



Technical Manual

AM/FM STEREO TUNER RT-1080-1

Table of Contents

Specification.....1
Parts List2~7
Adjustment.....8~16
PCB Assembly17~18
Schematic Diagram19~21

Specification

FM Tuner

Usable Sensitivity:
12.2 dBf
50dB Quieting Sensitivity:
20.2 dBf (mono)
45.3 dBf (stereo)
Signal to Noise Ratio (at 65 dBf):
75 dBf (mono)
72 dBf (stereo)
Harmonic Distortion (at 65 dBf):
0.2% (mono)
0.3% (stereo)
Frequency Response:
10 Hz-15 kHz, ± 3 dB
Capture Ratio:
2.0 dB
Alternate Channel Selectivity:
47 dB (± 400 kHz)
Spurious Response Ratio:
90 dB
Image Rejection Ratio:
80 dB
IF Rejection Ratio:
80 dB
AM Suppression Ratio:
55 dB
Stereo Separation (100Hz/1 kHz/10 kHz):
40 dB/45 dB/35 dB
Output level:
1.2V
Antenna Input:
75 ohms unbalanced

AM Tuner

Usable Sensitivity:
300 μ V/m
Selectivity:
25 dB
Harmonic Distortion:
0.5%
Image Rejection Ratio:
45 dB
Signal to Noise Ratio:
48 dB
Output level:
165 mV
Antenna Input:
Loop Antenna

General

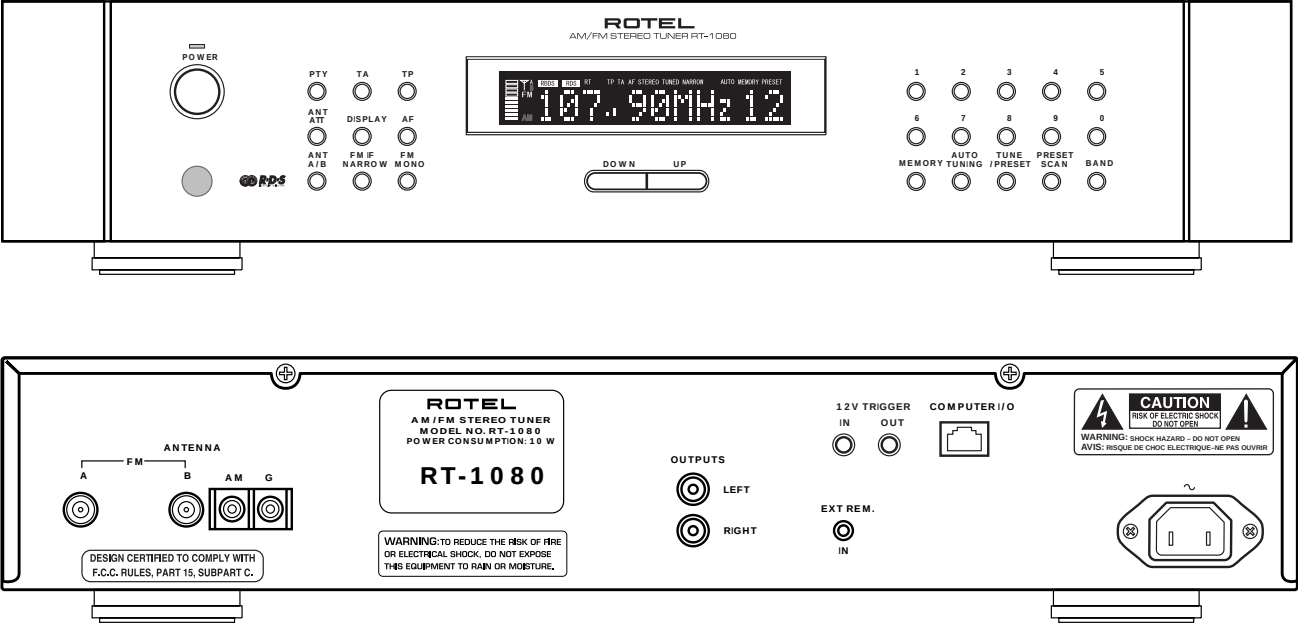
Power Consumption:
10 watts
Power Requirements (AC):
115 volts, 60 Hz (USA version)
230 volts, 50 Hz (European version)
Weight:
4.7 Kg/10.4 lb.
Dimensions (W x H x D):
432 x 92 x 340 mm
16 15/16" x 3 5/8" x 13 7/6"

THE ROTEL CO., LTD

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

Serial. NO.
Beginning

Appearance



SYMBOL	PARTS NO.	DESCRIPTION
	016 X-1304A01-05 PCB ASSY	
	501 X-1304	PCB ASSY (MAIN)
	017 C-4755A10	HEAT SINK for IC501
C540	019 C-4357A03	COVER CAP
L207	021 2648601430	MICRO INDUCTOR 20.8mH
L201-206, L500	021 LF160A00	MICRO INDUCTOR
TL301	021 RLV155A00	COIL 072 (RED)
LFL200,LFR200	021 RLV156A00	COIL 01 (BLACK)
TL303	021 RLV159A00	COIL 713 (YELLOW)
TL302	021 RLV162A00	COIL 5232 (GRN)
TL304	021 RLV163A00	COIL 5908 (BLACK)
TL201	021 RLV164A00	COIL 5053 (WHITE)
TL202	021 RLV165A00	COIL 5054 (BLUE)
CF205	023 CSBLA456KE2ZF11B0	CERAMIC RESONATOR
XTL401	023 CSB456F15	CERAMIC RESONATOR
XTL201	023 HC49U-004	CRYSTAL 7.2MHZ
CF203	023 SFELF10M7JAA0B0	CERAMIC FILTER (FM)
CF201,202,204	023 SFELF10M7GALM-BO	CERAMIC FILTER (FM)
CF301	023 SFPS450H	CERAMIC FILTER (AM)
IC202,203	031 LA1235	IC
IC301	031 LA1245	IC
IC401	031 LA2230	IC
IC204	031 LA3450	IC
IC201	031 LC72191M	IC
IC501	031 NJM317F	IC
ICM101	031 PC817X2	IC
IC205	031 TL072CP	IC
Q223	032 2K117Y	TRANSISTOR
Q212,301	032 2K192A-GR	TRANSISTOR
Q213-216	032 C1674-KL	TRANSISTOR
Q502	032 TA608-FG	TRANSISTOR
Q209,211	032 TC174OS-R	TRANSISTOR
QL201,QR201	032 KTD1303-AT	TRANSISTOR
Q503	032 TC3708-ST	TRANSISTOR
Q201,202,219,506	032 TC536-FG	TRANSISTOR
Q204,206,207,225,302,505	032 TDTA114YS	TRANSISTOR
Q222,501,504	032 TDTC114YS	TRANSISTOR
D201,501-505, D511	034 1N4004	DIODE
D301,302	034 SVC323S-3	VARACTOR DIODE
D202-205,210-212,303-305,307, 308,509,D209	034 T1N4148-86	DIODE
	034 T1N4148-86	DIODE
D508	034 TRD12JST1	ZENER DIODE
D506	034 TRD22EBT1	ZENER DIODE
D208,401	034 TRD5.1JST1	ZENER DIODE
D510	034 TRD5.6JST1	ZENER DIODE
D507	034 TRD6.2JST1	ZENER DIODE
C204,216,252,282-284,321	041 TUTES1C101-7TF	ELECTROLYTIC CAPACITOR 16V100uF
C512	041 TUTES1C221-7TF	ELECTROLYTIC CAPACITOR 16V220uF
C218,222,313,402-404,511,513,514	041 TUTES1C470-7TF	ELECTROLYTIC CAPACITOR 16V47uF
C247,249,254,262,264,265	041 TUTES1H010-7TF	ELECTROLYTIC CAPACITOR 50V1uF
C274,278,279,409,412,508	041 TUTES1H100-7TF	ELECTROLYTIC CAPACITOR 50V10uF
CL201,202,CR201,202	041 TUTES1H220-7TF	ELECTROLYTIC CAPACITOR 50V22uF
C516	041 TUTES1H2R2-7TF	ELECTROLYTIC CAPACITOR 50V2.2uF
C281	041 TUTES1H330-7TF	ELECTROLYTIC CAPACITOR 50V33uF
C214,325	041 TUTES1H3R3-7TF	ELECTROLYTIC CAPACITOR 50V3.3uF

