



Technical Manual

STEREO RECEIVER RX-1050-1

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Specifications

Audio

Continuous Amplifier Power
100 watts/ch (20-20k Hz, <0.05% THD, 8 ohms)

Total Harmonic Distortion
<0.05%

Inter modulation Distortion (60 Hz:7 kHz)
<0.05%

Frequency Response
10 Hz - 70 kHz, ± 3 dB (line level)
20 Hz - 20 kHz, ± 1 dB (phono)

Signal to Noise Ratio (IHF A-weighted)
92 dB (line level), 74 dB (phono)

Input Overload
5 V (line Input)
120 mV (phono)

Input Sensitivity/Impedance
Line Level: 160 mV/47 kohms
Phono Level: 2.5 mV/47 kohms

Tone Controls (Bass/Treble)
 ± 8 dB at 100 Hz/10 kHz

Preoutput Level
1.0 V (160 mV Input)

Video

Frequency Response
3 Hz-10 MHz, ± 3 dB

Signal to Noise Ratio
45 dB

Input Impedance
75 ohms

Output Impedance
75 ohms

Output Level
1 volt

FM Tuner

Usable Sensitivity
14.2 dBf

Signal to Noise Ratio (at 65 dBf)
70 dBf

Harmonic Distortion (at 65 dBf)
0.03%

Stereo Separation (1 kHz)
45 dB

Output level
1.3 V

Antenna Input
75 ohms unbalanced

AM Tuner

Sensitivity
500 μ V/m

Signal to Noise Ratio
40 dBf

Output level
250 mV

Antenna Input
Loop Antenna

General

Power Consumption:
300 watts

Power Requirements (AC)
115 volts, 60Hz (USA)
230 volts, 50Hz (CE)

Weight
10.3 Kg/ lb.

Dimensions (W x H x D)
432 x 121 x 362 mm
17 1/2 " x 6 1/4 " x 15 3/4 "

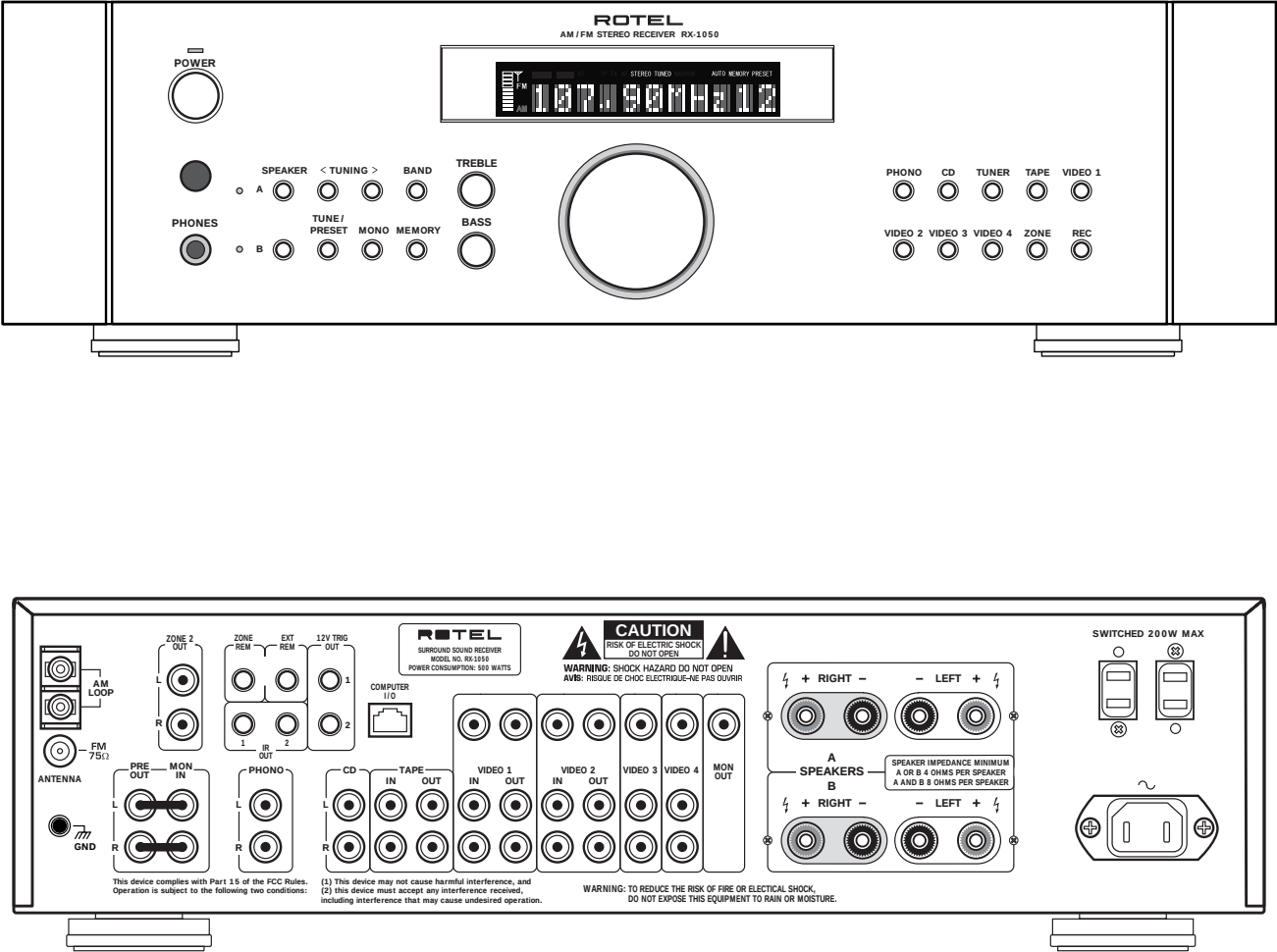
THE ROTEL CO., LTD.

SHINSEN-BLD. 4F 10-10 SHINSEN-CHO, SHIBUYA-KU,
TOKYO 150-0045, JAPAN

Serial. NO.
Beginning

Y-358A-0112/W

Appearance



Parts List 1/7

SYMBOL	PARTS NO.	DESCRIPTION
016 X-1321A00 AMPLIFIER PCB ASSY		
	501 X-1321	PCB ASSY
HS1,HS2,HS3,HS4	017 C-4401A01	H/S BOARD SUB
LL201,LR201	021 TRL-331	SPEAKER COIL
Q221	032 KRC107M	TRANSISTOR
QL203,204,QR203,204,Q218	032 KTA1266Y	TRANSISTOR
QL217,QR217,Q219,220	032 KTC3198Y-AT	TRANSISTOR
QL207,QR207	033 A1209-ST	TRANSISTOR
QL212,QR212	033 A1667-OY	TRANSISTOR
QL209,QR209	033 C2911-ST	TRANSISTOR
QL211,QR211	033 C4381-OY	TRANSISTOR
QL201,202,205,QR201,202,205	033 KTA1268-GRBL	TRANSISTOR
QL206,208,QR206,208	033 KTC3200-GRBL	TRANSISTOR
DL203,204,DR203,204	034 1N4004	DIODE
DL201,202,DR201,202,D205	034 T1N4148-86	DIODE
ZD201	034 TRD9.1JST1	ZENER DIODE
C215,CL207,CR207	041 TUTES1C471-TF	ELECTROLYTIC CAPACITOR 16V470uF
C218	041 UTES1H010-FB	ELECTROLYTIC CAPACITOR 50V1uF
CL210,213,CR210,213	041 UTES1H100-FB	ELECTROLYTIC CAPACITOR 50V10uF
CL205,CR205	041 UTES1H220-FB	ELECTROLYTIC CAPACITOR 50V22uF
CL204,CR204	041 UTES1H330-FB	ELECTROLYTIC CAPACITOR 50V33uF
CL201,211,CR201,211	041 UTES1H4R7-FB	ELECTROLYTIC CAPACITOR 50V4.7uF
CL208,209,CR208,209	041 UTES1J471	ELECTROLYTIC CAPACITOR 63V470uF
C216,217	041 UTES2A010	ELECTROLYTIC CAPACITOR 100V1uF
CL214,CR214	042 TP50V103J	MYLAR CAPACITOR 0.01uF
CL212,CR212	043 TC50V102	CERAMIC CAPACITOR 1000pF
CL202,CR202	043 TC50V221	CERAMIC CAPACITOR 220pF
CL203,CR203	043 TC50V681	CERAMIC CAPACITOR 680pF
CL206,CR206	043 TC50VCH030	CERAMIC CAPACITOR 3pF
RL227,228,RR227,228	054 1WS47JF	METAL OXIDE FILM RESISTOR 47R
RL235,245-247,RR235,245-247	054 NIR2-0.22JF	NIR RESISTOR 0.22R
RL220,226,230,RR220,226,230	054 TMF1000	METAL RESISTOR 100R
RL201,RR201,R249	054 TMF1001	METAL RESISTOR 1K
RL210,RR210	054 TMF1002	METAL RESISTOR 10K
R246	054 TMF1003	METAL RESISTOR 100K
RL212,223,RR212,223	054 TMF1201	METAL RESISTOR 1.2K
RL203,204,RR203,204	054 TMF12R0	METAL RESISTOR 12R
RL209,RR209	054 TMF1500	METAL RESISTOR 150R
R252	054 TMF1501	METAL RESISTOR 1.5K
R253	054 TMF1503	METAL RESISTOR 150K
RL237-240,RR237-240	054 TMF2201	METAL RESISTOR 2.2K
RL221,222,RR221,222	054 TMF2202	METAL RESISTOR 22K
RL242,RR242	054 TMF2402	METAL RESISTOR 24K
R248	054 TMF3301	METAL RESISTOR 3.3K
RL202,211,229,RR202,211,229	054 TMF3302	METAL RESISTOR 33K
RL225,RR225	054 TMF3901	METAL RESISTOR 3.9K
RL231-234,RR231-234	054 TMF3R30	METAL RESISTOR 3.3R
RL217,RR217	054 TMF4701	METAL RESISTOR 4.7K
RL213-216,218,219,224	054 TMF5600	METAL RESISTOR 560R
RR213-216,218,219,224	054 TMF5600	METAL RESISTOR 560R
RL205,241,RR205,241	054 TMF6800	METAL RESISTOR 680R
RL244,RR244,R250	054 TMF6801	METAL RESISTOR 6.8K
R247	054 TMF6802	METAL RESISTOR 68K
RL208,RR208	054 TMF68R0	METAL RESISTOR 68R
RL206,207,RR206,207	054 TMF7500	METAL RESISTOR 750R
CP204,CP602	068 B2B-EH	CONNECTOR POST 2P
CP201	068 B5B-PH-KS	CONNECTOR POST 5P
GND201	069 C-4484A00	EARTH LUG
016 E-1322A00 MAIN PCB ASSY		

