



Technical Manual

STEREO CONTROL AMPLIFIER RC-1570

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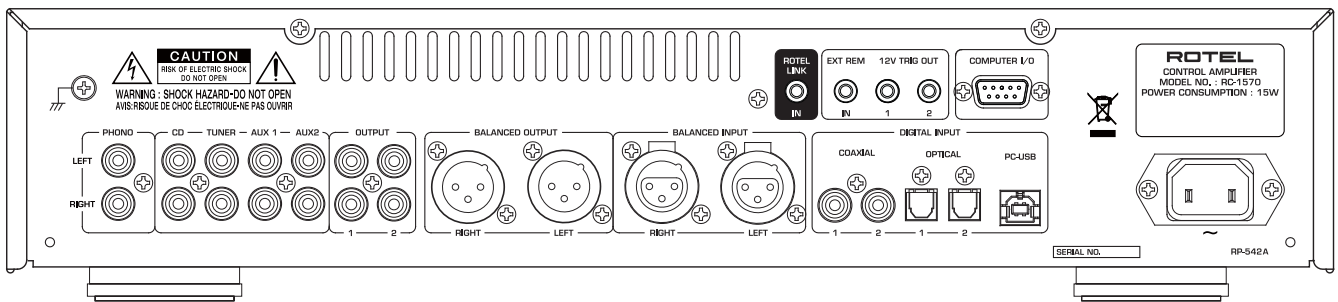
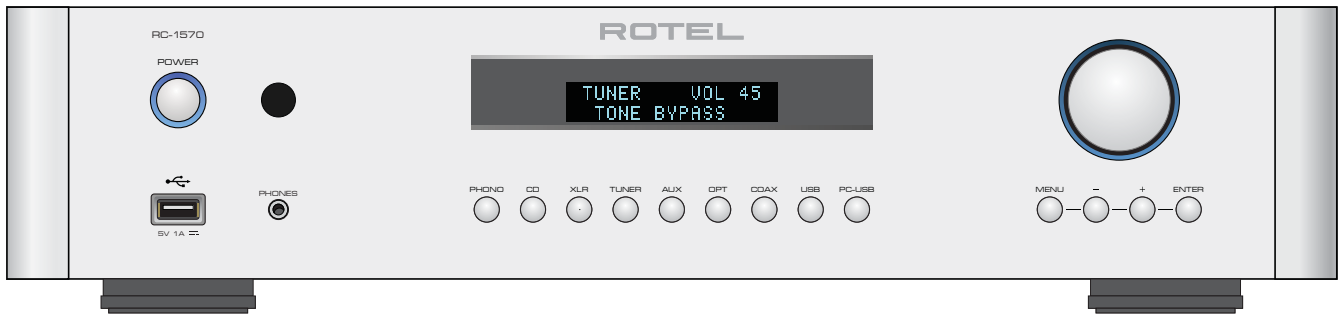
Specifications

Total Harmonic Distortion (20Hz-20kHz)	< 0.004%
Intermodulation Distortion (60 Hz : 7 kHz, 4:1)	< 0.004% at 1V output
Input Sensitivity / Impedance	
Phono Input (MM)	2.5 mV / 47k ohms
Line Level Inputs (RCA)	150 mV / 24k ohms
Line Level Inputs (XLR)	300 mV / 100k ohms
Input Overload	
Phono Input	65 mV
Line Level Inputs	4.3 V
Output Level / Impedance	
Output (RCA)	1V / 100 ohms
Output (XLR)	2V / 100 ohms
Frequency Response:	
Phono Input	20 Hz-20k Hz, 0 ±0.3 dB
Line Level Inputs	4 Hz-100k Hz, 0 ± 0.3 dB
Tone Controls	
Bass	±10 dB at 100Hz
Treble	±10 dB at 10kHz
Signal to Noise Ratio (IHF "A" weighted)	
Phono Input	80 dB
Line Level Inputs	110 dB
Digital Section	
Frequency Response	10Hz - 95k Hz (±3.0dB, Max)
Signal to Noise Ratio (IHF "A" weighted)	100 dB
Input Sensitivity/Impedance	0 dBfs / 75 ohms
USB/iPod Digital Signals	WAV, MP3, WMA (up to 48kHz 16 bit)
Coaxial/Optical Digital Signals	SPDIF LPCM (up to 192kHz 24 bit)
PC-USB	USB Audio Class 1 (up to 96kHz 24 bit)
	USB Audio Class 2 (up to 192kHz 24bit)*
	*Driver installation required
Power Requirements:	
USA:	120 Volts, 60 Hz
EC:	230 Volts, 50 Hz
Power Consumption	15 watts
Standby Power Consumption	< 0.5 watts
Dimensions (W x H x D)	431 x 99 x 320 mm
	(17 x 4 x 12 5/8 ins)
Front Panel Height	2U (88.1mm, 3 1/2 ins)
Weight (net)	7kg, 16 lbs.

THE ROTEL CO., LTD.