SYMBOL	PARTS NO.	DESCRIPTION
C327,502,515	041 TUTES1H470-7TF	ELECTROLYTIC CAPACITOR 50V47uF
C270,326,411,413,504	041 TUTES1H4R7-7TF	ELECTROLYTIC CAPACITOR 50V4.7uF
C261,268,269	041 TUTES1HR47-7TF	ELECTROLYTIC CAPACITOR 50V0.47uF
C501	041 TUTES1V332-7TS	ELECTROLYTIC CAPACITOR 35V3300uF
C330,414	042 TP50V223J	MYLAR CAPACITOR 0.022uF
C415,416	042 TP50V332J	MYLAR CAPACITOR 3300PF
CL203,CR203	042 TP50V392J	MYLAR CAPACITOR 3900PF
C417	042 TP50V682J	MYLAR CAPACITOR 6800PF
C213,266,272,322,407,408,C201,202	043 TC16V103-A	CERA CAPACITOR AXIAL 0.01uF
C405, C406	043 TC16V332-A	CERA CAPACITOR AXIAL 3300PF
C203,211,212,215,217,219,221,	043 TC25V223-A	CERA CAPACITOR AXIAL 0.022uF
223-236,243,C245,246,248,250,251,253,	043 TC25V223-A	CERA CAPACITOR AXIAL 0.022uF
257,267,273,285,C306-308,311,312,	043 TC25V223-A	CERA CAPACITOR AXIAL 0.022uF
314,319,323,324,401,C506,507,509	043 TC25V223-A	CERA CAPACITOR AXIAL 0.022uF
C503,505	043 TC500V103	CERAMIC CAPACITOR 500V0.01uF
CL277,CR277, C237	043 TC50V101-A	CERA CAPACITOR AXIAL 100PF
C316,CL204,CR204, C207-210	043 TC50V102-A	CERA CAPACITOR AXIAL 1000PF
CL273, CR273	043 TC50V121-A	CERA CAPACITOR AXIAL 120PF
C242	043 TC50V151-A	CERA CAPACITOR AXIAL 150PF
C309	043 TC50V221-A	CERA CAPACITOR AXIAL 220PF
C280,CL271,CR271	043 TC50V271-A	CERA CAPACITOR AXIAL 270PF
C276	043 TC50V331-A	CERA CAPACITOR AXIAL 330PF
C328	043 TC50V471-A	CERA CAPACITOR AXIAL 470PF
C238-241,255,259,263,271,304,329	043 TC50V473-A	CERA CAPACITOR AXIAL 0.047uF
C275	043 TC50V680-A	CERA CAPACITOR AXIAL 68PF
C260	043 TC50V681-A	CERA CAPACITOR AXIAL 680PF
C302	043 TC50VCH180	CERA CAPACITOR AXIAL 18PF
C205,206	043 TC50VCH330	CERA CAPACITOR AXIAL 33PF
C317	044 50MSAN473J	SF CAPACITOR 0.047uF
C318	044 50MSAN563J	SF CAPACITOR 0.056uF
C540	044 DE1307E472M	SPARK KILLER
C301	044 S50V470PJ	STYROL CAPACITOR 47PF
TC301	045 TZ03N100	TRIMMER (WHT)
TC302	045 TZ03R200	TRIMMER (RED)
VR401	051 TRH063MC14R	SEMI-FIXD RESISTOR VOLUME 100K
VR204	051 TRH063MC16R	SEMI-FIXD RESISTOR VOLUME 1M
VR203,VR301	051 TRH063MCJ4R	SEMI-FIXD RESISTOR VOLUME 22K
VR206	051 TRH063MCS3R	SEMI-FIXD RESISTOR VOLUME 4K7
VR201	051 TRH063MCS4R	SEMI-FIXD RESISTOR VOLUME 47K
VR205	051 TRH063MCS5R	SEMI-FIXD RESISTOR VOLUME 470K
R277	054 2WS10JF	METAL FILM RESISTOR 10R
R509	054 2WS270JF	METAL FILM RESISTOR 270R
R507	054 1WS680JF	METAL FILM RESISTOR 680R
R230	054 MSR1/2W4M7J	METAL FILM RESISTOR 4.7MJ
R303,311,515	054 TMF16-1000	MF RESISTOR MF16 100R
R214-218,233,276,404,406,511	054 TMF16-1001	MF RESISTOR MF16 1K
R312, R282, R205	054 TMF16-1001	MF RESISTOR MF16 1K
R224,278,283,289,308,319,321	054 TMF16-1002	MF RESISTOR MF16 10K
R409,412,502,514,517, R508	054 TMF16-1002	MF RESISTOR MF16 10K
R203,204,207,272,273,291,301,302,R309	054 TMF16-1003	MF RESISTOR MF16 100K
320,RL205,RL295,RR205,RR295,R292,R208	054 TMF16-1003	MF RESISTOR MF16 100K
R299	054 TMF16-1004	MF RESISTOR MF16 1M
R284,285	054 TMF16-1200	MF RESISTOR MF16 120R
R516	054 TMF16-1202	MF RESISTOR MF16 12K
R240	054 TMF16-1500	MF RESISTOR MF16 150R
R300	054 TMF16-1501	MF RESISTOR MF16 1.5K

SYMBOL	PARTS NO.	DESCRIPTION
R243	054 TMF16-1502	MF RESISTOR MF16 15K
R506	054 TMF16-1801	MF RESISTOR MF16 1.8K
R274, R281	054 TMF16-1802	MF RESISTOR MF16 18K
RL294,RR294	054 TMF16-1803	MF RESISTOR MF16 180K
R505	054 TMF16-2000	MF RESISTOR MF16 200R
R314	054 TMF16-2001	MF RESISTOR MF16 2K
R222,231,232,306,307, R316,317	054 TMF16-2200	MF RESISTOR MF16 220R
R211-213	054 TMF16-2200	MF RESISTOR MF16 220R
R413, R513	054 TMF16-2202	MF RESISTOR MF16 22K
R247,298	054 TMF16-22R0	MF RESISTOR MF16 22R
R504, RM101	054 TMF16-2700	MF RESISTOR MF16 270R
R238	054 TMF16-2702	MF RESISTOR MF16 27K
R405,410	054 TMF16-3004	MF RESISTOR MF16 3M
R236,239,242,249,257,258,263,	054 TMF16-3300	MF RESISTOR MF16 330R
265,266,271,R226	054 TMF16-3300	MF RESISTOR MF16 330R
R246,260,279,286,408,RL201,	054 TMF16-3301	MF RESISTOR MF16 3.3K
RL206,RR201,RR206	054 TMF16-3301	MF RESISTOR MF16 3.3K
R411	054 TMF16-3302	MF RESISTOR MF16 33K
R244,248,262	054 TMF16-3900	MF RESISTOR MF16 390R
R261	054 TMF16-39R0	MF RESISTOR MF16 39R
R241,305,RL204,RR204	054 TMF16-4700	MF RESISTOR MF16 470R
R201,250,264,313,518	054 TMF16-4701	MF RESISTOR MF16 4.7K
R297,400, R501	054 TMF16-4701	MF RESISTOR MF16 4.7K
R275,520	054 TMF16-4702	MF RESISTOR MF16 47K
R223,401,402	054 TMF16-5600	MF RESISTOR MF16 560R
R225,288,407	054 TMF16-5601	MF RESISTOR MF16 5.6K
R519	054 TMF16-5602	MF RESISTOR MF16 56K
R245,259,RL202,RR202	054 TMF16-6801	MF RESISTOR MF16 6.8K
R403	054 TMF16-6803	MF RESISTOR MF16 680K
R304	054 TMF16-8200	MF RESISTOR MF16 820R
RL203,RR203	054 TMF16-8201	MF RESISTOR MF16 8.2K
R503	054 TMF16-8202	MF RESISTOR MF16 82K
R202,318	054 TMF16-82R0	MF RESISTOR MF16 82R
SW201	061 C-4176A08	POWER SWITCH
RLY201,202	063 G5A-237P	RELAY
JACK1	065 YKB21-5103A	3.5F JACK
ANT200	065 YKD31-0432	TERMINAL ANTenna
JACK2	066 C-4764A01	2P PIN JACK
ANT201	067 SC021058KN	TERMINAL ANTenna
CP201	068 00-8370-211	CONNECTOR POST
CP502,503	068 B2P3-VH	CONNECTOR POST
CP204	068 B7B-PH-KS	CONNECTOR POST
CN501	068 C-4652A05	CONNECTOR W/WIRE
CN503	068 C-4695A03	CONNECTOR W/WIRE (BLK)
JL200,JR200,	068 DM-2GM-O	MINI JUMPER PLUG (US)
JL201,JR201	068 DM-2GM-O	MINI JUMPER PLUG (EU)
CP501	068 MO5267-07	CONNECTOR POST
JL200,201,JR200,201	068 TD02SG-2	BASE/POST
CN203	072 C-4750A01	CONNECTOR W/WIRE (BLK)
FFE200	092 KST-F724HA	FRONT-END
016 X-1305C01-02 PCB ASSY		
	501 X-1305	PCB ASSY (TERMINAL)
IC601	031 HIN232CP	IC
IC602	031 PC817B	IC
RMC201	031 RPM7138H9	IC

