

TEAC

SERVICE MANUAL

R-2

AM/FM RECEIVER



NOTES

- PC board shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sign are safety critical components. they must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [] mark can be used only with the version designated.
[T/C]: UL/CSA [E]: EUROPE [UK]: U.K.
[SIN]: SINGAPORE [HK]: HONG KONG

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1 SAFETY INFORMATION

SAFETY INFORMATION

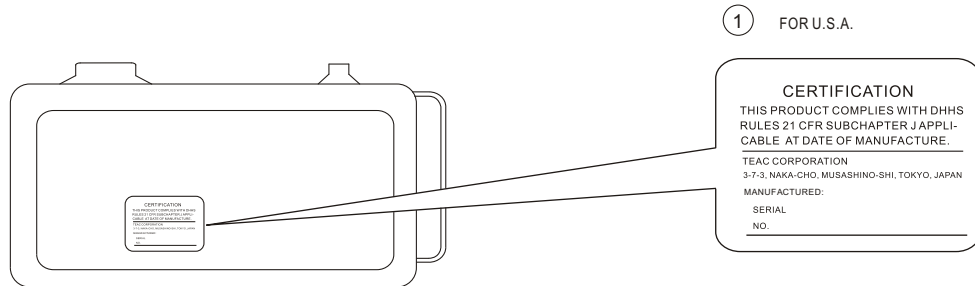
This product has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, subchapter J, based on The Radiation Control for Health and Safety Act of 1968" and is classified as class 1 laser product. There is not hazardous invisible laser radiation during operation because invisible laser radiation emitted inside of this product is completely confined in the protective housings. The label required in this regulation is shown ①.

• **CAUTION**

USE OF CONTROLS OR ADJUSTMENT OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT REMOVE THE PROTECTIVE HOUSING USING SCREWDRIVER.

IF THIS PRODUCT DEVELOPS TROUBLE, MAKE A CONTACT WITH OUR SERVICEMAN, AND DO NOT USE THE PRODUCT A TROUBLED STATE.



2 SPECIFICATIONS

TUNER Section

Frequency Range (FM): 87.5MHz to 108.00 MHz (100kHz step) - USA
87.5MHz to 108.00 MHz (50kHz step) - EUR

Frequency Range (AM): 530kHz to 1710 kHz (10kHz step) - USA
522kHz to 1620 kHz (9kHz step) - EUR

SPEAKER Type

Type : 65 mm
Impedance : 4 ohms
Output Power : 1.5 W

GENERAL

Power Requirements (AC adaptor):
120V , 60Hz (U.S.A./ Canada model)
230V , 50Hz (Europe model)

Power Consumption: 15 W

Dimension (W x H x D): 238 x 130 x 120 mm
9-3/8 x 5-1/8 x 4-3/4 (inches)

Weight: (net) 3-1/16 lbs (1.4 kg)

Standard Accessories: AC Adaptor x 1
Stereo mini plug cable x 1
FM Lead-type Antenna x 1
Owner's Manual x 1
Warranty Card x 1

- Design and specifications are subject to change without notice.
- Illustrations may differ slightly from production models.

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3 ADJUSTMENTS AND CHECKS

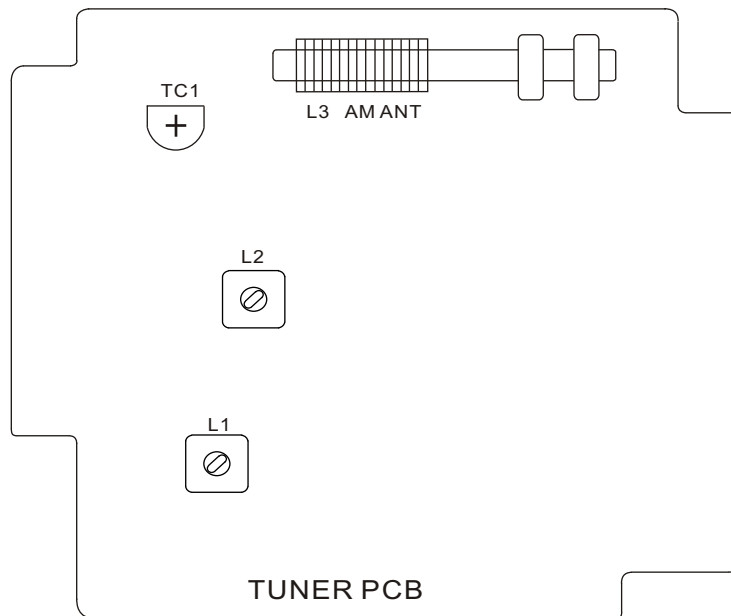
3-1 TUNER SECTION

- Use a screwdriver with a plastic or ceramic grip for all adjustment.

