

Quality Uncompromised

ROTEL®

Technical Manual

DIGITAL GATEWAY

RDG-1520v02

Table of Contents

Specification.....	1	PCB Assembly.....	9~10
Parts List.....	2~6	Schematic Diagram	11~13
Upgrade Procedure.....	7~8		

Specifications

FM Tuner

Usable Sensitivity	22.2dBf
50dB Quieting Sensitivity	27.2dBf(mono)
Signal to Noise Ration (at 65 dBf)	63 dBf (mono)
	60 dBf (stereo)
Harmonic Distortion (at 65 dBf)	0.2% (mono)
	0.3% (stereo)
Frequency Response	10 Hz-15kHz, ±3dB
Stereo Separation (100Hz/1kHz/10kHz)	40dB/45dB/35dB
Output level	1.1V
Antenna Input	75 ohms unbalanced

DAB Tuner

Sensitivity	-80dBm
Tuning Range	Band III (174-240MHz)
Audio Data Rate	224Kbps (Max)
Frequency Response	20 - 20KHz +/- 1.0dB
Analog Output	2.1V at 0dBFS
Antenna Input	75 ohms F connector

Audio USB(front)/AUX

Signal to Noise Ratio (IHF-A)	90dB
Total Harmonic Distortion (0dBfs)	0.2%
Output Level (0dBfs)	2.2V

General

Network connection	802.11b/g
Security	WEP, WPA1 (TKIP) WPA2 (TKIP)
File formats	Real Audio, MP3, Windows media streams, OGG vorbis AAC, WAV, AIFF and AU.
Power consumption	12 watts
Power Requirements (AC)	120V, 60Hz(USA) 230V, 50Hz(Europe)
Weight	6.5 kgs 14.33 lbs
Dimensions (W x H x D)	431 x 99 x 312 mm 17x37/8x12 1/4 in
Front panel height	2U (3 1/2 in)

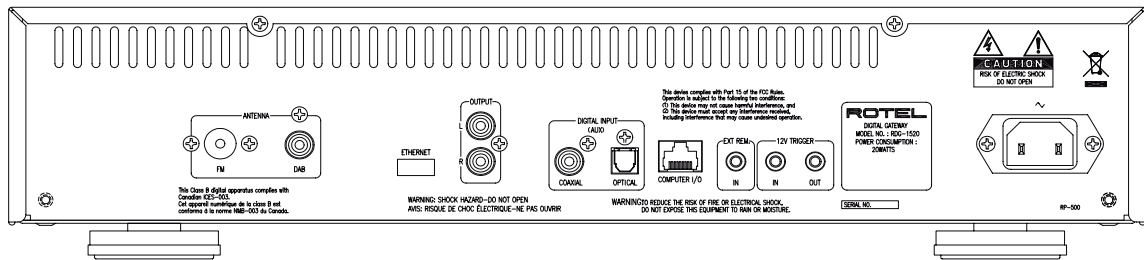
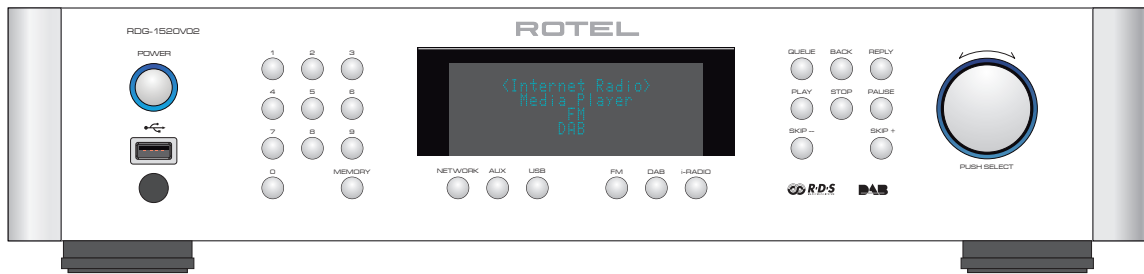
THE ROTEL CO., LTD.

2F 6-12-21 MEGUROHON-CHO, MEGURO-KU,
TOKYO 152-0002, JAPAN

Serial. NO.
Beginning

0441001 ~

Y-427B-1011/pdf



SYMBOL	PARTS NO.	DESCRIPTION
016 E-1568C00 PCB ASSY		
	501 E-1568C-1	PCB ASSY (MAIN)
HS101,HS102	017 4TR-2792#3	SUB HEAT SINKER H=35
L103	021 2888100012	COIL TRANS PLUS
XT101	023 CY0600100	CRYSTAL ISXO-3E-24.576MHZ
XT102	023 CY0700400	CRYSTAL SMD SRXA-S1-18-4MHZ
L102	025 BK2125HS101	BEAD COIL BK2125HS101-T
L107,108,111,112,114,115	025 BK2125HS102	BEAD COIL BK2125HS102-T
L101,104-106,109,110,113	025 BK2125HS601	BEAD COIL CHIP
IC118	031 IC0001900	IC AK4114VQP SMD (D/A TRANSCEIVER)
IC113	031 IC0002910	IC EPROM AT24C16AN-10SU-2.7V
IC103,104	031 IC0007700	IC LTV817 (PHOTO COUPLER)
IC111	031 IC0010600	IC NJM7805FA(KIA7805API-U/P) (REG. +5VDC)
IC115	031 IC0010900	IC NJM7812FA(KIA7812API-U/P) (REG. +12VDC)
IC114	031 IC0011500	IC NJM7912FA(KIA7912PI-U/P) (REG. -12VDC)
IC106-108	031 IC0012700	IC OPA2604AP (OPE DUAL)
IC119,120	031 IC0025400	IC SN74LVC257APWR SMD (MULTIPLEXER)
IC112	031 IC0027600	IC SMD WM8740SEDS (DAC)
(IC117)	031 IC0028300	IC CPU STM32F101RCT6 LQFP64P 32-bit MCU
IC101	031 IC0028600	IC SN65220DBVR USB port Transient Suppressor
IC109	031 IC0028800	IC SN74HC4040PW 12-BIT ASYNC BYNARY COUNTER
IC105	031 IC0029000	IC SN75C3232PWR RS232 Line drivereceiver 3-5V
IC102,121	031 IC0029100	IC TPS2553DBVR Adjustable current limite S/W
IC110	031 IC0029200	IC REG KIA378R033PI 3A WITH S/W
IC116	031 KIA7805AF	IC SMD (REG. +5VDC) 2169606121
Q104	032 KRA107S	TRANSISTOR CHIP KRA107S-RTK/P
Q101,103,106,107,108	032 KRC107S	TRANSISTOR CHIP KRC107S-RTK/P
Q105,109	032 TC3708-ST	TRANSISTOR CHIP 2SC3708AA-ST
D103,106,107	034 DB0001000	POWER DIODE KBP206 (2A 600V)
D104,105,108,109,112-115	034 DD0000200	DIODE T1N4004-TB
D110	034 DD0000300	DIODE T1N4148-86
D101,102,111	034 DD0000500	DIODE CHIP KDS184RTK/P
DZ102	034 DZ0100121	ZENER DIODE HZS12NB3-TD-E
DZ104,105	034 DZ0100201	ZENER DIODE HZS20NB3-TD-E
DZ101	034 DZ0103R31	ZENER DIODE HZS3.3NB2-TD-E
DZ103	034 DZ0105R11	ZENER DIODE HZS5.1NB2-TD-E
C157,164,182,205	041 16SH47M+F	ELECTROLYTIC CAPACITOR 16V47UF
C141,155,158,166,178,196	041 25SH10M+F	ELECTROLYTIC CAPACITOR 25V10UF
C142-145	041 35ZA10MTZ	ELECTROLYTIC CAPACITOR 35V10UF
C112,115	041 50ZL100M	ELECTROLYTIC CAPACITOR 50V100UF
C174,179	041 EEUFC1E101SB	ELECTROLYTIC CAPACITOR 25V100UF
C113,114,123-126	041 EEUFC1E221B	ELECTROLYTIC CAPACITOR 25V220UF
C170,184	041 EEUFC1E222S	ELECTROLYTIC CAPACITOR 25V2200UF
C140,153,160,C122	041 TUTES1C222-7TS	ELECTROLYTIC CAPACITOR 16V2200UF
C195	041 TUTES1E470-7TF	ELECTROLYTIC CAPACITOR 25V47UF
C104,201,208	041 TUTES1H100-7TF	ELECTROLYTIC CAPACITOR 50V10UF
C206,207	041 TUTES1H220-7TF	ELECTROLYTIC CAPACITOR 50V22UF
C194	041 TUTES1H221-7TS	ELECTROLYTIC CAPACITOR 50V220UF
C200	041 TUTES1H4R7-7TF	ELECTROLYTIC CAPACITOR 50V4.7UF
C197	041 TUTES1HR47-7TF	ELECTROLYTIC CAPACITOR 50V0.47UF
C209	041 TUTES1J471-7TS	ELECTROLYTIC CAPACITOR 63V470UF
C130,146,152,161,162,169,172,173	043 TC500V103	CERAMIC CAPACITOR 500V0.01UF
C151,156,159,163,165,167	043 TC50V473	CERAMIC CAPACITOR 50V0.047UF
C117-120	044 FSC160V220H	POLYSTYRENE CAPACITOR 160V22PF
C132-139	044 FSCEX160V102H	POLYSTYRENE CAPACITOR 160V1000PF
C185,186	047 3536200122	CERAMIC CAPACITOR CHIP 50V20PF
C210,211	047 ECJ2VC1H102J	CERAMIC CAPACITOR CHIP 50V1000PF
C198	047 GRM216B11H103KA01D	CERAMIC CAPACITOR CHIP 50V0.01UF
C101-103,105-111,116,121,127-129	047 GRM219F11H104ZA01D	CERAMIC CAPACITOR CHIP 50V0.1UF
C131,147-150,154,168,171,175-177	047 GRM219F11H104ZA01D	CERAMIC CAPACITOR CHIP 50V0.1UF
C180,181,183,187-193,199,202-204	047 GRM219F11H104ZA01D	CERAMIC CAPACITOR CHIP 50V0.1UF
R186,201	054 1WS10JF	MOR RESISTOR 1WS 10