SYMBOL	PARTS NO.	DESCRIPTION
QM101	032 TC536-FG	TRANSISTOR
D601-604	034 TRD12JST1	ZENER DIODE
C601-605	041 TUTES1H010-7TF	ELECTROLYTIC CAPACITOR 50V1uF
CM101	041 TUTES1H100-7TF	ELECTROLYTIC CAPACITOR 50V10uF
RM102	054 TMF16-1000	METAL MILM RESISTOR 100R
R601,602	054 TMF16-1001	METAL MILM RESISTOR 1K
RM103	054 TMF16-1500	METAL MILM RESISTOR 150R
R603	054 TMF16-2200	METAL MILM RESISTOR 220R
RM104	054 TMF16-4701	METAL MILM RESISTOR 4.7K
JACK5	065 YKB21-5103A	3.5F JACK WITH SWITCH
JACK4	065 YKB21-5111A	3.5F JACK WITH SWITCH
JACK3	066 SY010-8P/K	MODULAR JACK
CP604	068 B7B-PH-KS	CONNECTOR POST
CPM100	068 S2B-PH-KS	CONNECTOR POST
CPM103	068 S4B-PH-KS	CONNECTOR POST
016 X-1302B00 PCB ASSY		
	501 X-1302	PCB ASSY (FRONT)
XT101	023 CSTLS10MOG53-BO	CERAMIC RESONATOR
IC102	031 AT24C16A10PU-2.7	IC
IC101	031 CXP82832-346Q	IC
Q101	032 TC536-FG	TRANSISTOR
D101-108	034 T1N4148-86	DIODE
FL101	035 SVR12MM18	FL TUBE
C112	041 TUTES1H220-7TF	ELECTROLYTIC CAPACITOR 50V22uF
C101-108	043 TC50V101-A	CERAMIC CAPACITOR 100PF
C118	043 TC50V102-A	CERAMIC CAPACITOR 1000PF
C109,113,116	043 TC50V104-A	CERAMIC CAPACITOR 0.1uF
C110,111	043 TC50V473-A	CERAMIC CAPACITOR 0.047uF
C117	043 TC50V821-A	CERAMIC CAPACITOR 820PF
R136,152-159,160	054 TMF16-1002	METAL FILM RESISTOR 10K
R137-143,145	054 TMF16-1201	METAL FILM RESISTOR 1.2K
R150,151	054 TMF16-2R20	METAL FILM RESISTOR 2.2R
R144,146-149	054 TMF16-4702	METAL FILM RESISTOR 47K
SW101-126	061 C-4679A01	TACT SWITCH
FPC201	068 00-8370-217	FPC WIRE CONNECTOR 21P
CN103	068 C-4692A06	PH/SAN W/WIRE L=80
CN102	068 C-4692A26	PH/SAN W/WIRE L=200
CN101	068 C-4692A29	PH/SAN W/WIRE L=300
OTHERS		
	011 FP-537-B	BLACK PANEL ASSY
	011 FP-537-S	SILVER PANEL ASSY
	015 RP-387	PRINTED REAR CHASSIS
	019 4TSH-19#2	PLASTIC FOOT 50F
	021 RLA145A00	AM LOOP ANTENNA
TF201	022 T-1065N01	POWER TRANSFORMER
	034 SEL1124R	LED (RED) 1X5
	034 SEL1E24W	LED (BLUE) 1X5
	069 C-4629A01	AC INLET
	072 4TR-2489	3.5MM PLUG SHIELD CORD
	072 4TR-2875	RCA PIN CORD
	072 4TR-3228	T TYPE ANTENNA
	072 C-4621A03	AC CORD SET for USA
	072 C-4622A02	AC CORD SET for AUSTRALIA
	072 C-4623A02	AC CORD SET for UK
	072 C-4624A03	AC CORD SET for CEE

SYMBOL	PARTS NO.	DESCRIPTION
	081 TN3-09B00	INSIDE CARTON
	081 ZE-204	ETHAFORM MOULDING
	082 OMRT-1080-2	OWNERS MANUAL (EFGSD)
	092 RR-T92 / RR-T93	REMOTE UNIT

Addendum List for Black and Silver

RT1080/ -1

SYMBOL	PARTS	DESCRIPTION
①	011 FP-537-B	BLACK PANEL ASSY
②	011 FP-537-S	SILVER PANEL ASSY
③	011 TF3-01A00	H/S PANEL H80
	012 RV4-09A00	PUSH BUTTON 14F (BLK)
	012 RV4-09A01	PUSH BUTTON 14F (SLV)
	012 SK3-05A00	TACT BUTTON 9KEY(BLK)
	012 SK3-05A01	TACT BUTTON 9KEY(SLV)
	012 TN2-08A00	TACT BUTTON 15KEY(BLK)
	012 TN2-08A01	TACT BUTTON 15KEY(SLV)
	012 TN3-07A00	TACT BUTTON 2KEY(BLK)
	012 TN3-07A01	TACT BUTTON 2KEY(SLV)
	034 SEL1124R	LED (RED) 1X5
	034 SEL1E24W	LED (BLU) 1X5

Panel Assy is included:

