Quality Uncompromised

ROTEL®

Technical Manual

AM/FM STEREO TUNER
RT-955

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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 μV/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):	120 volts, 60 Hz (USA version) 230 volts, 50 Hz (European version)
Weight:	3.7 kg/8.2 lb.
Dimensions (W x H x D):	440 x 72 x 286 mm 17 3/8" x 2 7/8" x 11 1/4"

THE ROTEL CO., LTD

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

Serial. NO.
Beginning

Y-329A-00065C/S-S

Parts List-1

SYMBOL	PARTS NO.	DESCRIPTION
	X-1273-01 PCB ASSEMBLY	
ANT200	ANTENNA TERMINAL 1P	ANTENNA-A
ANT201	ANTENNA TERMINAL 3P	ANTENNA-B
C201.202	0.01UF	CERAMIC CAPACITOR
C203	0.022UF	CERAMIC CAPACITOR
C204	100UF/16V	ELECTRIC CAPACITOR
C205.206	33PF-CH	CERAMIC CAPACITOR(CH TYPE)
C207-210	1000PF	CERAMIC CAPACITOR
C211.212	0.022UF	CERAMIC CAPACITOR
C213	0.01UF	CERAMIC CAPACITOR
C214	3.3UF/50V	ELECTRIC CAPACITOR
C215	0.022UF	CERAMIC CAPACITOR
C216	100UF/16V	ELECTRIC CAPACITOR
C217	0.022UF	CERAMIC CAPACITOR
C218	47UF/16V	ELECTRIC CAPACITOR
C219	0.022UF	CERAMIC CAPACITOR
C221	0.022UF	CERAMIC CAPACITOR
C222	47UF/16V	ELECTRIC CAPACITOR
C223-236	0.022UF	CERAMIC CAPACITOR
C237	100PF	CERAMIC CAPACITOR
C238-241	0.047UF	CERAMIC CAPACITOR
C242	150PF	CERAMIC CAPACITOR
C243	0.022UF	CERAMIC CAPACITOR
C245.246	0.022UF	CERAMIC CAPACITOR
C247	1UF/50V	ELECTRIC CAPACITOR
C248	0.022UF	CERAMIC CAPACITOR
C249	1UF/50V	ELECTRIC CAPACITOR
C250.251	0.022UF	CERAMIC CAPACITOR
C252	100UF/16V	ELECTRIC CAPACITOR
C253	0.022UF	CERAMIC CAPACITOR
C254	1UF/50V	ELECTRIC CAPACITOR
C255	0.047UF	CERAMIC CAPACITOR
C257	0.022UF	CERAMIC CAPACITOR
C259	0.047UF	CERAMIC CAPACITOR
C260	680PF	CERAMIC CAPACITOR
C261	0.47UF/50V	ELECTRIC CAPACITOR
C262	1UF/50V	ELECTRIC CAPACITOR
C263	0.047UF	CERAMIC CAPACITOR
C264.265	1UF/50V	ELECTRIC CAPACITOR
C266	0.01UF	CERAMIC CAPACITOR
C267	0.022UF	CERAMIC CAPACITOR
C268.269	0.47UF/50V	ELECTRIC CAPACITOR
C270	4.7UF/50V	ELECTRIC CAPACITOR
C271	0.047UF	CERAMIC CAPACITOR
C272	0.01UF	CERAMIC CAPACITOR
C273	0.022UF	CERAMIC CAPACITOR
C274	10UF/50V	ELECTRIC CAPACITOR
C275	68PF	CERAMIC CAPACITOR
C276	330PF	CERAMIC CAPACITOR
C278.279	10UF/50V	ELECTRIC CAPACITOR
C280	270PF	CERAMIC CAPACITOR
C281	33UF/35V	ELECTRIC CAPACITOR
C282-284	100UF/16V	ELECTRIC CAPACITOR
C285	0.022UF	CERAMIC CAPACITOR
C301	470PF-POLY	FILM CAPACITOR
C302	18PF-CH	CERAMIC CAPACITOR(CH TYPE)

SYMBOL	PARTS NO.	DESCRIPTION
C304	0.047UF	CERAMIC CAPACITOR
C306-308	0.022UF	CERAMIC CAPACITOR
C309	220PF	CERAMIC CAPACITOR
C311.312	0.022UF	CERAMIC CAPACITOR
C313	47UF/16V	ELECTRIC CAPACITOR
C314	0.022UF	CERAMIC CAPACITOR
C316	1000PF	CERAMIC CAPACITOR
C317	0.047UF-M	MYLAR CAPACITOR
C318	0.056UF-M	MYLAR CAPACITOR
C319	0.022UF	CERAMIC CAPACITOR
C321	100UF/16V	ELECTRIC CAPACITOR
C322	0.01UF	CERAMIC CAPACITOR
C323.324	0.022UF	CERAMIC CAPACITOR
C325	3.3UF/50V	ELECTRIC CAPACITOR
C326	4.7UF/50V	ELECTRIC CAPACITOR
C327	1UF/50V	ELECTRIC CAPACITOR
C328	470PF	CERAMIC CAPACITOR
C329	0.047UF	CERAMIC CAPACITOR
C330	0.022UF-M	MYLAR CAPACITOR
C401	0.022UF	CERAMIC CAPACITOR
C402-404	47UF/16V	ELECTRIC CAPACITOR
C405.406	0.0033UF	CERAMIC CAPACITOR
C407.408	0.01UF	CERAMIC CAPACITOR
C409	10UF/50V	ELECTRIC CAPACITOR
C411	4.7UF/50V	ELECTRIC CAPACITOR
C412	10UF/50V	ELECTRIC CAPACITOR
C413	4.7UF/50V	ELECTRIC CAPACITOR
C414	0.022UF-M	MYLAR CAPACITOR
C415.416	0.0033UF-M	MYLAR CAPACITOR
C417	0.0068UF-M	MYLAR CAPACITOR
C501	3300UF/35V	ELECTRIC CAPACITOR
C502	47UF/50V	ELECTRIC CAPACITOR
C503	0.068UF-M	MYLAR CAPACITOR
C504	4.7UF/50V	ELECTRIC CAPACITOR
C505	0.068UF-M	MYLAR CAPACITOR
C506.507	0.022UF	CERAMIC CAPACITOR
C508	10UF/50V	ELECTRIC CAPACITOR
C509	0.022UF	CERAMIC CAPACITOR
C511	47UF/16V	ELECTRIC CAPACITOR
C512	220UF/16V	ELECTRIC CAPACITOR
C513.514	47UF/16V	ELECTRIC CAPACITOR
C515	47UF/35V	ELECTRIC CAPACITOR
C516	2.2UF/50V	ELECTRIC CAPACITOR
CL201.202	22UF/16V	ELECTRIC CAPACITOR
CL203	0.0039UF-M	MYLAR CAPACITOR
CL204	1000PF	CERAMIC CAPACITOR
CL271	270PF	CERAMIC CAPACITOR
CL273	120PF	CERAMIC CAPACITOR
CL277	100PF	CERAMIC CAPACITOR
CR201.202	22UF/16V	ELECTRIC CAPACITOR
CR203	0.0039UF-M	MYLAR CAPACITOR
CR204	1000PF	CERAMIC CAPACITOR
CR271	270PF	CERAMIC CAPACITOR
CR273	120PF	CERAMIC CAPACITOR
CR277	100PF	CERAMIC CAPACITOR