SYMBOL	PARTS NO.	DESCRIPTION
R150,166	054 1WS1JF	MOR RESISTOR 1WS 1
R198	054 1WS4.7JF	MOR RESISTOR 1WS 4.7
R221,223,224	054 TMF4R70	METAL RESISTOR 1/4W 4.7
R124,134,136,137,139	054 TMFR4001KI	METAL RESISTOR MFR4 1/4W 1K
R125	054 TMFR4010RI	METAL RESISTOR MFR4 1/4W 10
R222	054 TMFR402K2I	METAL RESISTOR MFR4 1/4W 2.2K
R194-197	054 TMFR4047RI	METAL RESISTOR MFR4 1/4W 47
R142,143,145,146	054 TMFR4056RI	METAL RESISTOR MFR4 1/4W 56
R219,220	054 TMFR4220RI	METAL RESISTOR MFR4 1/4W 220
R132,133	054 TMFR4560KI	METAL RESISTOR MFR4 1/4W 560K
R147,148	054 TMFR4680RI	METAL RESISTOR MFR4 1/4W 680
R162-165	054 TPR9372-01K5D	METAL RESISTOR PR9372 1.5K
R154-161	054 TPR9372-470RD	METAL RESISTOR PR9372 470
R135,138,141,144	054 TRC55D1001C	METAL RESISTOR RC55D 1K
R129,130	054 TRC55Y1000C	METAL RESISTOR RC55Y 100
R113,149,151-153,193,213	055 ERJ6ENF1000V	RESISTOR CHIP 2012 1/10W 100
R111,123,191,207,209,212	055 ERJ6ENF1001V	RESISTOR CHIP 2012 1/10W 1K
R101,112,116,127,169,171,174	055 ERJ6ENF1002V	RESISTOR CHIP 2012 1/10W 10K
R178-182,187-190,204,211,218	055 ERJ6ENF1002V	RESISTOR CHIP 2012 1/10W 10K
R229-231	055 ERJ6ENF1002V	RESISTOR CHIP 2012 1/10W 10K
R199	055 ERJ6ENF1004V	RESISTOR CHIP 2012 1/10W 1M
R102-104,170	055 ERJ6ENF10R0V	RESISTOR CHIP 2012 1/10W 10
(R175)	055 ERJ6ENF1502V	RESISTOR CHIP 2012 1/10W 15K
R119,120,172,175	055 ERJ6ENF1502V	RESISTOR CHIP 2012 1/10W 15K
R106-109	055 ERJ6ENF1800V	RESISTOR CHIP 2012 1/10W 180
(R175,176)	055 ERJ6ENF1802V	RESISTOR CHIP 2012 1/10W 18K
R205	055 ERJ6ENF1802V	RESISTOR CHIP 2012 1/10W 18K
R173	055 ERJ6ENF1803V	RESISTOR CHIP 2012 1/10W 180K
R110	055 ERJ6ENF2200V	RESISTOR CHIP 2012 1/10W 220
R118,121	055 ERJ6ENF22R0V	RESISTOR CHIP 2012 1/10W 22
R200	055 ERJ6ENF3900V	RESISTOR CHIP 2012 1/10W 390
R140	055 ERJ6ENF4700V	RESISTOR CHIP 2012 1/10W 470
R114,115,126,128,183,184,206,208	055 ERJ6ENF4701V	RESISTOR CHIP 2012 1/10W 4.7K
R214-217,225-228	055 ERJ6ENF4701V	RESISTOR CHIP 2012 1/10W 4.7K
(R176)	055 ERJ6ENF4702V	RESISTOR CHIP 2012 1/10W 47K
R122,176,177,210	055 ERJ6ENF4702V	RESISTOR CHIP 2012 1/10W 47K
R117,131	055 ERJ6ENF75R0V	RESISTOR CHIP 2012 1/10W 75
R105,167,168,185,202,232	055 ERJ6GEY0R00V	RESISTOR CHIP 2012 1/8W 0
S101,S102	061 C-4679A03	TACT SWITCH 5MM GRY HV061050GS
RLY101,RLY102	063 EA2-12NU	RELAY
JK101-JK103	065 YKB21-5406N	3.5DIA MINIATURE JACK (ST)
JK109	066 C-4733A03	1P PIN JACK BLACK
JK110	066 C-4764A01	2P PIN JACK AU (WHITE/RED)
JK107	066 C-5131A00	JACK USB 1P TYCO 292303-4 ANGLE
P1,P4	066 C-5133A20	CNT SOCKET P2.0 TM2502-DG-20P
P2	066 C-5133A32	CNT SOCKET P2.0 TM2502-DG-32P
P3	066 C-5133A40	CNT SOCKET P2.0 TM2502-DG-40P
JK104	066 SY010-8P/K	RJ45 TERMINAL SY010-8P/K-01E/RH
JK105	066 TORX147L	OPTICAL MODULE TORX147L (F,T)
JK108	067 C-5126A00	TERMINAL ANT 1P C1016002
JK106	067 SC0110101N	ANTENNA TERMINAL 1P
CP201	068 B10B-PH-KS	CONNECTOR POST 10P
CP105	068 B2P-VH	CONNECTOR POST 2P
CP501	068 B4B-PH-KS	CONNECTOR POST 4P
CP205	068 B6B-PH-KS	CONNECTOR POST 6P
CP202	068 B7B-PH-KS	CONNECTOR POST 7P
CP106	068 B8B-EH	CONNECTOR POST 8P
016 X-1569C01-03 PCB ASSY		
	501 X-1569C-1	PCB ASSY (FRONT)
L201	025 BK2125HS101	BEAD COIL BK2125HS102-T
IC201	031 IC0028600	IC SMD SN65220DBVR USB port Transient Suppressor