2-11-4, NAKANE, MEGURO-KU,
TOKYO 152-0013, JAPAN

Serial. NO. Beginning



SYMBOL	PARTS NO.	DESCRIPTION
016 X-1683B01-03 PCB ASSY		
T001	501X-1683B-1	PCB ASSY (MAIN)
XT101	022T-1135N01-V01	STBY TRANS 5.9V-0.1A
XT103	023CY0600100	CRYSTAL ISXO-3E-24.576MHZ
XT104	023CY0600400	CRYSTAL ISXO-3E-49.152MHZ
XT201	023CY0600500	CRYSTAL ISXO-3E-45.1584MHZ
XT102	023CY0700400	CRYSTAL SMD SRXA-S1-18-4MHZ
B01,02	023CY0900100	X-TAL 12MHz SRXA-SI-A8 SMD
B101-114,201,205	025BK2125HS101	BEAD COIL BK2125 HS101-T
B206-208	025BK2125HS102	BEAD COIL BK2125HS102-T
IC101	025BK2125HS601	BEAD COIL BK2125HS601-T
IC111	031IC0001900	IC AK4114VQP SMD (D/A TRANSCIEVER)
IC202	031IC0002703	IC AME1117CCGTZ ABF SMD (REGULATOR)
IC211	031IC0002910	IC EPROM AT24C16AN-10SU-2.7V
IC301,302,401,501,505,507	031IC0007700	IC LTV817B (PHOTO COUPLER)
IC903,905,906	031IC0008802	IC NE5532AP (OPE DUAL)
IC901	031IC0010600	IC NJM7805FA (KIA7805API-U/P) (REG. +5VDC)
IC902	031IC0011000	IC NJM7815FA (KIA7815API-U/P) (REG.+15VDC)
IC104,105,106	031IC0011600	IC NJM7915FA (KIA7915PI-U/P) (REG.-15VDC)
IC107	031IC0012700	IC OPA2604AP (OPE DUAL)
IC103	031IC0027300	IC RCLAMP0524P SMD (DIODE ARRAY)
IC102	031IC0027600	IC SMD WM8740SEDS (DAC)
IC210	031IC0028000	IC DIT 192KHz 24-Bit 3.3V AK4104
IC205	031IC0028600	IC SN65220DBVR USB Suppressor
IC801,904	031IC0029000	IC SN75C3232PWR RS232 Line driver
IC203,204	031IC0031400	IC BA33BC0T 3V3 LDO.
IC402	031IC0033300	IC SN74LVC1G08DBV SiINGLE 2-INPUT AND GATE
IC509	031IC0037000	IC MPC507AU SWITCH ALLEY(8 STEREO IN) SMD
IC503	031IC0037100	IC NJW1194V ELEC 4IN-VOL-TONE SMD
IC110	031IC0037600	IC PGA2311UA ELEC VOLUME SMD
IC108	031IC0038400	IC AT24C02C-SSHM-T 2-Wire Serial EEPROM
IC109	031IC0038501	IC CM6631A USB2.0 Audio Processor LQFP-100
IC201	031IC0038601	IC SST39VF040-70-4C-WHE Flash MEMORY TSOP
Q202	531IC0030803	IC CPU STM32F101VC-RA1570 SOFT WRITING
Q101,201,401-403,501-504,913	032KRA107S	TR KRA107S-RTK/P
Q905,910,912	032KRC107S	TR KRC107S-RTK/P
Q904,908	032KTA1266Y	TR KTA1266Y/PF
Q801,906,909,914	032KTA1268-GRBL	TR KTA1268-GRBL/P
Q803,903,907	032KTC3198Y-AT	TR KTC3198Y-AT/PJ
Q802,911	032KTC3200-GRBL	TR KTC3200-GRBL/P
Q901	032KTC3203Y	TR KTC3203Y/P
Q902	033KTB631K-Y	TR KTB631K-Y (PAIR KTD600K)
D801	033KTD600K-Y	TR KTD600K-Y (PAIR KTB631K)
D901,917-921	034DB0000100	POWER DIODE W02M (1.5A 200V)
D803,809-812,902,903	034DB0001001	POWER DIODE KBP206G (2A 600V)
D802,905-908	034DD0000200	DIODE 1N4004-F (AMMO) 1A 400V
D201,501-504	034DD0000300	DIODE 1N4148 (AMMO) WA 150mA 75V
D101	034DD0000500	DIODE CHIP KDS184RTK/P
D204,205	034DD0000800	DIODE SMD 1SR154-400TE25 1A 4.5x2.6
D202,203	034DE0000200	TVS SMD LTBV15C SOD323
D915,916	034DZ0054R30	DOIDE ZENER SMD KDZ4.3V/P
D909,910	034DZ0110151	ZENER DIODE 15V 1N5245B
D814,815	034DZ0110181	ZENER DIODE 18V 1N5248B
D804	034DZ0110201	ZENER DIODE 20V 1N5250B
D813	034DZ0113R31	ZENER DIODE 3.3V 1N5226B
D911,912	034DZ0115R11	ZENER DIODE 5.1V 1N5231B
D913,914	034DZ0115R61	ZENER DIODE 5.6V 1N5232B
F801	034DZ0117R51	ZENER DIODE 7.5V 1N5236B
F901	0365ST250-R	FUSE 250VT250mA
	0365ST2-R	FUSE 250VT2A

SYMBOL	PARTS NO.	DESCRIPTION
SW001,002	061C-4679A07	TACT SW 5MM GRAY SFKHAM2520
RY801	063DG1U-5-025W	RELAY DG5D1-O(M)III 0.25W TV-5
RY501-504	063EA2-24NU	RELAY
HJ1	065C-4939A02	3.5F MINI JACK PJ317-01
JK402-405	065YKB21-5406N	3.5DIA MINIATURE JACK (ST)
JK401	0664TR-2166#4	2P PIN JACK AU (WHT.RED)
JK501-503	0664TR-2408#3	4P PIN JACK AU (WHT.RED)
JK303,304	066C-4516B01	3P CANNON SOCKET (MALE) YKF52-5004V
JK301,302	066C-4575B01	3P CANNON JACK (FEMALE) YKF52-5006V
JK101	066C-4859A01	2P PIN JACK AU (BLK)
P101	066C-5133A20	CNT SOCKET FH 2.0X4.3 20P F6322011242HA
JK104	066C-5205A00-01	JACK USB B TYPE DIP U7020412210DA
JK102,103	066GP1FAV31RK0F	OPTICAL MODULE GP1FAV31RK0F
CP207	068B10B-PH-KS-01	CONNECTOR WAFER 10P 1W2001WOV0-10KNA
CP202	068B11B-PH-KS-01	CONNECTOR WAFER 11P 1W2001WOV0-11KNA
CP201	068B12B-PH-KS-01	CONNECTOR WAFER 12P 1W2001WOV0-12KNA
CP802,803,804	068B2P3-VH-01	CONNECTOR WAFER 2P 1W3961WOV0-3P2NYA
CP905	068B5B-EH	CONNECTOR WAFER 5P
CP208	068B8B-PH-KS-01	CONNECTOR WAFER 8P 1W2001WOV0-08KNA
CP904	068B9B-EH-01	CONNECTOR WAFER 9P 1W2502WOV0-09KNYA
CON901,902	068C-4422A01	PCB TERMINAL 2P P10 TP WF-21 I-102NA
DB9	068DEL09SNBK2ES	D-SUB CONNECTOR WITH JACK SCREW
016 X-1684A01-05 PCB ASSY		
	501X-1684A-1	PCB ASSY (FRONT)
B203,204	025BK2125HS101	BEAD COIL BK2125 HS101-T
B202	025BK2125HS102	BEAD COIL BK2125HS102-T
IC208	031IC0009900	IC NJM317F (REGULATOR)
IC206	031IC0028600	IC SN65220DBVR USB Suppressor
IC207	031IC0029100	IC TPS2553DBVR current limite S/W
IC209	031IC0030600	REMOCON SENSOR RPM7238-H9 3.3V
Q203-205	032KRC107S	TR KRC107S-RTK/P
VFD201	035DN2025E	FL TUBE
ENC201	056C-4678B01	ROTARY ENCODER (WITHOUT DETENT)
SW801	061C-4176A08-01	POWER SW PS4-A210-60-76 TV-5 PCB
SW201-213	061C-4679A07	TACT SW 5MM GRAY SFKHAM2520
JK105	066C-5132C00	JACK USB 1P U0010411210DA VERTICAL
CP203	068B2B-PH-KS-01	CONNECTOR WAFER 2P 1W2001WOV0-02KNA
CP802	068B2P3-VH-01	CONNECTOR WAFER 2P 1W3961WOV0-3P2NYA
CP204	068B4B-PH-KS-01	CONNECTOR WAFER 4P 1W2001WOV0-04KNA
016 E-1685A00 PCB ASSY		
	501E-1685A-1	PCB ASSY (PHONE)
IC601	031IC0010100	IC NJM4556AD (OPE DUAL)
CP601	068B3B-PH-KS-01	CONNECTOR WAFER 3P 1W2001WOV0-03KNA
CP602	068B4B-PH-KS-01	CONNECTOR WAFER 4P 1W2001WOV0-04KNA
CP603	068B8B-PH-KS-01	CONNECTOR WAFER 8P 1W2001WOV0-08KNA
016 E-1642B00 PCB ASSY		
	501E-1642B-A	PCB ASSY (TELECHIPS)
XT302	023CY0900100	X-TAL 12MHz SRXA-SI-A8 SMD
L301-L302	025BK2125HS601	BEAD COIL BK2125HS601-T
L303	025CIL10J2R2K	COIL CHIP 1608 2.2UH-CIL10J2R2K
IC305	031IC0002703	IC AME1117CCGTZ ABF SMD (REGULATOR)
IC304	031IC0002704	IC AME1117ECGTZ AXH SMD (REGULATOR)
IC302	031IC0030500	IC TCC8600 32-bit RISC for Host Player SMD
IC307	031IC0036800	IC MF1337S3959I-POD 2.0C CP Authentication SMD
IC303	031IC0036901	IC EM639165TS-6G SDRAM SMD
IC306	531IC0032616	IC EN29LV160CT-RA1570 SOFT WRITING
J301	068C-5130A20	CNT PIN HEADER PH2.0 20P P6612011140GA

