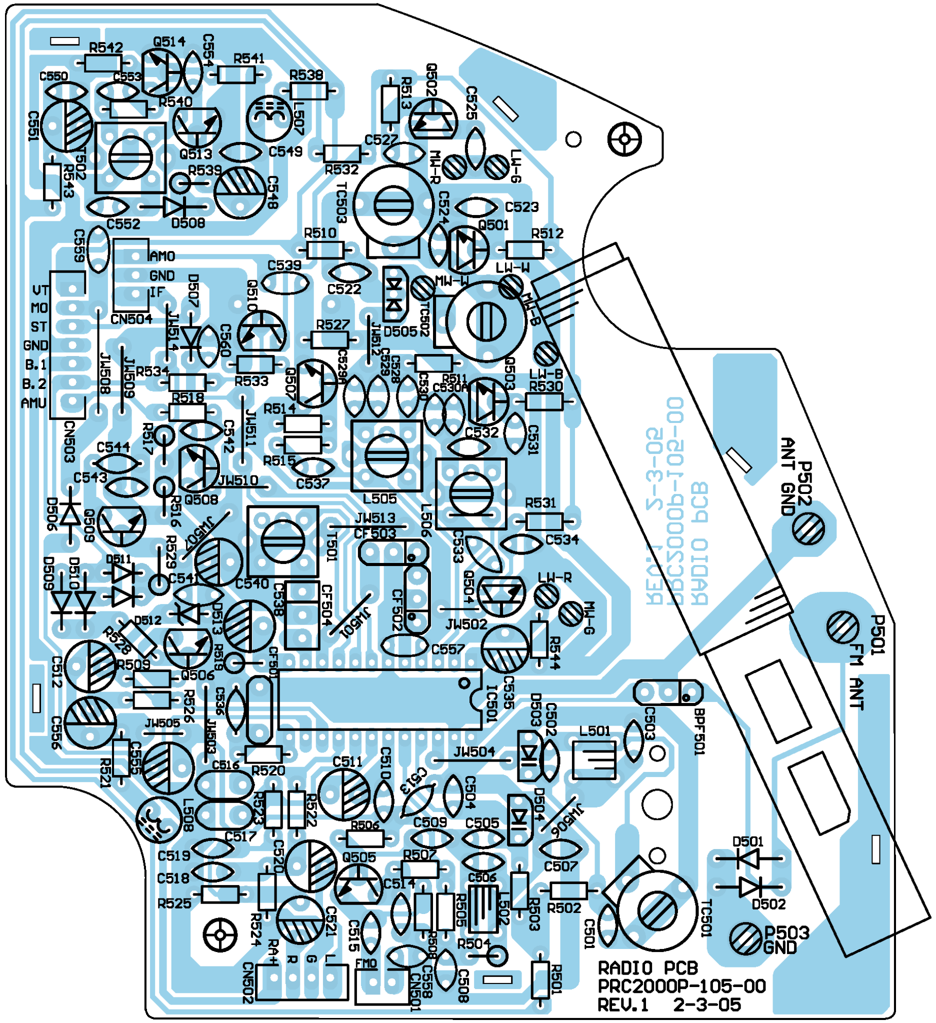
DIODE CONNECTED	0	510 + 510	1K3 + 620	2K12 + 820	3K32 + 1K2	4K82 + 1K5
		R719	R720	R721	R722	R723
US0	1	0	0	0	0	0
US1	0	1	0	0	0	0
EU0	0	0	1	0	0	0
EU1	0	0	0	1	0	0
SS0	0	0	0	0	1	0
JAPAN	0	0	0	0	0	1

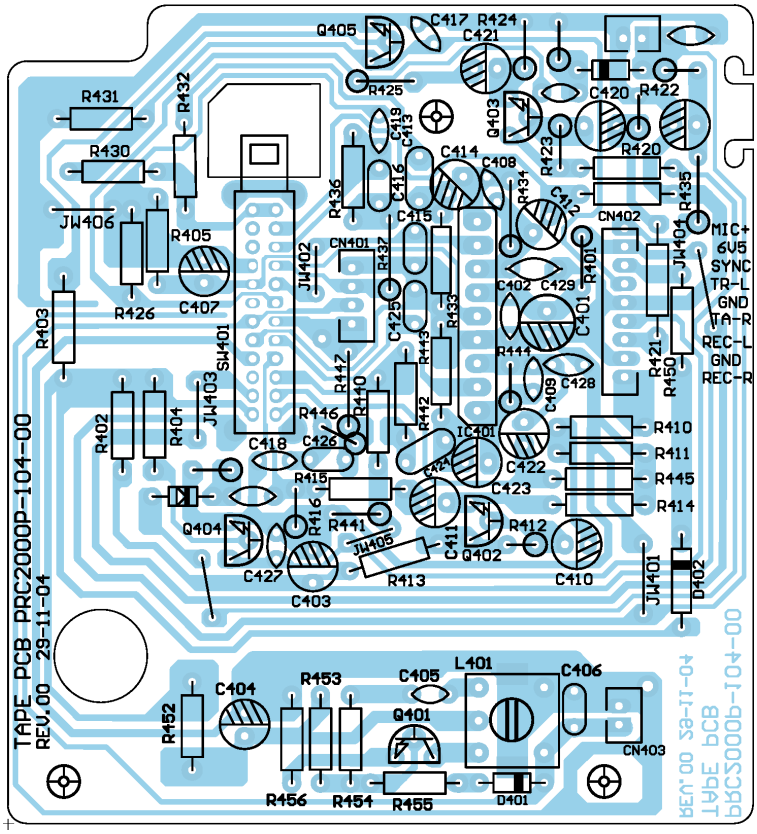
AREA	BAND	FREQUENCY RANGE	STEP (KHz)	IF
US0	FM	87.5 - 107.9 MHz	200 KHz	+10.7 MHz
	AM	520 - 1710 KHz	10 KHz	+450 KHz
US1	FM	87.5 - 108 MHz	100 KHz	+10.7 MHz
	AM	520 - 1710 KHz	10 KHz	+450 KHz
EU0	FM	87.5 - 108 MHz	50 KHz	+10.7 MHz
	AM	522 - 1620 KHz	9 KHz	+450 KHz
EU1	FM	87.5 - 108 MKHz	50 KHz	+10.7 MHz
	AM	522 - 1620 KHz	9 KHz	+450 KHz
	LW	150 - 285 KHz	1 KHz	+450 KHz
SS0	FM	87.5 - 108 MHz	100 KHz	+10.7 MHz
	AM	531 - 1620 KHz	9 KHz	+450 KHz
JAPAN	FM	76 - 90 MHz TV1 , TV2 , TV3	100 KHz	-10.7 MHz
	AM	522 - 1629 KHz	9 KHz	+450 KHz