Parts List-2

SYMBOL	PARTS NO.	DESCRIPTION
CF201.202	FM FILTER 10.7MM-A	FM IF CERAMIC FILTER
CF203	FM FILTER 10.7MJA10-A	FM IF CERAMIC FILTER
CF204	FM FILTER 10.7MM-A	FM IF CERAMIC FILTER
CF205	CSB456F11	CERAMIC RESONATOR
CF301	SFPS450H	FILTER FOR AM
D201	1N4004	SWITCHING DIODE
D202-205	1N4148	SWITCHING DIODE
D208	ZENER 5.1V	ZENER DIODE
D209-212	1N4148	SWITCHING DIODE
D301.302	KV1236Z	VARACTOR DIODE
D303-305	1N4148	SWITCHING DIODE
D307.308	1N4148	SWITCHING DIODE
D401	ZENER 5.1V	ZENER DIODE
D501-505	1N4004	SWITCHING DIODE
D506	ZENER 30V	ZENER DIODE
D507	ZENER 6.2V	ZENER DIODE
D508	ZENER 12V	ZENER DIODE
D509	1N4148	SWITCHING DIODE
D510	ZENER 5.6V	ZENER DIODE
D511	1N4004	SWITCHING DIODE
F501.502	036 5ST500	MINI FUSE 250V T500MA
FFE200	FTA4-460H	FM FRONT-END
IC201	LC72191M	PLL IC
IC202	LA1235	SIGNAL METER IC
IC203	LA1235	FM IF IC
IC204	LA3450	MPX IC
IC205	NJM072DE	DUAL OP AMP
IC301	LA1245	AM IF IC
IC401	LA2230	RDS IC
IC501	NJM317F	REGULATOR IC
☆	HEAT SINK(24X17X30)	REG.IC HEAT SINKER
ICM101	LTV817	PHOTO COUPLER IC
J321	4.7K	RESISTOR 5%
JACK1	MINI JACK	MULTI-ROOM JACK
JACK2	RCA 2P	RCA JACK
L201-206	56UH	INDUCTOR
L207	20.8MH	FTZ COIL
L500	56UH	INDUCTOR
LFL200	KLM5B2-T	MPX LPF COIL
LFR200	KLM5B2-T	MPX LPF COIL
Q201.202	KTC3198Y	TRANSISTOR
Q204	DTA114Y	TRANSISTOR
Q206.207	DTA114Y	TRANSISTOR
Q209	2SC1740S	TRANSISTOR
Q211	2SC1740S	TRANSISTOR
Q212	2SK192GR	FET
Q213-216	KTC3195Y	TRANSISTOR
Q219	KTC3198Y	TRANSISTOR
Q222	DTC114Y	TRANSISTOR
Q223	2SK117	FET
Q225	DTA114Y	TRANSISTOR
Q301	2SK192GR	FET
Q302	DTA114Y	TRANSISTOR
Q501	DTC114Y	TRANSISTOR
Q502	BKTA1267Y	TRANSISTOR

SYMBOL	PARTS NO.	DESCRIPTION
Q503	KTC3198Y	TRANSISTOR
Q504	DTC114Y	TRANSISTOR
Q505	DTA114Y	TRANSISTOR
Q506	KTC3198Y	TRANSISTOR
QL201	KTD1303	TRANSISTOR
QR201	KTD1303	TRANSISTOR
R201	4.7K	RESISTOR 5%
R202	82R	RESISTOR 5%
R203.204	100K	RESISTOR 5%
R205	1K	RESISTOR 5%
R207.208	100K	RESISTOR 5%
R211-213	220R	RESISTOR 5%
R214-218	1K	RESISTOR 5%
R222	220R	RESISTOR 5%
R223	560R	RESISTOR 5%
R224	10K	RESISTOR 5%
R225	5.6K	RESISTOR 5%
R226	330R	RESISTOR 5%
R231.232	220R	RESISTOR 5%
R233	1K	RESISTOR 5%
R236	330R	RESISTOR 5%
R238	27K	RESISTOR 5%
R239	330R	RESISTOR 5%
R240	150R	RESISTOR 5%
R241	470R	RESISTOR 5%
R242	330R	RESISTOR 5%
R243	15K	RESISTOR 5%
R244	390R	RESISTOR 5%
R245	6.8K	RESISTOR 5%
R246	3.3K	RESISTOR 5%
R247	22R	RESISTOR 5%
R248	390R	RESISTOR 5%
R249	330R	RESISTOR 5%
R250	4.7K	RESISTOR 5%
R257.258	330R	RESISTOR 5%
R259	6.8K	RESISTOR 5%
R260	3.3K	RESISTOR 5%
R261	39R	RESISTOR 5%
R262	390R	RESISTOR 5%
R263	330R	RESISTOR 5%
R264	4.7K	RESISTOR 5%
R265.266	330R	RESISTOR 5%
R271	330R	RESISTOR 5%
R272.273	100K	RESISTOR 5%
R274	18K	RESISTOR 5%
R275	47K	RESISTOR 5%
R276	1K	RESISTOR 5%
R277	10R(1W)	WATT RESISTOR
R278	10K	RESISTOR 5%
R279	3.3K	RESISTOR 5%
R281	18K	RESISTOR 5%
R282	1K	RESISTOR 5%
R283	10K	RESISTOR 5%
R284.285	120K	RESISTOR 5%
R286	3.3K	RESISTOR 5%

Parts List-3

SYMBOL	PARTS NO.	DESCRIPTION
R288	5.6K	RESISTOR 5%
R289	10K	RESISTOR 5%
R291.292	100K	RESISTOR 5%
R297	4.7K	RESISTOR 5%
R298	22R	RESISTOR 5%
R299	1M	RESISTOR 5%
R300	1.5K	RESISTOR 5%
R301.302	100K	RESISTOR 5%
R303	100R	RESISTOR 5%
R304	820R	RESISTOR 5%
R305	470R	RESISTOR 5%
R306.307	220R	RESISTOR 5%
R308	10K	RESISTOR 5%
R309	100K	RESISTOR 5%
R311	100R	RESISTOR 5%
R312	1K	RESISTOR 5%
R313	4.7K	RESISTOR 5%
R314	2K	RESISTOR 5%
R316.317	220R	RESISTOR 5%
R318	82R	RESISTOR 5%
R319	10K	RESISTOR 5%
R320	100K	RESISTOR 5%
R321	10K	RESISTOR 5%
R401.402	560R	RESISTOR 5%
R403	680R	RESISTOR 5%
R404	1K	RESISTOR 5%
R405	3M	RESISTOR 5%
R406	1K	RESISTOR 5%
R407	5.6K	RESISTOR 5%
R408	3.3K	RESISTOR 5%
R409	10K	RESISTOR 5%
R410	3M	RESISTOR 5%
R411	33K	RESISTOR 5%
R412	10K	RESISTOR 5%
R413	22K	RESISTOR 5%
R501	4.7K	RESISTOR 5%
R502	10K	RESISTOR 5%
R503	82R	RESISTOR 5%
R504	270R	RESISTOR 5%
R505	200R	RESISTOR 5%
R506	1.8K	RESISTOR 5%
R507	330R(1W)	WATT RESISTOR
R508	10K	RESISTOR 5%
R509	270R(1W)	WATT RESISTOR
R511	1K	RESISTOR 5%
R513	22K	RESISTOR 5%
R514	10K	RESISTOR 5%
R515	100R	RESISTOR 5%
R516	12K	RESISTOR 5%
R517	10K	RESISTOR 5%
R518	4.7K	RESISTOR 5%
R519	56K	RESISTOR 5%
R520	47K	RESISTOR 5%
RL201	3.3K	RESISTOR 5%
RL202	6.8K	RESISTOR 5%