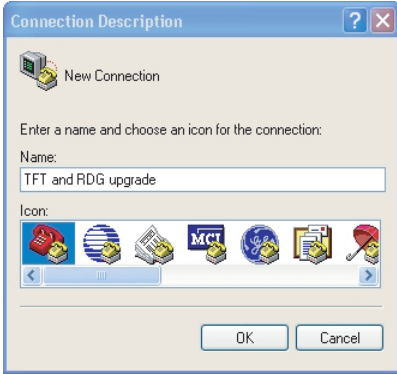
SYMBOL	PARTS NO.	DESCRIPTION
RMC201	031 IC0030600	REMOCON SENSOR RPM7238-H9 3.3V
Q201	032 KRC231S	TRANSISTOR SMD KRC231S-RTK/P
Z201	034 DZ0053R30	ZENER DIODE CHIP KDS184RTK/P
FL201	035 DN2045E	FL TUBE DN2045
C211	044 3549472109	AC CAPACITOR 400V0.0047UF
C207	047 ECFS1A221M	ELECTROLYTIC CAPACITOR SMD CHIP EC-FS 10V220UF
C209	047 ECFS1C100M	ELECTROLYTIC CAPACITOR SMD CHIP EC-FS 16V10UF
C201-204,206,210	047 ECJ2VC1H101J	CERAMIC CAP CHIP 2012 50V100PF
C205,208	047 ECJ2VF1H104Z	CERAMIC CAP CHIP 2012 50V0.1UF
R223,225	055 ERJ6ENF1000V	RESISTOR CHIP 2012 1/10W 100
R208,209	055 ERJ6ENF1002V	RESISTOR CHIP 2012 1/10W 10K
R216,217	055 ERJ6ENF1500V	RESISTOR CHIP 2012 1/10W 150
R201,202,205,206,219,220,226,227	055 ERJ6ENF1501V	RESISTOR CHIP 2012 1/10W 1.5K
R203,213,228,229	055 ERJ6ENF2201V	RESISTOR CHIP 2012 1/10W 2.2K
R210,214,221,230	055 ERJ6ENF3301V	RESISTOR CHIP 2012 1/10W 3.3K
R204,207,218,233	055 ERJ6ENF4301V	RESISTOR CHIP 2012 1/10W 4.3K
R211,215,222,231	055 ERJ6ENF5101V	RESISTOR CHIP 2012 1/10W 5.1K
R212,224,232	055 ERJ6ENF9101V	RESISTOR CHIP 2012 1/10W 9.1K
SW208	056 C-5136A00	ROTARY ENCODER (WITH DETENT SWITCH)
SW207	061 C-4176A08	POWER SWITCH TV-8
SW201-206,209-227	061 C-4679A03	TACT SWITCH 5H
JK201	066 C-5132A00	PIN JACK 1P
CP204	068 B2P3-VH	CONNECTOR POST 2P
CP203	068 B3B-PH-KS	CONNECTOR POST 3P
016 E-1564A00 PCB ASSY		
	501 E-1564A-1	PCB ASSY (TELECHIPS)
XT302	023 CY0900100	CRYSTAL SMD 12MHz SRXA-SI-A8
L301,302	025 BK2125HS601	BEAD COIL CHIP
L303	025 CIL10J2R2K	COIL CHIP 1608 2.2UH
IC305	031 IC0002703	IC SMD AME1117CCGTZ ABF (REGULATOR)
IC304	031 IC0002704	IC SMD AME1117ECGTZ AXH (REGULATOR)
IC306	031 IC0023900	IC SMD ES29LV160ET-70RTG (FLASH MEMORY)
(IC306)	031 IC0023902	IC SMD ES29LV160ET-G20 ESI 16M BIT WRITING
IC303	031 IC0024101	IC SMD K4S641632K-UC60 (MEMORY)
IC301	031 IC0030400	IC SMD MFI341S2164 I-POD 2.0 CP Authentication
IC302	031 IC0030500	IC SMD TCC8600 32-bit RISC for Host Player
C306	047 ECJ1VB1H122K	CERAMIC CAP CHIP 50V1200PF
C307,308	047 ECJ1VC1H220J	CERAMIC CAP CHIP 50V22PF
C305	047 ECJ1VC1H391J	CERAMIC CAP CHIP 50V390PF
C309	047 ECJ1VF1C105Z	CERAMIC CAP CHIP 16V1UF
C324	047 ECJ1VF1C105Z	CERAMIC CAP CHIP 16V1UF
C310-313	047 ECJ1VF1H104Z	CERAMIC CAP CHIP 50V0.1UF
C314-318,321-323,325-329,331-340	047 ECJ1VF1H104Z	CERAMIC CAP CHIP 50V0.1UF
C301-304	047 TCSCS1A226M	TANTAL CAP CHIP 3216
R318	055 ERJ3EKF1001V	RESISTOR CHIP 1K
R327,328,333,336,337,340	055 ERJ3EKF1002V	RESISTOR CHIP 10K
R305	055 ERJ3EKF1004V	RESISTOR CHIP 1M
R322-325	055 ERJ3EKF1502V	RESISTOR CHIP 15K
R301-304	055 ERJ3EKF22R1V	RESISTOR CHIP 22.1
R317	055 ERJ3EKF4701V	RESISTOR CHIP 4.7K
R319,320,330,331,334	055 ERJ3EKF4701V	RESISTOR CHIP 4.7K
R332	055 ERJ3EKF4702V	RESISTOR CHIP 47K
R335	055 ERJ3EKF56R0V	RESISTOR CHIP 56
R306-316	055 EXB28V470JX	RESISTOR CHIP ALLEY 2010
J301	068 C-5130A20	CNT PIN HEADER P2.0 TM2004-AG 20P
016 E-1577B00 PCB ASSY		
	501 E-1577B-1	PCB ASSY (STANDBY)
L501	021 TRL-356	LINE CHOKE COIL LF-2217 150UH
T501	022 T-1118N01-V01	STBY TRANS SB-0236 5V-100mA
IC501	031 IC0031400	IC BA33BC0T 3V3 LDO
Q501	032 TDTC114YSA	TRANSISTOR DTC114YSATP

SYMBOL	PARTS NO.	DESCRIPTION
D501	034 DB0001000	POWER DIODE KBP206 (2A 600V)
D502	034 DD0000200	DIODE 1N4004-F (AMMO) 1A 400V
(F502)	036 5T1L-250V	FUSE 250VT1AL
F501	036 5T250ML-250V	FUSE 250VT250mAL
(F502)	036 5T2L-250V	FUSE 250VT2AL
C506	041 TUTES1C102-7TS	ELECTROLYTIC CAPACITOR 16V1000UF
C510	041 TUTES1H100-7TF	ELECTROLYTIC CAPACITOR 50V10UF
C503,505	043 TC50V103	CERAMIC CAPACITOR 50V0.01UF
C504	043 TC50V104	CERAMIC CAPACITOR 50V0.1UF
C502,507,509	044 3549472109	AC CAPACITOR 400V0.0047UF
(R503)	054 MSR1/2W4M7J	METAL SURGE RESISTOR 4.7M
R501	054 TMF4R70	METAL RESISTOR 1/4W 4.7
RY501	063 DG1U-5-025W	RELAY DG5D1-O(M)
CP504	068 4428503746	CONNECTOR POST
CP502,503,505-507	068 B2P3-VH	CONNECTOR POST 2P
	OTHERS	
	011 FP-661A-B	BLACK PANEL ASSY
	011 FP-661A-S	SILVER PANEL ASSY
	012 C-5009B00	TACT BUTTON 8.3F (BLACK)
	012 C-5009B01	TACT BUTTON 8.3F (SILVER)
	012 C-5026A01	KNOB 33F (BLACK)
	012 C-5026A01S	KNOB 33F (SILVER)
	012 RV4-09A00	PUSH BUTTON 14F (BLACK)
	012 RV4-09A01	PUSH BUTTON 14F (SILVER)
	014 C-5004B03	UPPER COVER (BLACK)
	014 C-5004B03S	UPPER COVER (SILVER)
	014 YM3-02A00	SIDE CAP (BLACK) 2U (88.1H)
	014 YM3-02A01	SIDE CAP (SILVER) 2U (88.1H)
	015 RP-500A	REAR CHASSIS
	019 4TSH-19#2	PLASTIC FOOT 50F (BLACK)
	019 C-5017A00	TACT BUTTON BASE 15KEY
	022 T-1115N01-V02	POWER TRANSFORMER
	069 C-4629A01	AC 2P INLET 6102.3100 (WIRING)
	071 MFH4X8BK	MACHINE FLAT HEAD SCREW (BLACK)
	071 MFH4X8NI	MACHINE FLAT HEAD SCREW (SILVER)
	072 C-4621A03	AC CORD SET SJT AWG16 UL 2P 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 EUROPE CEE 2P
	081 ZE-220(T/B)	ETHAFOAM MOULDING
	081 ZL3-20A01	INSIDE CARTON
	081 ZL3-21A01	SHIPPING CARTON
	082 OMRDG-1520-81	OWNER'S MANUAL
	092 C-4944A00	DAB Antenna
P1,P2,P3	092 C-5135A00	STINGRAY MODULE
	092 RR-CX92	REMOTE UNIT
	092 WL0115	USB WiFi Dongle WL0115

Main Software Upgrade Procedure

1. Connect RDG-1520 and PC with RJ45/DB9 cable (Computer I/O cable). RJ45 jack should be connected to COMPUTER I/O port in RDG-1520 rear panel. DB9 jack will be connected to PC serial port (ex. COM1 or COM2,...).
2. Use Hyper Terminal program of Microsoft original which has "Ymodem" protocol selection.

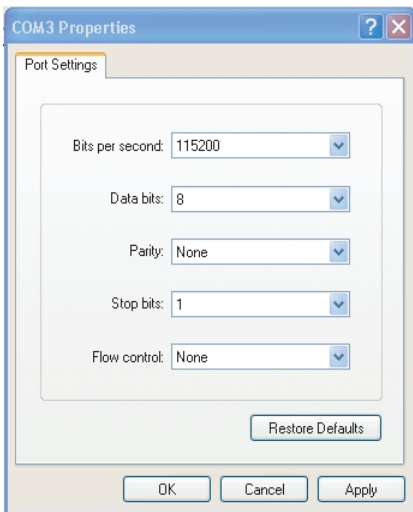
(1) execute Hyper Terminal > Name: xxxxx > OK



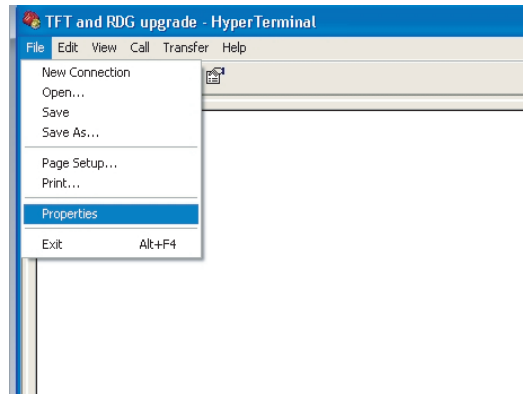
(2) Connect To > COM1 > OK



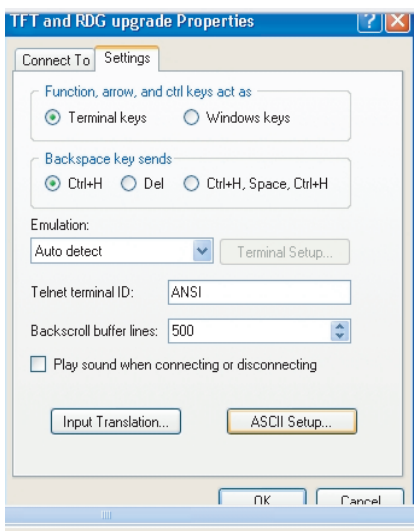
(3) COM1 Properties > 115200,8,None,1,None > OK