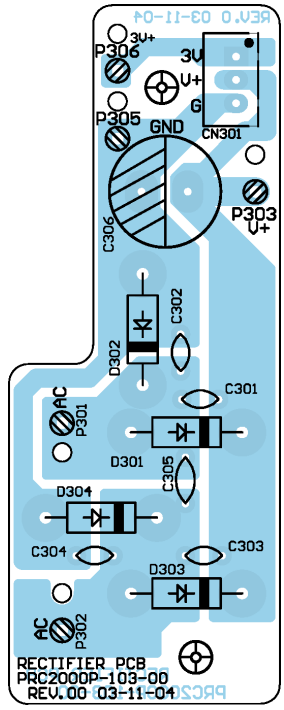

TAPE BOARD
15-Mar-2005
BEAT CUT BOARD
REC. 6V5
TO POWER PCB
CN202
CN402
REC-R
GND
REC-L
R-OUT
GND
L-OUT
SYNC
6V5
8PINS
R.CH OUT
L.CH OUT
IC401
LS22241
TO R/P HEAD
CN401
4PINS
R-CH
COMMON
L-CH
GND
CN403
AC BIAS
REC GND
2PINS
REC GND
PS-82D06
SW401D
SW401B
SW401C
SW401E
SW401F
SW401G
SW401H
SW801
C801
680p
CN801
2PINS
1P2T
Q401
9014C
Q402
Q403
Q404
Q405
D401
1N4148
D402
L401
9170

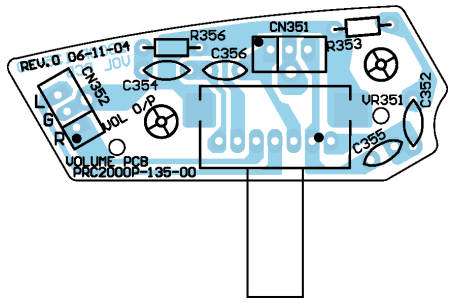

FM-ANT
TP501
R501 10K
D501 1N4148
D502 1N4148
BPF BPF501
TP502
D503 SVC201
C502 1n
10P TC501
C501 5P
4.5X3T5 L501
C503 20n
D504 SVC201
C505 1n
C506 18p
L502 5X2T5
C504 20n
R503 100K
C507 47n
R504 56
R505 10
C508 100n
C510 2n7
C512 u22
C556 u22
C555 3u3
R526 3K3
TP503
C509 3p
C511 4u7
R506 100K
R507 220
Q505 9018F
C514 20n
R521 220
R508 1K2
R523 33K
R522 33K
C515 100p
C520 1u
C516 6n8(M)
R524 22K
C518 1n
22K R525
C519 1n
C517 6n8(M)
R528 10K
C521 1u
TO DISPLAY BOARD CN103
CN501 2PINS
C558 20n
TO POWER BOARD CN207
RA+
R.CH
GND
L.CH
CN502 4PINS
ANT G2 FMRF VCC2 FMO DO MPX R L A/F SM DET
IC501 LA1823
R520 1
CDA10.7MG1 CF501
4p C536
R509 1K
Q506 9014C
D506 1N4148
D509 1N4148
D510 1N4148
TO DISPLAY BOARD CN107
CN504
IF
GND
AMOSC
3PINS
L503 MW ANT
70:20T
TC502 10p
R510 47K
SVC384 D505
C522 20n
AMR REG AMC VCC1 FM G1 IF ST AM FIF AIF AGC
C535 10u
C537 5p
R515 100
R514 220K
Q507 9018F
R527 1K
C539 1n
D507 1N4148
TP504
AM IF T501
321F
CF504 45OK
C538 4u7
R519 47K
C529A 50p
C529 330p
369SO L505
MW OSC
C528 10p
R511 100K
TP505
D513 3V3
10.7MJA10
CF502
CF503 10.7MJA10
C557 100n
C540 100u
C541 100n
R518 10K
Q508 9018F
C542 O/C
R517 330
C544 470p
R516 4K7
C543 47p
Q509 9014C
R529 10K
D511 1N4148
D512 1N4148
C559 1n
CN503
VT
MONO
ST
GND
BAND1
BAND2
AMUTE
7PINS
TO DISPLAY BOARD CN102
TP506
R538 56K
L507 100uH
R539 4K7
D508 1N4148
TP508
T502
7021A
C552 15p
R540 68K
C553 22p
R541 820K
Q513 9014C
Q514 9014C
C554 20P
R542 39K
C548 10u
C549 20n
C550 20n
C551 47u
TP507
R543 33
B1 B2
FM 0 0
AM 1 0
LW 0 1
RADIO BOARD
15-Mar-2005