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SYMBOL	PARTS NO.	DESCRIPTION
	501 E-1322	PCB ASSY
HS101	017 C-4682A02	H/S BOARD SUB
IC101	031 KIA7815PI	IC (REGULATOR)
IC102	031 KIA7915PI	IC (REGULATOR)
IC305-310	031 NJM5532D	IC (OP AMP)
IC304	031 NJU7312AL	IC (ANALOG SWITCH)
IC303	031 TC9184P	IC (ELEC TONE)
IC301,302	031 TC9459N	IC (ELEC VOLUME)
Q303,307,311	032 KRA107M	TRANSISTOR
Q101,102,304,308,312	032 KTC3198Y-AT	TRANSISTOR
Q301,302,305,306,309,310	032 TDTC323TS	TRANSISTOR
D101-106	034 1N4004	DIODE
DB101	034 MP254W	POWER DIODE
D107	034 TRD5.1JST1	ZENER DIODE
F101,F102	036 5ST1	FUSE 250V1A
F103,F104	036 5ST8	FUSE 250V8A
C101,102	041 AM1K123	ELECTROLYTIC CAPACITOR 80V12000uF
C328-339,367,368,370-373,375-378	041 UTES1E470-FB	ELECTROLYTIC CAPACITOR 25V47uF
C117,118,CL365,CR365	041 UTES1H010-FB	ELECTROLYTIC CAPACITOR 50V1uF
C116	041 UTES1H0R1-FB	ELECTROLYTIC CAPACITOR 50V0.1uF
CL352,356,CR352,356	041 UTES1H100-FB	ELECTROLYTIC CAPACITOR 50V10uF
CL317,CR317	041 UTES1H330-FB	ELECTROLYTIC CAPACITOR 50V33uF
CL315,340,343,344,346,347,349,355,361	041 UTES1H4R7-FB	ELECTROLYTIC CAPACITOR 50V4.7uF
CR315,340,343,344,346,347,349,355,361	041 UTES1H4R7-FB	ELECTROLYTIC CAPACITOR 50V4.7uF
CL320,CR320	041 UTES1HR22-FB	ELECTROLYTIC CAPACITOR 50V0.22uF
C103,104	041 UTES1V332	ELECTROLYTIC CAPACITOR 35V3300uF
CL360,CR360	042 TP50V123J	MYLAR CAPACITOR 0.012uF
CL318,321,CR318,321	042 TP50V182J	MYLAR CAPACITOR 1800pF
CL316,CR316	042 TP50V222J	MYLAR CAPACITOR 2200pF
CL363,CR363	042 TP50V223J	MYLAR CAPACITOR 0.022uF
CL362,CR362	042 TP50V272J	MYLAR CAPACITOR 2700pF
C124,125	042 TP50V472J	MYLAR CAPACITOR 4700pF
CL319,CR319	042 TP50V562J	MYLAR CAPACITOR 5600pF
C105-109	043 TC500V103	CERAMIC CAPACITOR 0.01uF
C366,369	043 TC50V101	CERAMIC CAPACITOR 100pF
CL301-310,313,314,322-327,341,342,345	043 TC50V101	CERAMIC CAPACITOR 100pF
CL348,350,351,353,354,357	043 TC50V101	CERAMIC CAPACITOR 100pF
CR301-310,313,314,322-327,341,342,345	043 TC50V101	CERAMIC CAPACITOR 100pF
CR348,350,351,353,354,357	043 TC50V101	CERAMIC CAPACITOR 100pF
C312,374	043 TC50V104	CERAMIC CAPACITOR 0.1uF
C311	043 TC50V223	CERAMIC CAPACITOR 0.022uF
CL358,CR358	043 TC50V270	CERAMIC CAPACITOR 27pF
C110-115,123	044 50MSAN473J	STACKED FILM CAPACITOR 0.047uF
CL359,CR359	044 50MSAN683J	STACKED FILM CAPACITOR 0.068uF
R105,106	054 2WS10JF	MOF RESISTOR 10R
R103,104	054 2WS470JF	MOF RESISTOR 470R
RL336,340,345,350,370	054 TMF1000	METAL RESISTOR 100R
RR336,340,345,350,370	054 TMF1000	METAL RESISTOR 100R
R319-321,324-326,351-353,356-358,367-369,396	054 TMF1001	METAL RESISTOR 1K
RL301-306,314-316,341,346,381,385	054 TMF1001	METAL RESISTOR 1K
RL387,390,393	054 TMF1001	METAL RESISTOR 1K
RR301-306,314-316,341,346,381,385	054 TMF1001	METAL RESISTOR 1K
RR387,390,393	054 TMF1001	METAL RESISTOR 1K
RL338,RR338	054 TMF1002	METAL RESISTOR 10K
R108-110,382	054 TMF1003	METAL RESISTOR 100K
RL313,337,339,342,344,347,349,371,380,386,389	054 TMF1003	METAL RESISTOR 100K
RR313,337,339,342,344,347,349,371,380,386,389	054 TMF1003	METAL RESISTOR 100K
RL379,RR379	054 TMF1201	METAL RESISTOR 1.2K
R318,322,323,327-332,334,354,355	054 TMF2200	METAL RESISTOR 220R
R359-364	054 TMF2200	METAL RESISTOR 220R
R317,333	054 TMF2200	METAL RESISTOR 220R

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SYMBOL	PARTS NO.	DESCRIPTION
RL377,RR377	054 TMF2702	METAL RESISTOR 27K
R101,102,391,394	054 TMF3301	METAL RESISTOR 3.3K
RL374,RR374	054 TMF3902	METAL RESISTOR 39K
RL310,RR310	054 TMF4302	METAL RESISTOR 43K
R107,383,384,392,395	054 TMF4701	METAL RESISTOR 4.7K
RL343,348,376,388,RR343,348,376,388	054 TMF4701	METAL RESISTOR 4.7K
RL372,RR372	054 TMF4703	METAL RESISTOR 470K
R365,366,RL312,RR312	054 TMF5600	METAL RESISTOR 560R
RL378,RR378	054 TMF5601	METAL RESISTOR 5.6K
RL309,375,RR309,375	054 TMF5603	METAL RESISTOR 560K
RL311,RR311	054 TMF8200	METAL RESISTOR 820R
RL373,RR373	054 TMF8202	METAL RESISTOR 82K
RL307,308,RR307,308	054 TMF9102	METAL RESISTOR 91K
RLY101,102	063 DH2TU-24	RELAY
RCA304	066 4TR-2166#4	PIN JACK 2P
JAK301	066 4TR-2408#3	PIN JACK 4P
RCA301,302,303	066 4TR-3184	PIN JACK 6P
JAK101	067 C-4493A00	SPEAKER TERMINAL
CP102	068 4428503746	CONNECTOR POST (JE202B-1 T-3)
CP107	068 B14B-PH-KS	CONNECTOR POST 4P
CP106	068 B2P3-VH	CONNECTOR POST 7P
CP103,CP104	068 B2P-VH	CONNECTOR POST 6P
CP108	068 B3B-EH	CONNECTOR POST 3P
CP105	068 B3B-PH-KS	CONNECTOR POST 5P
CNP301	068 C-4688A07	PIN PLUG
CNP301-1,CNP301-2	068 C-4688A11	PIN PLUG
F101-104	069 C-3417A	FUSE CLIP
GND101	069 C-4484A00	EARTH LUG
016 X-1323B01-10 FRONT PCB ASSY		
	501 X-1323	PCB ASSY
T501	021 2648701170	LINE COIL
T502	022 T-1075N01	SUB TRANSFORMER
XT601	023 CST10.0MTW	CERAMIC RESONATOR 10MHz
IC601*	031 CXP82812-1	IC (CPU MASKED)
IC601*	031 CXP828P60Q-1	IC (CPU OTP)
IC405	031 HIN232CP	IC (TRANSMITTER RECEIVER)
IC501	031 K1A7805P	IC (REGULATOR)
IC403,404	031 LTV-817	IC (PHOTO COUPLER)
IC406,407	031 NJU7312AL	IC (ANALOG SWITCH)
RMC601	031 SBX3010-52B	IC (REMOTE MODULE)
IC401	031 TC9163AN	IC (SWITCH ALLEY)
IC402	031 TK15420D	IC (VIDEO AMP)
Q601	032 KRC107M	TRANSISTOR
Q402,501	032 KTA1266Y	TRANSISTOR
Q403,404,502,602-604	032 KTC3198Y-AT	TRANSISTOR
Q401	032 TDTC323TS	TRANSISTOR
D501-504,510	034 1N4004	DIODE
LED601,LED602	034 LTL1214A	LED
D406-408,506,509,511,601-610,612	034 T1N4148-86	DIODE
D405,409-412	034 TRD12JST1	ZENER DIODE
D508	034 TRD30JST1	ZENER DIODE
D505	034 TRD4.3EST1	ZENER DIODE
D403,404	034 TRD5.6JST1	ZENER DIODE
D507	034 TRD9.1JST1	ZENER DIODE
FL601	035 SVR12MM18	FL TUBE
(F501)	036 5ST250	FUSE 250V250
(F501)	036 5ST315	FUSE 250V315
C601	041 SCDA5R5104V	SUPER CAP 5.5V 0.1F
C501	041 UTES1E102	ELECTROLYTIC CAPACITOR 25V1000uF
C401,402,415,416	041 UTES1E470-FB	ELECTROLYTIC CAPACITOR 25V47uF