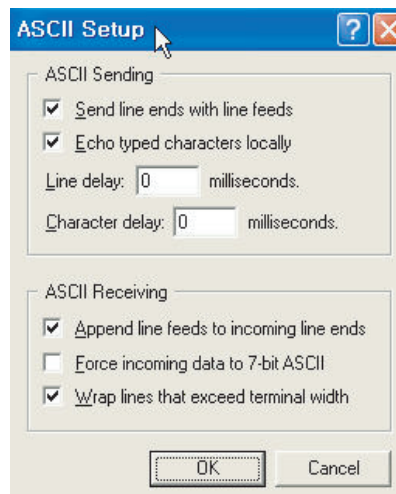
(4) File > Properties



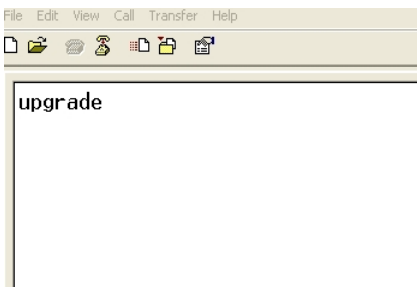
(5) Settings > ASCII Setup...



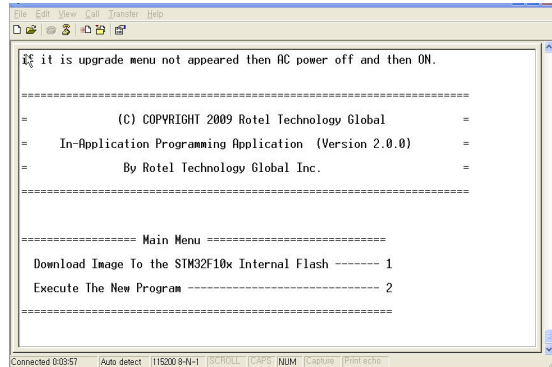
(6) ASCII Setup > checking... > OK



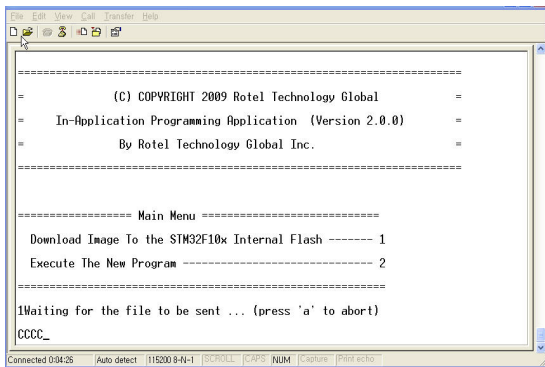
(7) typing "upgrade" and enter



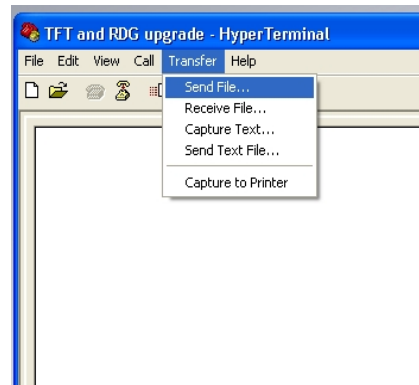
(8) display Main Menu > typing "1"



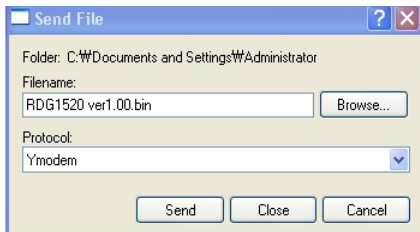
(8-1) ready for sending



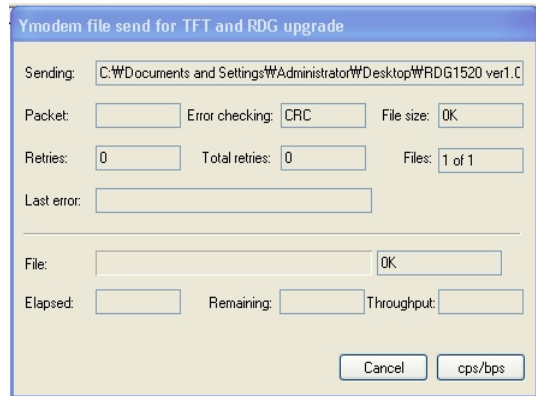
(9) Transfer > send file



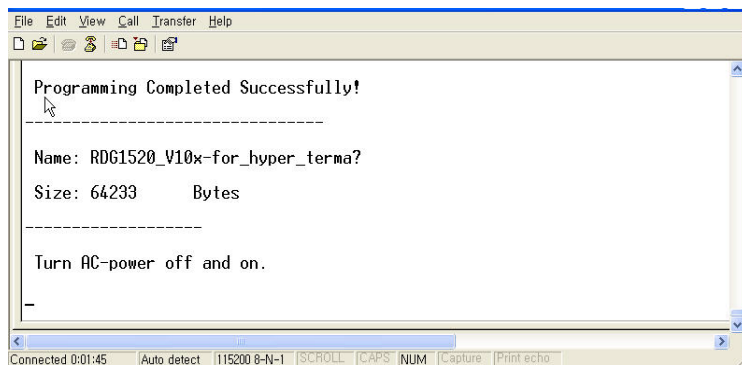
(10) Send File > select "RDG1520 bin file" > "Ymodem" > Send