SYMBOL	PARTS NO.	DESCRIPTION
	016 E-1533B00 PCB ASSY	
	501E-1533B-46	PCB ASSY (POWER LED)
D1,D2	034LE0002600	LED L-314UB5W (BLU) 3F
CP1	068S3B-PH-KS-01	3P CONNECTOR WAFER 1W2001WOR0-03KNA
	OTHERS	
	011FP-705A-B	FRONT PANEL ASSY (BLK)
	011FP-705A-S	FRONT PANEL ASSY (SLV)
	012C-5009B00	TACT BUTTON 8.3F (BLK)
	012C-5009B01	TACT BUTTON 8.3F (SLV)
	012C-5026A01	KNOB 33F NO MARK (BLK)
	012C-5026A01S	KNOB 33F NO MARK (SLV)
	012RV4-09A00	PUSH BUTTON 14F (BLK)
	012RV4-09A01	PUSH BUTTON 14F (SLV)
	014C-5004C03	UPPER COVER (BLK)
	014C-5004C03S	UPPER COVER (SLV)
	014YM3-02A00	SIDE CAP (BLK) 2U (88.1H)
	014YM3-02A01	SIDE CAP (SLV) 2U (88.1H)
	015RP-542A	REAR CHASSIS
	0194TSH-19#2	PLASTIC FOOT 50F BLK 4TSH-19#2-RO
	0194TQF-17C#2	KNOB RING (BLU) 33F
	019C-5074B00	DIMMER RING
T02	022T-1136T01	POWER TRANSFORMER
	069C-4629A01	AC 2P INLET 6102.3100 (WIRING)
	071MFH4X8BK	MACHINE FLAT SCREW (BLK)
	071MFH4X8NI	MACHINE FLAT HEAD SCREW (SLV)
	0724TR-2875	PLUG SHIELD CODE 2P PIN OFC
	072C-4621A03	AC CORD SET SJT AWG16 UL 2P for USA
	072C-4622A02	AC CORD SET AUSTRALIA SAA 2P for Australia
	072C-4623A02	AC CORD SET BS H05VV-F 2C for UK
	072C-4624A03	AC CORD SET EUROPE CEE 2P for Europe
	072C-5178A00-01	USB AM-BM CABLE USB2.0 AM TO USB BM L=1.5M
	081ABM-06A00	SUB PARTS BOX
	081ABM-07A00	EPS BLOCK
	081ABM-10B00	INSIDE CARTON
	081ABM-11A00	SHIPPING CARTON
	081EPS-2U02 (L/R)	EPS MOULDING
	082OMADDPCDRV-C	ADD SHEET PC USB DRIVER
	082OMADDPCUSB-CA	ADD SHEET PC-USB Driver Instruction
	082OMRC-1570-81	OWNER'S MANUAL
	092I-BTD-18C3-1	USB BLUETOOTH DONGLE
	092PC-USB-DRV-C	PC USB DRIVER CD ROM
	092RR-AX92	REMOTE UNIT

1. Main Software Upgrade- 1/2

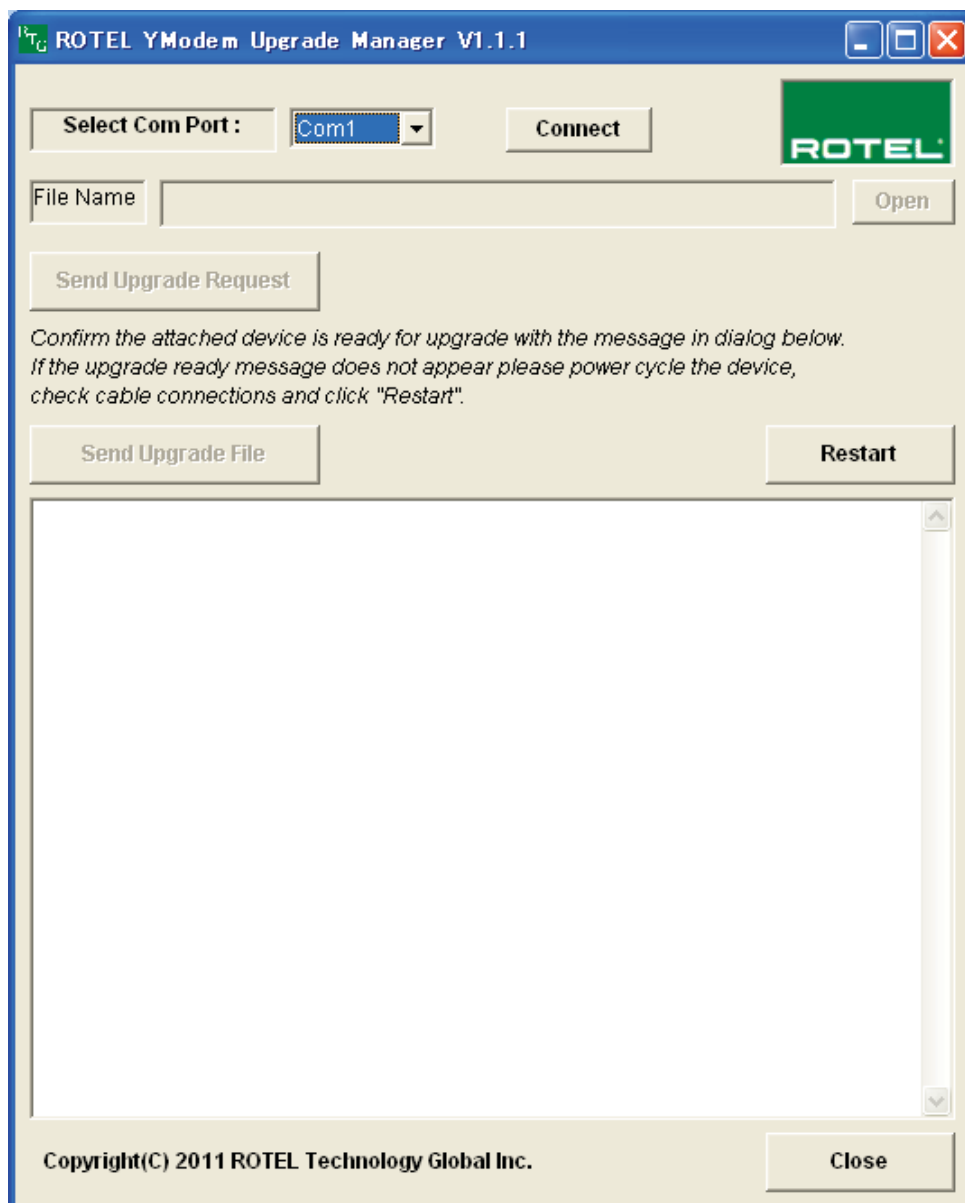
1. Launch application 'ROTEL YModem Upgrade Manager V1.1.1'.