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SYMBOL	PARTS NO.	DESCRIPTION
C419-423,505,506	041 UTES1H010-FB	ELECTROLYTIC CAPACITOR 50V1uF
C403,406,408-414,509	041 UTES1H100-FB	ELECTROLYTIC CAPACITOR 50V10uF
C603	041 UTES1H3R3-FB	ELECTROLYTIC CAPACITOR 50V3.3uF
C510	041 UTES1H470-FB	ELECTROLYTIC CAPACITOR 50V47uF
C605	041 UTES1H4R7-FB	ELECTROLYTIC CAPACITOR 50V4.7uF
C604	041 UTES1HR22-FB	ELECTROLYTIC CAPACITOR 50V0.22uF
C429,430	042 TP50V472J	MYLAR CAPACITOR 4700pF
C609,612,615-620	043 TC50V101	CERAMIC CAPACITOR 100pF
C417,418,602,606	043 TC50V103	CERAMIC CAPACITOR 0.01uF
C502-504,508,613,614	043 TC50V473	CERAMIC CAPACITOR 0.047uF
C426,427	043 TC50V561	CERAMIC CAPACITOR 560pF
C607,608,610,611	043 TC50V821	CERAMIC CAPACITOR 820pF
C428,512	044 3549472109	SPARK KILLER
C507,511	044 50MSAN104J	STACKED FILM CAPACITOR 50V0.1uF
R501	054 1WS22J	MOF RESISTOR 22R
R508	054 MOF12-3M3	CARBON RESISTOR 3.3M
R420,422,424,427,431,605	054 TMF1000	METAL RESISTOR 100R
R403-405,421,423,425,432,433,505,627	054 TMF1001	METAL RESISTOR 1K
R622-626	054 TMF1001	METAL RESISTOR 1K
R504,610,611,613,628-631	054 TMF1002	METAL RESISTOR 10K
R435,436,608	054 TMF1003	METAL RESISTOR 100K
R415,426,430	054 TMF10R0	METAL RESISTOR 10R
R401,402	054 TMF2200	METAL RESISTOR 220R
R407,434	054 TMF2202	METAL RESISTOR 22K
R614,615	054 TMF2R20	METAL RESISTOR 2.2R
R612,616,618,620	054 TMF3300	METAL RESISTOR 330R
R506	054 TMF3301	METAL RESISTOR 3.3K
R609	054 TMF3302	METAL RESISTOR 33K
R408,410,412-414,428	054 TMF4700	METAL RESISTOR 470R
R429,502,509,606,607,617,619	054 TMF4701	METAL RESISTOR 4.7K
R621,632-638	054 TMF4701	METAL RESISTOR 4.7K
R601-604	054 TMF4702	METAL RESISTOR 47K
R507	054 TMF47R0	METAL RESISTOR 47R
R503	054 TMF56R0	METAL RESISTOR 56R
R406,409,411,416-419	054 TMF75R0	METAL RESISTOR 75R
RO601-RO623	055 ERJ6GEYJ124V	CHIP RESISTOR 120K
SW601	056 C-4678A01	ENCODER EC16B243040F (D25)
SW602,SW603	056 C-4678A03	ENCODER EC16B242040A (D20)
SW401	061 C-4176A08	POWER SWITCH
S601-618	061 C-4179A03	TACT SWITCH
RLY501	063 OZT-SS-112LMI	RELAY
SW604	064 KSS02S	DIP SWITCH
JAK406	065 C-3399#1	HEAD PHONE JACK 3P
JAK401-403	065 HSJ1002-01-1020	3.5F JACK
RCA401	066 4TR-2166#4	PIN JACK 2P
RCA404	066 4TR-2487#9	PIN JACK 1P
RCA402,RCA403	066 4TR-2964#10	PIN JACK 3P
JAK404	066 SY010-8P/K	RJ45 TERMINAL
JAK405	067 C-4493A00	SPEAKER TERMINAL
CP503	068 4428503746	CONNECTOR POST 3P (JE202B-1 T-3)
CP604	068 B2B-PH-KS	CONNECTOR POST 2P
CP501,CP502,CP505	068 B2P3-VH	CONNECTOR POST 2P
CP108,CP601	068 B3B-PH-KS	CONNECTOR POST 3P
CP504	068 B4B-EH	CONNECTOR POST 4P
CP101	068 B4P-VH	CONNECTOR POST 4P
CP103	068 B5B-PH-KS	CONNECTOR POST 5P
CP606	068 B7B-PH-KS	CONNECTOR POST 7P
CP603,CP605	068 B8B-PH-KS	CONNECTOR POST 8P
CP607-2,CP608-2	068 C-4687A07	PCB CONNECTOR
CP607,CP607-1,CP608,CP608-1	068 C-4687A11	PCB CONNECTOR
F501	069 C-3417A	FUSE CLIP

Parts List 5/7

SYMBOL	PARTS NO.	DESCRIPTION
JAK407 (USA VERSION ONLY)	069 C-4372A00	AC OUTLET
GND501	069 C-4484A00	EARTH LUG
016 X-1347A00 BUFFER PCB ASSY		
	501 X-1347	PCB ASSY
ICI301-306	031 NJM5332MD	IC OPEAMP SMD
CI301,302	041 TUTES1E470-TF	ELECTROLYTIC CAPACITOR 25V47uF
RI301-312	053 CR14-102J-A	CARBON RESISTOR 1/4W 1K
RI313-324	053 CR16-104J-A	CARBON RESISTOR 1/6W 100K
RI325,326	053 CR16-221J-A	CARBON RESISTOR 1/6W 220
P1-24	068 C-4689A01	CONNECTOR POST 1P
CNI301	068 C-4802A01WR	CONNECTOR WIRE SAN/ -W/WIRE 3P
016 E-4002002301 TUNER PCB ASSY		
	501 E-4004002301	PCB ASSY
L01	021 2648601430	MICRO INDUCTOR 20.8mH
T01	021 RLV152A00	AM ANT COIL (M7ZN-K5643A-KR)
T03	021 RLV154A00	AM IFT COIL (A7MC-K672713N4-KR)
T02	021 RLV155A00	AM OSC COIL (7BR-K111027X2-KR)
TL06,TR06	021 RLV156A00	MPX LPF COIL (253AGG-K5001-KR)
T04	021 RLV157A00	FM DET-A1 COIL (292BCA-K5713FKG)
T05	021 RLV158A00	FM DET-B1 COIL (292BCA-K5714X)
CF04	023 AHCFM2-450BL	CERAMIC FILTER (AHCFM2-450BL)
X02	023 CSB456F11	CERAMIC FILTER
X01	023 HC49U-004	CRYSTAL 7.2MHZ
CF01-03	023 SFE10.7M-02	CERAMIC FILTER (SFE10.7MA5-A)
IC02	031 LA1266	IC
IC03	031 LA3401	IC
IC01	031 LM7001JUM	IC
Q04,Q05,Q06,Q09	032 KRA107M	TRANSISTOR
Q03	032 KTC3194Y	TRANSISTOR
Q01,Q02,Q07	032 KTC3198Y-AT	TRANSISTOR
QL08,QR08	032 TDTC323TS	TRANSISTOR
VD01,VD02	034 SVC321SPA-B2	VARACTOR DIODE
D02	034 T1N4148-86	DIODE
ZD01	034 TRD5.1JST1	ZENER DIODE
C14,35,44	041 TUTES1C101-TF	ELECTROLYTIC CAPACITOR 16V100uF
C05,11	041 TUTES1C470-TF	ELECTROLYTIC CAPACITOR 16V47uF
C33,45,47	041 TUTES1H010-TF	ELECTROLYTIC CAPACITOR 50V1uF
C20,39,49,53,CL51,CR51	041 TUTES1H100-TF	ELECTROLYTIC CAPACITOR 50V10uF
C03,27	041 TUTES1H3R3-TF	ELECTROLYTIC CAPACITOR 50V3.3uF
C26,28,41	041 TUTES1H4R7-TF	ELECTROLYTIC CAPACITOR 50V4.7uF
C46	041 TUTES1HR22-TF	ELECTROLYTIC CAPACITOR 50V0.22uF
C30,48	042 TP50V223J	MYLAR CAPACITOR 0.022uF
C31	042 TP50V332J	MYLAR CAPACITOR 3300pF
C32	042 TP50V393J	MYLAR CAPACITOR 0.039uF
C38	043 TC50V101	CERAMIC CAPACITOR 100pF
C37	043 TC50V820	CERAMIC CAPACITOR 82pF
C16	043 TC50VCH150	CERAMIC CAPACITOR 15pF
C09	043 TC50VCH270	CERAMIC CAPACITOR 27pF
C08	043 TC50VCH330	CERAMIC CAPACITOR 33pF
C15	044 S50V470PJ	STYROL CAPACITOR 47pF
TC01	045 TZ03N100	TRIMMER 10pF
C04,07,23	047 ECJ2VB1H103K	CHIP CAP 0.01uF
C01,06,12,13,17,18,21,22,29,34,40	047 ECJ2VB1H223K	CHIP CAP 0.022uF
C02,24,25,42	047 ECJ2VF1H473Z	CHIP CAP 0.047uF
CLU52,CRU52	047 ECJ2VG1H100D	CHIP CAP 10pF
C10	047 ECJ2VG1H101J	CHIP CAP 100pF
CL50,CR50	047 ECJ2VG1H121J	CHIP CAP 120pF
C36	047 ECJ2VG1H331J	CHIP CAP 330pF
CL52,CR52	047 ECJ2VG1H680J	CHIP CAP 68pF