3-1-1 AM adjustment

1. Set the function switch to the TUNER position.
2. Set the BAND switch to the AM position.
3. Connect the test loop antenna across the output of the signal generator.
4. Connect the oscilloscope to the PHONE JACK terminal.
5. Set the signal generator as listed in the alignment chart.

3-2 Adjustment and Test Points



3-2-1 AM Tuner

ITEM	SG SETTING	TUNER SETTING	ADJUSTMENT	MEASURING POINTS. RESULT
AM				
1. VOLTAGE adjustment		1710kHz (USA) 1620kHz (EUR)	L2	VT 8.0V
		530kHz (USA) 522kHz (EUR)	Check	VT 1.5V
2. IFT adjustment	610kHz 1kHz, 30% mod	610kHz (USA) 603kHz (EUR)	L1	Adjust for max. output.
3. ANT COIL adjustment	610kHz (USA) 603kHz (EUR) 1kHz, 30% mod	610kHz (USA) 603kHz (EUR)	L3 AM ant coil	Adjust for max. output.
4. TC1 adjustment	1410kHz (USA) 1404kHz (EUR) 1kHz, 30% mod	1410kHz (USA) 1404kHz (EUR)	TC1 repeat step 3 and 4	Adjust for max. output and best waveform.
	Repeat step 3			