All option except Connect, Restart, Close are gray and not selectable.

2. Select the COM port (1-8). Depend on using USB port.

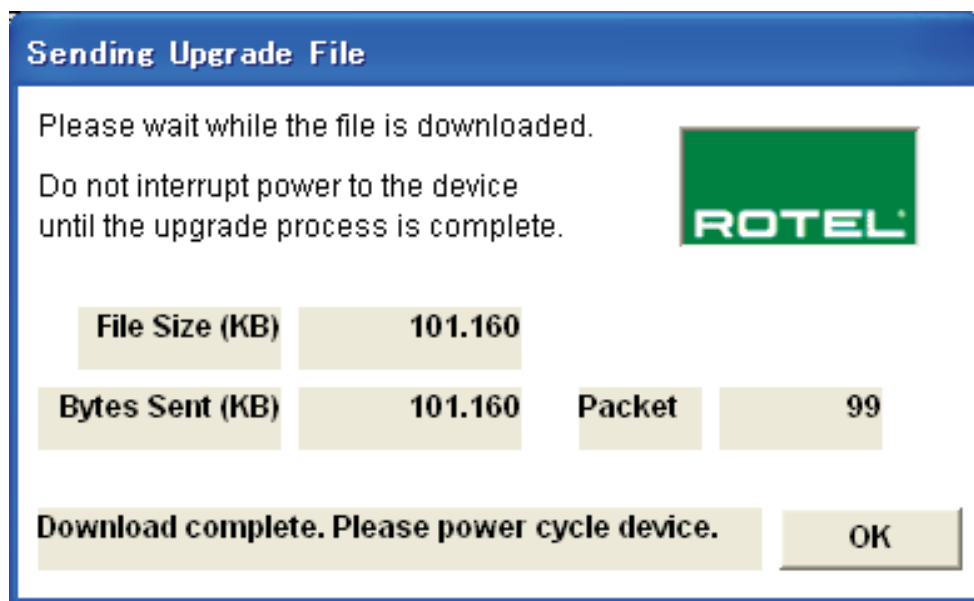
3. Click 'Connect'.

If connection fail a dialog appears, 'Unable to connect. Please verify COM port information'.



1. Main Software Upgrade -2/2

4. 'Open' button is active.
5. Click 'Open' and select the file to upgrade. Only proper file extension are display in list.
6. 'Send Upgrade Request' is now active.
7. Click 'Send Upgrade Request'.
8. Send the 'upgrade' message via RS232 to the attached device.
9. Text box is cleared of all data. Device enters upgrade mode. Upgrade options are displayed in the text box for confirmation of upgrade mode.
10. 'Send Upgrade File' is active.
11. Click 'Send Upgrade File'.
12. The file begins transfer, a user dialog box appears showing the file size and data sent. This dialog should be 'dressed up' a bit if possible for better experience.
13. When download complete pop up text box change to 'Download complete'. Please power cycle device with 'OK' button active.
14. If Restart is selected the '2' command is sent via RS232 to exit any possible upgrade mode. 'Send Upgrade File' is disable until 'Send Upgrade Request' is clicked.



2. Install the PC-USB driver software to a Windows PC

Rotel Product

- Do **NOT** attach the PC-USB cable to your computer until prompted.
- Press MENU on the front panel until 'PC-USB AUDIO CLASS' appears on the display.
- Select '2.0' using the '-' key then press 'ENTER'.

PC

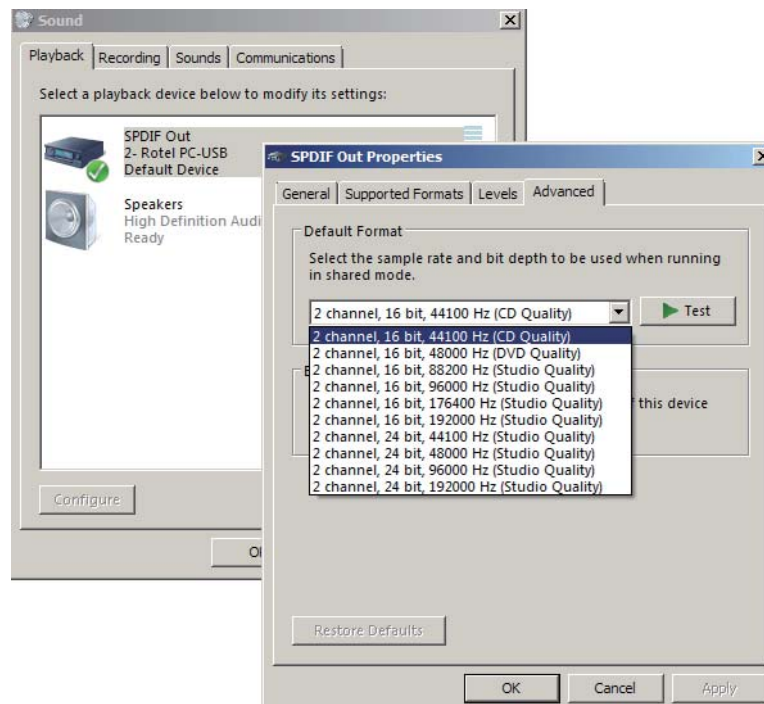
- Insert the supplied Rotel Driver Installation disc into your computer.
- Select 'Set-up' or 'Set-up.exe' as appropriate from the disc menu when it appears.