Parts List 6/7

SYMBOL	PARTS NO.	DESCRIPTION
C43	047 ECJ2VG1H681J	CHIP CAP 680PF
CLU50,CRU50	047 ECJ2VG1H820J	CHIP CAP 82pF
VR03	051 TRH063MCJ5R	SEMI-FIXED VR 220K
VR01	051 TRH063MCS3R	SEMI-FIXED VR 4.7K
VR02	051 TRH063MCS4R	SEMI-FIXED VR 47K
R16,34,39	055 ERJ6GEYJ101V	CHIP RESISTOR 100R
R10,17,18,19,38	055 ERJ6GEYJ102V	CHIP RESISTOR 1K
R07,27	055 ERJ6GEYJ103V	CHIP RESISTOR 10K
R01,04,06	055 ERJ6GEYJ104V	CHIP RESISTOR 100K
RL57,RR57	055 ERJ6GEYJ152V	CHIP RESISTOR 1.5K
R11	055 ERJ6GEYJ181V	CHIP RESISTOR 180R
R35	055 ERJ6GEYJ182V	CHIP RESISTOR 1.8K
R29,37	055 ERJ6GEYJ220V	CHIP RESISTOR 22R
R28,41,43	055 ERJ6GEYJ223V	CHIP RESISTOR 22K
R08,21	055 ERJ6GEYJ271V	CHIP RESISTOR 270R
RL48,RR48	055 ERJ6GEYJ272V	CHIP RESISTOR 2.7K
RL46,RR46,RL47,RR47	055 ERJ6GEYJ274V	CHIP RESISTOR 270K
R20	055 ERJ6GEYJ331V	CHIP RESISTOR 330R
R13,33,42,RL49,RR49	055 ERJ6GEYJ332V	CHIP RESISTOR 3.3K
R31	055 ERJ6GEYJ392V	CHIP RESISTOR 3.9K
R26	055 ERJ6GEYJ393V	CHIP RESISTOR 39K
R05,15,22	055 ERJ6GEYJ471V	CHIP RESISTOR 470R
R24,30	055 ERJ6GEYJ472V	CHIP RESISTOR 4.7K
R36,40,44	055 ERJ6GEYJ473V	CHIP RESISTOR 47K
R09,12,14	055 ERJ6GEYJ561V	CHIP RESISTOR 560R
R02,32	055 ERJ6GEYJ562V	CHIP RESISTOR 5.6K
R03	055 ERJ6GEYJ623V	CHIP RESISTOR 62K
R25	055 ERJ6GEYJ683V	CHIP RESISTOR 68K
ANT01	067 SC0210586N	ANTENNA TERMINAL
CP20	068 B5B-PH-KS	CONNECTOR POST 5P
CN10	068 B6B-PH-KS	CONNECTOR POST 6P
	068 DM-2GM-0	SHORT PLUG
JLE/U100,JRE/U100	068 TDB04SG	BASE POST 4PIN
FE01	092 FTA4-460H	FRONT-END
HEAT SINKER ASSEMBLY		
	017 TZ3-07A00	HEAT SINKER BOARD
	019 TO-126	MICA SHEET TBM-51W-15 #9524
	019 TO-3P	MICA SHEET TBM-51W-15 #9043
QL210,QR210	032 C4137-V	TR 2SC4137-V
QL215,216	033 A1492-OPY	TR 2SA1492-OPY
QL213,214	033 C3856-OPY	TR 2SC3856-OPY
CP204	034 436302122031	POSISTOR P43T7D120BW20
OTHERS		
	011 FP-545-B	BLACK PANEL ASSY
	011 FP-545-S	SILVER PANEL ASSY
	011 TH3-01B00	H/S PANEL 109MM
	012 C-4711A03	KNOB 34F NO MARK (BLACK)
	012 C-4711A03S	KNOB 43F NO MARK (SILVER)
	012 C-4751A00	KNOB 10F (BLACK)
	012 C-4751A01	KNOB 10F (SILVER)
	012 RV4-09A00	PUSH BUTTON 14F (BLACK)
	012 RV4-09A01	PUSH BUTTON 14F (SILVER)
	012 TB3-18A00	TACT BUTTON 16 KEY (BLACK)
	012 TB3-18A01	TACT BUTTON 16 KEY (SILVER)
	014 C-4716A00	SIDE CAP H=109MM (BLACK)
	014 C-4723A03	TOP COVER
	019 4TSH-19#2	PLASTIC FOOT 50F BLK
	019 C-4520A01	LED SPACER LH-5S-5
	019 C-4520A02	LED SPACER LH-5S-6

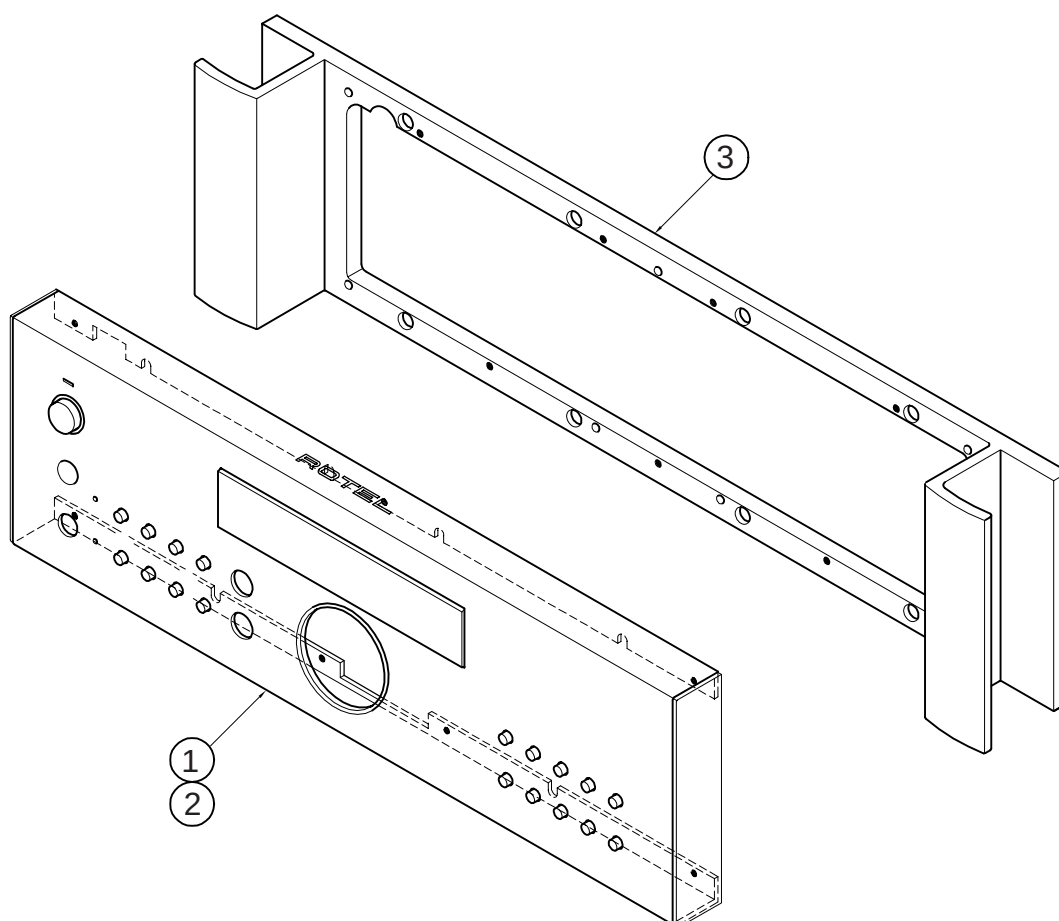
Parts List 7/7

SYMBOL	PARTS NO.	DESCRIPTION
	021 RLA145A00	AM LOOP ANT(2608207360)
	022 T-1088N01	POWER TRANSFORMER
	034 LTL1214A	LED (BRIGHT RED) 2F
	034 SEL1124R	LED (RED) 1X5
	034 SEL1E24W	LED (BLUE) 1X5
	069 18-24	F CONNECTOR
	069 C-4629A01	AC 2P INLET 6102.3100 (WIRING)
	069 C-4783A00	JUMPER PLUG
	072 4TR-3228	T TYPE ANTENNA
	072 C-4621A01	AC CORD SET SJT AWG16/2C
	072 C-4622A01	AC CORD SET AUSTRALIA
	072 C-4623A01	AC CORD SET U.K
	072 C-4624A01	AC CORD SET EUROPE
	081 TZ3-10A00	INSIDE CARTON
	081 Z-204	STYROL MOULDING
	092 RR-AT93	REMOTE UNIT

Addendum List for Black and Silver

RX1050

SYMBOL	PARTS	DESCRIPTION
①	011 FP-545-B	BLACK PANEL ASSY
②	011 FP-545-S	SILVER PANEL ASSY
③	011 TH3-01B00	H/S PANEL H109
	012 C-4711A03	KNOB 43F NO MARK (BLK)
	012 C-4711A03S	KNOB 43F NO MARK (SLV)
	012 C-4751A00	KNOB 10F(BLK)
	012 C-4751A01	KNOB 10F(SLV)
	012 RV4-09A00	PUSH BUTTON 14F (BLK)
	012 RV4-09A01	PUSH BUTTON 14F (SLV)
	012 TB3-18A00	TACT BUTTON 16 KEY (BLK)
	012 TB3-18A01	TACT BUTTON 16 KEY (SLV)
	034 SEL1124R	LED (RED) 1X5
	034 SEL1E24W	LED (BLU) 1X5



Tuner Adjustment Method

FM Section

* Necessary measurement equipment

RDS/STEREO Multiplexer, FM/AM Signal Generator, Audio Analyzer, Oscilloscope, Digital Volt Meter (DVM)

(A) Center adjust

RDS/STEREO Multiplexer Setting

- MODE : **MONO** - Audio Frequency : **1KHz**

FM Signal Generator Setting

- Deviation : **75KHz** - Radio Frequency : **98.1MHz** - Output Level : **66dB**

RX-1050 Setting

- FM Frequency : **97.9MHz** - FM MODE : **MONO**

1. Turn FM Signal Generator Modulation on
2. Connect DVM (+)(-) terminals to **Jumper J7 and J8** and measure the volt.
3. If measured voltage is not adjusted within $\pm 10\text{mV}$, Make this measured volt '**0**' by adjusting **T04** (FM-DET-A Coil).
: **The adjustment should be within $\pm 10\text{mV}$**
4. After this adjustment, measure **THD**(Total Harmonic Distortion) with Audio Signal Generator
5. Adjust THD to minimum point with **T05**(FM-DET-B Coil). : **THD should be within 0.5%**

(B) Channel Separation adjust

RDS/STEREO Multiplexer Setting

- MODE : **STEREO (ONLY L-CH Signal OUT)** - Audio Frequency : **1KHz**

FM Signal Generator Setting

- Deviation : **75KHz** - Radio Frequency : **98.1MHz** - Output Level : **66dB**

RX-1050 Setting

- FM Frequency : **98.1MHz** - FM MODE : **STEREO**

1. Turn FM Signal Generator Modulation on after **modulating only L-CH (or only R-CH)** at STEREO Multiplexer.
2. Confirm if '**STEREO**' indicator is **turned 'ON'** on the display
3. Measure output level via Audio Signal Analyzer and make the level as standard.
4. Turn FM Signal Generator Modulation on after **modulating only R-CH (or only L-CH)** at STEREO Multiplexer.
5. Measure output level via Audio Signal Analyzer (measure per a dB)
6. If measured output level is not lower than -40dB, Adjust output level to minimum position with **VR03** (CH-SEPA. ADJ.).
: **lower than -40dB**

(C) TUNED Level adjust

RDS/STEREO Multiplexer Setting

- MODE : **STEREO** - Audio Frequency : **1KHz**

FM Signal Generator Setting

- Deviation : **75KHz** - Radio Frequency : **98.1MHz** - Output Level : **26dB**

RX-1050 Setting

- FM Frequency : **98.1MHz** - FM MODE : **STEREO**

1. Turn FM Signal Generator Modulation 'ON' (confirm if output level is **26dB**)
2. Change the output level of the Generator from 20dB to 30dB
and Confirm if 'STEREO' & 'TUNED' indicator of the DISPLAY turns on at 26db(± 5 dB)
3. If these indicators do not turn on at higher than 26dB(± 5 dB) or do not turn off at lower than 26(± 5 dB) ,
Adjust **VR02 (FM-ADJ)** up to the moment where 'STEREO' & 'TUNED' indicator turns **OFF & ON** at 26dB.
4. Confirm if 'STEREO' & 'TUNED' turns OFF when decreasing the output level slowly from 26dB to 25dB, 24dB ~~~.
(Repeat the above 3. if not OFF in lower than 24dB.)
5. Push RX-1050's TUNE UP or DOWN button "**long**" at Signal Generator Output Level 26dB and **start Auto search**.
Confirm if search **stops** at FM Frequency 98.1MHz.
(Examine both of High Freq. -> 98.1MHz search , Low Freq. -> 98.1MHz search)

AM Section

* Necessary measurement equipment :

AM Signal Generator, Audio Signal Analyzer, Dummy Load, Oscilloscope, Digital Volt Meter (DVM)

(A) VT adjust

AM Signal Generator Setting

1. Adjust AM Frequency of RX-1050 to **522KHz. (or 520KHz)**
2. Connect (-) terminal of DVM with GND (or chassis) and connect (+) terminal with Jumper **J3** (VT CHECK) and measure voltage. (**Low Freq. VT**)
3. Adjust VT to 1.1V with **T02** (AM-OSC Coil).