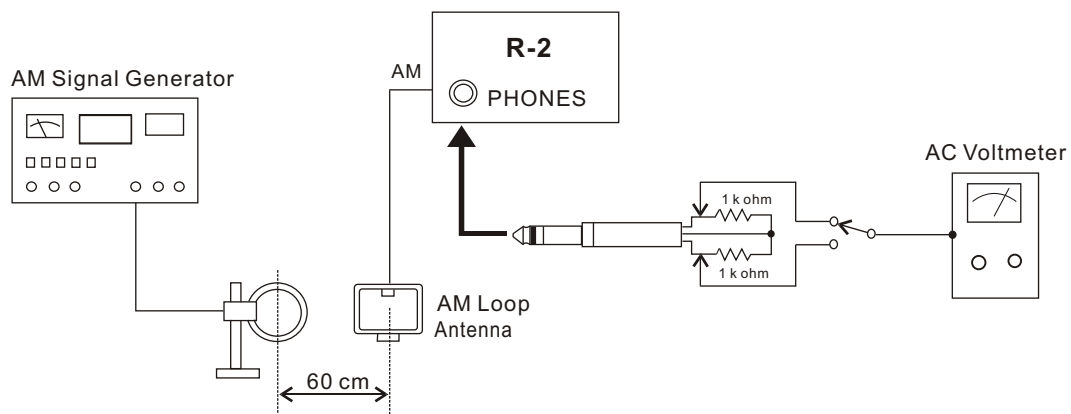
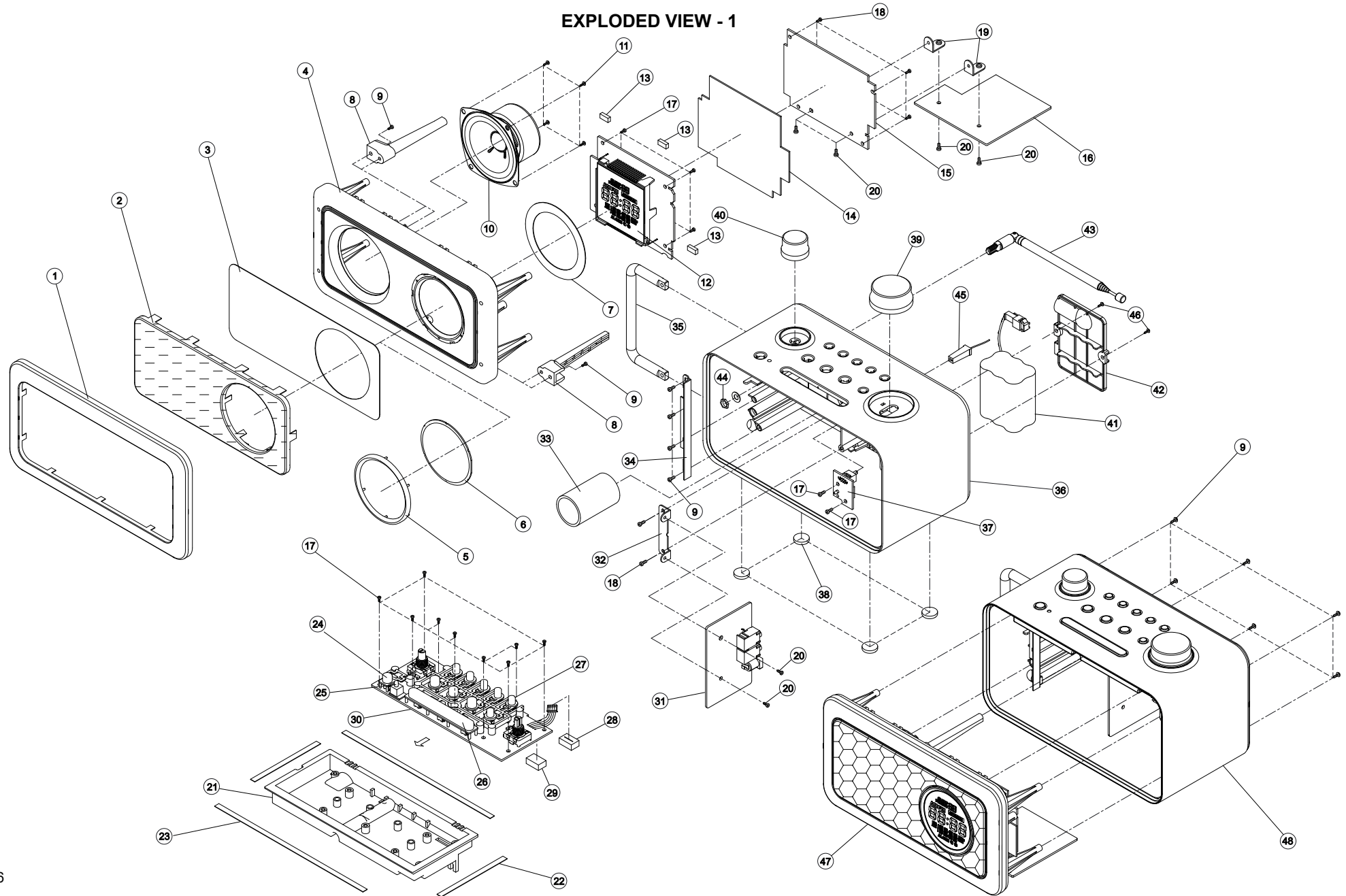