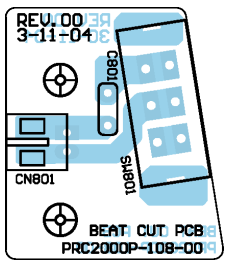

CD SERVO PCB
PRC2000P-107-00
REV.0 05-11-04


RADIO PCB
PRC2000P-105-00
REV.1 2-3-05

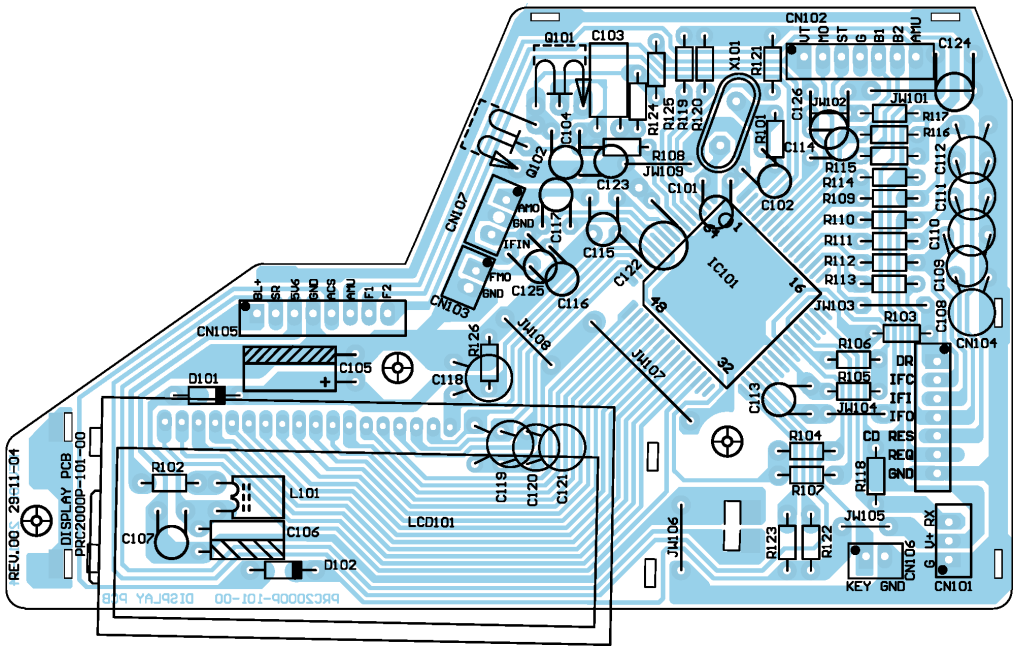

TAPE PCB PRC2000P-104-00
REV.00 29-11-04
MIC+
6V5
SYNC
TR-L
GND
TA-R
REC-L
GND
REC-R

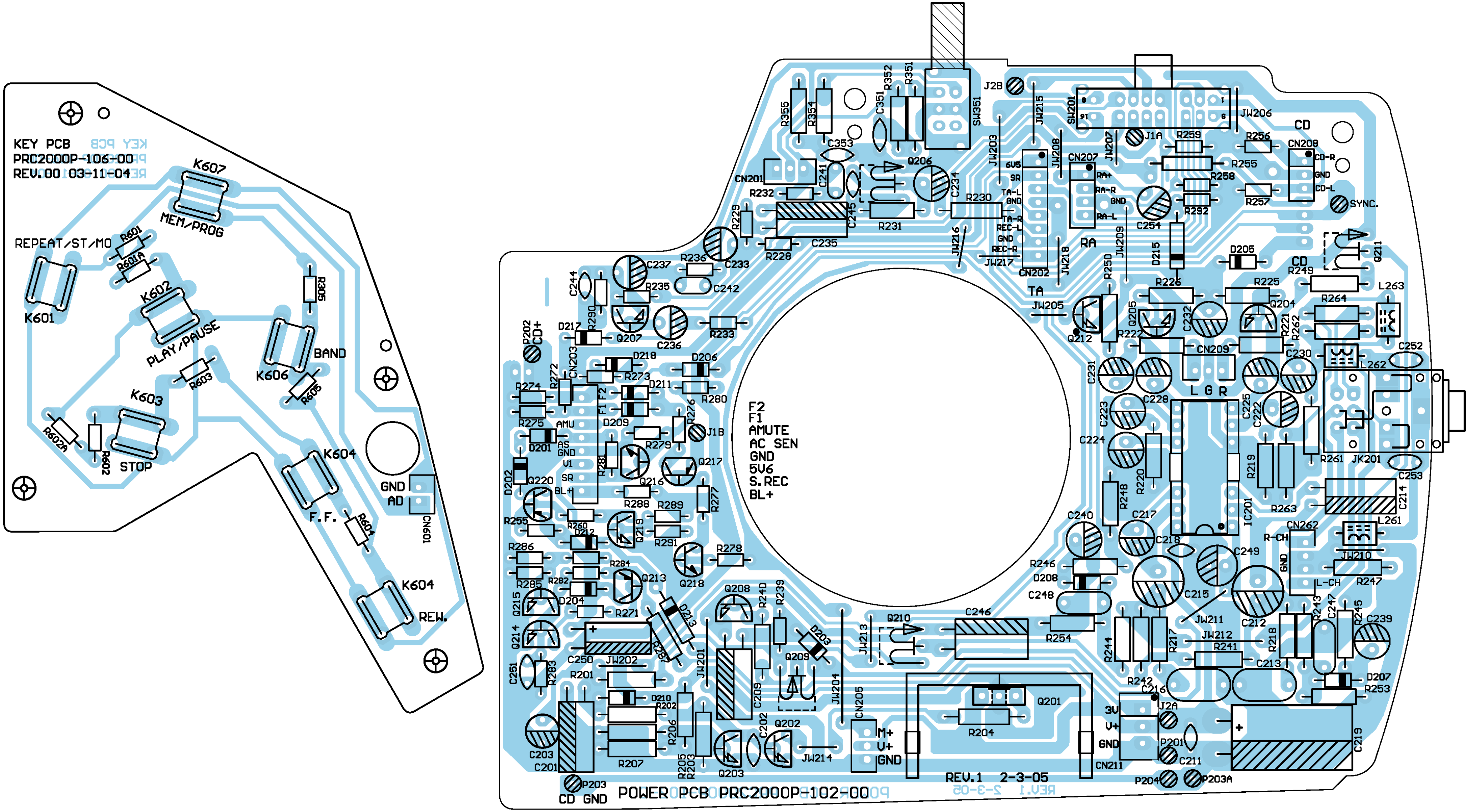

RECTIFIER PCB
PRC2000P-103-00
REV.00 03-11-04


VOLUME PCB
PRC2000P-135-00


BEAT CUT PCB
PRC2000P-108-00


2000P-110-00
B.L. PCB
REV 00 03-11-04


DISPLAY PCB
PRC2000P-101-00
REV.00 29-11-04
LCD101
KEY GND



KEY PCB
PRC2000P-106-00
REV.00 03-11-04
K607
MEM/PROG
REPEAT/ST/MO
K601
K602
PLAY/PAUSE
BAND
K606
K603
STOP
K604
F.F.
K604
REW.
GND
AD
CN601
F2
F1
AMUTE
AC SEN
GND
5V6
S.REC
BL+
CD
RA
TA
SYNC.
L G R
R-CH
L-CH
JK201
POWER PCB PRC2000P-102-00
REV.1 2-3-05
CD GND

ALIGNMENT PROCEDURE

GRUNDIG RRCD1310

INSTRUMENTS REQUIRED

1. Signal Generator
2. FM Signal Generator
3. FM/AM IF Sweep Generator (10.7 MHz for FM)
4. VTVM
5. Oscilloscope
6. Frequency counter
7. Regulated DC power supply

GENERAL PREPARATION

1. Check source voltage, DC or AC according to specificaions
2. Set function switch to band being aligned
3. Signal input should be kept as low as possible to avoid AGC and AFC function
4. Standard modulation : AM 1 KHz 30% mod
   FM 1 KHz 22.5 KHz dev

AM IF ALIGNMENT

STEP	SIGNAL SOURCE (AM RF Gen.) CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR (Oscilloscope, VTVM) CONNECT TO	SET RADIO DIAL TO	ADJUST	ADJUST FOR	REMARKS
1	A standard radiation loop	450KHz	TP503 Detector output terminal and ground (TP504)	Quiet Point	T501	Maximum	Volume control at min. position
2	Repeat step 1 for max. output						

FM IF ALIGNMENT

This model requires no FM IF alignment as the IF is fixed by ceramic filter and discriminator CF502 or CF503 & CF505. Please take note that correct type and same color dot of ceramic filter is used in servicing, diff color dot of ceramic filter may cause worse IF 'S' curve characteristic and distortion.