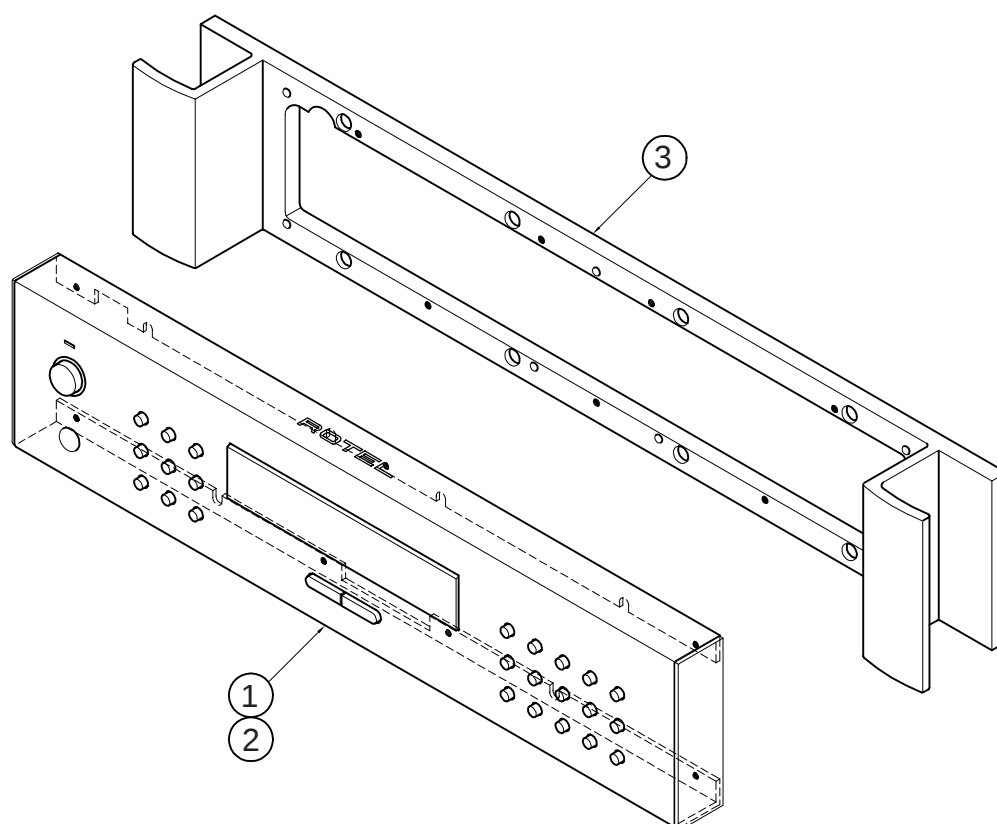
Panel Window

Side Cap

Knob Ring

Tact buttons

LED



Adjustment

■ FM

* Necessary measurement equipment

RDS/STEREO Multiplexer	1 unit
FM/AM Signal Generator	1 unit
Audio Signal Analyzer	1 unit
Oscilloscope	1 unit
Digital Volt Meter (DVM)	1 unit

(A) Center adjust

□ RDS/STEREO Multiplexer Setting

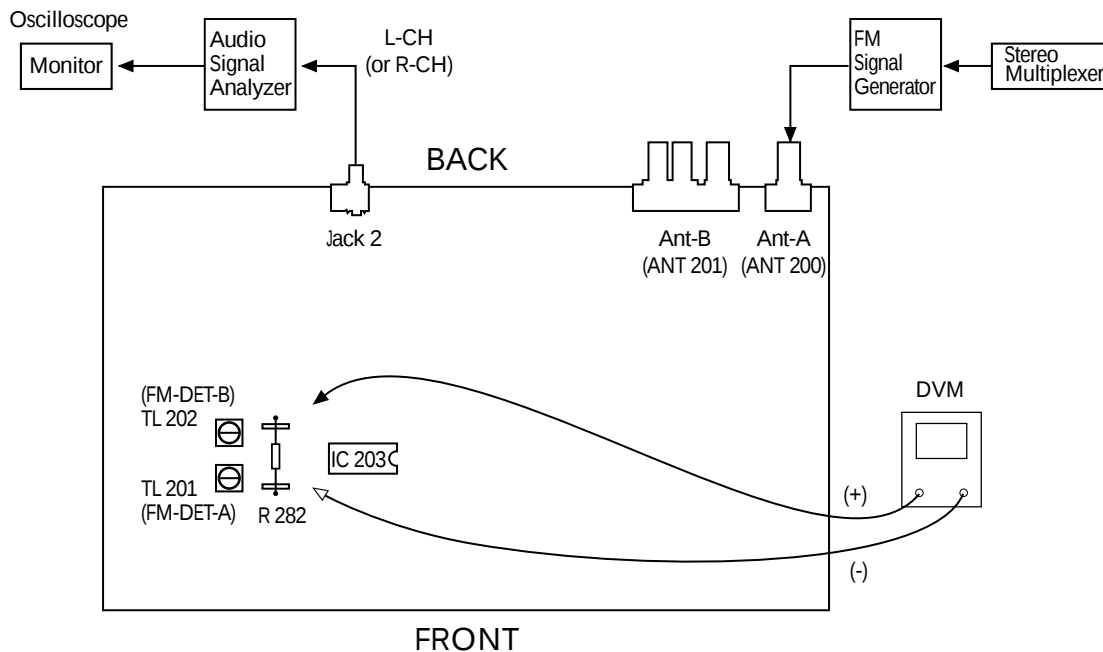
- MODE : MONO
- Audio Frequency : 1KHz

□ FM Signal Generator Setting

- Deviation : 75KHz
- Radio Frequency : 98.0MHz
- Output Level : 66dB

□ RT1080 Setting

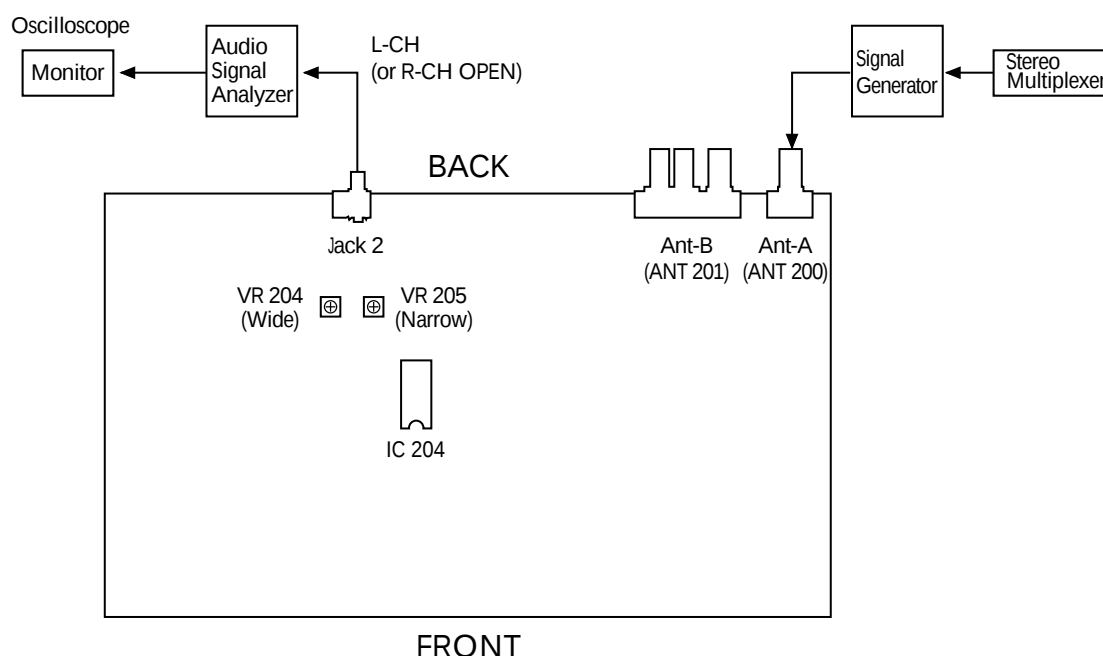
- FM Frequency : 98.0MHz
- Antenna Selection : A
- FM MODE : MONO
- IF MODE : WIDE



- ① Turn FM Signal Generator Modulation on
- ② Connect DVM (+)(-) terminals to both ends of resistor R282 and measure the volt.
- ③ Make this measured volt '0' by adjusting TL201(FM-DET-A Coil).
(The adjustment should be within $\pm 2\text{mV}$)
- ④ After this adjustment, measure THD(Total Harmonic Distortion) with Audio Signal Generator.
- ⑤ Adjust THD to minimum point with TL202(FM-DET-B Coil).
(THD should be within 0.5%)