Fig. 3-2-2

4 EXPLODED VIEWS AND PARTS LIST

EXPLODED VIEW - 1



EXPLODED VIEW-1

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
1-1	020-SR100300	ALUMI FRAME [T/C,SIN,HK]	
	020-R2EU0100	ALUMI FRAME [E,UK]	
1-2	020-R2B00500	SPEAKER METAL NET - BLACK	
	020-R2W00501	SPEAKER METAL NET - SILVER	
1-3	051-SRL10000	FRONT PANEL HIMERON	
1-4	001-R2B00100	FRONT PANEL - BLACK	
	001-R2W00101	FRONT PANEL - WHITE	
1-5	010-R2000100	DISPLAY RING	
1-6	007-R2000200	DISPLAY WINDOW	
1-7	051-R2000001	LCD HIMERON SHEET	
1-8	010-SR100400	PANEL JOINT BAR	
1-9	023-23012033	SCREW BB 3X12MM (BLK)	
1-10	061-SR100400	SPEAKER 4 OHM 5-8W	
1-11	024-43008033	SCREW PWA 3X8MM (BLK)	
1-12	100-R2UL2060	DISPLAY PCB ASSY	
1-13	035-R2000052	TUNER PCB EVA CUSHION	
1-14	099-35R20000	TUNER PCB SHIELD PAPER	
1-15	100-R2UL2020	TUNER PCB ASSY	
1-16	100-R2UL2010	MAIN PCB ASSY	
1-17	024-23008032	SCREW BA 3X8MM	
1-18	023-23010033	SCREW BB 3X10MM (BLK)	
1-19	011-R2000200	MAIN PCB BRACKET	
1-20	022-23006032	SCREW BM 3X6MM	
1-21	010-R2000200	FUNCTION PCB COVER	
1-22	035-R2000012	PCB COVER EVA SHEET(A)	
1-23	035-R2000022	PCB COVER EVA SHEET(C)	
1-24	004-R2000500	POWER BUTTON	
1-25	007-R2000100	POWER LED LENS	
1-26	004-R2000400	SNOOZE BUTTON	
1-27	004-R2000300	FUNCTION BUTTON	
1-28	035-R2000032	PCB COVER EVA CUSHION (A)	
1-29	035-R2000042	PCB COVER EVA CUSHION (B)	
1-30	100-R2UL2050	CONTROL PCB ASSY	
1-31	100-R2UL2030	POWER PCB ASSY	
1-32	011-R2000100	POWER PCB BRACKET	
1-33	044-SR100000	PAPER PIPER	
1-34	011-R2000300	METAL HANDLE BRACKET	
1-35	011-SR100300	METAL HANDLE - BLACK	
	011-SR100301	METAL HANDLE - SILVER	
1-36	001-R2B00200	REAR PANEL - BLACK [T/C]	
	001-R2W00201	REAR PANEL - WHITE [T/C]	
	001-R2EB0200	REAR PANEL - BLACK [E,UK]	
	001-R2EW0201	REAR PANEL - WHITE [E,UK]	
	001-R2SB0200	REAR PANEL - BLACK [SIN,HK]	
	001-R2SW0201	REAR PANEL - WHITE [SIN,HK]	

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EXPLODED VIEW-1

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
1-37	100-R2UL2040	FM ANT PIN PCB ASSY	
1-38	037-SR100100	RUBBER FOOT	
1-39	004-R2B00100	TUNER KNOB - BLACK	
	004-R2W00101	TUNER KNOB - SILVER	
1-40	004-R2B00200	VOLUME KNOB - BLACK	
	004-R2W00201	VOLUME KNOB - SILVER	
1-41	099-45SRL101	AA SIZE NI-MH BATTERY	
1-42	003-R2B00100	BATTERY COVER - BLACK [T/C]	
	003-R2W00101	BATTERY COVER - WHITE [T/C]	
	003-R2YB0100	BATTERY COVER - BLACK - W/MADE IN CHINA [E]	
	003-R2NB0100	BATTERY COVER - BLACK - W/O/MADE IN CHINA [E,UK,SIN,HK]	
	003-R2YW0101	BATTERY COVER - WHITE - W/MADE IN CHINA [E]	
	003-R2NW0101	BATTERY COVER - WHITE - WO/MADE IN CHINA [E,UK,SIN.HK]	
1-43	089-00000017	FM ROD ANTENNA	
1-44	013-60000001	HEXAGON NUT M6	
1-45	089-00000016	FM ANTENNA L=1500MM (BLACK)	
	089-00000019	FM ANTENNA L=1500MM (WHITE)	
1-46	023-23010031	SCREW BB 3X10MM	
	023-23010033	SCREW BB 3X10MM (BLK)	
1-47		FRONT PANEL ASSY	
1-48		REAR PANEL ASSY	