* In case of **USA version**, AM freq. range is **520KHz ~ 1710KHz**. So, adjust as below.
at 520KHz, VT = 1.1V (Low Freq. VT)

(B) Output Level adjust

AM Signal Generator Setting

- Modulation : **30%**
- Audio Frequency : **400Hz**
- Output Level : **100dB**
- Radio Frequency : **603KHz (or 600KHz)**

RX-1050 Setting

- AM Frequency : **603KHz/1404KHz/999KHz (or 600KHz/1400KHz/1000KHz)**

1. Turn AM Signal Generator Modulation ON
2. Adjust RX-1050 AM Freq. to **603KHz (or 600KHz)** and measure output level with Audio Signal analyzer.
3. Adjust output level to maximum point with **T01** (AM-ANT).
4. Adjust AM Signal Generator & RX-1050 AM Frequency to **1404KHz (or 1400KHz)** and measure output level.
5. Adjust output level to maximum point with **TC01 (White Trimmer)**.
6. Repeat above 2.~ 5. **steps** 2 ~ 3 times until adjusting to best output level.
7. Adjust AM Signal Generator & RX-1050 AM Frequency to **999KHz (or 1000KHz)** and measure output level.
8. Adjust level to maximum position with **T03** (AM-IFT).

(C) TUNED Level adjust

AM Signal Generator Setting

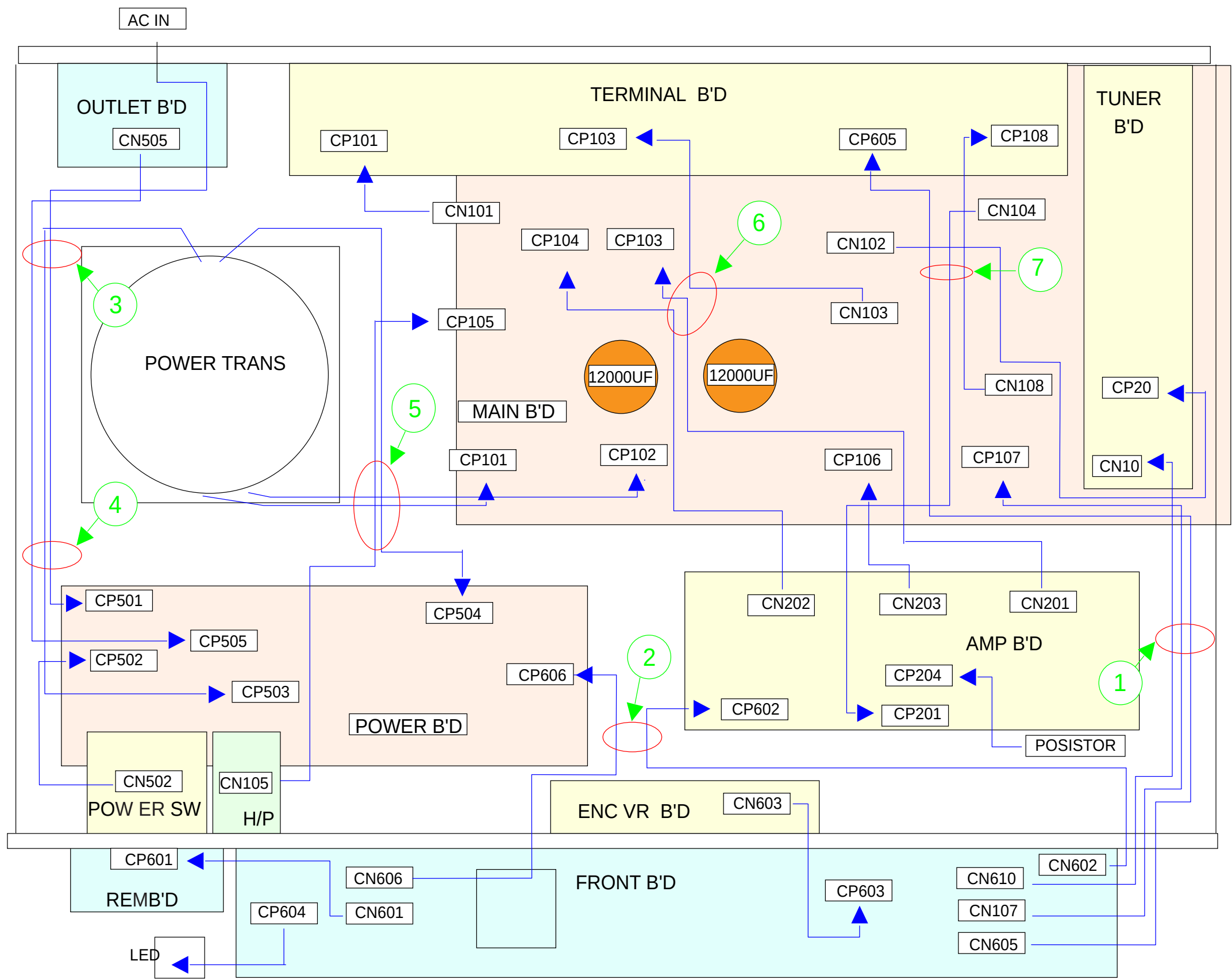
- Modulation : **30%**
- Audio Frequency : **400Hz**
- Radio Frequency : **999KHz (or 1000KHz)**
- Output Level : **84dB**

RX-1050 Setting

- AM Frequency : **999KHz (or 1000KHz)**

1. Turn AM Signal Generator Modulation ON (Make sure if Output level is **84dB**)
2. If 'TUNED' indicator does not turn on at higher than 80~86dB(Generator output),
Adjust **VR01** (AM-ADJ) up to the moment where 'TUNED' indicator turns OFF & ON again
3. Confirm if 'TUNED' turns OFF when decreasing the output level of AM Signal Generator slowly from 84dB to 80dB.
4. Push RX-1050 **TUNE UP or DOWN** button "**long**" at AM Signal Generator Output Level 84dB and **start AUTO search**.
Confirm if search **stops** at AM Frequency 999KHz (or 1000KHz).
< Check with both of High Freq. -> 999KHz(or 1000KHz) search , Low Freq. -> 999KHz(or 1000KHz) search >

Wiring Diagram



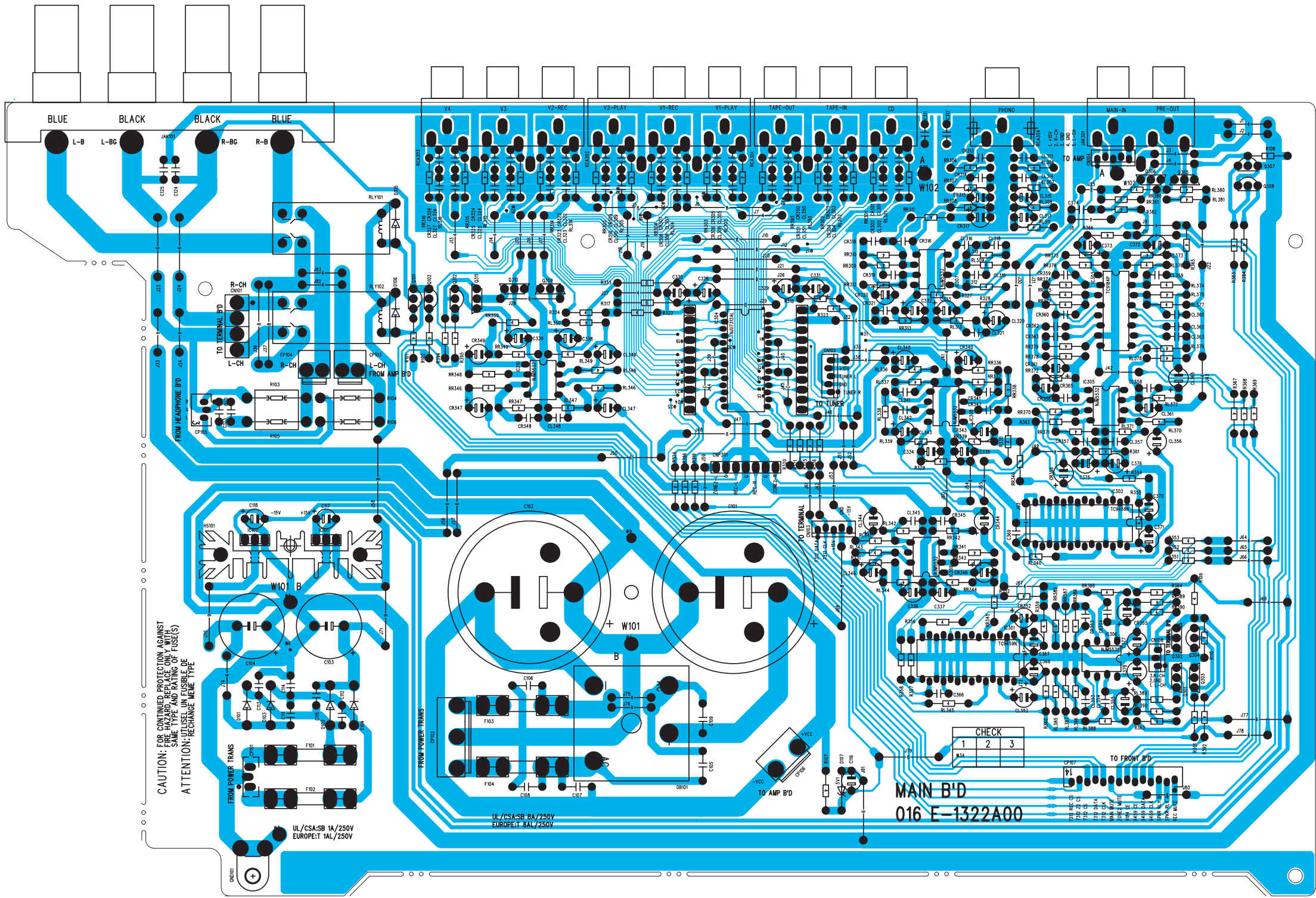
1) ENC VR B'D CN603->FRONT B'D CP603
2) FRONT B'D CN601->RE SEN B'D CP601
3) FRONT B'D CN606->POW B'D CP606
4) FRONT B'D CN605->TERMINAL B'D CP605
5) FRONT B'D CN107->MAIN B'D CP107
6) FRONT B'D CN610->TUNER B'D CN10
7) FRONT B'D CN602->AMP B'D CP602
8) POW LED->FRONT B'D CP604
9) AMP B'D CN202->MAIN B'D CP104
10) AMP B'D CN203->MAIN B'D CP106
11) AMP B'D CN201->MAIN B'D CP103
12) POSISTOR->AMP B'D CP204
13) MAIN B'D CN104->AMP B'D CP201
14) MAIN B'D CN102->TUN B'D CP20
15) MAIN B'D CN108->TERMINAL B'D CP108
16) MAIN B'D CN103->TERMINAL B'D CP103
17) MAIN B'D CN101->TERMINAL B'D CP101
18) P/T Primary ->POW B'D CP503
19) P/T Secondary RED/BLK->MAIN B'D CP102
20) P/T Secondary WHT/GRY->MAIN B'D CP101
21) P/T Secondary ORG/VIO->POW B'D CP504
22) AC INLET->POWER B'D CP501
23) POWER SW B'D CN502->POW B'D CP502
24) OUTLET B'D CN505->POW B'D CP505
25) H/P B'D CN105->MAIN B'D CP105
26) WIRE CLAMPER->6 POINTS