SYMBOL	PARTS NO.	DESCRIPTION
RL203	8.2K	RESISTOR 5%
RL204	470R	RESISTOR 5%
RL205	100K	RESISTOR 5%
RL206	3.3K	RESISTOR 5%
RL294	180K	RESISTOR 5%
RL295	100K	RESISTOR 5%
RM101	270R	RESISTOR 5%
RR201	3.3K	RESISTOR 5%
RR202	6.8K	RESISTOR 5%
RR203	8.2K	RESISTOR 5%
RR204	470R	RESISTOR 5%
RR205	100K	RESISTOR 5%
RR206	3.3K	RESISTOR 5%
RR294	180K	RESISTOR 5%
RR295	100K	RESISTOR 5%
RLY201.202	G5A-237P DC12V	RELAY
TC301	TRIMER 10P(WHITE)	VARIABLE CAPACITOR
TC302	TRIMER 20P(RED)	VARIABLE CAPACITOR
TL201	FM-DET-A	FM DET.COIL
TL202	FM-DET-B	FM DET.COIL
TL301	AM-OSC1	AM OSC.COIL
TL302	AM-ANT2	AM ANT.COIL
TL303	AM-IFT1	AM IFT COIL
TL304	AM-IFT2	AM IFT COIL
VR201	VR.47K	VARIABLE RESISTOR
VR203	VR.22K	VARIABLE RESISTOR
VR204	VR.1M	VARIABLE RESISTOR
VR205	VR.470K	VARIABLE RESISTOR
VR206	VR.4.7K	VARIABLE RESISTOR
VR301	VR.22K	VARIABLE RESISTOR
VR401	VR.10K	VARIABLE RESISTOR
XTL201	XTAL 7.2MHZ	CRYSTAL
XTL401	CSB456F15	CERAMIC RESONATOR
	X-1273-02 PCB ASSEMBLY	
C101-107	100PF	CERAMIC CAPACITOR
C110.111	0.047UF	CERAMIC CAPACITOR
C112	22UF/16V(SE TYPE)	ELECTRIC CAPACITOR
C113	0.1UF	CERAMIC CAPACITOR
C114.115	820PF	CERAMIC CAPACITOR
C116	0.1UF	CERAMIC CAPACITOR
C117	820PF	CERAMIC CAPACITOR
C118	1000PF	CERAMIC CAPACITOR
C119	100PF	CERAMIC CAPACITOR
C121	0.1UF	CERAMIC CAPACITOR
D101-107	1N4148	SWITCHING DIODE
D118	1N4148	SWITCHING DIODE
ENC101	EC16B24202	VR ENCODER
FL101	SVR-12MM18(35S/12G)	VFD FOR RDS/RBDS
Q101	KTC3198Y	TRANSISTOR
R101-135	120K	RESISTOR 5%
R136	10K	RESISTOR 5%
R137-143	1K2	RESISTOR 5%
R146-149	47K	RESISTOR 5%
R150.151	2R2	RESISTOR 5%

Parts List-4

SYMBOL	PARTS NO.	DESCRIPTION
R152	10K	RESISTOR 5%
R155.156	10K	RESISTOR 5%
R157	47K	RESISTOR 5%
R158-163	10K	RESISTOR 5%
R164	1K2	RESISTOR 5%
SW101-112	TACT SWITCH(SKHVBH)	TACT SWITCH
SW114-116	TACT SWITCH(SKHVBH)	TACT SWITCH
SW118-120	TACT SWITCH(SKHVBH)	TACT SWITCH
SW122-124	TACT SWITCH(SKHVBH)	TACT SWITCH
SW126-128	TACT SWITCH(SKHVBH)	TACT SWITCH
U101	CXP82832-182Q	CPU
U102	AT24C16	EEP ROM
XT101	CST10.00MTW	RESONATOR 10.0MHZ
	X-1273-03 PCB ASSEMBLY	
CM101	10UF/16V(SE TYPE)	ELECTRIC CAPACITOR
QM101	KTC3198Y	TRANSISTOR
RM102	100R	RESISTOR 5%
RM103	150R	RESISTOR 5%
RM104	4.7K	RESISTOR 5%
RMC201	CRV1M352-00B	REMOTE CONTROL SENSOR
	X-1273-04 PCB ASSEMBLY	
C540	0.0047UF/400V	SPARK KILLER(AC CERAMIC)
SW201	POWER SW.TV-5	SWITCH
	X-1273-05 PCB ASSEMBLY	
TF201	022 T-1065N01	POWER TRANSFORMER

SYMBOL	PARTS NO.	DESCRIPTION
	X-1273-06 PCB ASSEMBLY	
C601-605	1UF/50V	ELECTRIC CAPACITOR
D601-604	ZENER 12V	ZENER DIODE
IC601	MAX232CPE	RS232 DRIVER IC
JACK3	DB9 JACK(MALE)	DB9 JACK
	OTHERS	
	011 FP-504	FRONT PANEL ASSY
	012 SK4-06A00	KNOB 33F
	012 4TQF-15	POWER BUTTON 14X14
	014 C-4550A02	UPPER COVER
	014 4TQN-12B#5	BOTTOM BOARD
	015 RP-360	PRINTED REAR CHASSIS
	019 4TSH-19#2	PLASTIC FOOT 50F
	021 RLA145A00	AM LOOP ANTENNA
	034 SEL1124R	LED
	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-4620A01	AC CORD SET for STD
	072 C-4622A01	AC CORD SET for AUSTRALIA
	072 C-4623A01	AC CORD SET for UK
	072 C-4624A01	AC CORD SET for CEE
	081 SK4-10A00	INSIDE CARTON
	081 TZ-164-1	STYROL SIDE MOULDING
	092 RR-T91	REMOTE UNIT

Adjustment

■ FM

* Necessary measurement equipment

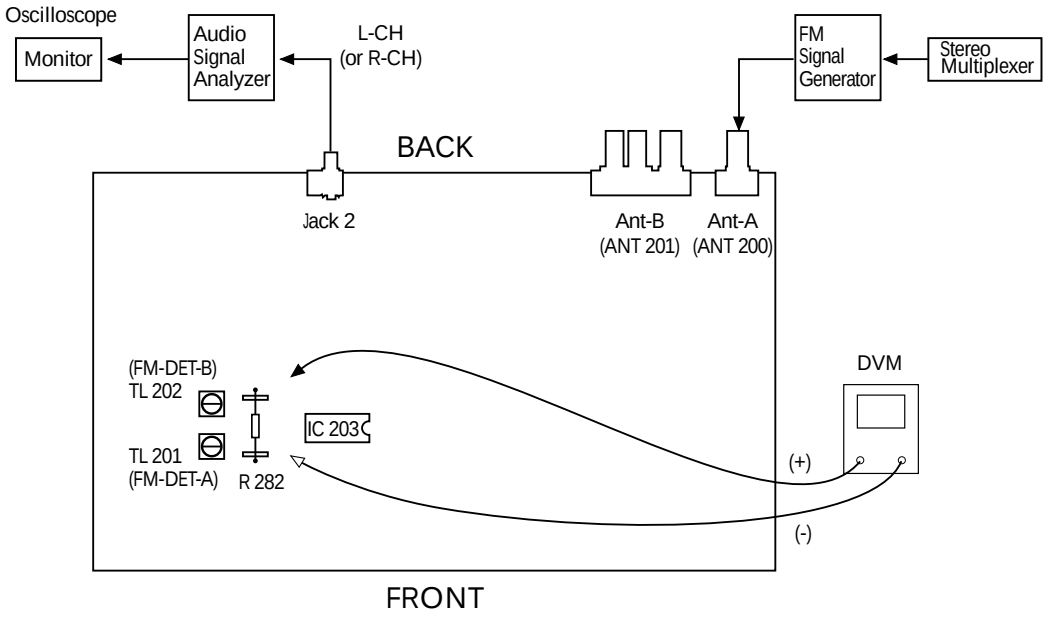
RDS/STEREO Multiplexer	1 unit
FM/AM Signal Generator	1 unit
Audio Signal Analyzer	1 unit
Oscilloscope	1 unit
Digital Volt Meter (DVM)	1 unit