(B) Channel Separation adjust

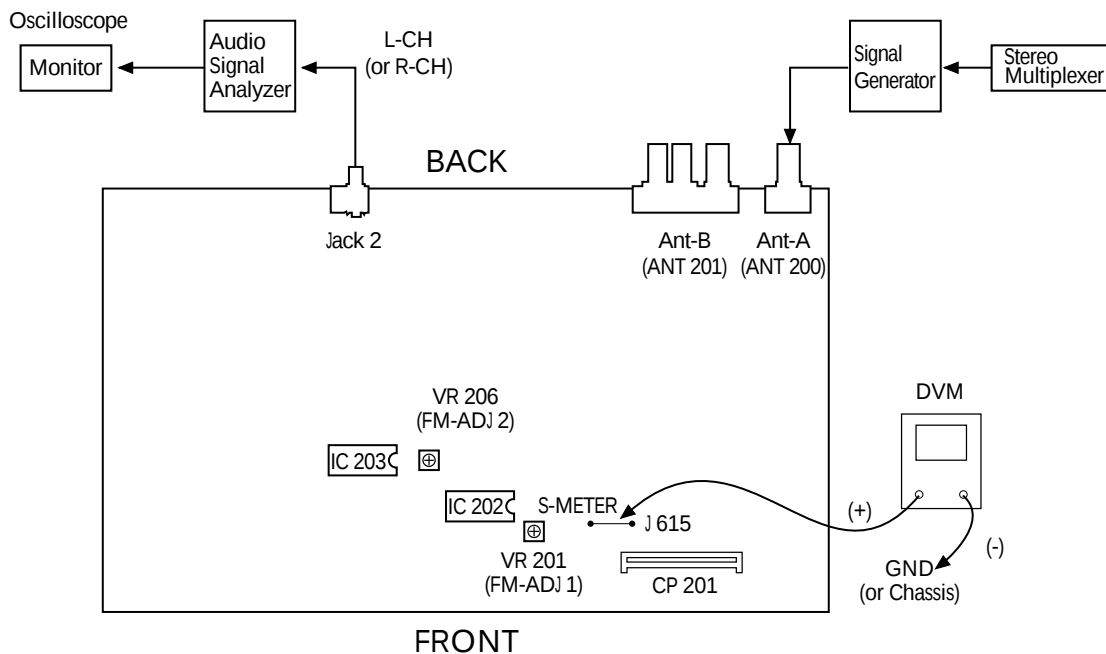
- ❑ RDS/STEREO Multiplexer Setting
 - MODE : STEREO (ONLY L-CH Signal OUT)
 - Audio Frequency : 1KHz
- ❑ FM Signal Generator Setting
 - Deviation : 75KHz
 - Radio Frequency : 98.0MHz
 - Output Level : 66dB
- ❑ RT1080 Setting
 - FM Frequency : 98.0MHz
 - Antenna Selection : A
 - FM MODE : STEREO
 - IF MODE : WIDE



- ① Turn FM Signal Generator Modulation on after modulating only L-CH at STEREO Multiplexer.
- ② Confirm if 'STEREO' indicator is turned 'ON' on the display in the WIDE MODE.
- 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 at STEREO Multiplexer.
- ⑤ Measure output level via Audio Signal Analyzer (measure per a dB)
- ⑥ Adjust output level to minimum position with VR204 (WIDE MODE CH-SEPA. ADJ.). (lower than -40dB)
- ⑦ Change RT1080 IF MODE to NARROW.
- ⑧ Repeat the above ①~⑤
- ⑨ Adjust output level to minimum point with VR205(NARROW MODE CH-SEPA. ADJ.). (lower than -38dB)

(C) TUNED Level adjust

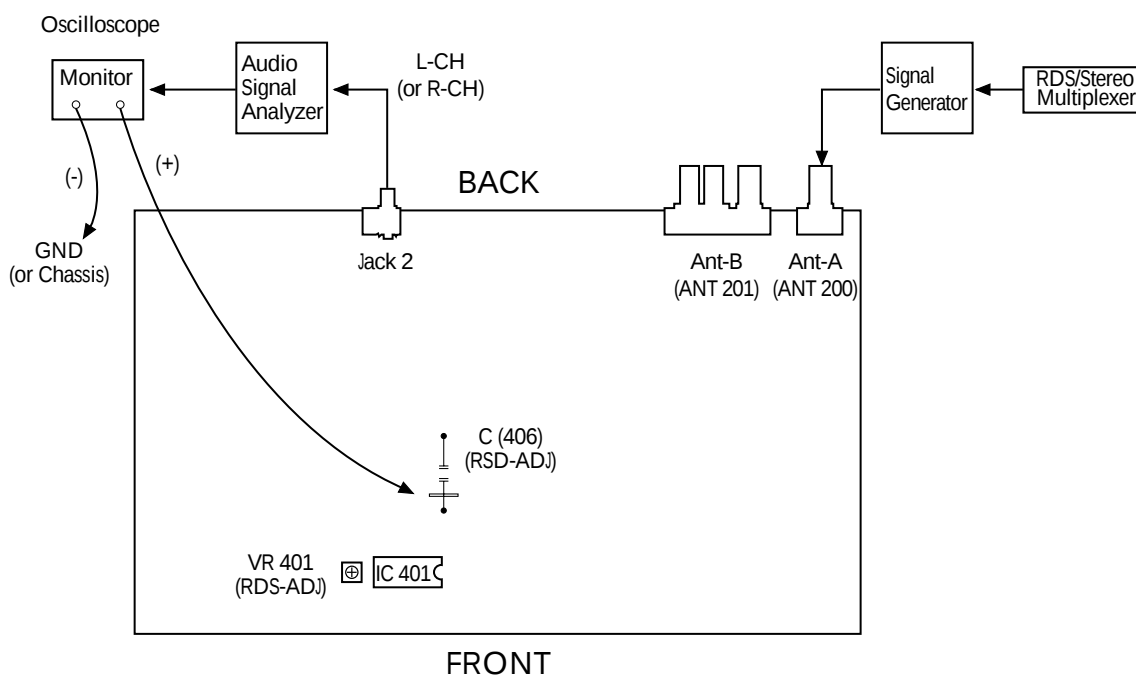
- ❑ RDS/STEREO Multiplexer Setting
 - MODE : STEREO
 - Audio Frequency : 1KHz
- ❑ FM Signal Generator Setting
 - Deviation : 75KHz
 - Radio Frequency : 98.0MHz
 - Output Level : 26dB
- ❑ RT1080 Setting
 - FM Frequency : 98.0MHz
 - Antenna Selection : A
 - FM MODE : STEREO
 - IF MODE : WIDE



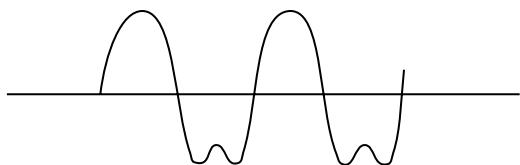
- ① Turn FM Signal Generator Modulation 'ON' (confirm if output level is 26dB)
- ② measure volt while connecting DVM (-) terminal to GND (or Chassis) & connecting (+) terminal to Jumper J615(S-METER).
- ③ Adjust volt to 1.2V with VR201 (FM-ADJ1).
- ④ Adjust VR206(FM-ADJ2) up to the moment where 'STEREO' & 'TUNED' indicator turns OFF & ON again.
- ⑤ Confirm if 'STEREO' & 'TUNED' turn OFF when decreasing the output level slowly from 26dB to 25dB, 24dB~~~.
(Repeat the above ③~④ if not OFF in lower than 24dB.)
- ⑥ Set RT1080's Search by MODE to AUTO at Signal Generator Output Level 26dB and start Auto search Tuning Encoder.
Confirm if search stops at FM Frequency 98.0MHz.
(Examine both of High Freq. →98.0MHz search, Low Freq. →98.0MHz search)

(D) RDS Level adjust

- ❑ RDS/STEREO Multiplexer Setting
 - MODE : STEREO
 - Audio Frequency : 1KHz
 - RDS MODE : ON
- ❑ FM Signal Generator Setting
 - Deviation : 75KHz
 - Radio Frequency : 98.0MHz
 - Output Level : 35dB
- ❑ RT1080 Setting
 - FM Frequency : 98.0MHz
 - Antenna Selection : A
 - FM MODE : STEREO
 - IF MODE : WIDE



- ① Make sure that RDS/STEREO Multiplexer RDS Modulation is ON and turn FM Signal Generator Modulation ON
- ② Connect oscilloscope terminal to low measuring point of C406(RDS ADJ) and measure. Make sure that the following waveform is output.



- ③ Adjust waveform to maximum level with VR401(RDS ADJ).
- ④ Confirm if 'RDS' indicator is ON.