PC-USB

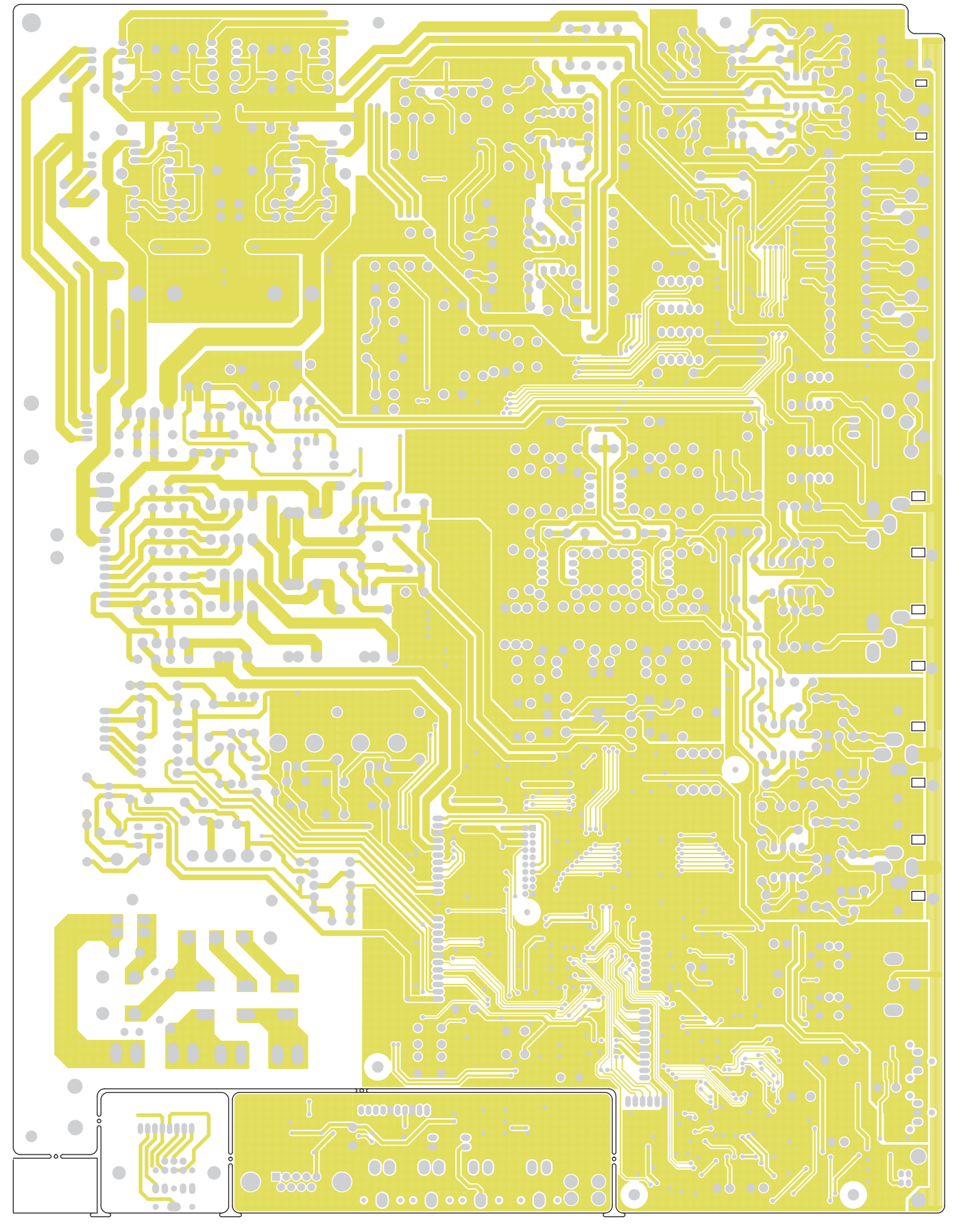
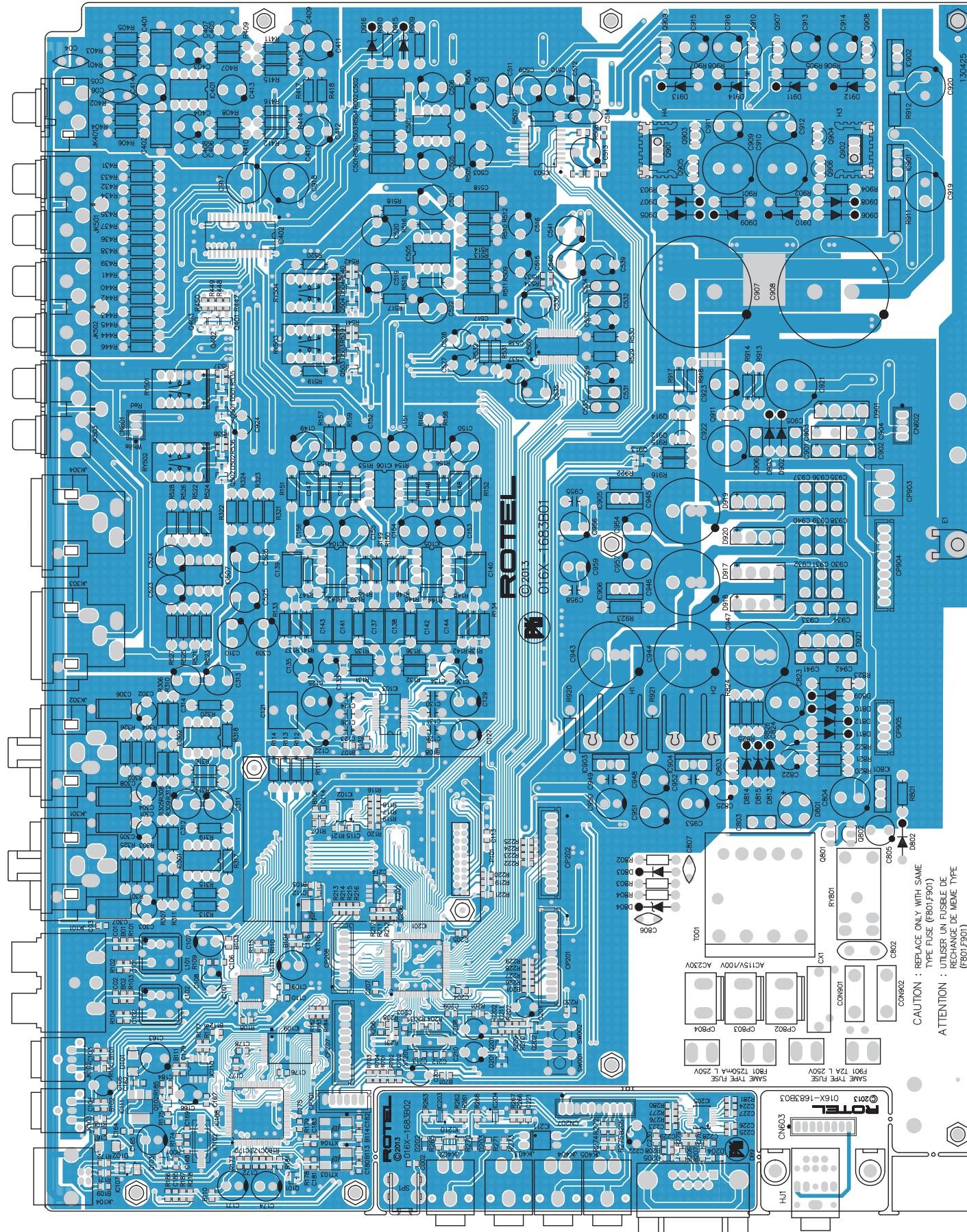
- When prompted, connect your Rotel product to the USB socket on your computer using the supplied cable.
- Follow the on-screen instructions - the PC-USB driver will then be installed.
- Remove the driver disc and re-start your computer.