5 PC BOARDS AND PARTS LIST

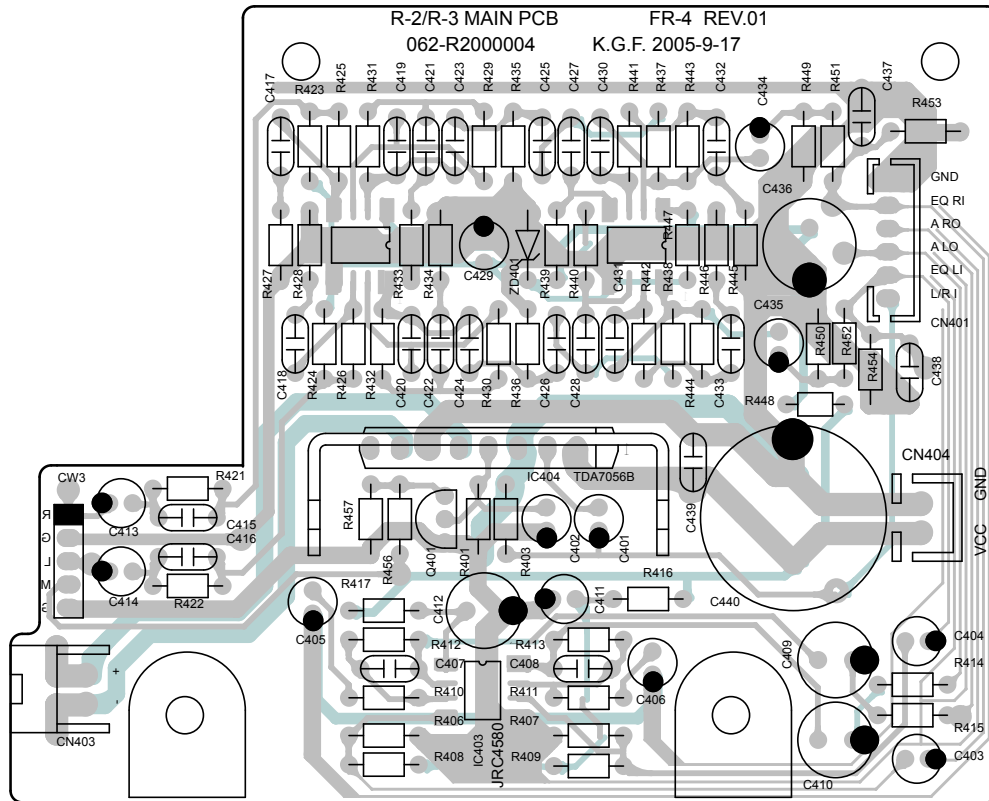
MAIN PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-R2UL2010	MAIN PCB ASSY	
	062-R2000004	MAIN PCB	
C440	⚠ 072-30330251	E.CAP 3300UF/25V	
CN401	082-10600100	CONNECTOR 6P P=2.0MM	
CN403	082-20240100	CONNECTOR 2P P=2.5MM	
CN404	082-10240100	CONNECTOR 2P P=2.5MM	
IC401-403	075-JR458027	IC - JRC4580	
IC404	075-07056B10	IC - TDA7056B	
Q401	076-00C94500	TR - 2SC945	
ZD401	077-3004A10H	ZENER DIODE 3.5V	

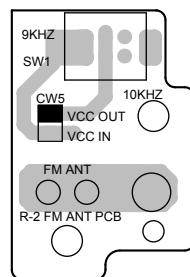
FM ANT PIN PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-R2UL2040	FM ANT PIN PCB ASSY	
	062-R2000004	FM ANT PIN PCB	
SW1	063-000R2110	TUNER AREA SW #SS-22D06	