Connect IF genescope output terminal to TP505 & TP504 (GND) in series with a 1000Pf capacitor, connect scope input terminal to TP503 & TP504 (GND), then the IF characteristic curve can be obs

ALIGNMENT PROCEDURE

GRUNDIG RRCD1310

FM RF ALIGNMENT

STEP	SIGNAL SOURCE (FM Signal Gen.) CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR (Oscilloscope, VTVM) CONNECT TO	SET RADIO DIAL TO	ADJUST	ADJUST FOR	REMARKS
1	TP501 & TP502 through matching network if necessary	87.5 MHz (modulated)	Terminals across speaker voice coil	87.5 MHz (Lowest end)	NA	NA	Digital DC Volt meter is Connected to TP506 and gnd
2		108 MHz (modulated)		108 MHz (Highest end)	L502 (Osc. Coil) stretch or squeeze	DC6.3V ±0.3V	
3		90.1 MHz (modulated)		90.1 MHz	L501 (RF coil) stretch or squeeze	Maximum	Volume control at max. position
4		106.1 MHz (modulated)		106.1 MHz	TC 501 (RF trimmer)		
5	Repeat steps 3 and 4 as necessary to minimize tracking error and also steps 1 and 2 if necessary						

AM RF ALIGNMENT

STEP	SIGNAL SOURCE (AM Signal Gen.) CONNECT TO	SET SIGNAL TO	ALIGNMENT INDICATOR (Oscilloscope, VTVM) CONNECT TO	SET RADIO DIAL TO	ADJUST	ADJUST FOR	REMARKS
1	A standard radiation loop ant.	522 KHz (modulated)	Across speaker voice coil	522 KHz (Lowest end)	NA	NA	Digital DC Volt meter is Connected to TP 5 and gnd
2		1620 KHz (modulated)		1620 KHz (Highest end)	L 505 (Osc.Coil)	DC8.1V ±0.3V	
3		612 KHz (modulated)		612 KHz	L 503 (ant. coil)	Maximum	Volume control at max. position
4		1440 KHz (modulated)		1440 KHz	L 502 (ant. trimmer)		
5	Repeat steps 3 and 4 as necessary to minimize tracking error and also steps 1 and 2 if necessary						

ALIGNMENT PROCEDURE FOR CD SECTION

Applicable unit :

1 This model is using CD drive unit No. SANYO DA11B3V

2 The alignment for CD section is fully automatic and no adjustment is reguired

ALIGNMENT PROCEDURE

GRUNDIG RRCD1310

GENERAL PREPARATION - 1) Check source voltage, DC or AC according to specifications . 2) Set function switch to Tape being aligned .

A) MEASURING INSTRUMENTS REQUIRED FOR TAPE SPEED AND HEAD AZIMUTH ADJUSTMENT.

(1) TAPE SPEED ADJUST

MTT-111 (3000 Hz) TEST ◦

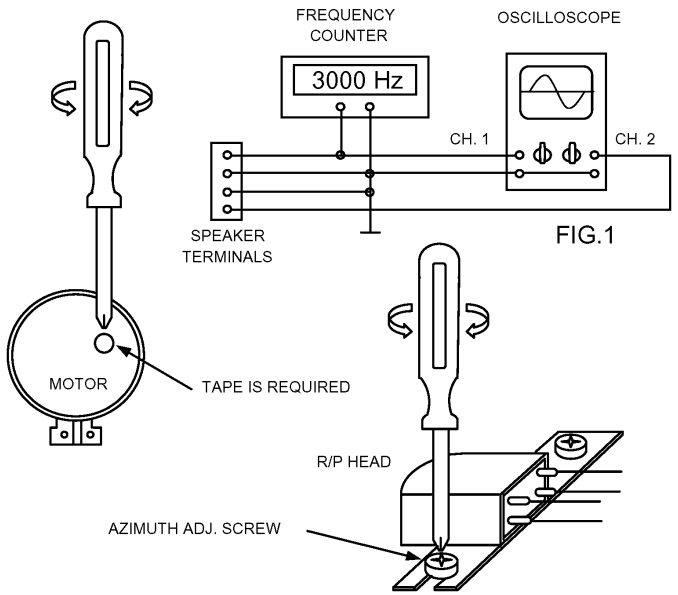


FIG.1

(2) HEAD AZIMUTH ADJUSTMENT .

2.1 - Connect the equipments as shown in the Fig. 1. (The Both Speakers loading Are Required)

2.2 - Insert a test tape (10 KHz : MTT-114) into deck.

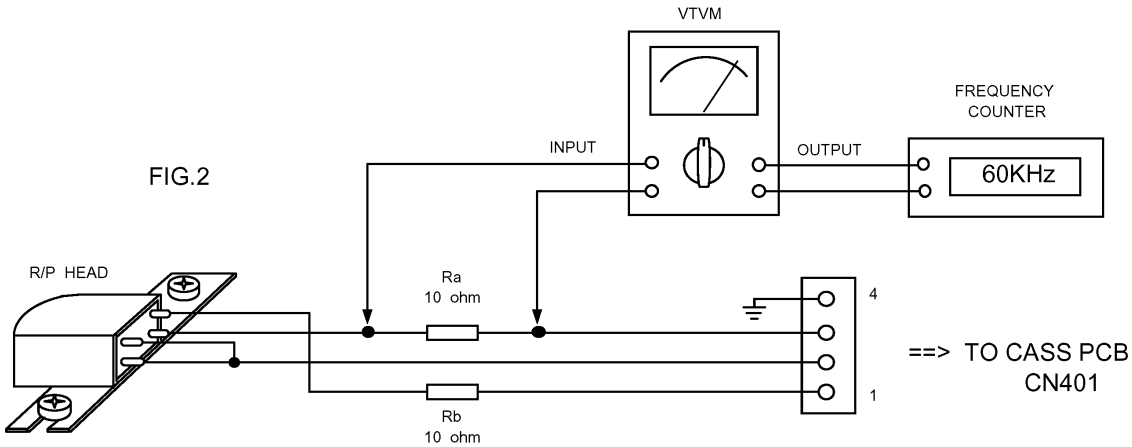
2.3 - Press PLAY and set VOLUME at reference output.