(11) Sending

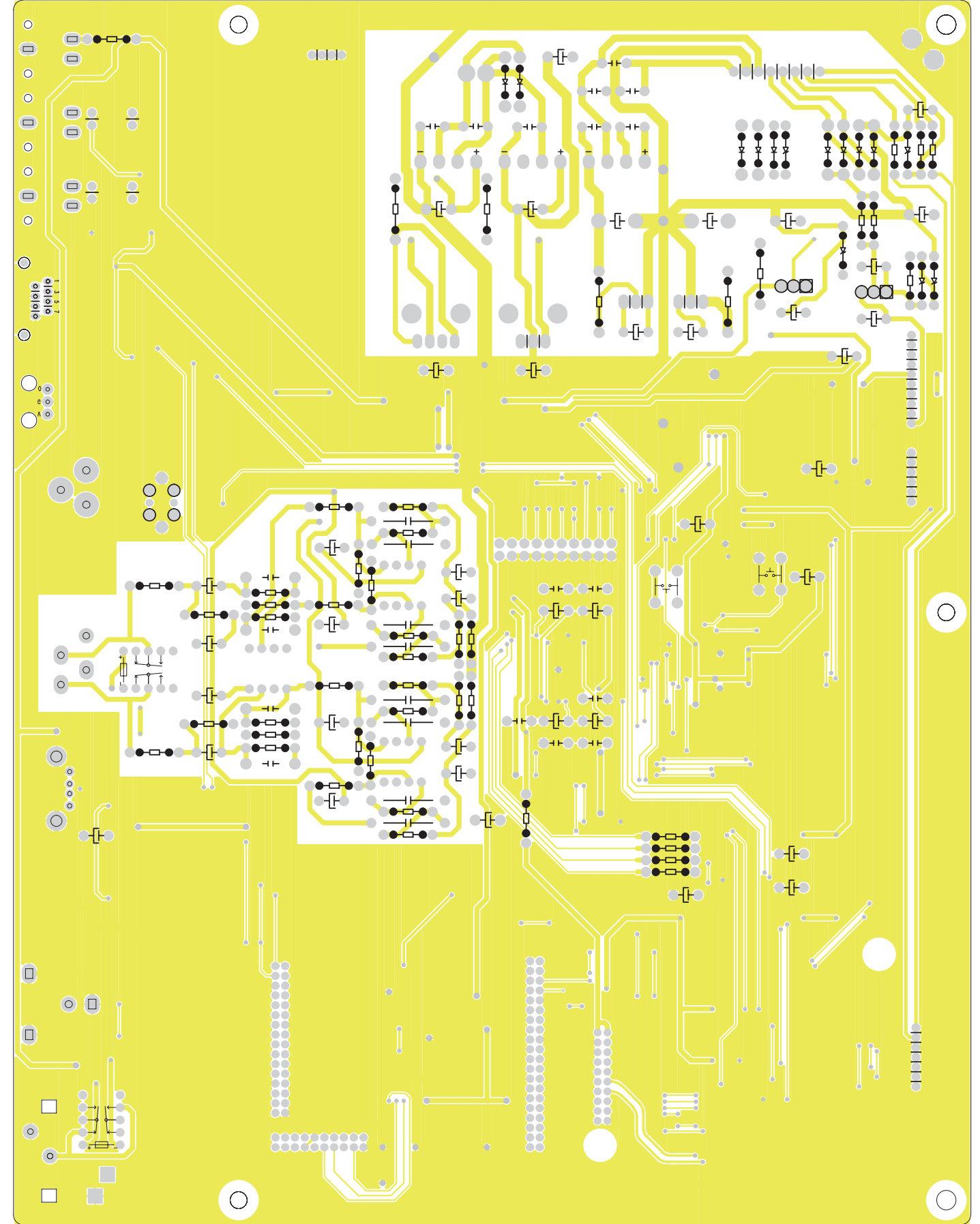
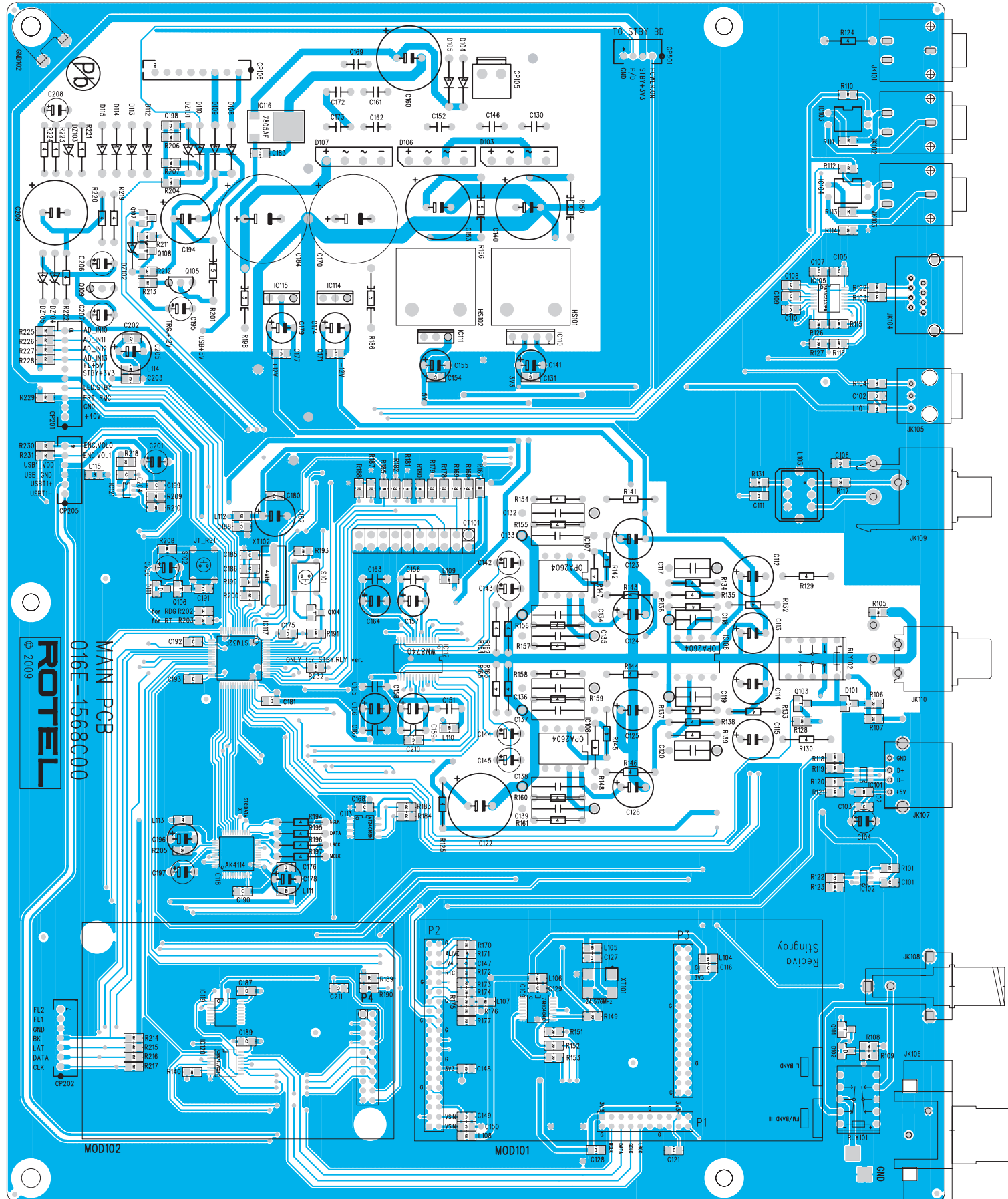


(12) Programming completed successfully. > Turn AC-power off and on.

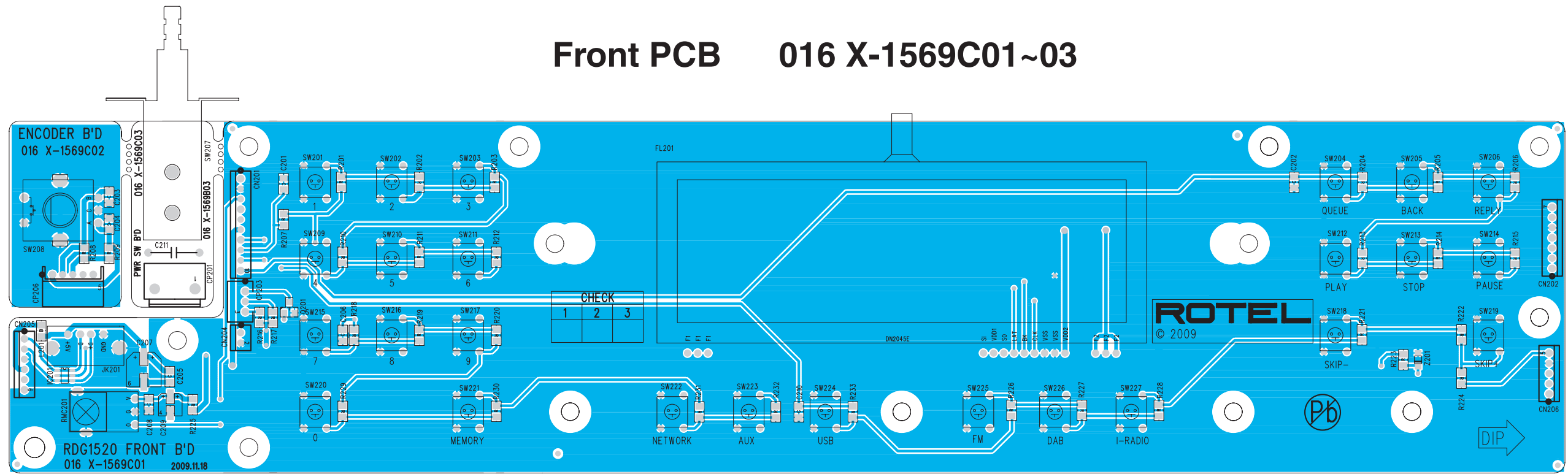


Main PCB

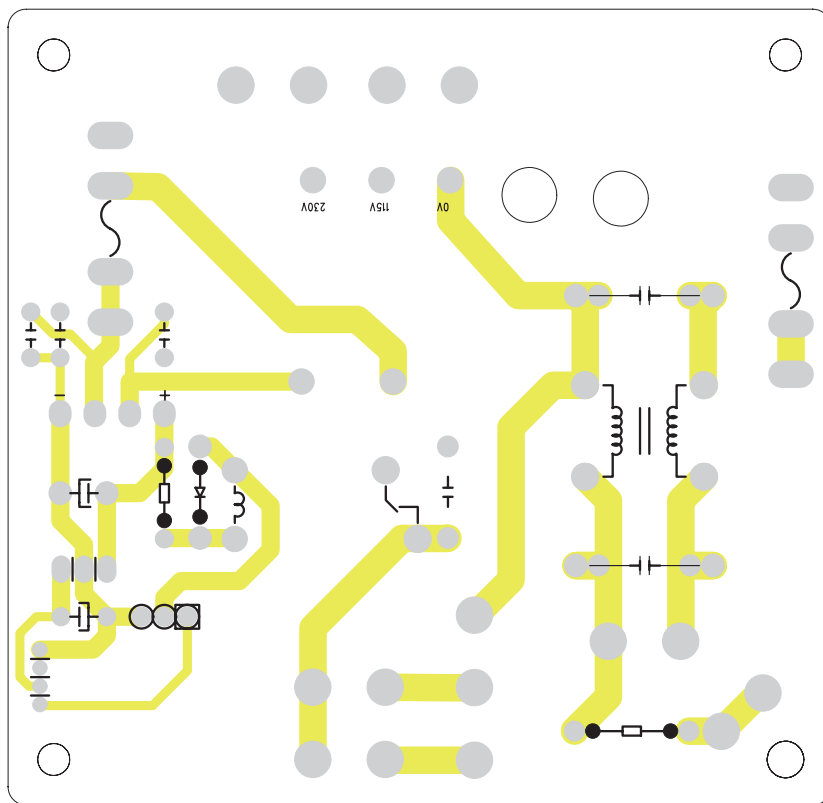
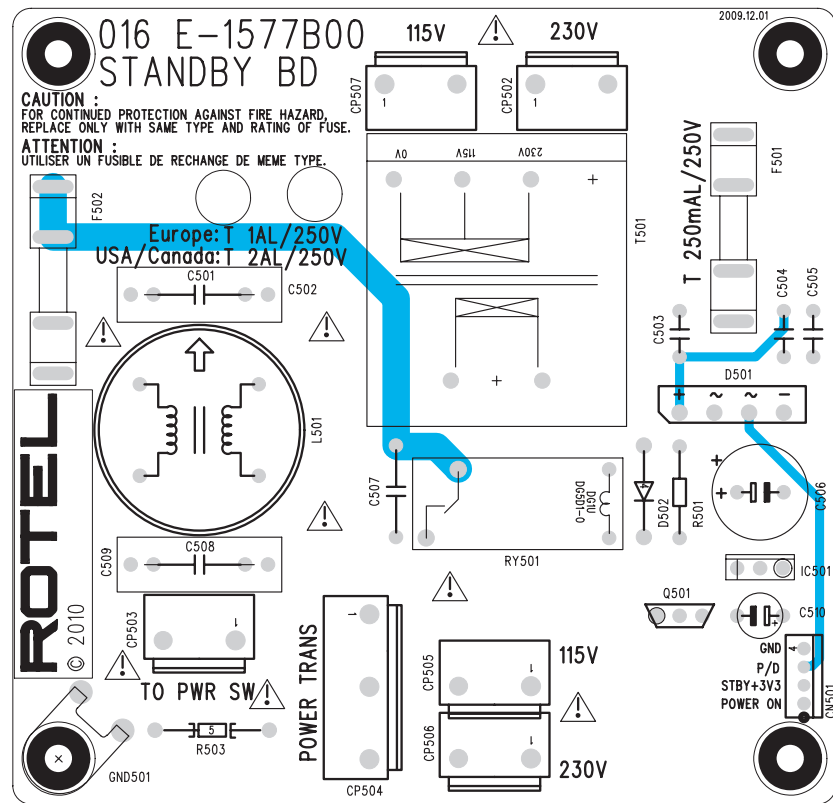
016 E-1568C00