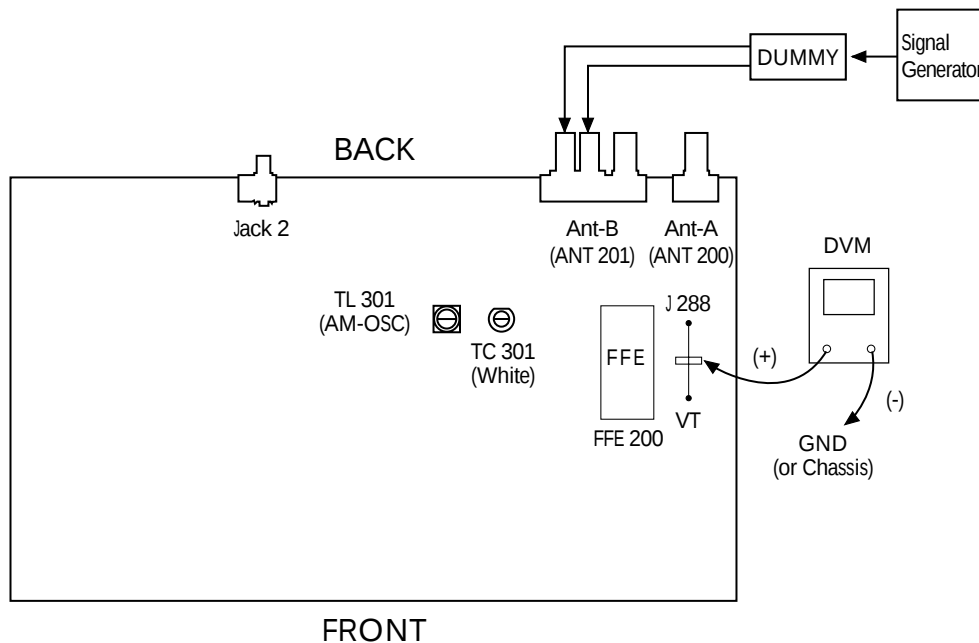
■ AM

* Necessary measurement equipment

AM Signal Generator	1 unit
Audio Signal Analyzer	1 unit
DUMMY	1 unit
Oscilloscope	1 unit
Digital Volt Meter (DVM)	1 unit

(A) VT adjust

□ AM Signal Generator Setting



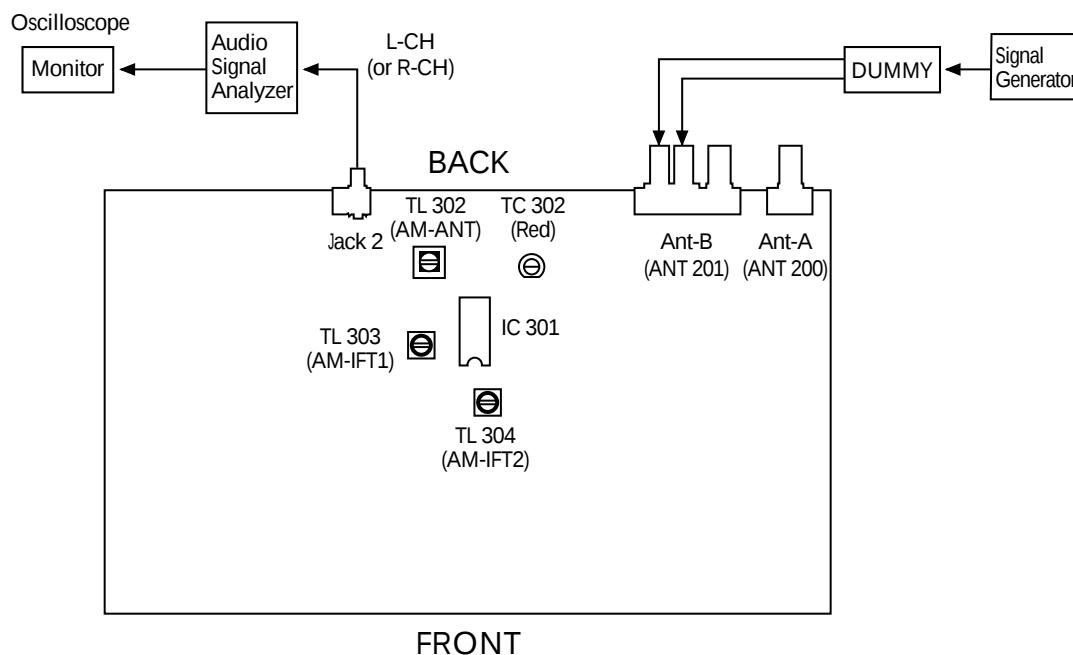
- ① Adjust AM Frequency of RT-955 to 522KHz.
- ② Connect (-) terminal of DVM with GND (or chassis) and connect (+) terminal with Jumper J288 (VT CHECK) and measure voltage. (Low Freq. VT)
- ③ Adjust VT to 1.1V with TL301 (AM-OSC Coil).
- ④ Adjust AM Frequency of RT-1080 to 1611KHz.
- ⑤ Measure VT and adjust VT to 7.5V with TC301 (WHITE Trimmer). (High Freq. VT)
- ⑥ Repeat above ② ~⑤ steps 2 or 3 times until VT becomes 1.1V at AM Freq. 522KHz, and VT becomes 7.5V at 1611KHz.

*In case of USA version, AM freq. Range is 520KHz ~ 1710KHz, adjust as below.

at 520KHz, VT = 1.1V (Low Freq. VT)
 at 1710KHz VT = 8.5V(High Freq. VT)

(B) Output Level adjust

- ❑ AM Signal Generator Setting
 - Modulation : 30%
 - Audio Frequency : 400Hz
 - Radio Frequency : 603KHz / 1404KHz / 999KHz
 - Output Level : 84dB
- ❑ RT1080 Setting
 - AM Frequency : 603KHz



- ① Turn AM Signal Generator Modulation ON
- ② Adjust RT1080 AM Freq. to 603KHz and measure output level with Audio Signal analyzer.
- ③ Adjust output level to maximum point with TL302 (AM-ANT).
- ④ Adjust AM Signal Generator & RT1080 AM Freq. to 1404KHz and measure output level.
- ⑤ Adjust output level to maximum point with TC302 (RED Trimmer).
- ⑥ Repeat above ② ~ ③ steps 2~3 times until adjusting to best output level.
- ⑦ Adjust AM Signal Generator & RT1080 AM Freq. to 999KHz and measure output level.
- ⑧ Adjust level to maximum position with TL303 (AM-IFT1).
- ⑨ Adjust output level of AM Signal Generator to 100dB and measure THD.
- ⑩ Adjust THD to minimum position with TL304 (AM-IFT2).
(Lower than 1.2%)

*In case of USA version, AM Freq. step is 10KHz. So, change the standard freq. as below.
 522KHz → 520KHz,
 1404KHz → 1400KHz,
 999KHz → 1000KHz,

(C) TUNED Level adjust

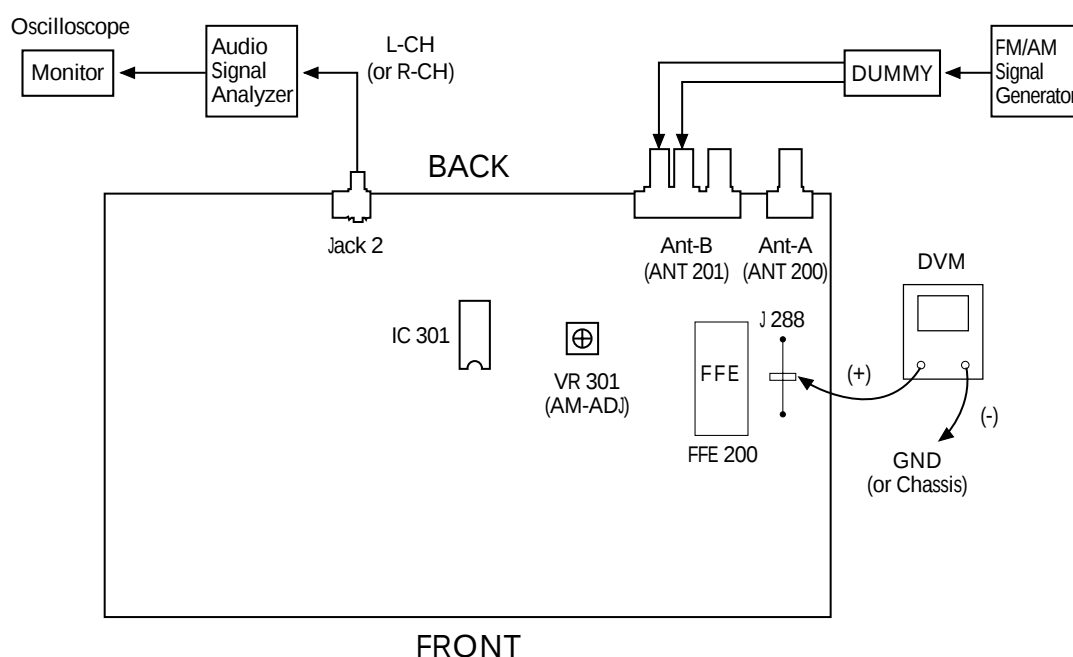
– Audio Frequency : 1KHz

❑ AM Signal Generator Setting

- Modulation : 30%
- Audio Frequency : 400Hz
- Radio Frequency : 999KHz
- Output Level : 84dB