Once installed you will need to configure the new driver on your computer. Navigate to your Sounds options in the Windows Control Panel to set the Default Sound Output to 'Rotel PC-USB'. Select your preferred sample rate from the Advanced tab. Depending on the version of Windows, you may need to enter the Properties tab to find the Advanced tab.



<Memo>

MAIN PCB 016 X-1683B01-03

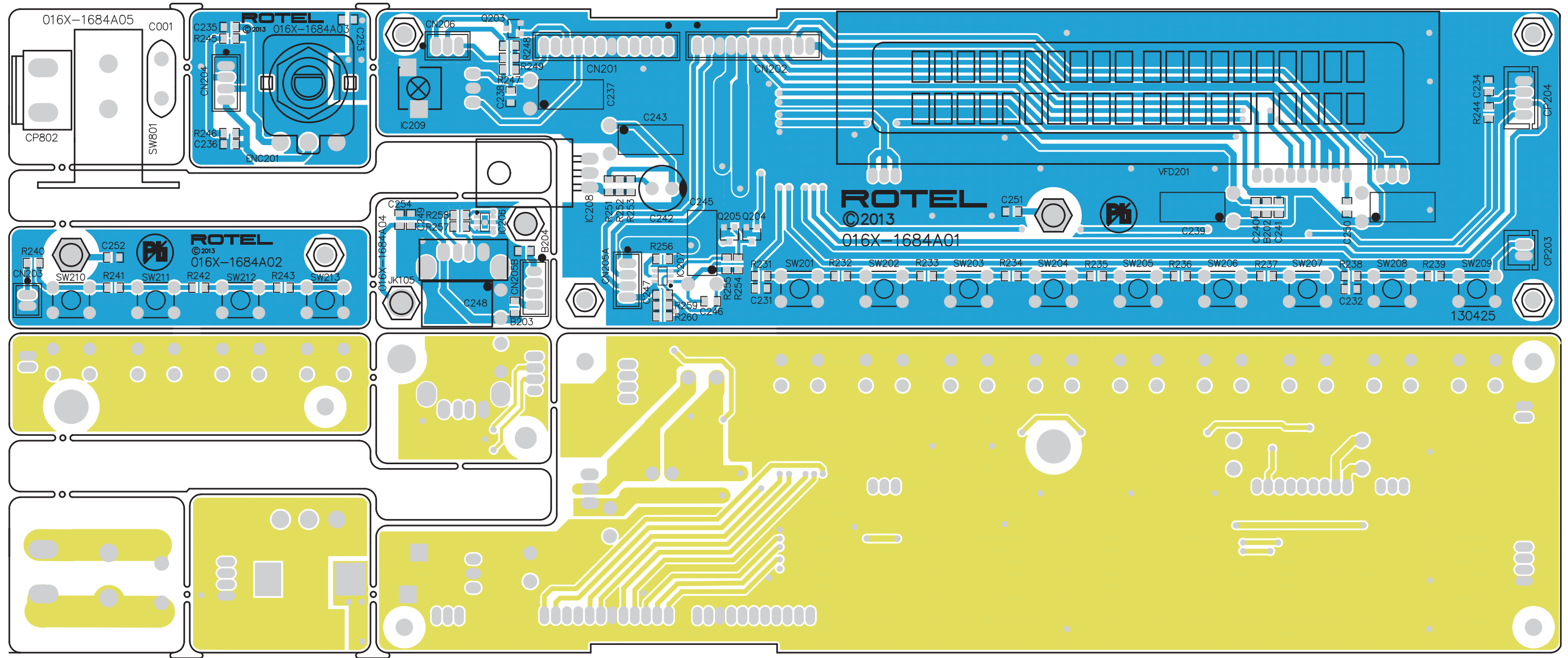


CAUTION : REPLACE ONLY WITH SAME TYPE FUSE (F801,F901)
ATTENTION : UTILISER UN FUSIBLE DE MÊME TYPE (F801,F901)