2.4 - Adjust the azimuth adjustment screw for the max. & balance ch. output on both ch. of oscilloscope.

2.5 - Secure above screw with glue after adj. completed.

B) EQUIPMENTS REQUESTED FOR AC BIAS FREQUENCY / CURRENT ADJUSTMENT :

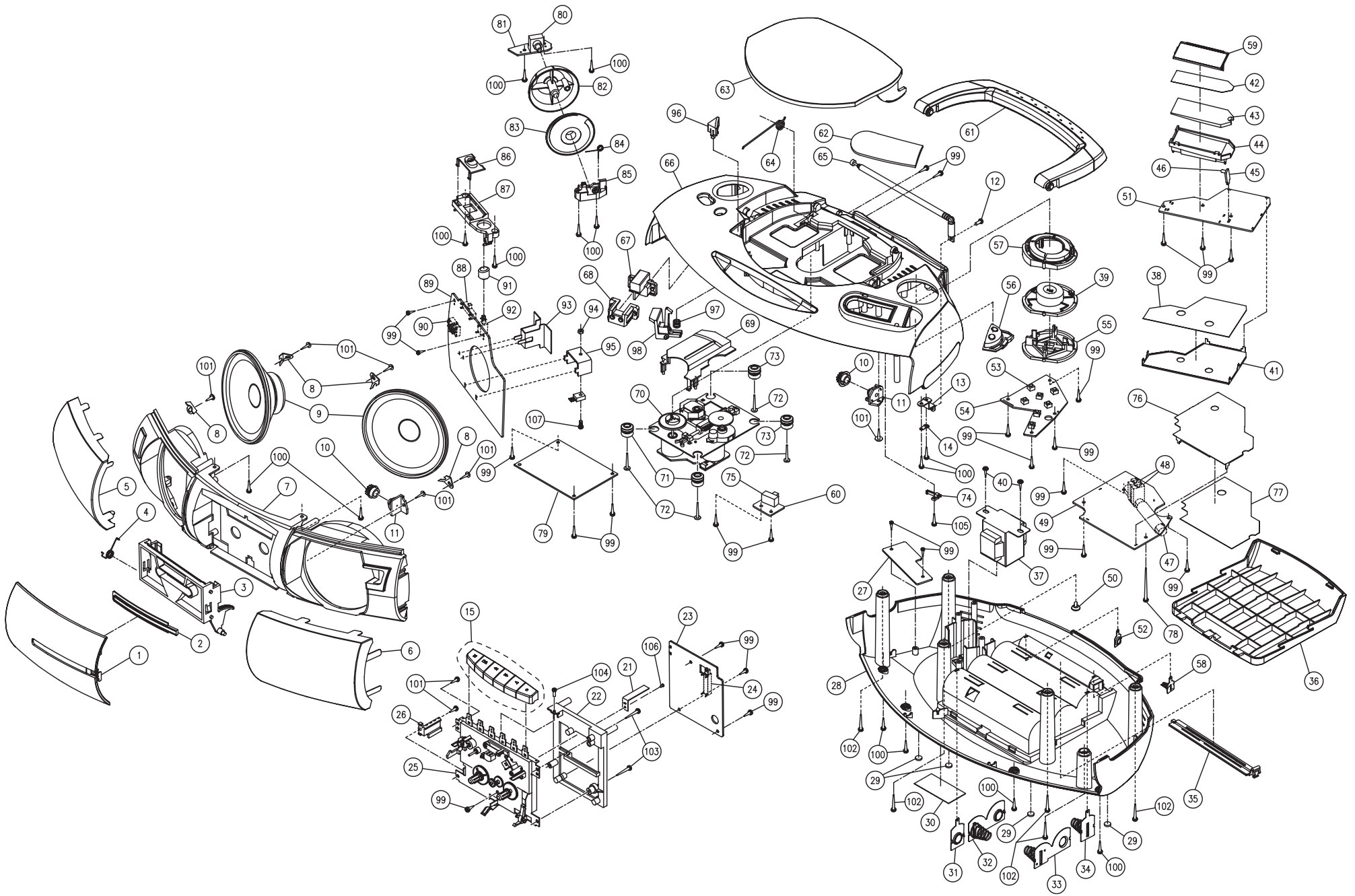
FIG.2



AC BIAS FREQUENCY ALIGNMENT :

Note :The test unit should be keep in recording mode and added two resistors Ra & Rb as shown in the Fig. 2 before alignment. be sure to delete the both resistors Ra & Rb after alignment completed.