MAIN PCB



FM ANT PIN PCB



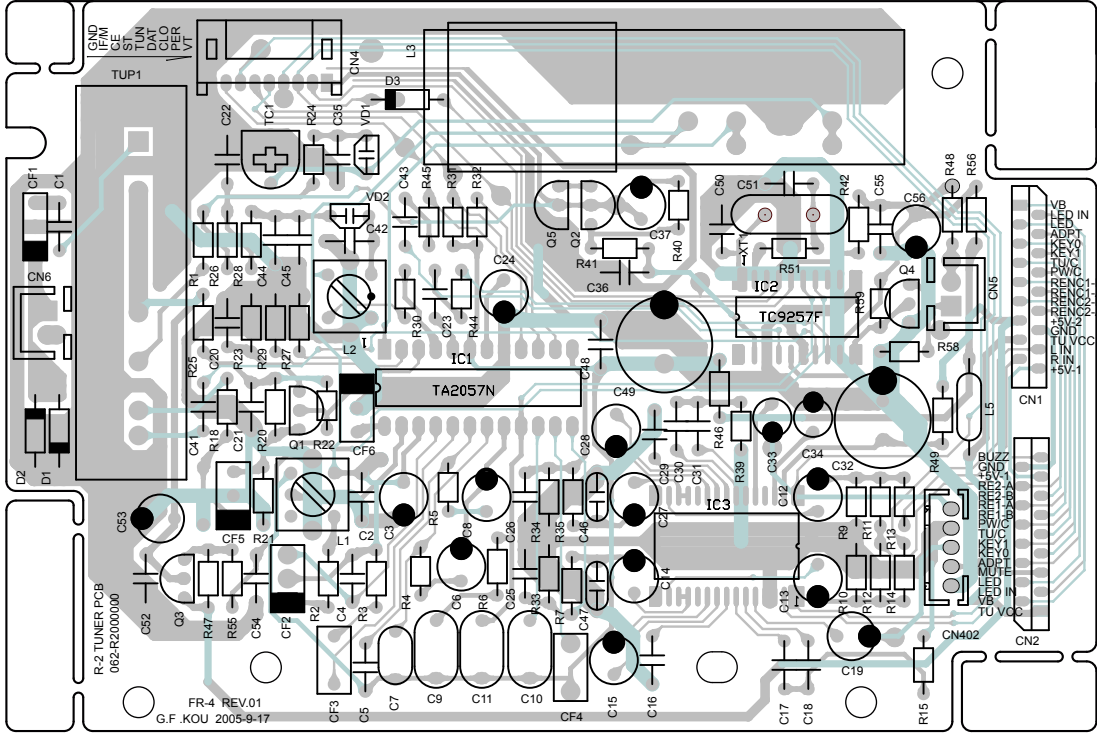
TUNER PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-R2UL2020	TUNER PCB ASSY	
	062-R2000000	TUNER PCB	
	055-SLD90000	TUNER PACK #DT2200F/V	
CF1	054-0GP18000	FM ANT FILTER GFMB3	
CF2	081-04500000	AM CER.FILTER SFU450B	
CF3	093-11070003	CER.FILTER 10.7MHZ	
CF4	093-A4560001	RESONATOR B456F16	
CF5,6	081-31070001	FM CER.FILTER L10.7MA-5	
CN1	082-11830300	FPC CONNECTOR 18PIN P=1MM	
CN2	082-21730300	FPC CONNECTOR 17PIN P=1MM	
CN4	082-20960100	CONNECTOR 9PIN P=1.5MM	
CN5,6	082-10240100	CONNECTOR 2PIN P=2.5MM	
CN402	082-10500100	CONNECTOR 5P P=2.0MM	
D1,2,3	077-00414801	DIODE 1N4148	
IC1	075-00205701	IC - TA2057N	
IC2	075-09257F21	IC - TC9257F	
IC3	075-07534224	IC - LC75342M	
L1	079-D2800011	AM IFT COIL - YELLOW	
L2	079-D2930210	AM OSC COIL - RED	
L3	096-000R2020	AM ANT COIL	
L5	095-00470001	INDUCTOR 47UH	
Q1,2,4,5	076-00C94500	TR - 2SC945	
Q3	076-00A73300	TR - 2SA733	
TC1	073-00020022	TC.20PF	
VD1,2	077-50014901	1SV149	
XT1	093-04500000	CRYSTAL 4.5MHZ	