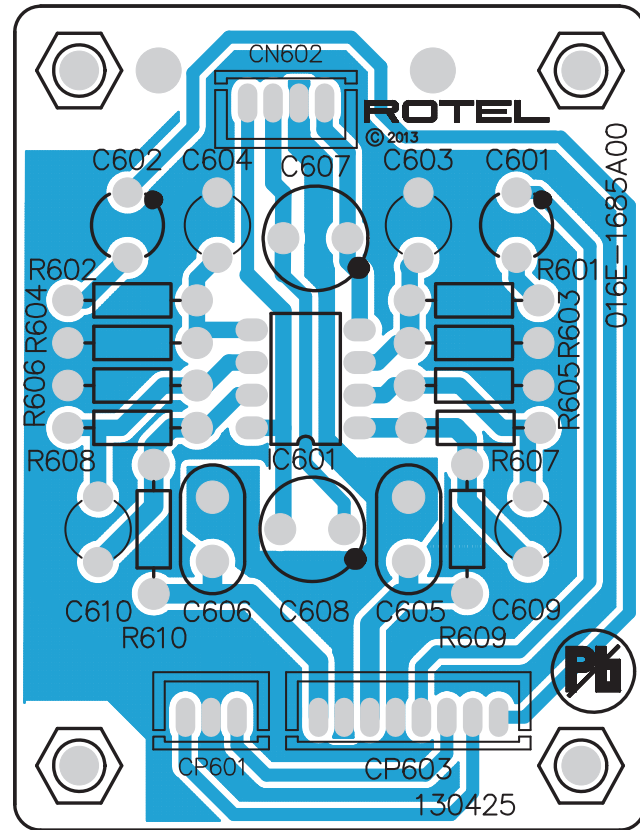
ROTEL © 2013 016X-1683B01

ROTEL © 2013 016X-1683B01

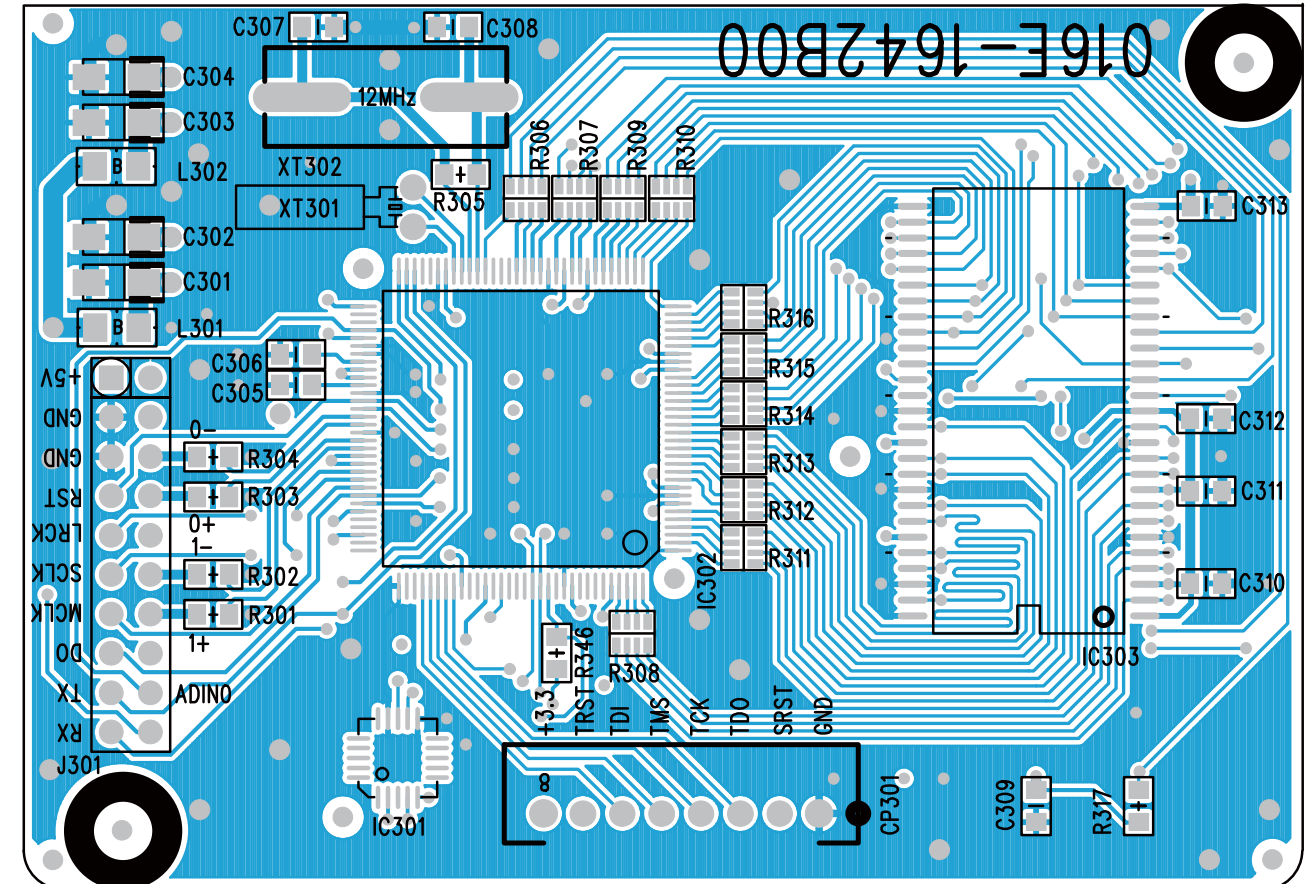
FRONT PCB 016 X-1684A01-05



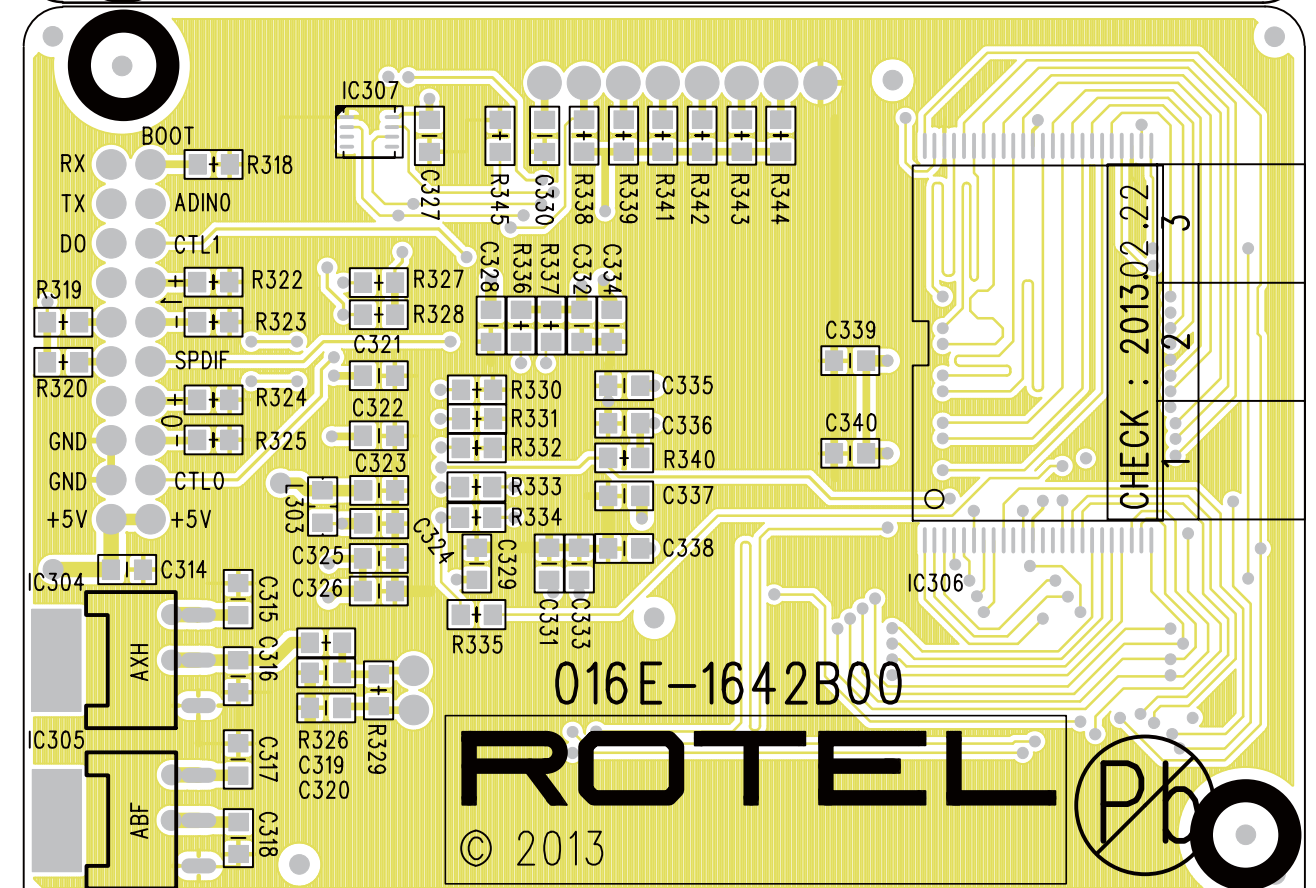