Front PCB X-1323B Top Side



PCB Assembly (4/5)

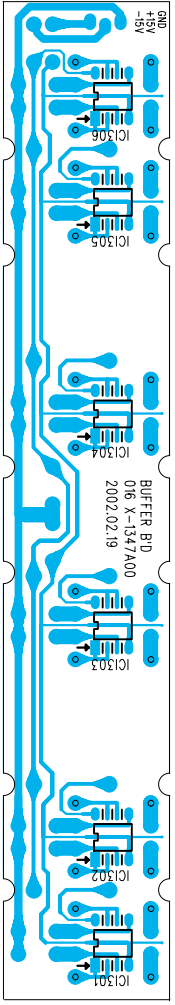
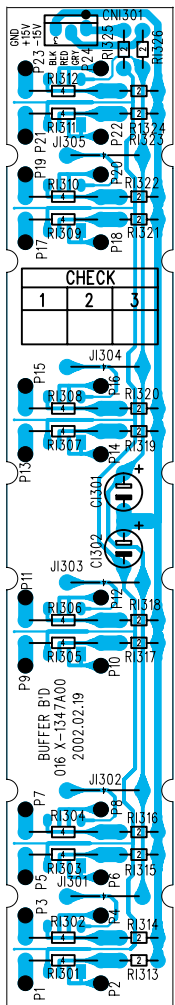
Main PCB E-1322A00