❑ RT1080 Setting

- AM Frequency : 999KHz



- ① Turn AM Signal Generator Modulation ON (Make sure if Output level is 84dB)
- ② Adjust VR301 (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 Set RT1080's Search MODE to AUTO at AM Signal Generator Output Level 84dB and start Auto search by Tuning Encoder.
Confirm if search stops at AM Frequency 999KHz.
(Check with both of High Freq. → 999KHz search, Low Freq. → 999KHz search)

*In case of USA version, AM Freq. Step is 10KHz.
So, check above steps with 1000KHz instead of 999KHz.

Default setting:

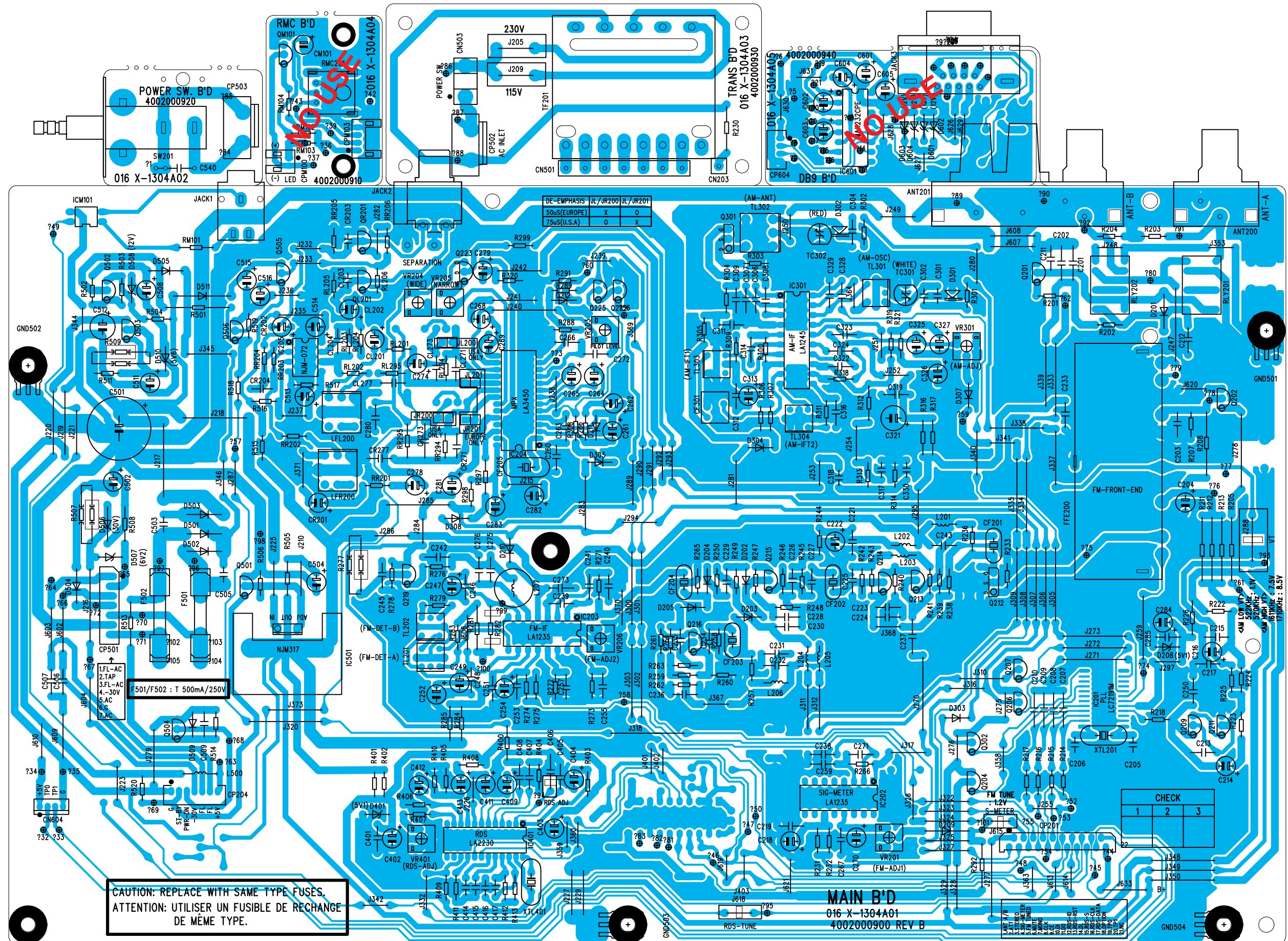
Press MEMORY + 9 button 3 sec while press Power button ON. ----- for US version