(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

❏ RT955 Setting
- – FM Frequency : 98.0MHz
- – Antenna Selection : A
- – FM MODE : MONO
- – IF MODE : WIDE



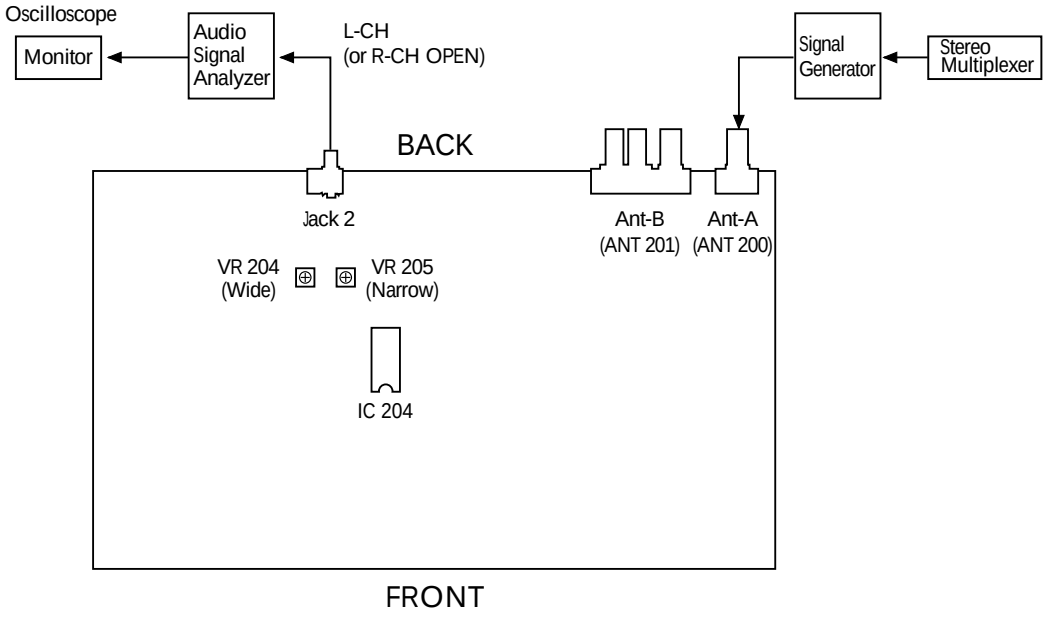
① Turn FM Signal Generator Modulation on
② Connect DVM (+)(-) terminals to both ends of resistor R282 and measure the volt.
③ Make this measured volt '0' by adjusting TL201(FM-DET-A Coil).
(The adjustment should be within ±2mV)
④ After this adjustment, measure THD(Total Harmonic Distortion) with Audio 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

❏ RT955 Setting
- – FM Frequency : 98.0MHz
- – Antenna Selection : A
- – FM MODE : STEREO
- – IF MODE : WIDE



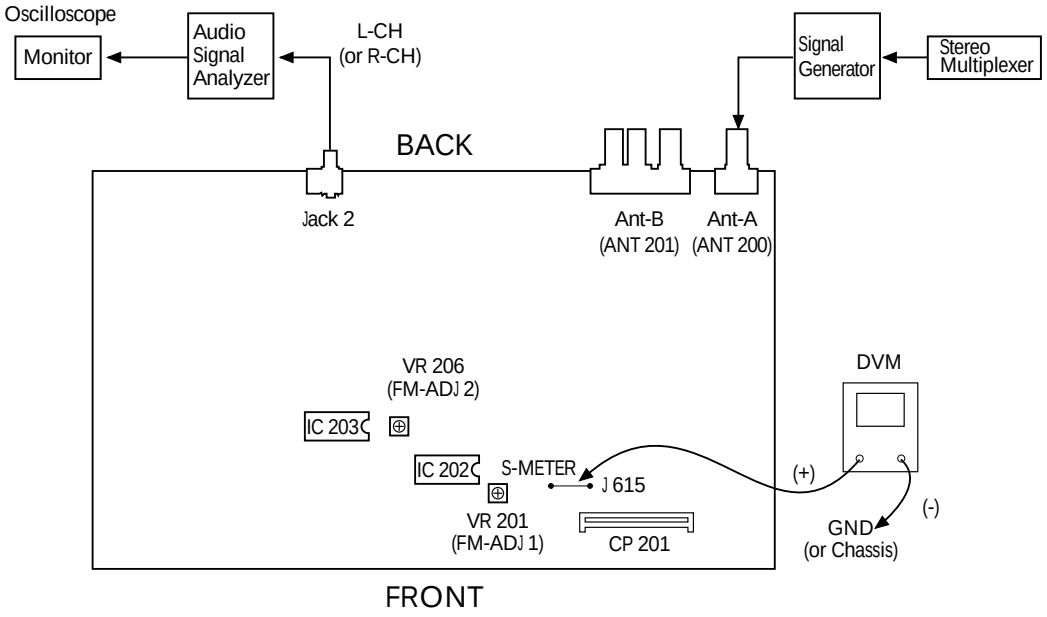
① Turn FM Signal Generator Modulation on after modulating only L-CH at STEREO Multiplexer.
② Confirm if 'STEREO' indicator is turned 'ON' on the display in the WIDE MODE.
③ Measure output level via Audio Signal Analyzer and make the level as standard.
④ Turn FM Signal Generator Modulation on after modulating 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 RT955 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

❏ RT955 Setting
- – FM Frequency : 98.0MHz
- – Antenna Selection : A
- – FM MODE : STEREO
- – IF MODE : WIDE



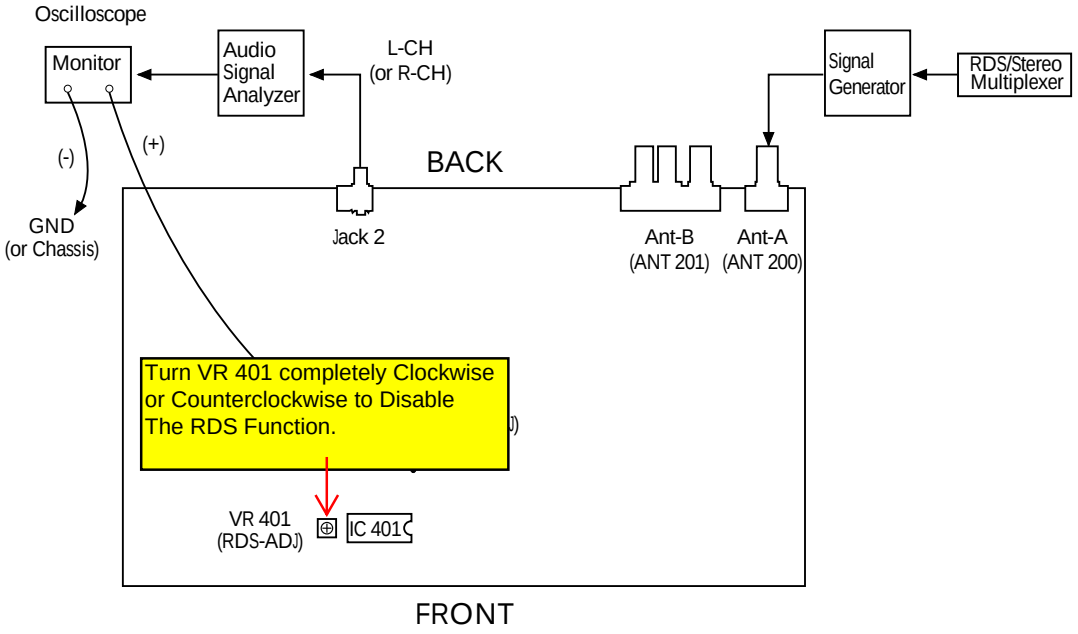
① Turn FM Signal Generator Modulation 'ON' (confirm if output level is 26dB)
② measure volt while connecting DVM (-) terminal to GND (or Chassis) & connecting (+) terminal to Jumper J615(S-METER).
③ Adjust volt to 1.2V with VR201 (FM-ADJ1).
④ Adjust VR206(FM-ADJ2) up to the moment where 'STEREO' & 'TUNED' 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 RT955'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