Front PCB 016 X-1569C01~03

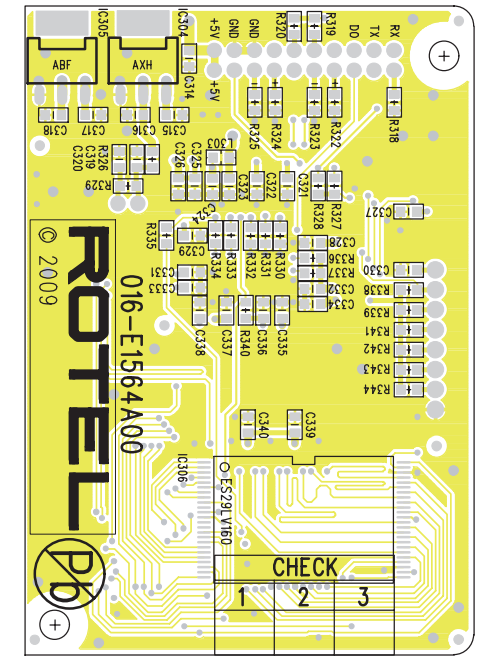
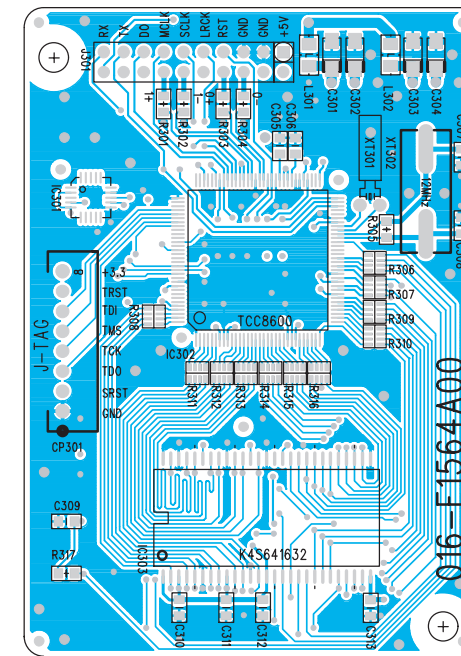