Press MEMORY + 0 button 3 sec while press Power button ON. ----- for EU version

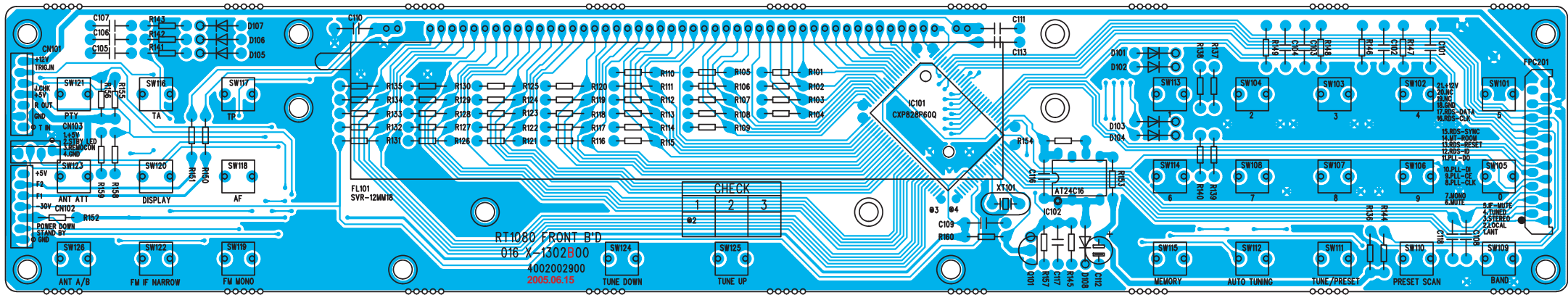
<Memo>

PCB Assembly 1/2

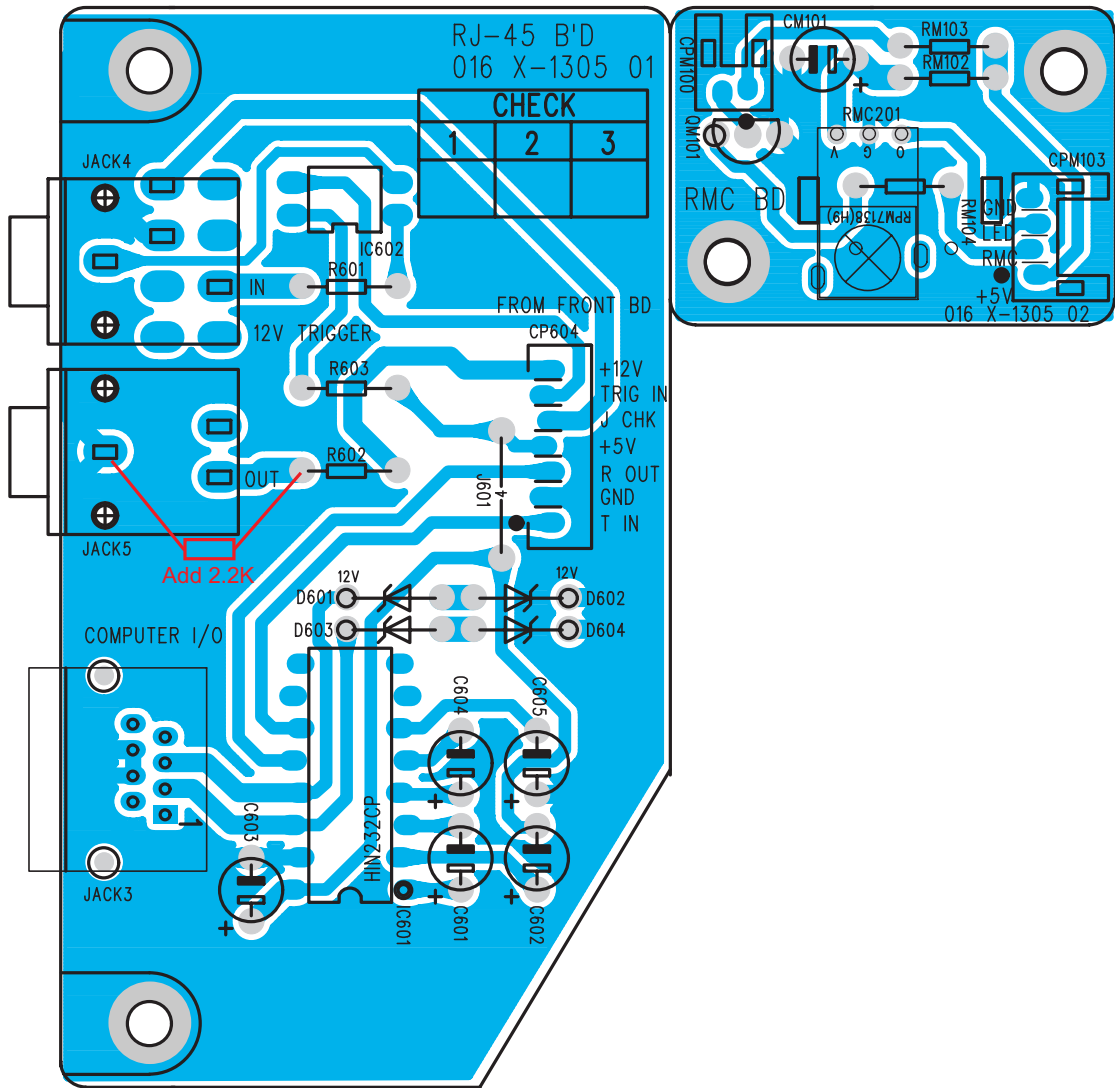
Main PCB 016 X-1304



Front PCB 016 X-1302B00



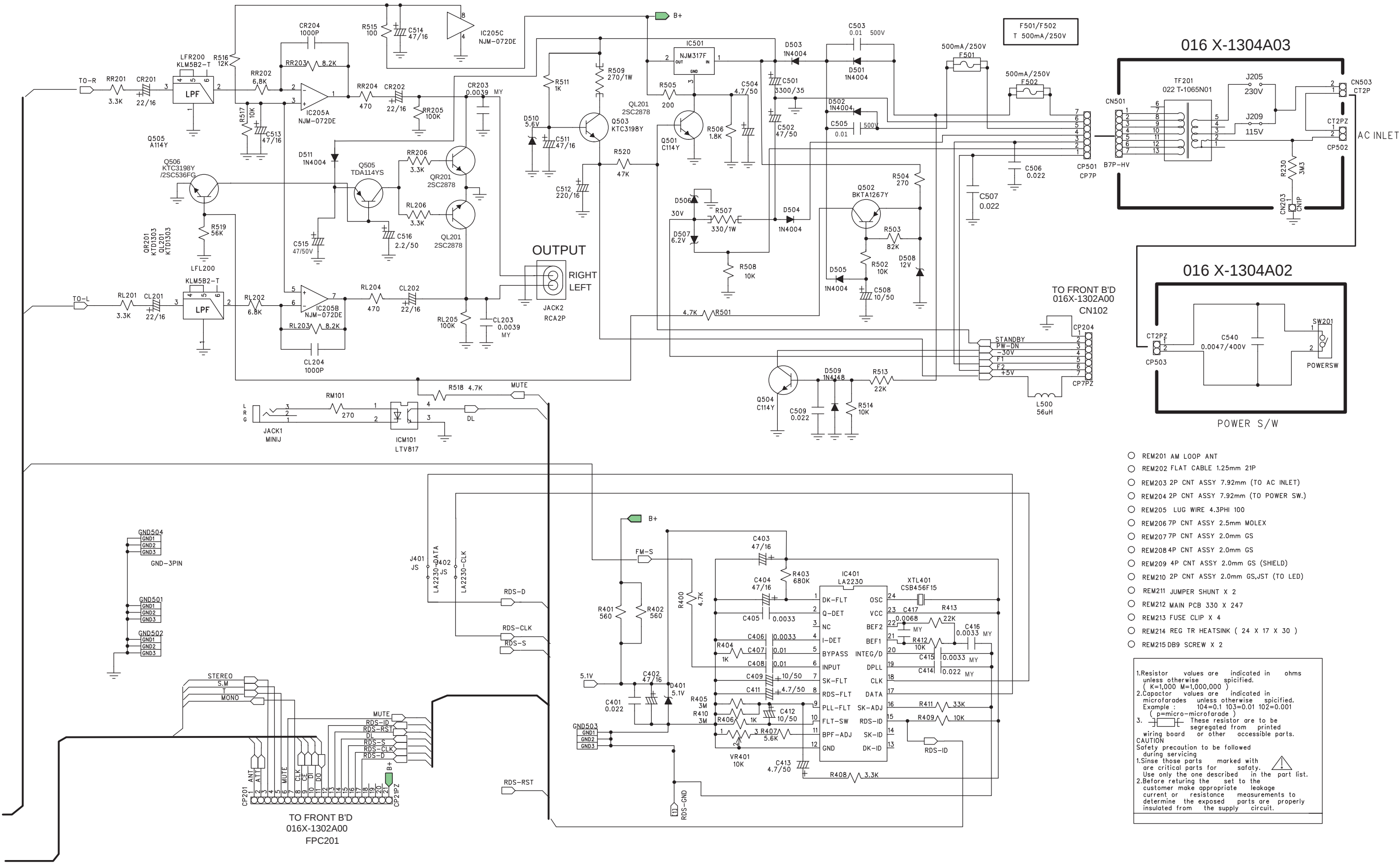
Terminal PCB 016 X-1305C01-02



Schematic Diagram 1/3



Main PCB 016 X-1304A01~05 (2/2)



- REM201 AM LOOP ANT
- REM202 FLAT CABLE 1.25mm 21P
- REM203 2P CNT ASSY 7.92mm (TO AC INLET)
- REM204 2P CNT ASSY 7.92mm (TO POWER SW.)
- REM205 LUG WIRE 4.3PHI 100
- REM206 7P CNT ASSY 2.5mm MOLEX
- REM207 7P CNT ASSY 2.0mm GS
- REM208 4P CNT ASSY 2.0mm GS
- REM209 4P CNT ASSY 2.0mm GS (SHIELD)
- REM210 2P CNT ASSY 2.0mm GS,JST (TO LED)
- REM211 JUMPER SHUNT X 2
- REM212 MAIN PCB 330 X 247
- REM213 FUSE CLIP X 4
- REM214 REG TR HEATSINK (24 X 17 X 30)
- REM215 DB9 SCREW X 2

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.

Front PCB 016 X-1302B00 , Terminal PCB 016 X-1305C01~02