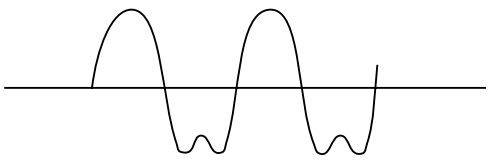
❏ FM Signal Generator Setting
- – Deviation : 75KHz
- – Radio Frequency : 98.0MHz
- – Output Level : 35dB

❏ RT955 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.

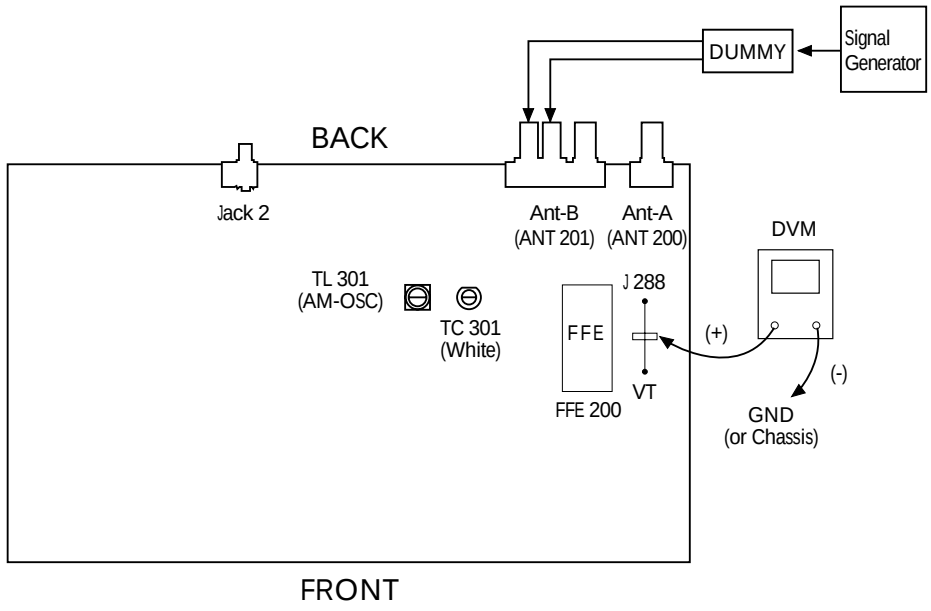
■ AM

* 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



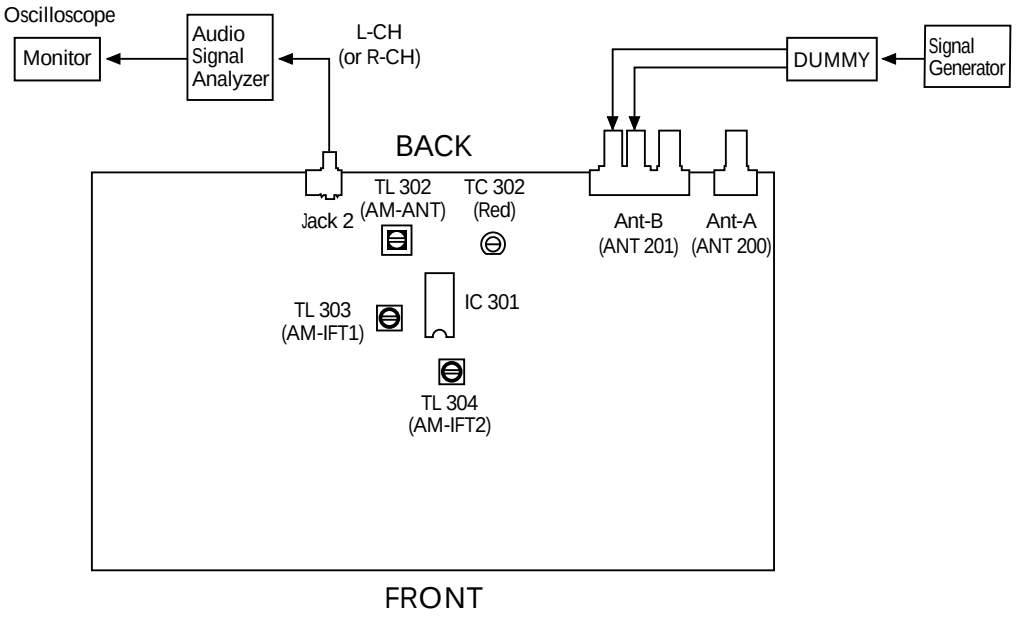
① Adjust AM Frequency of RT-955 to 522KHz.
② Connect (-) terminal of DVM with GND (or chassis) and connect (+) terminal with Jumper J288 (VT CHECK) and measure voltage. (Low Freq. VT)
③ Adjust VT to 1.1V with TL301 (AM-OSC Coil).
④ Adjust AM Frequency of RT-955 to 1611KHz.
⑤ Measure VT and adjust VT 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

❑ RT955 Setting
- – AM Frequency : 603KHz



① Turn AM Signal Generator Modulation ON
② Adjust RT955 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 & RT955 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 & RT955 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%)

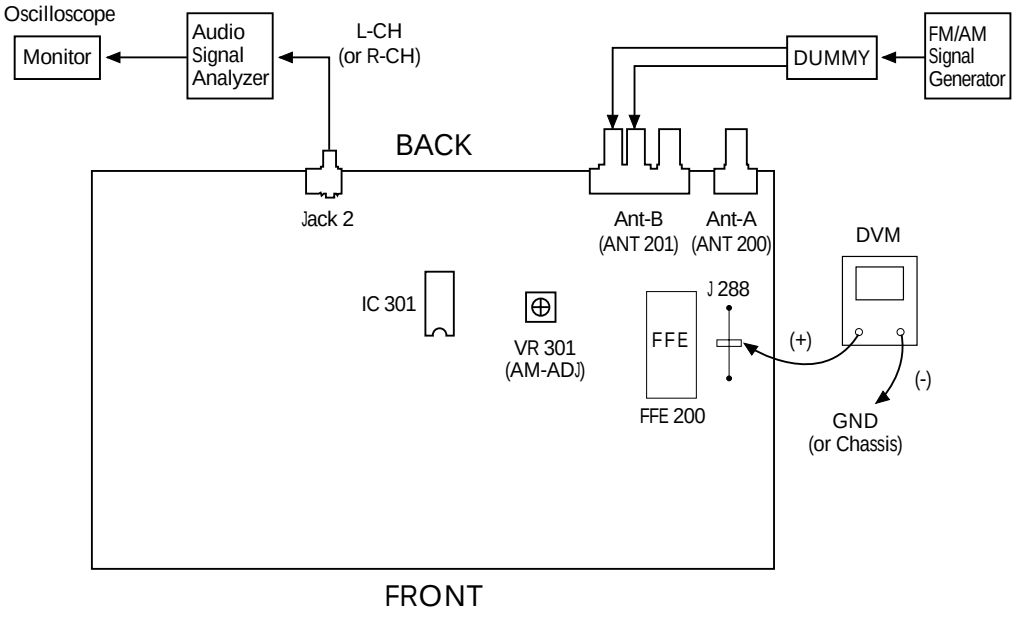
*In case of USA version, AM Freq. step is 10KHz. So, change the standard freq. as below.
522KHz → 520KHz,
1404KHz → 1400KHz,
999KHz → 1000KHz,