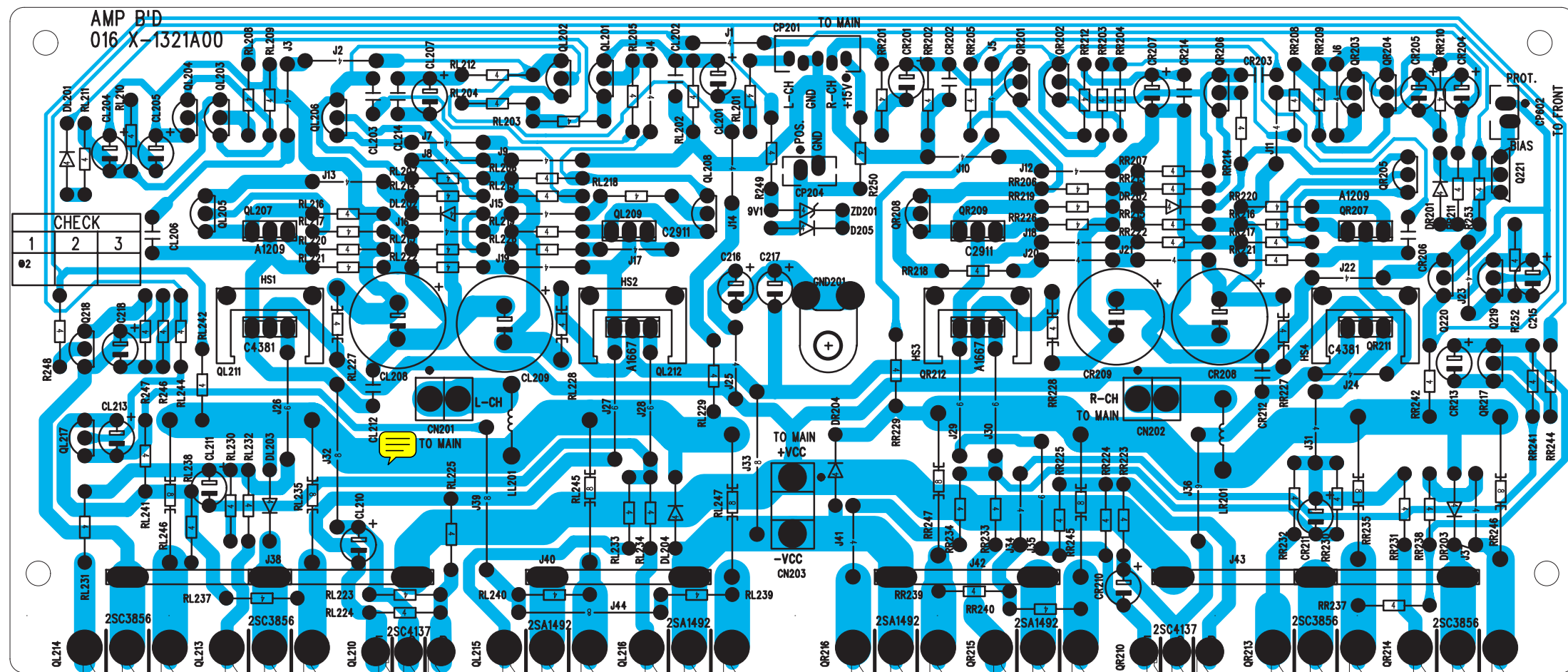
Buffer PCB 016 X-1347A00

Top_silk

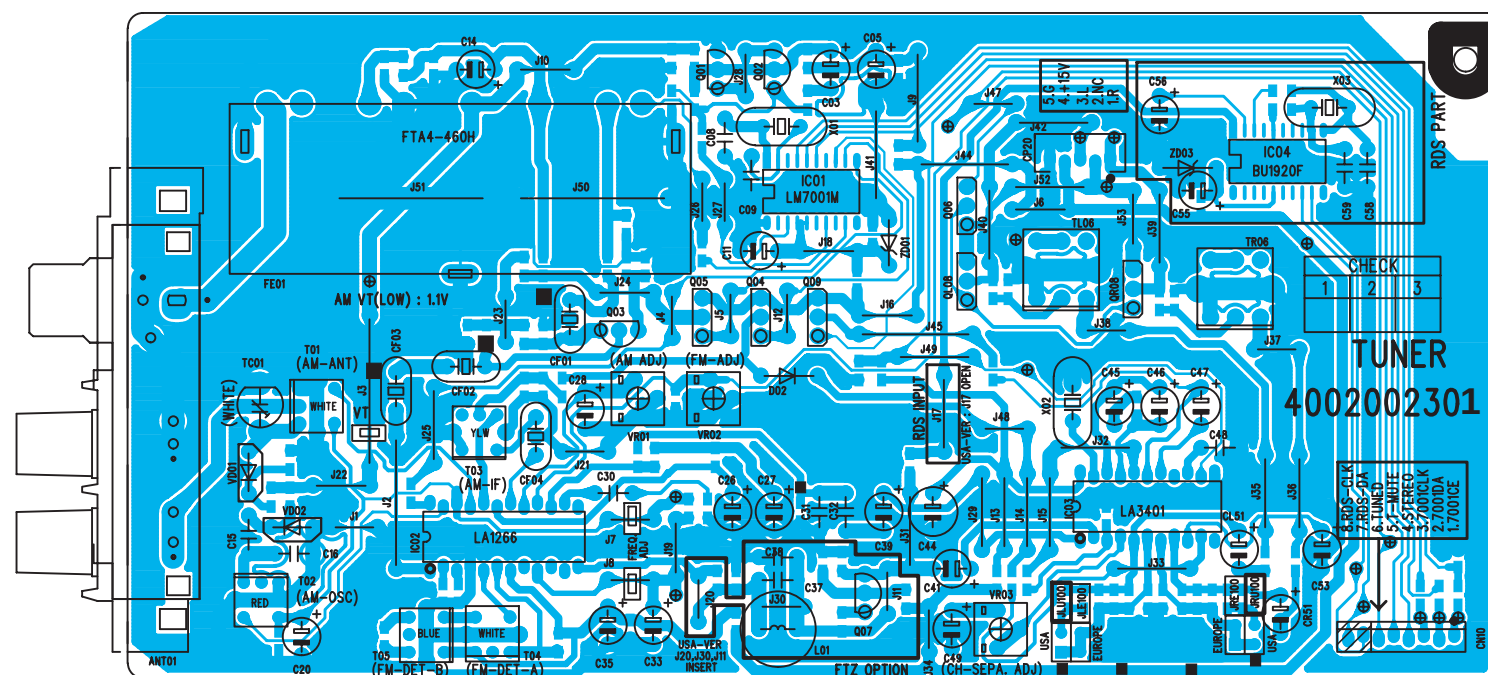
Bottom_Silk



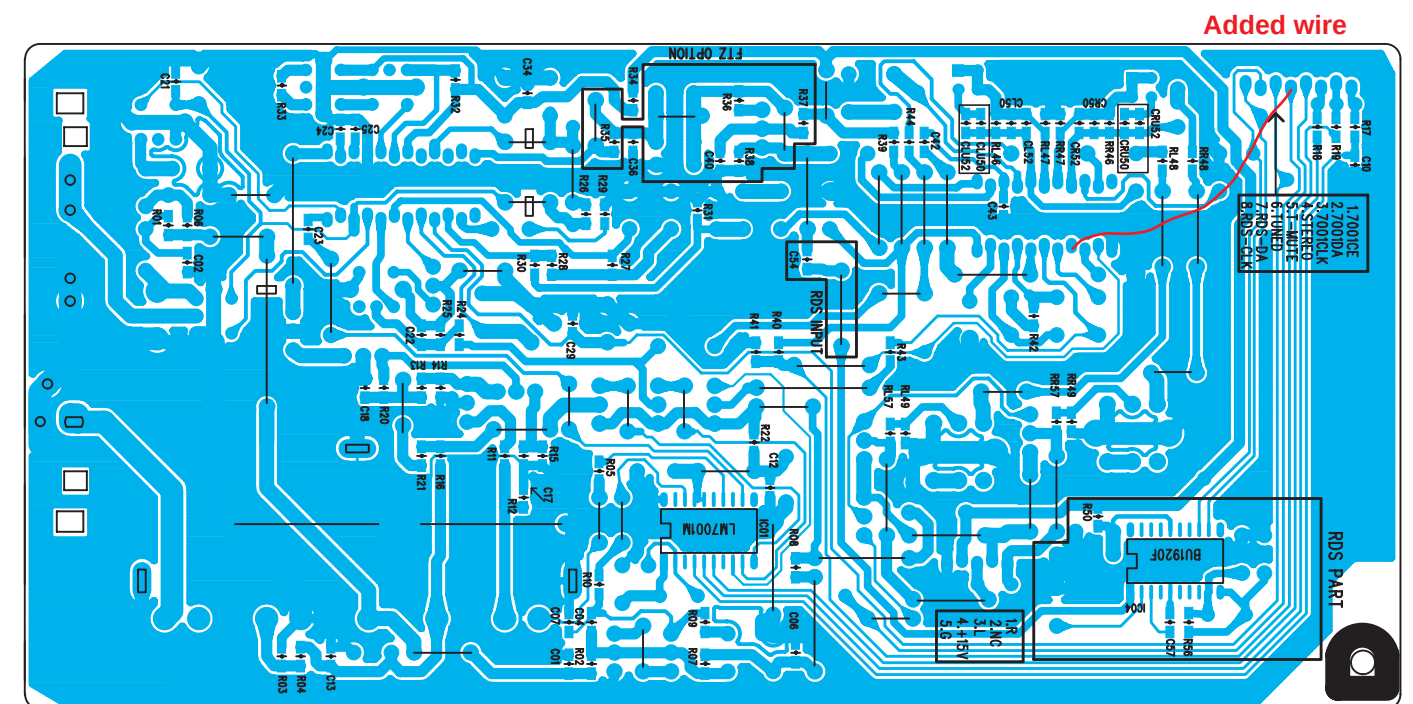
Amplifier PCB 016 X-1321A00



Tuner PCB 4002002301

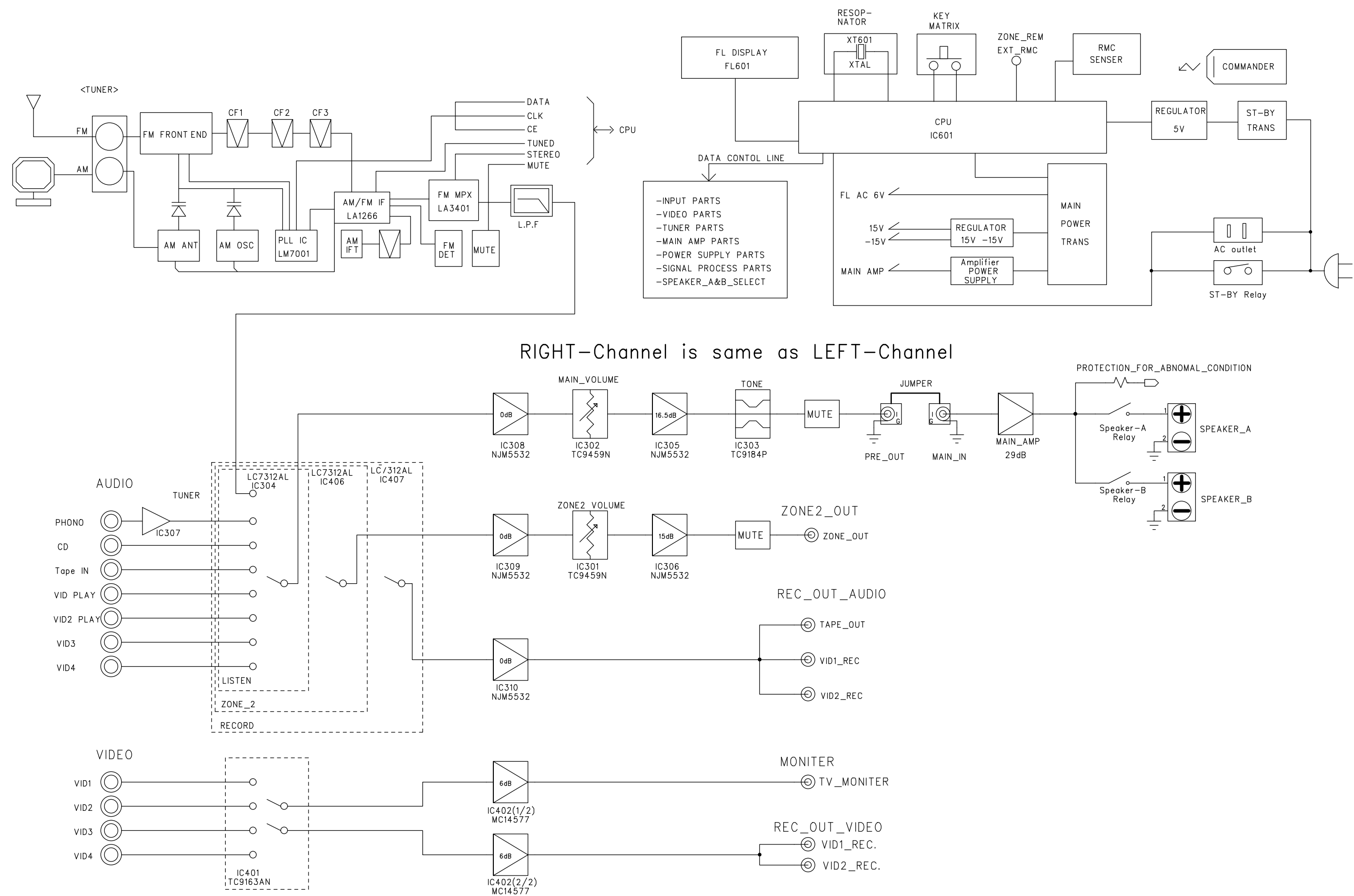


TOP SIDE

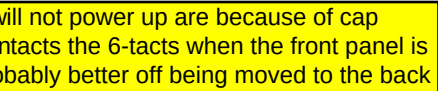


BOTTOM SIDE

Block Diagram

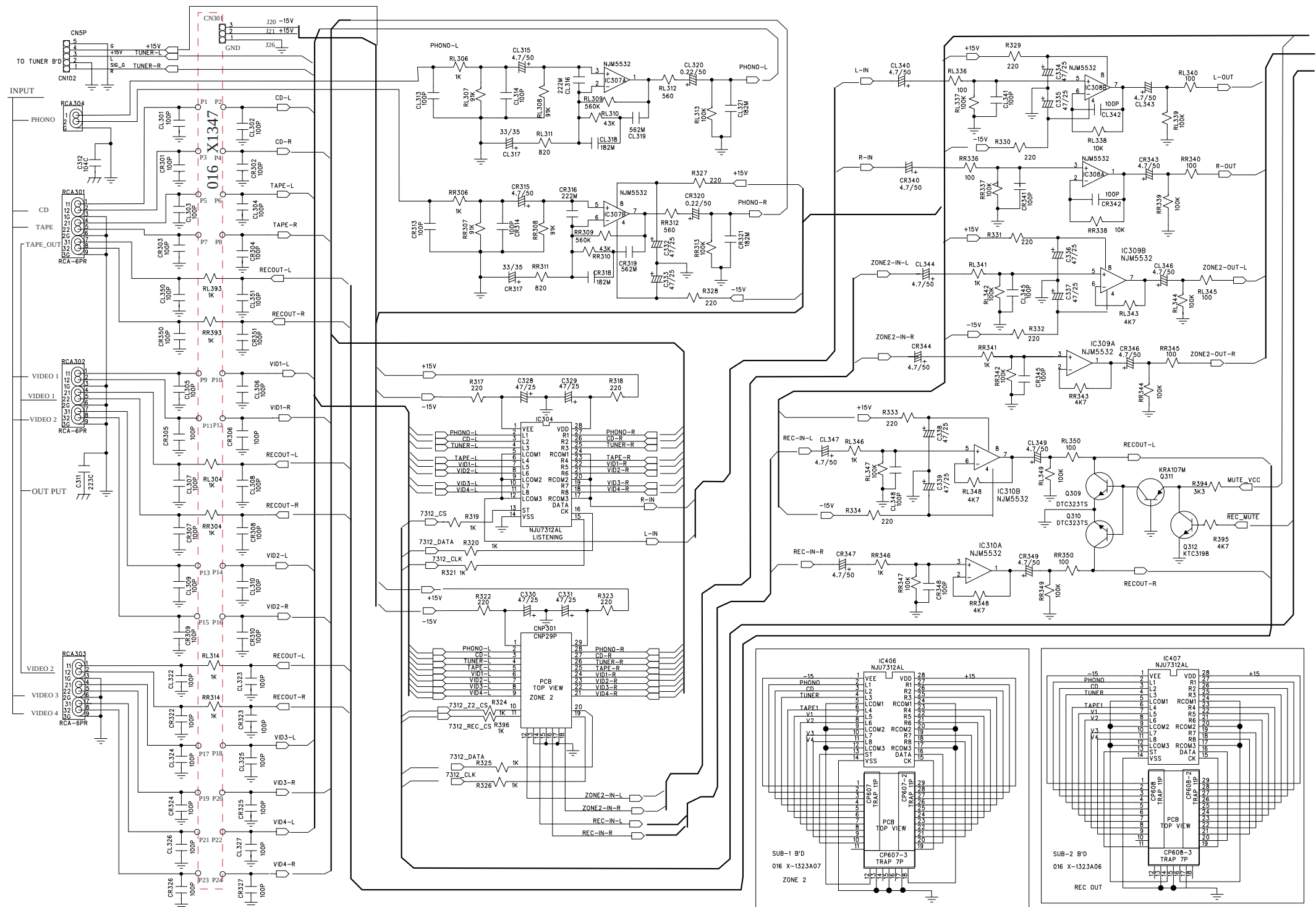


Front Circuit 016X-1323B01,04,10

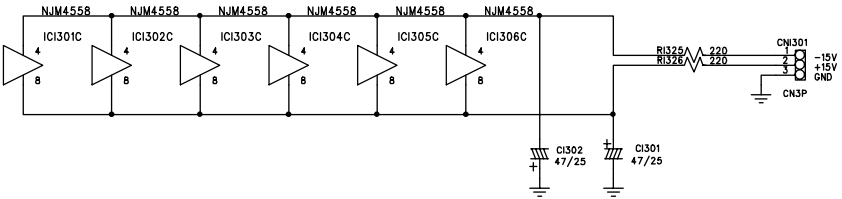
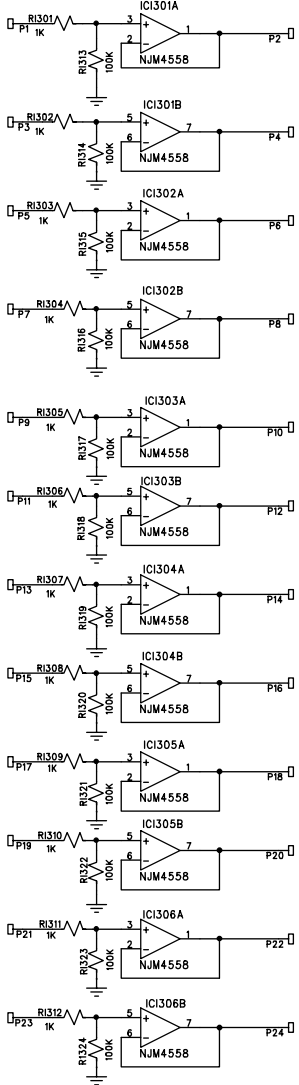


Schematic Diagram

Main PCB (1/2) 016 X-1322A00



Input Buffer Circuit
016 X-1347A00



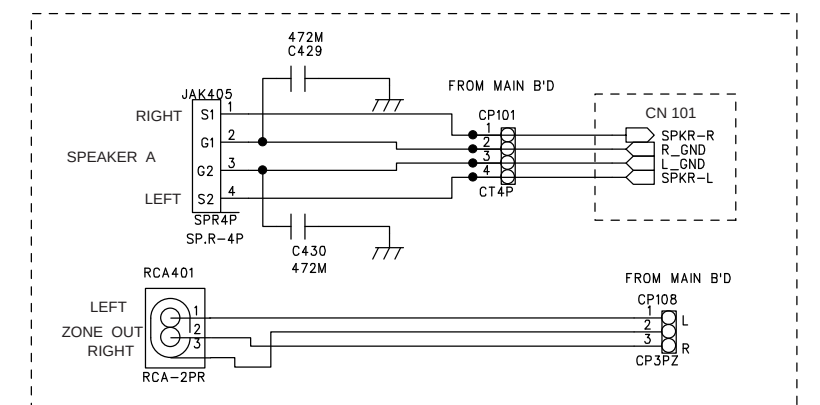
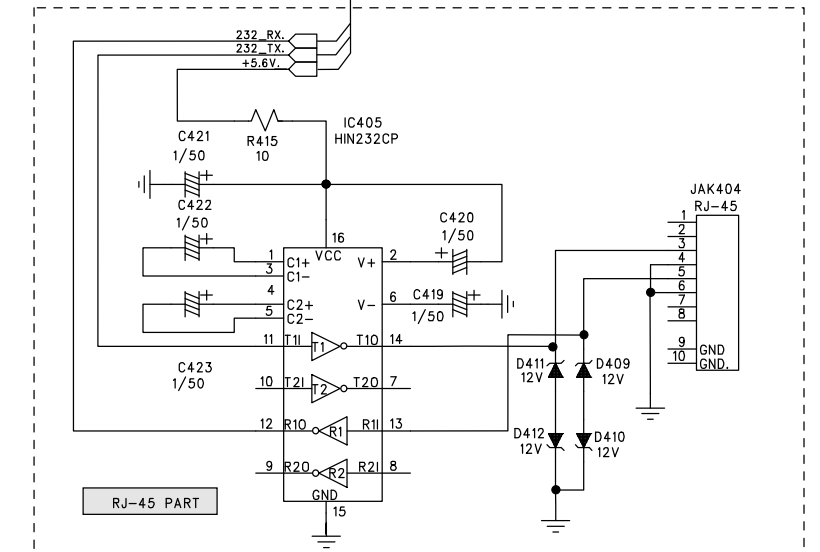
Main PCB (2/2) 016 X-1322A00



Amplifier Circuit 016 X-1321A00

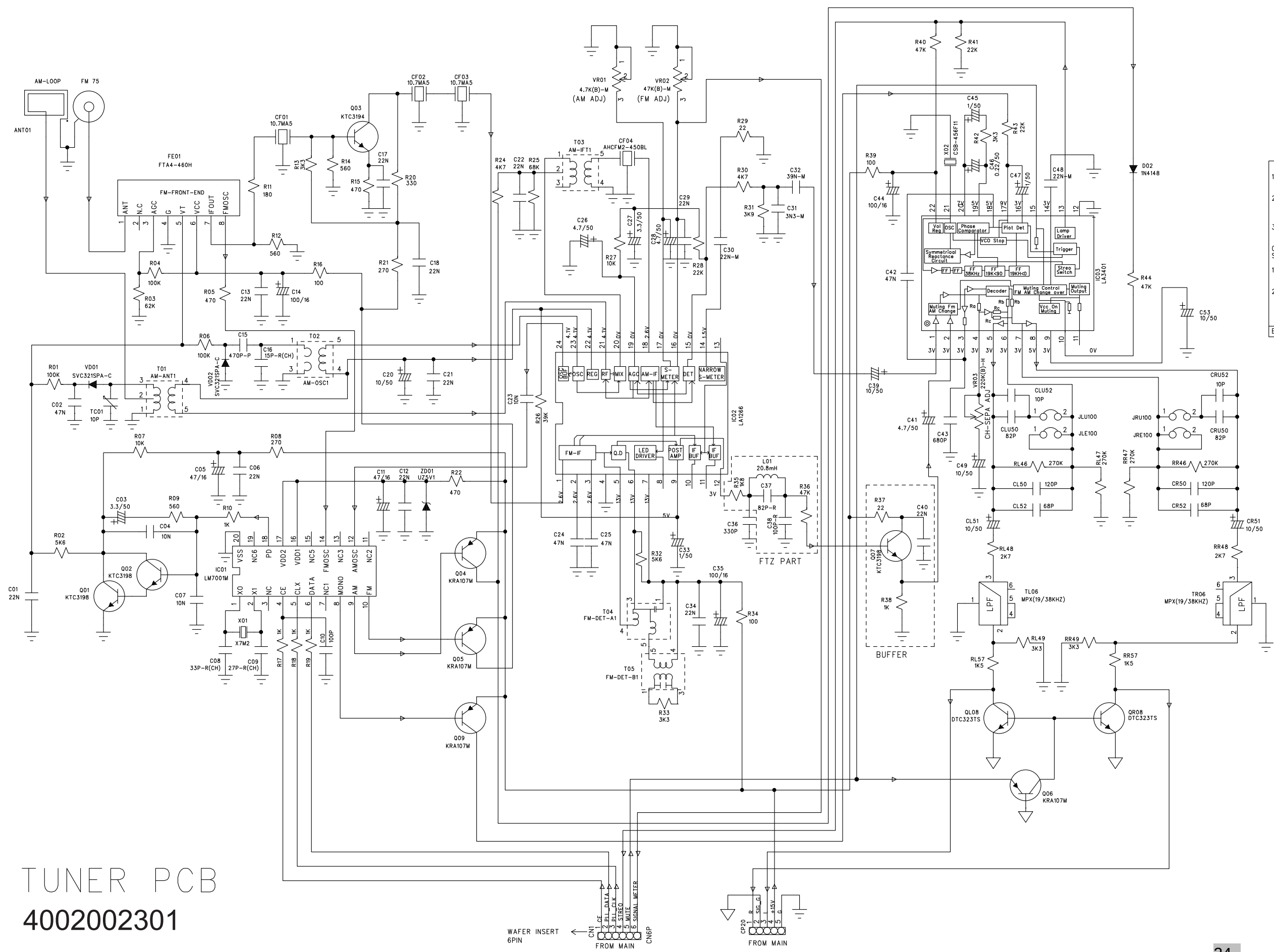


Power Supply, Video Circuit 016 X-1323B02,03,05,09



Schematic Diagram (6/6)

Tuner PCB 016 4002002301



VER-OPTION

JUMPER HEADER	DE-EMPHASIS	
	EUROPE(50uS)	U.S.A.(75uS)
JLU/JRU100	X	O
JLE/JRE100	O	X

X : SHUNT OPEN
O : SHUNT CLOSE

1. Resistor values are indicated in ohms unless otherwise specified.
(K=1,000 M=1,000,000)
2. Capacitor values are indicated in microfarads unless otherwise specified.
Example: 104=0.1 103=0.01 102=0.001
(p=micro-microfarad)
3. These resistor are to be segregated from printed wiring board or other accessible parts.
- CAUTION
Safety precaution to be followed during servicing
1. Since those parts marked with are critical parts for safety. Use only the one described in the part list.
2. Before returning the set to the customer make appropriate leakage current or resistance measurements to determine the exposed parts are properly insulated from the supply circuit.
- | | |
|-----------|----------|
| EQUIPMENT | DW. N.O. |
|-----------|----------|

TUNER PCB
4002002301