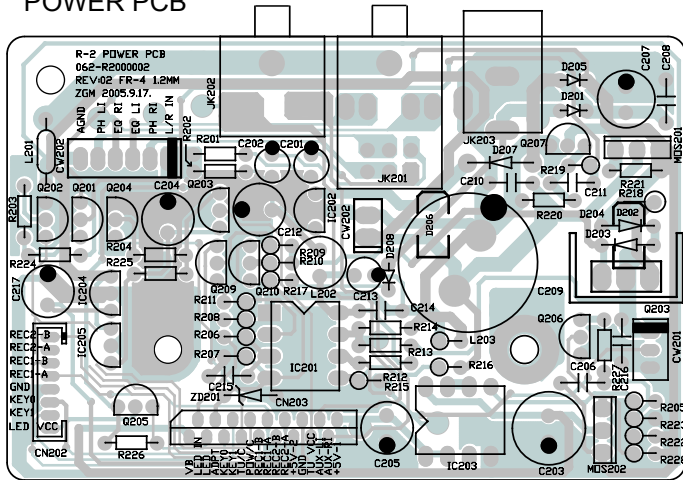
POWER PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-R2UL2020	POWER PCB ASSY	
	062-R2000002	POWER PCB	
C209	⚠ 072-30220251	E.CAP 2200UF/24V	
CN202	082-10860100	CONNECTOR 8PIN P=1.5MM	
CN203	082-11830300	FPC CONNECTOR 18PIN P=1MM	
D201,205,207	077-10400201	DIODE 1N4002	
D203,204,208	077-00414801	DIODE 1N4148	
D202,206	⚠ 077-70SS1201	DIODE SS12	
IC201	075-0F944403	IC - F9444	
IC202,204,205	075-LP295059	IC - LP2950	
IC203	075-LP295109	IC - LP2951	
JK201	064-35020101	HEADPHONEJACK #TE-03506S-11	
JK202	064-35020111	AUX JACK #TE-03506S-05	
JK203	064-20110102	DC JACK #TD0202-20	
L201	095-00220001	INDUCTOR 22UH	
L202	052-SRL50020	UPRIGHT FERRITE CORE	
L203	095-10100001	INDUCTOR 100UH	
MOS201,202	076-00295520	POWER MOSFET-MTP2955V	
Q201,203,205	076-00A73300	TR - 2SA733	
Q202,204,206,	076-00C94500	TR - 2SC945	
Q207,209,210			
Q208	076-00B77200	TR - 2SB772	
ZD201	077-3005C10H	ZENER DIODE 5V	

TUNER PCB



POWER PCB



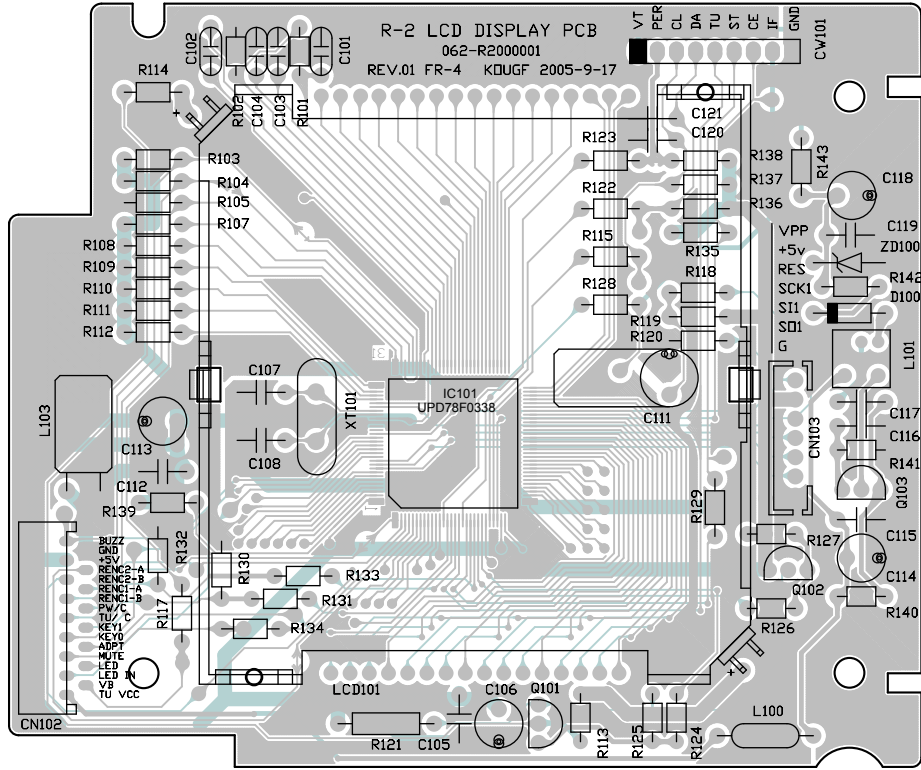
DISPLAY PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-R2UL2060	DISPLAY PCB ASSY	
	062-R2000001	DISPLAY PCB	
CN102	082-21730300	CONNECTOR 17PIN P=1MM	
CN103	082-10700100	CONNECTOR 7PIN P=2MM	
D100	077-00414801	DIODE 1N4148	
IC101	075-78033835	IC - UPD78F0338	
L100	095-00470001	INDUCTOR 47UH	
L101	079-R2000051	VT OSC COIL	
L103	052-SRL50020	UPRIGHT FERRITE CORE	
LCD	080-000R2001	LCD DISPLAY #TJMS-4394	
Q101,102	076-00A73300	TR - 2SA733	
Q103	076-00C94500	TR - 2SC945	
X101	093-11000002	CRYSTAL 10MHz	
ZD100	077-3012A20H	ZENER DIODE 12V	