(C) TUNED Level adjust

– Audio Frequency : 1KHz

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

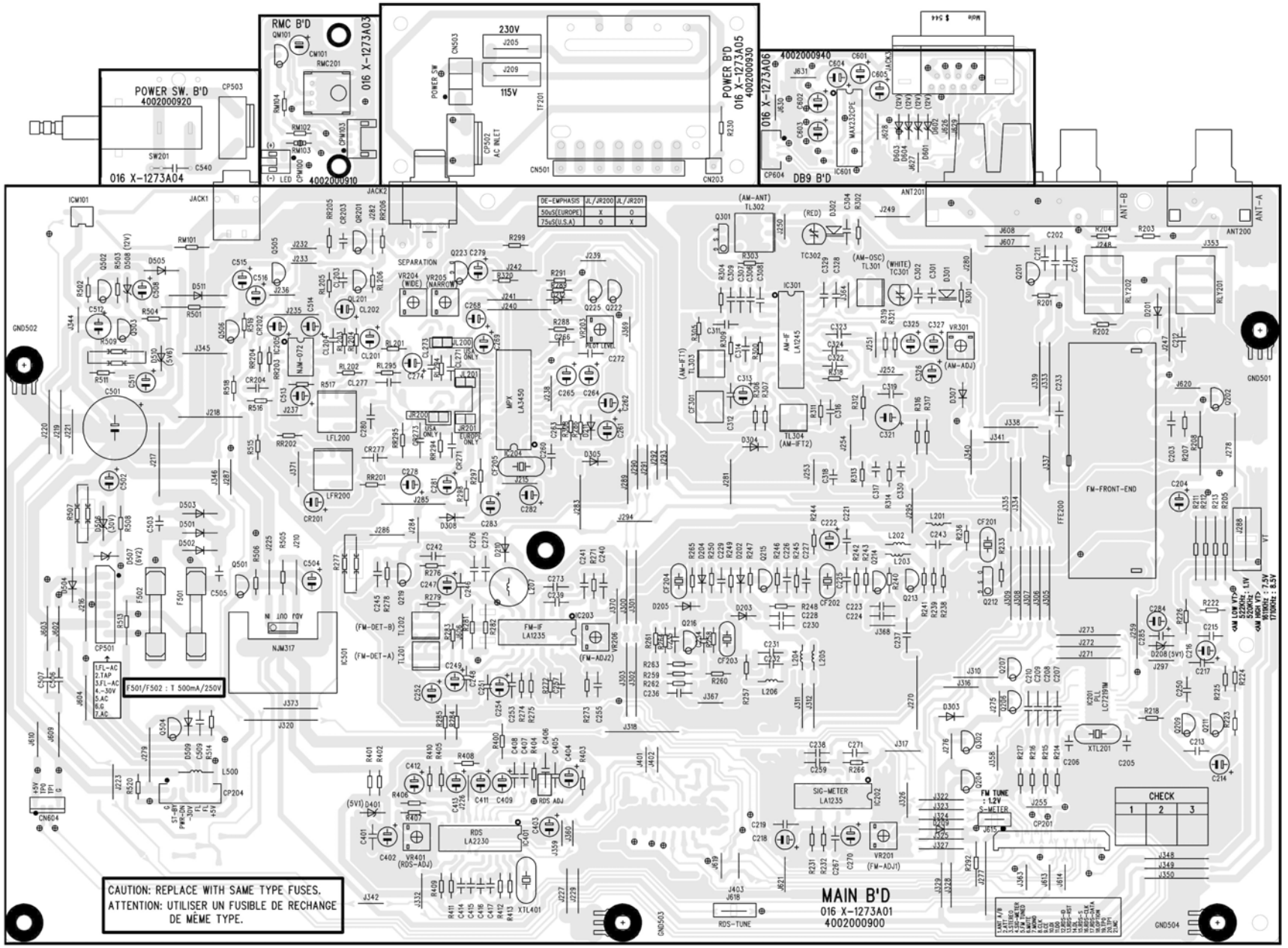
❑ RT955 Setting
- – AM Frequency : 999KHz



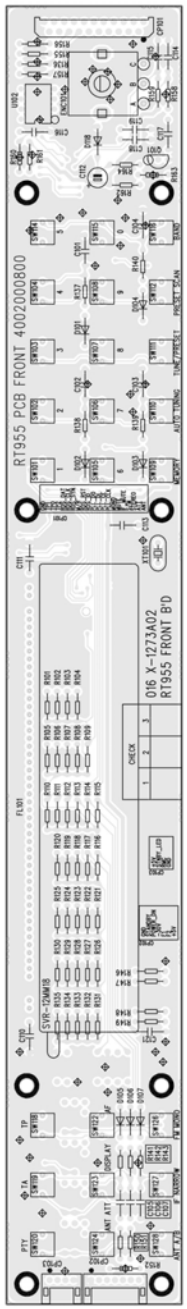
① Turn AM Signal Generator Modulation ON (Make sure if Output level is 84dB)
② Adjust VR301 (AM-ADJ) up to the moment where 'TUNED' indicator turns turns OFF & ON again.
③ Confirm if 'TUNED' turns OFF when decreasing the output level of AM signal Generator slowly from 84dB to 80dB.
④ Set RT955's Search MODE to AUTO at AM Signal Generator Output Level 84dB and start Auto search by Tunning Encoder.
Confirm if search stops at AM Frequency 999KHz.
(Check with both of High Freq. → 999KHz search, Low Freq. → 999KHz search)

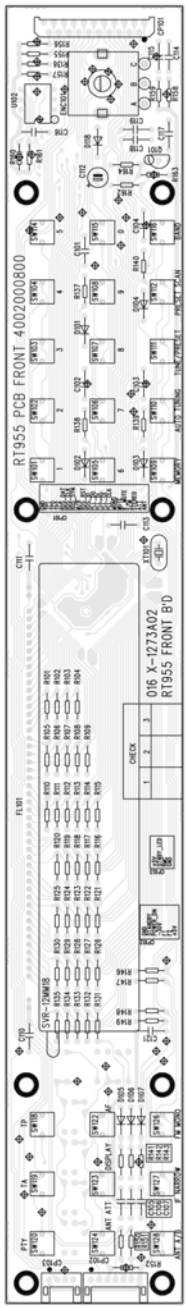
*In case of USA version, AM Freq. Step is 10KHz.
So, check above steps with 1000KHz instead of 999KHz.