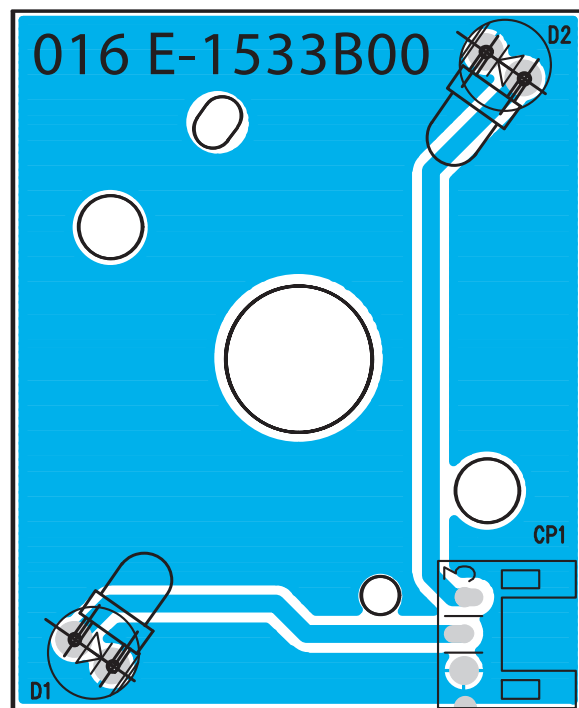
PHONE PCB 016 E-1685A00

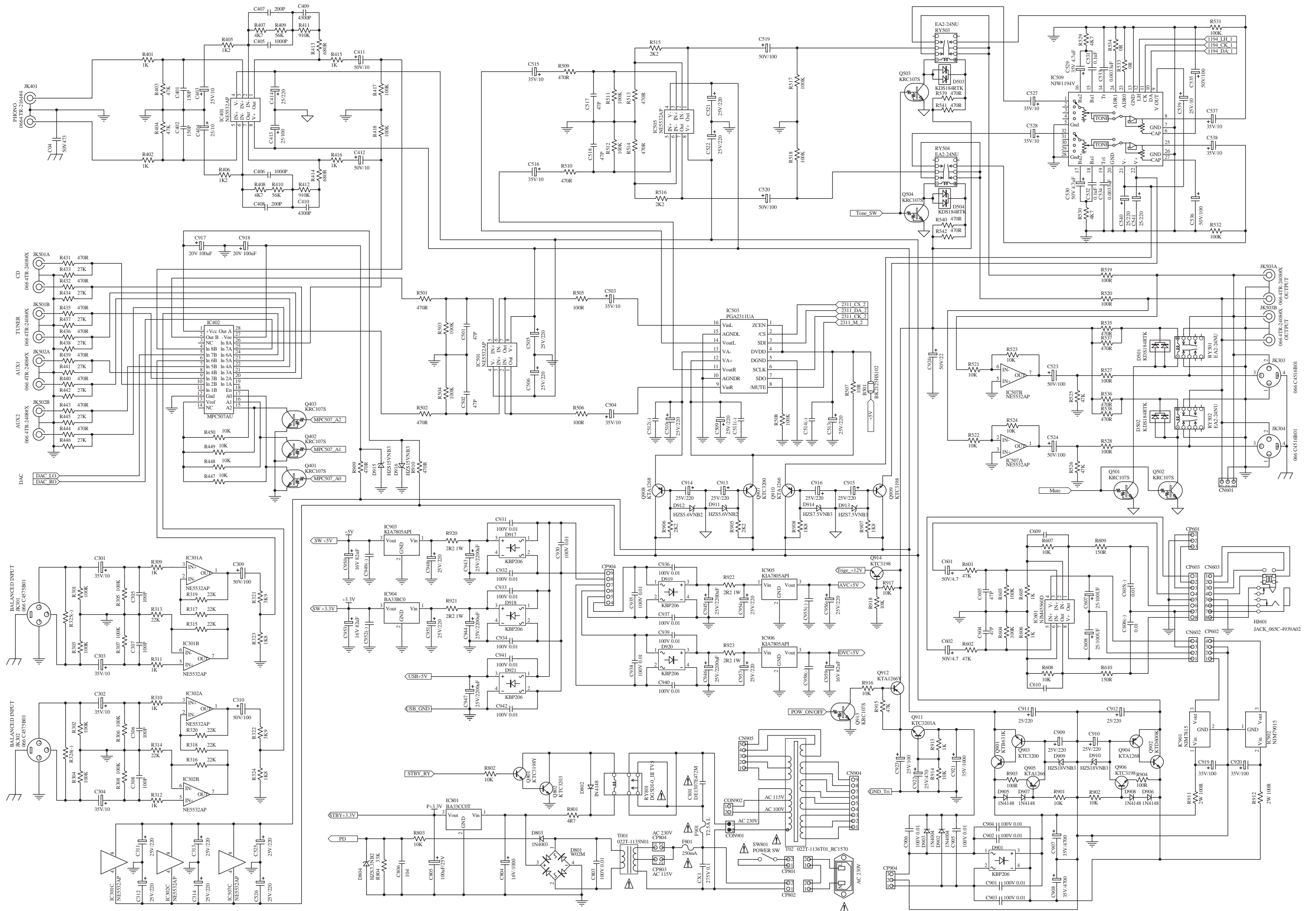


TELECHIPS PCB 016 E-1642B00



POWER LED PCB 016 E-1533B00





Schematic Diagram 3/3