Standby PCB 016 E-1577B00

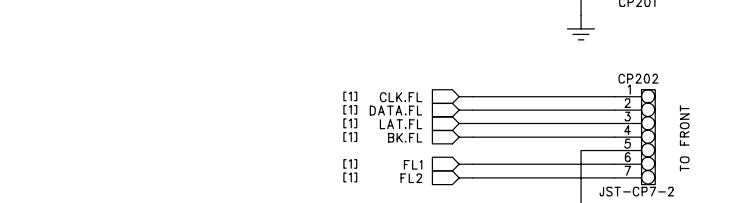
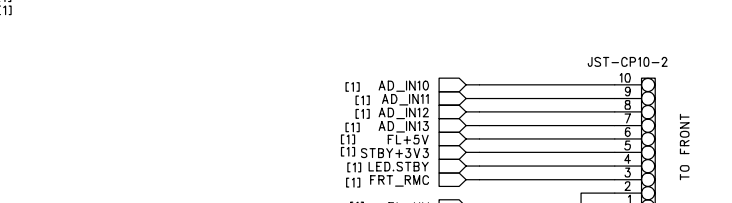
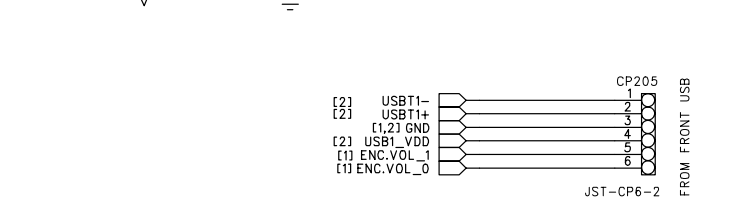
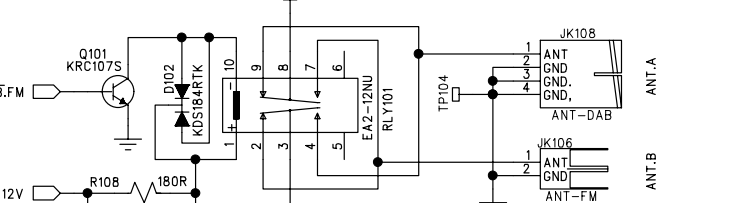
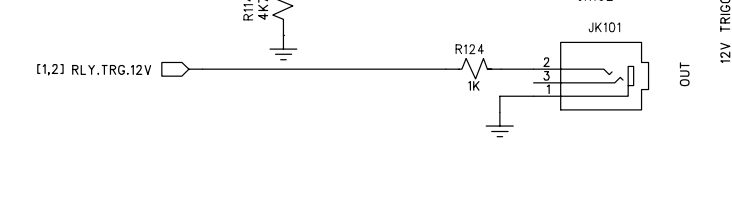
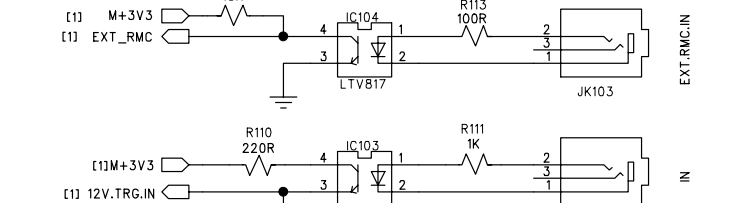
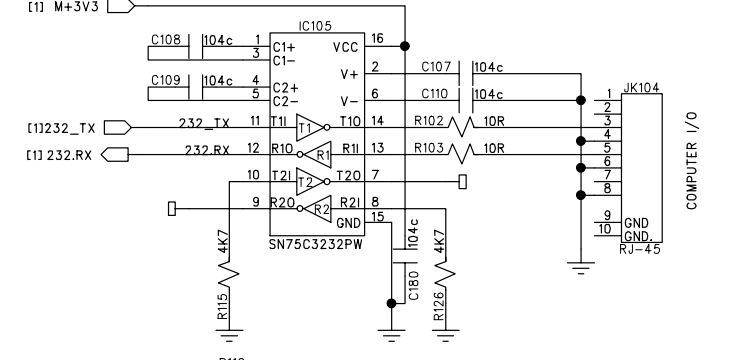
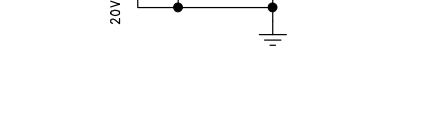
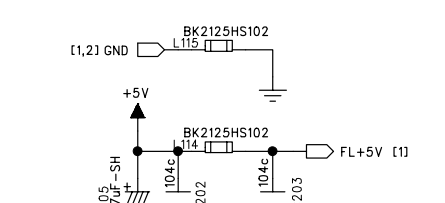
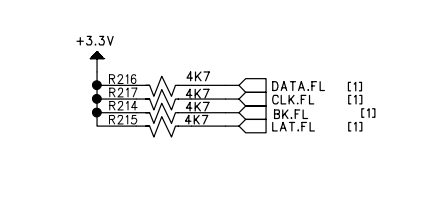
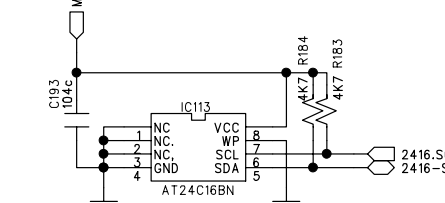
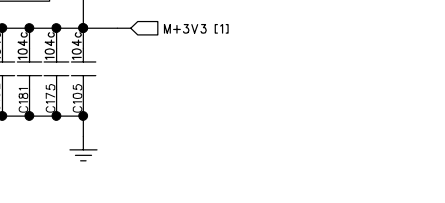
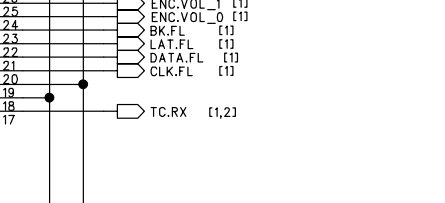
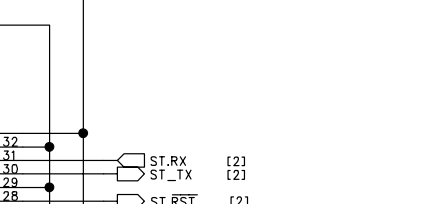
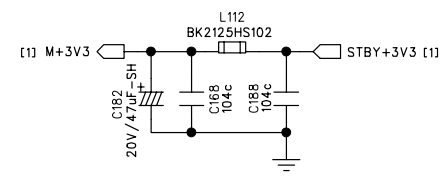
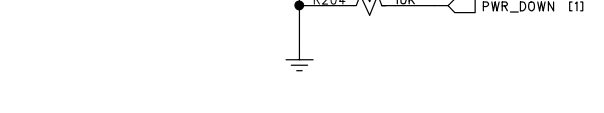
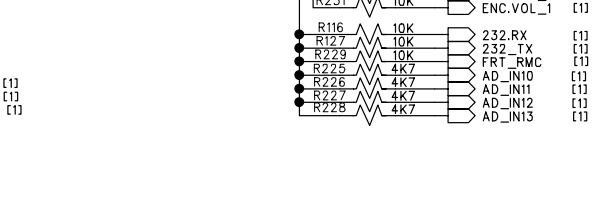
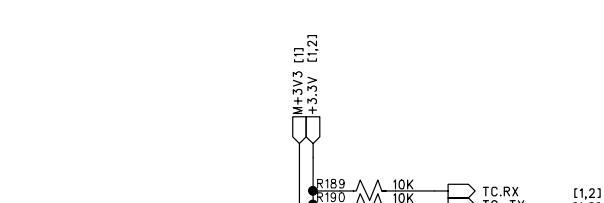
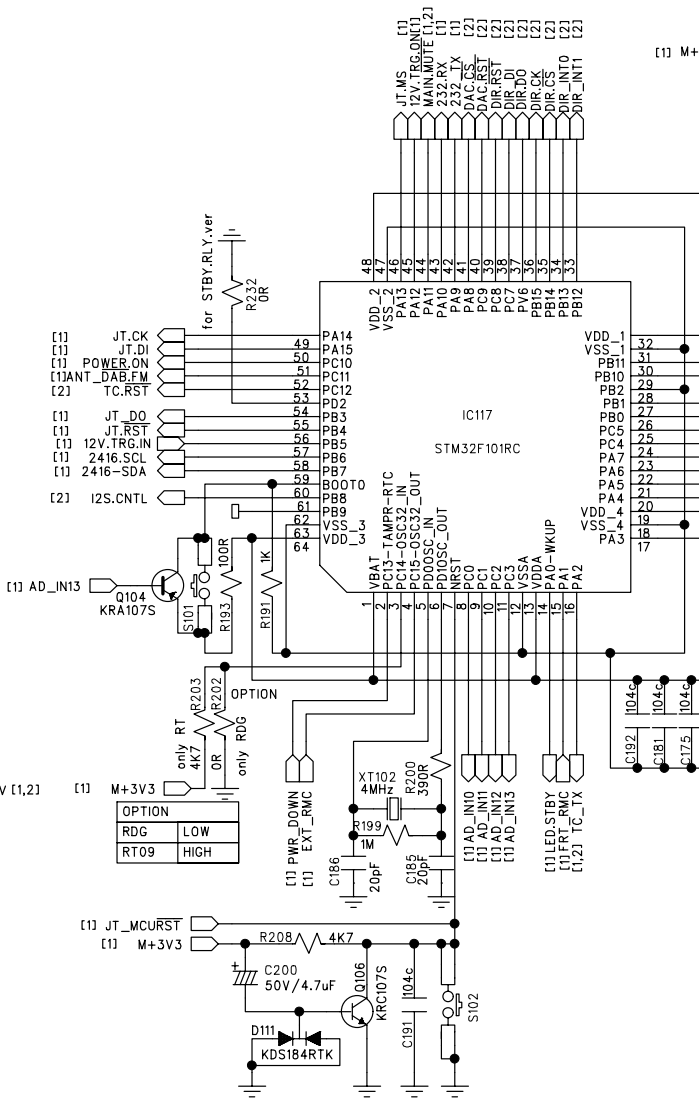
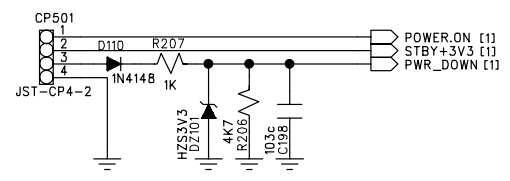
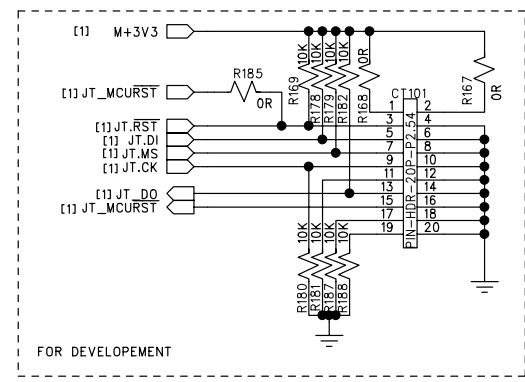
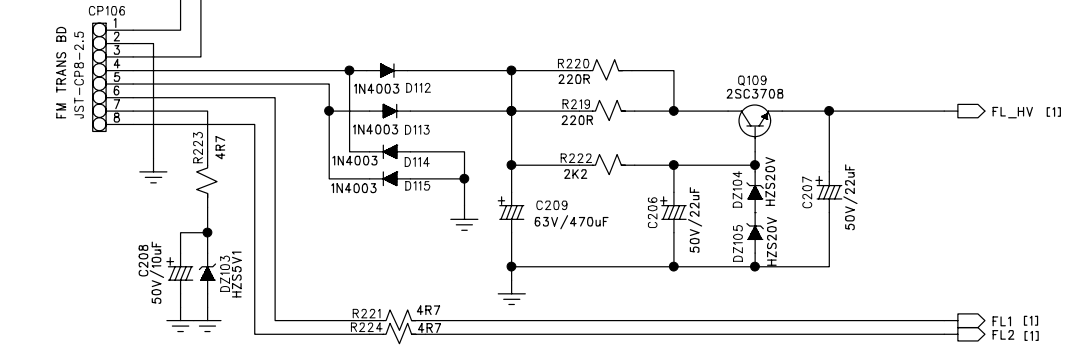
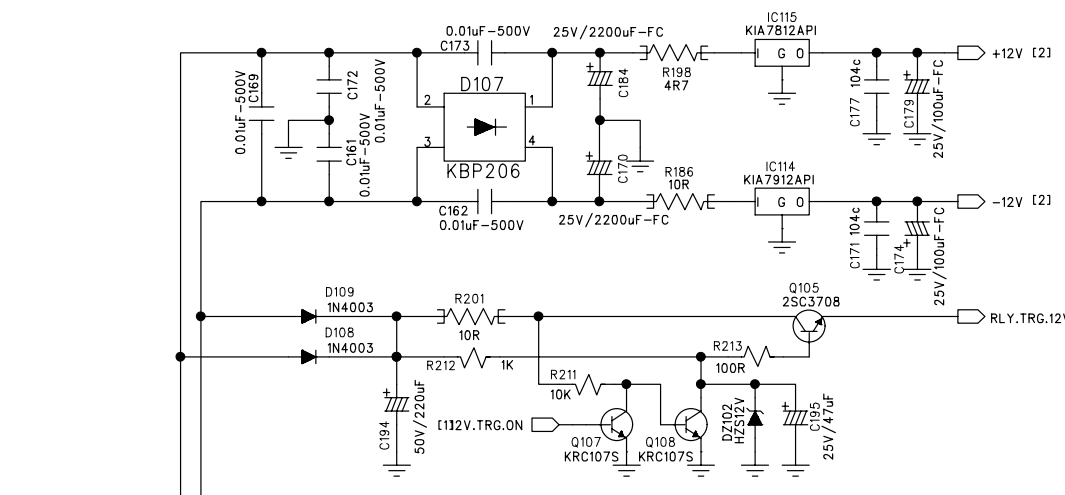
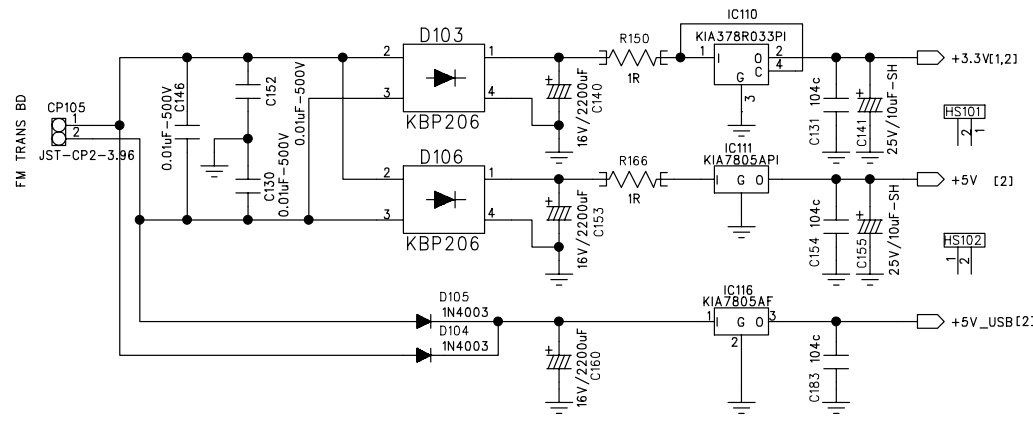