PCB Assembly

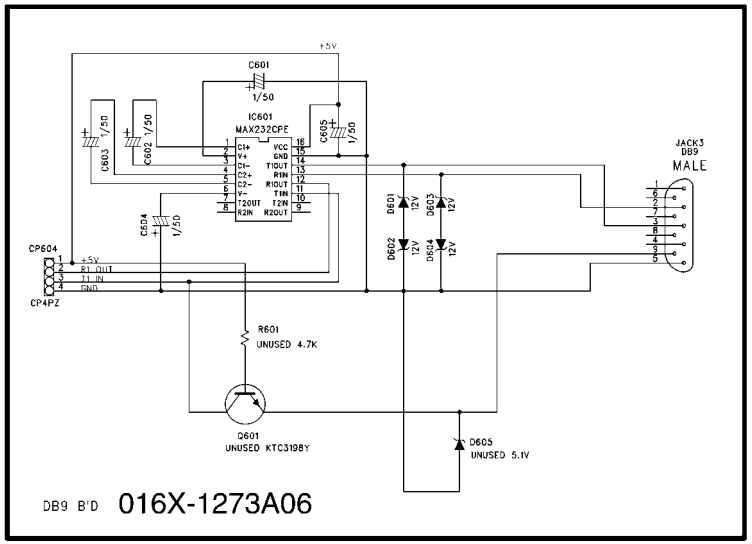


PCB Assembly-2

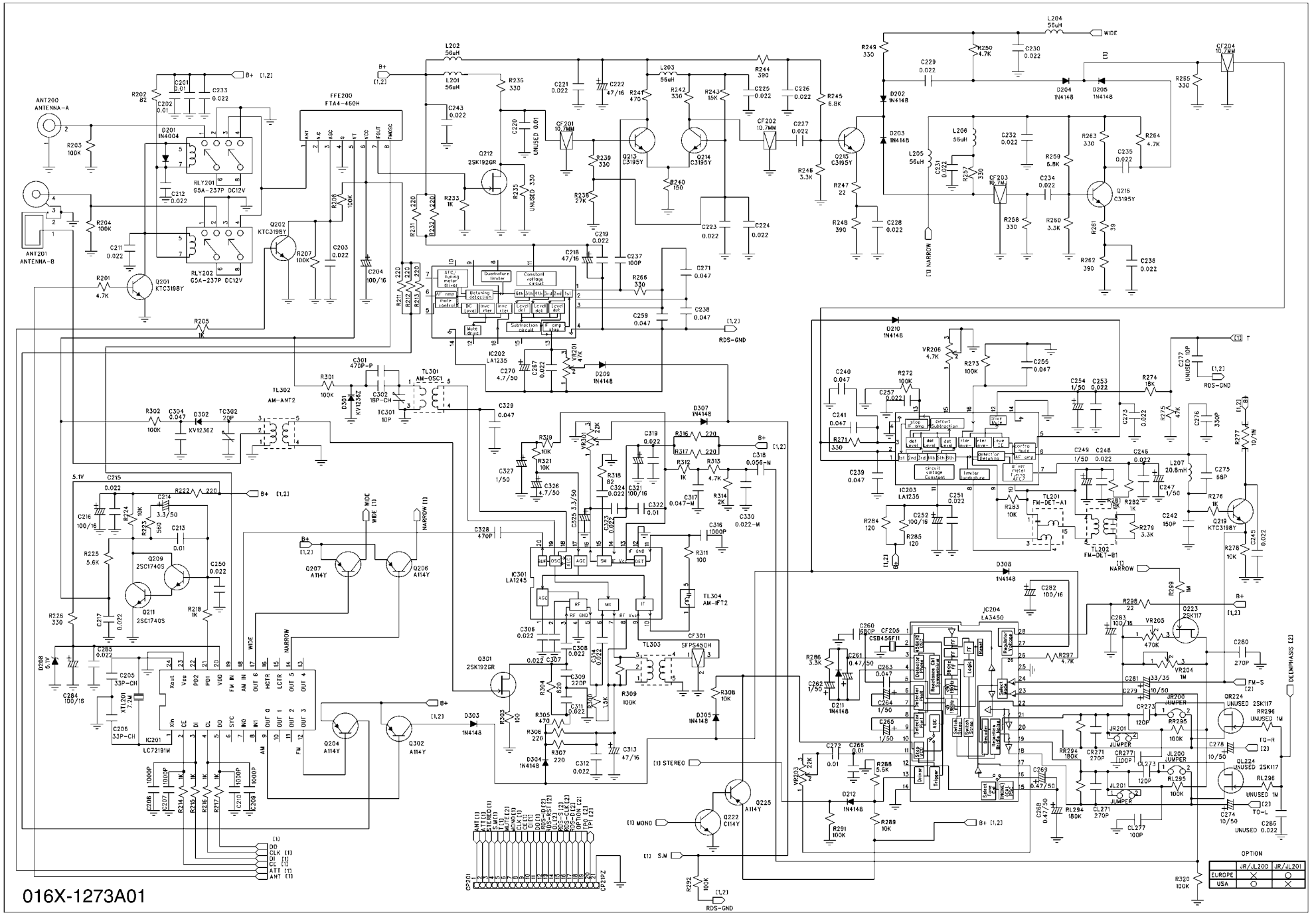




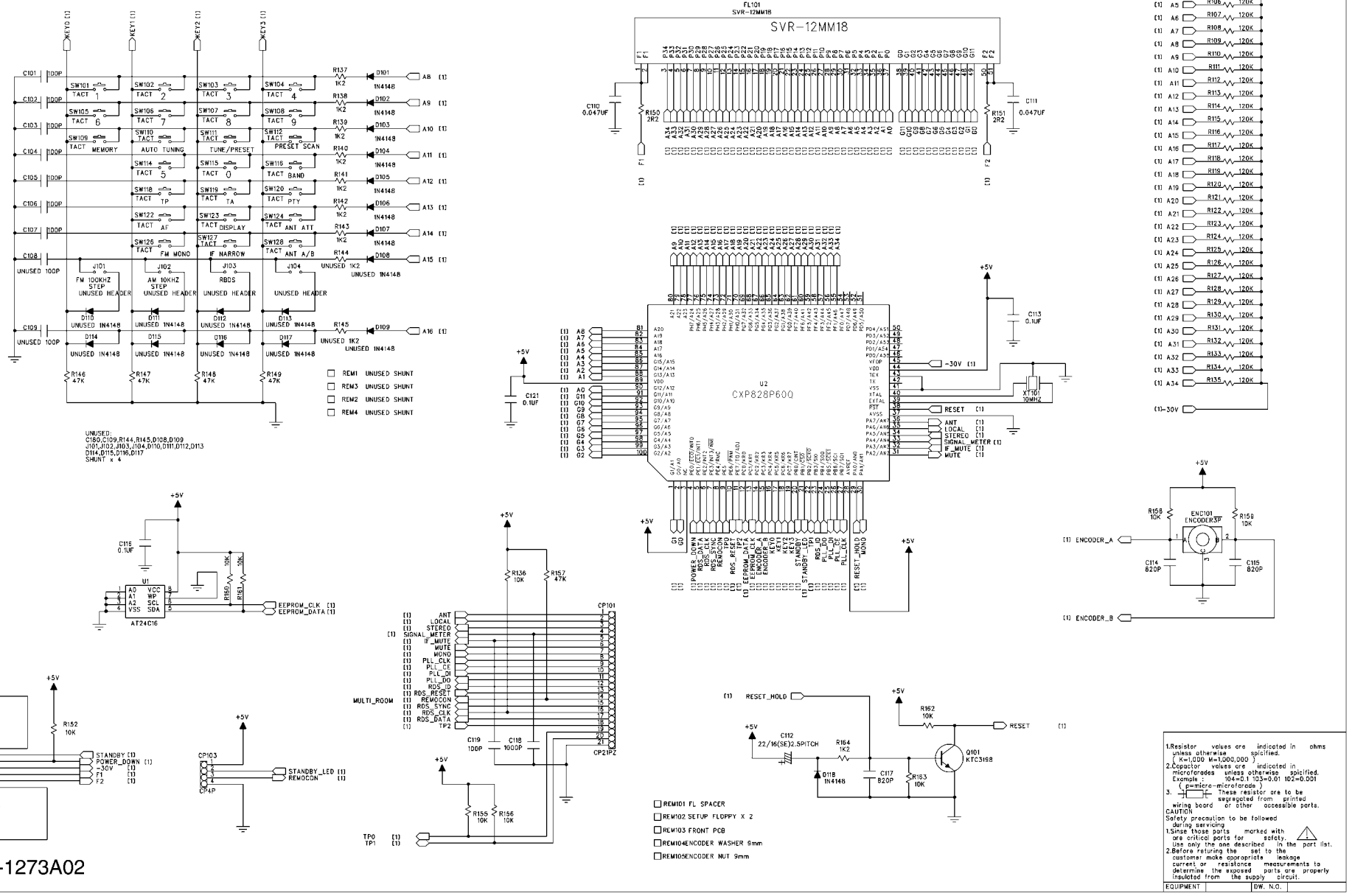
Schematic Diagram-1



Schematic Diagram-2



Schematic Diagram-3



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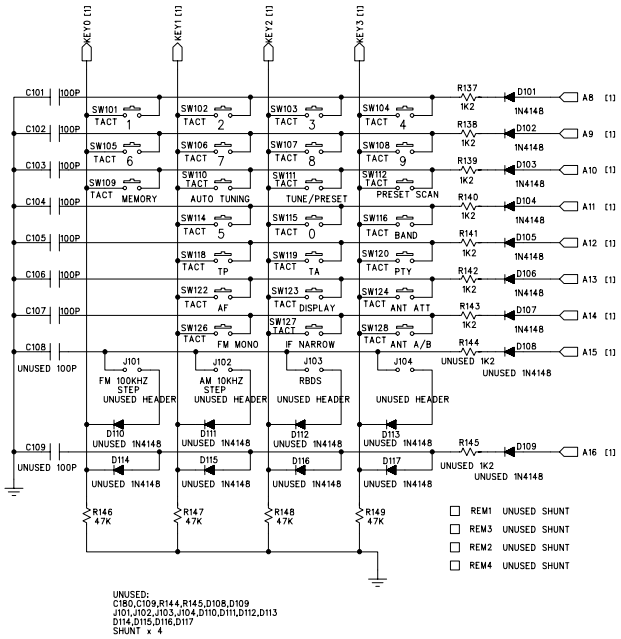
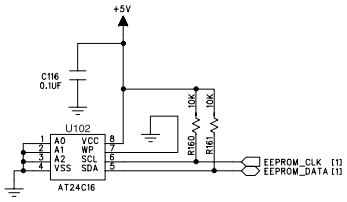
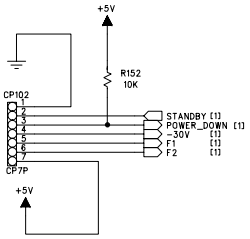
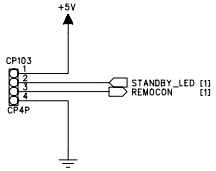
Schematic Diagram-3 (Revised)

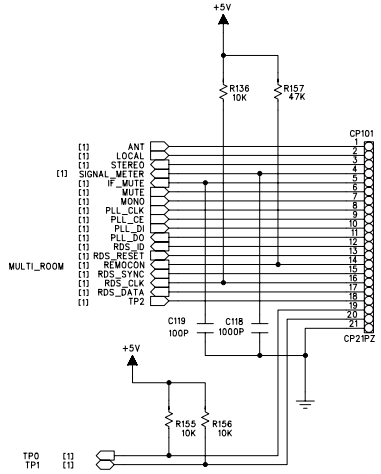


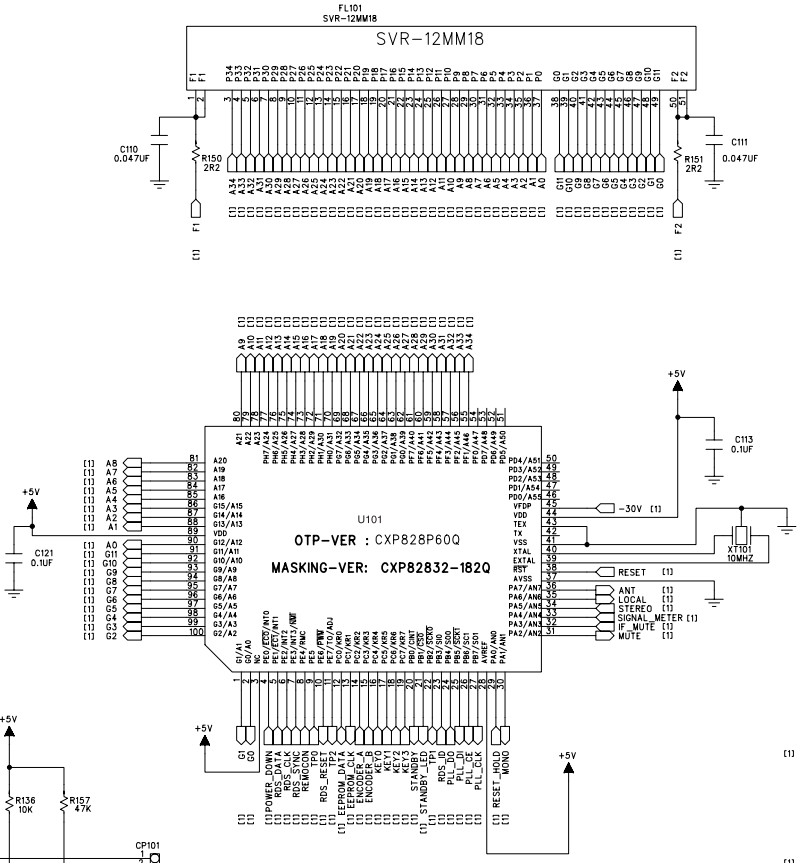
UNUSED:
C180,C109,R144,R145,D108,D109
J101,J102,J103,J104,D110,D111,D112,D113
D114,D115,D116,D117
SHUNT x 4