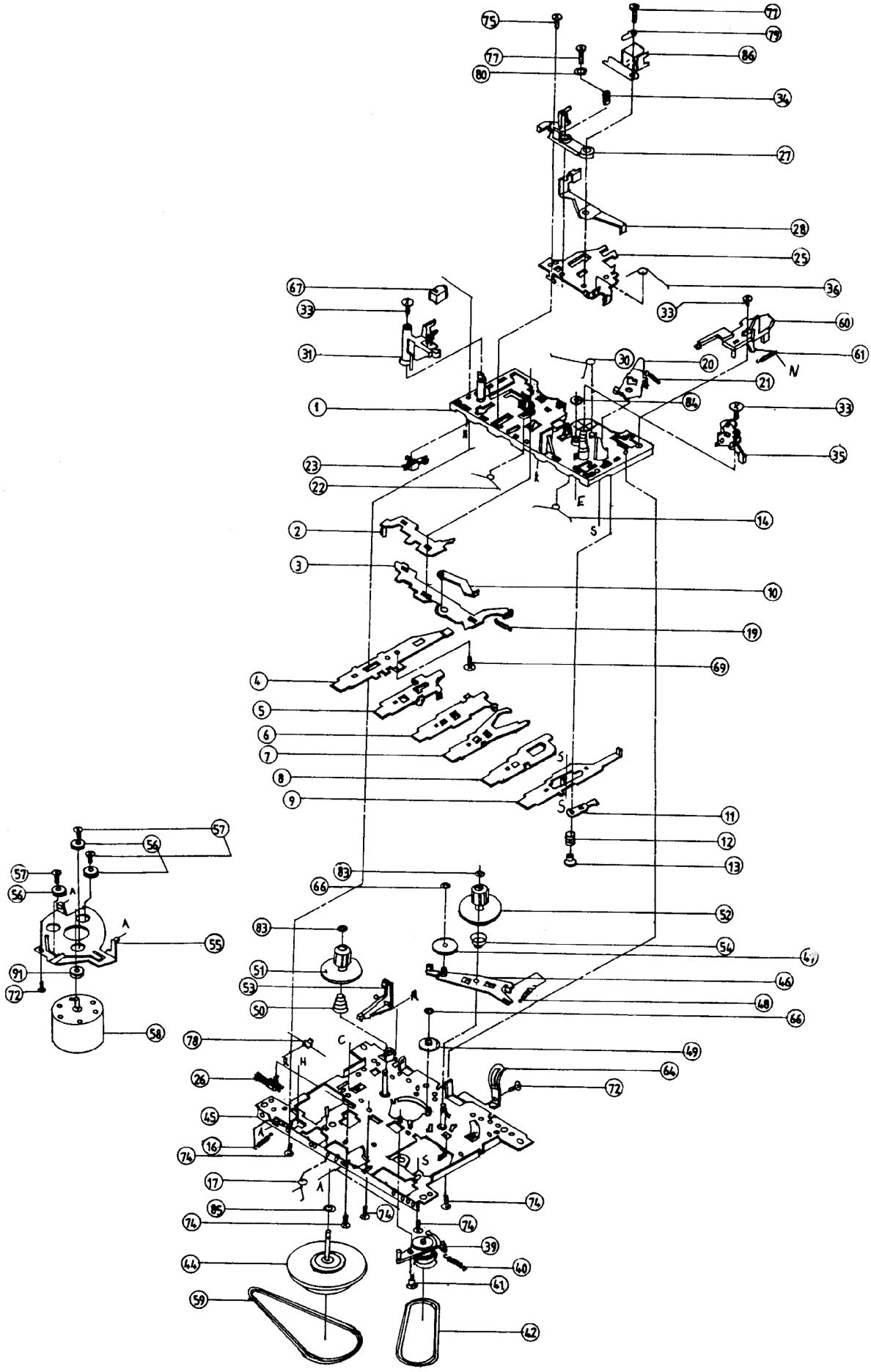
Test Point	Adjust	Frequency at Beat 0	Frequency Observe at		Observe		
			Beat 1	Beat 2	Beat 0	Beat 1	Beat 2
Resistor Ra or Rb	L401	60KHz ± 0.3KHz	54KHz ± 2KHz				