Telechips PCB

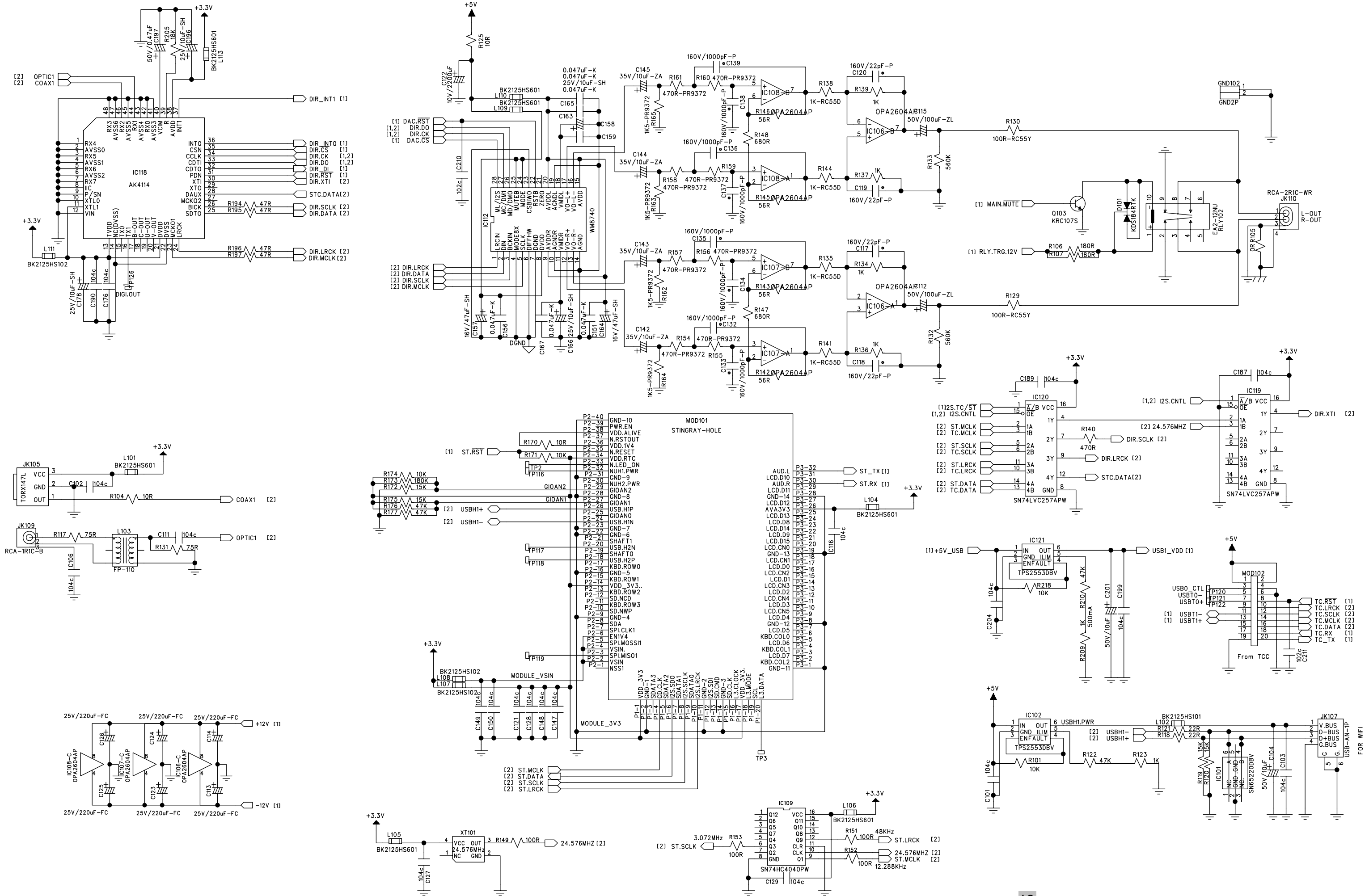
016 E-1564A00



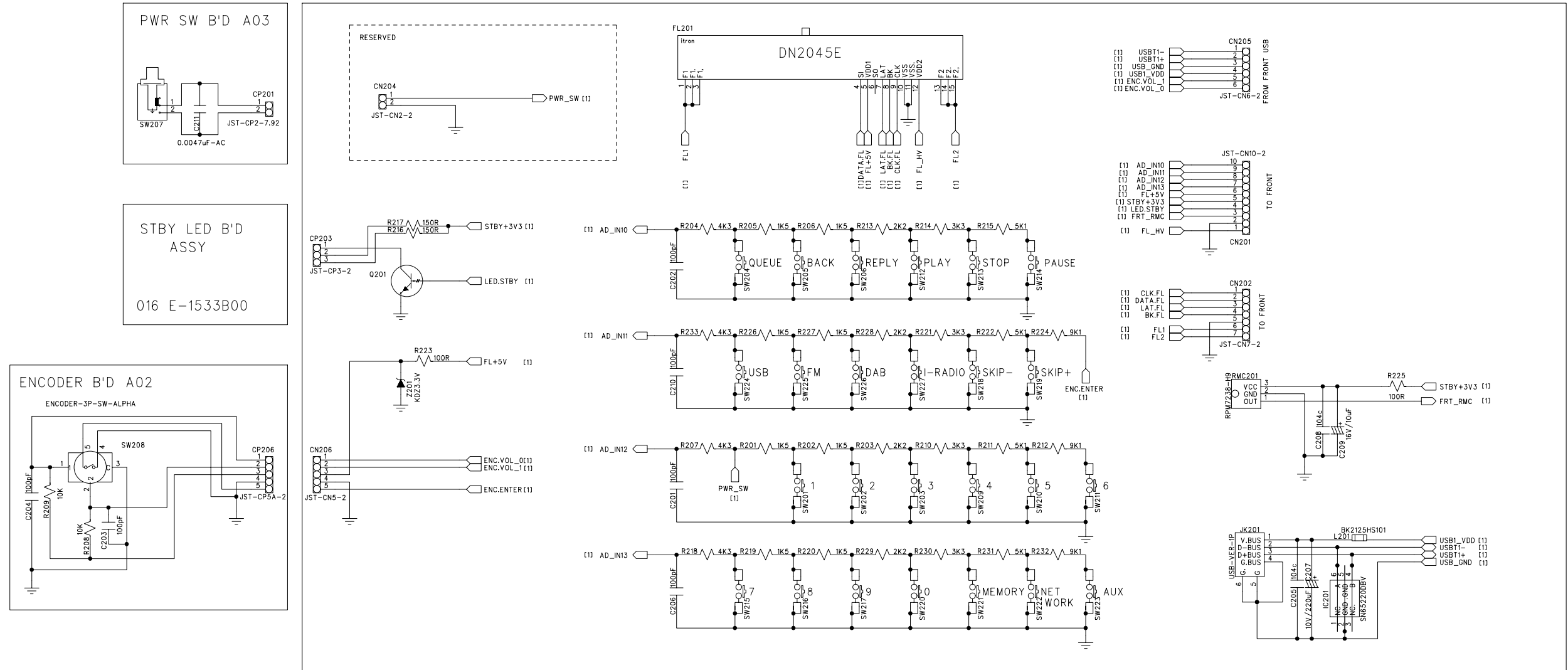
MAIN PCB (1/2) 016 E-1568C00



MAIN PCB (2/2) 016 E-1568C00



Front PCB 016 X-1569C01~03



Standby PCB 016 E-1577B00