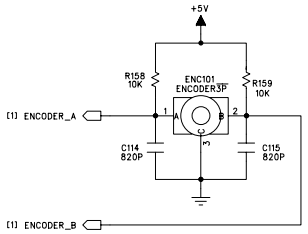


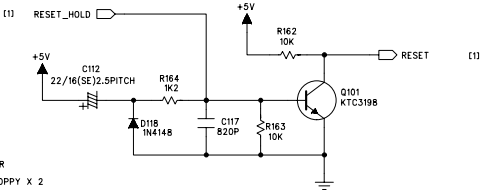




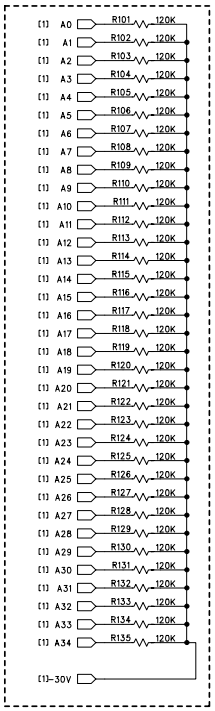








MASKING CPU-VER : OPEN



REM101 FL SPACER
REM102 SETUP FLOPPY X 2
REM103 FRONT PCB
REM104ENCODER WASHER 9mm
REM105ENCODER NUT 9mm

1.Resistor values are indicated in ohms unless otherwise spicified. (K=1,000 M=1,000,000)
2.Capacitor values are indicated in microfarades unless otherwise spicified. Example : 104=0.1 103=0.01 102=0.001 (p=micro-microfarade)
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 returing 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. NO.

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Schematic Diagram-4