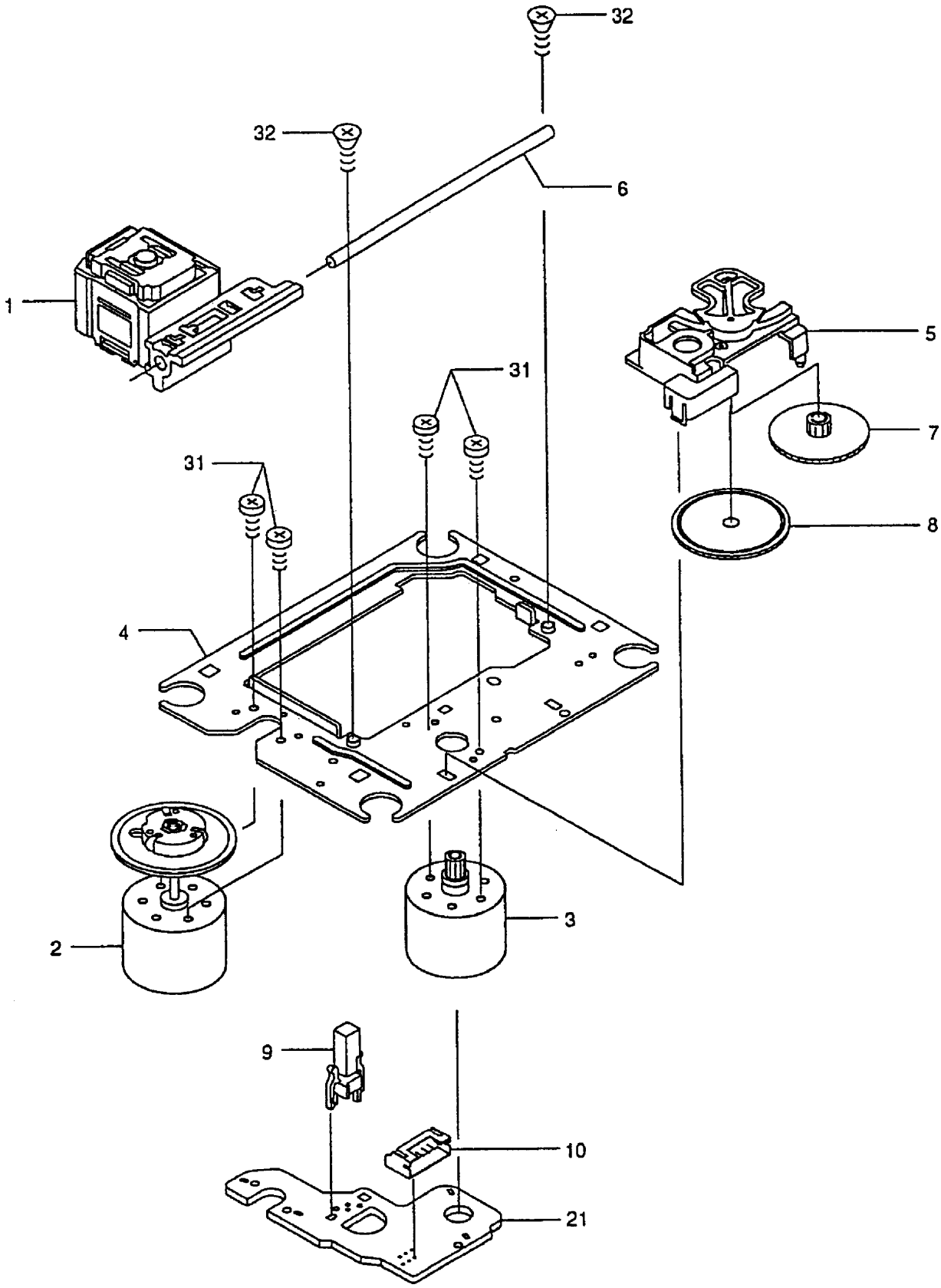
GRUNDIG

RRCD 1310

CS-21V



CD PLAYER MECHANISM EXPLODED VIEW



GRUNDIG

Ersatzteilliste
Spare Parts List

NUR FÜR INTERNEN GEBRAUCH
FOR INTERNAL USE ONLY

AUDIO

4 / 2005

RRCD 1310

MATERIAL-NR. / PART NO.: 757123455000
BESTELL-NR. / ORDER NO.: GDP5700 CHROME/WHITE

POS. NR. POS. NO.	ABB. FIG.	MATERIAL-NR. PART NUMBER	ANZ. QTY.	BEZEICHNUNG (D)	DESCRIPTION (GB)
		757123455000		RRCD 1310 CHROME/WHITE **TAUSCHGERAET**	RRCD 1310 CHROME/WHITE **EXCHANGE SET**
0001.000		759551139200		TUER CASSETTE	CASSETTE DOOR
0002.000		759551139600		LINSE TUER CASSETTE	CASSETTE DOOR LENS
0003.000		759551139800		EINSATZ CASSETTE	EMPLOYMENT CASSETTE
0004.000		759551128600		FEDER TUER CASSETTE	SPRING CASSETTE DOOR
0015.000		759551139700		TASTENSATZ CASSETTE	TASTE SET CASSETTE
0025.000		759551128500		LAUFWERK CASS. CS-21V-1006-C	CASS. MECHANISM CS-21V-1006-C
0035.000		759551139900		ABDECKUNG SPEICHERBATTERIE	DOOR BATTERIE MEMORY
0036.000		759551139400		BATTERIEFACHABDECKUNG	DOOR BATTERY
0061.000		759551139500		TRAGEGRIFF	HANDLE
0063.000		759551139300		TUER CD	CD DOOR
0064.000		759550615400		FEDER TUER CD 1,2MM	SPRING TUER CD 1,2MM
0065.000		759551128700		TELESKOPANTENNE	TELESKOPANTENNE
0070.000	⚠	759550615100		LAUFWERK CD DA11-T3CN	CD MECHANISM DA11-T3CN
0150.000	⚠	759551126700		NETZANSCHLUSSKABEL	AC POWER CORD
		720114052000		BEDIENUNGSANLEITUNG D/GB/F/I/P/E/NL/PL/DK/S/FIN	INSTRUCTION MANUAL D/GB/F/I/P/E/NL/PL/DK/S/FIN

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⚠ (!)

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ÄNDERUNGEN VORBEHALTEN / SUBJECT TO ALTERATION