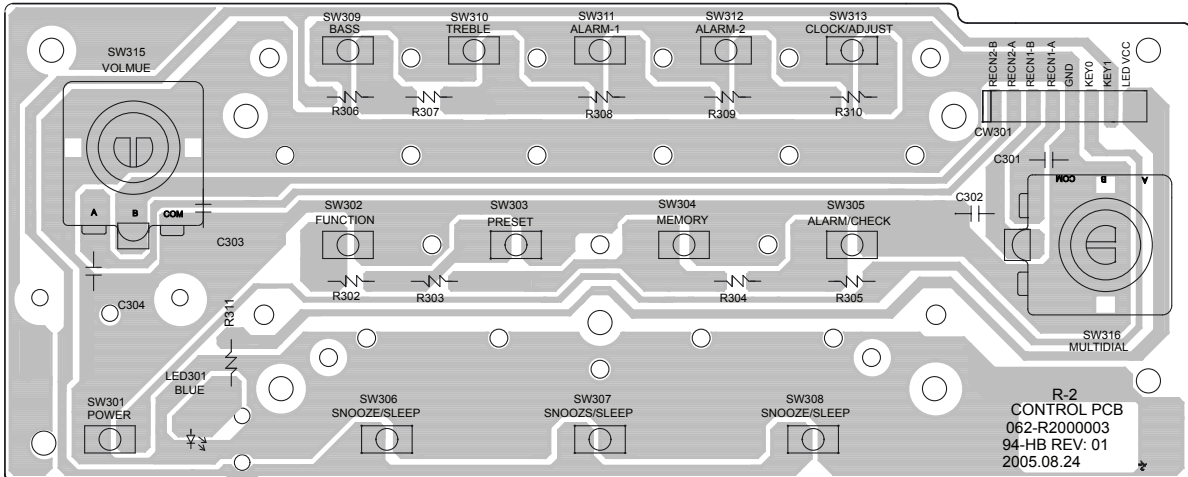
CONTROL PCB ASSY

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	100-R2UL2050	CONTROL PCB ASSY	
	062-R2000003	CONTROL PCB	
LED301	094-06020501	LED - BLUE D3MM	
SW301-313	063-SRL35090	TACT SWITCH H=5.5MM	
SW315,316	063-000R2610	ROTAY ENCODER #EC162102F1B-HA1-015	

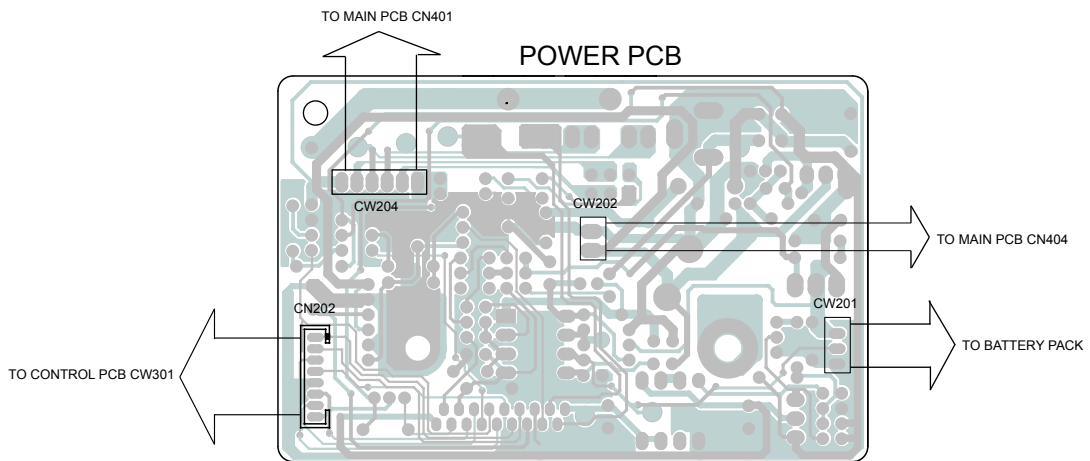
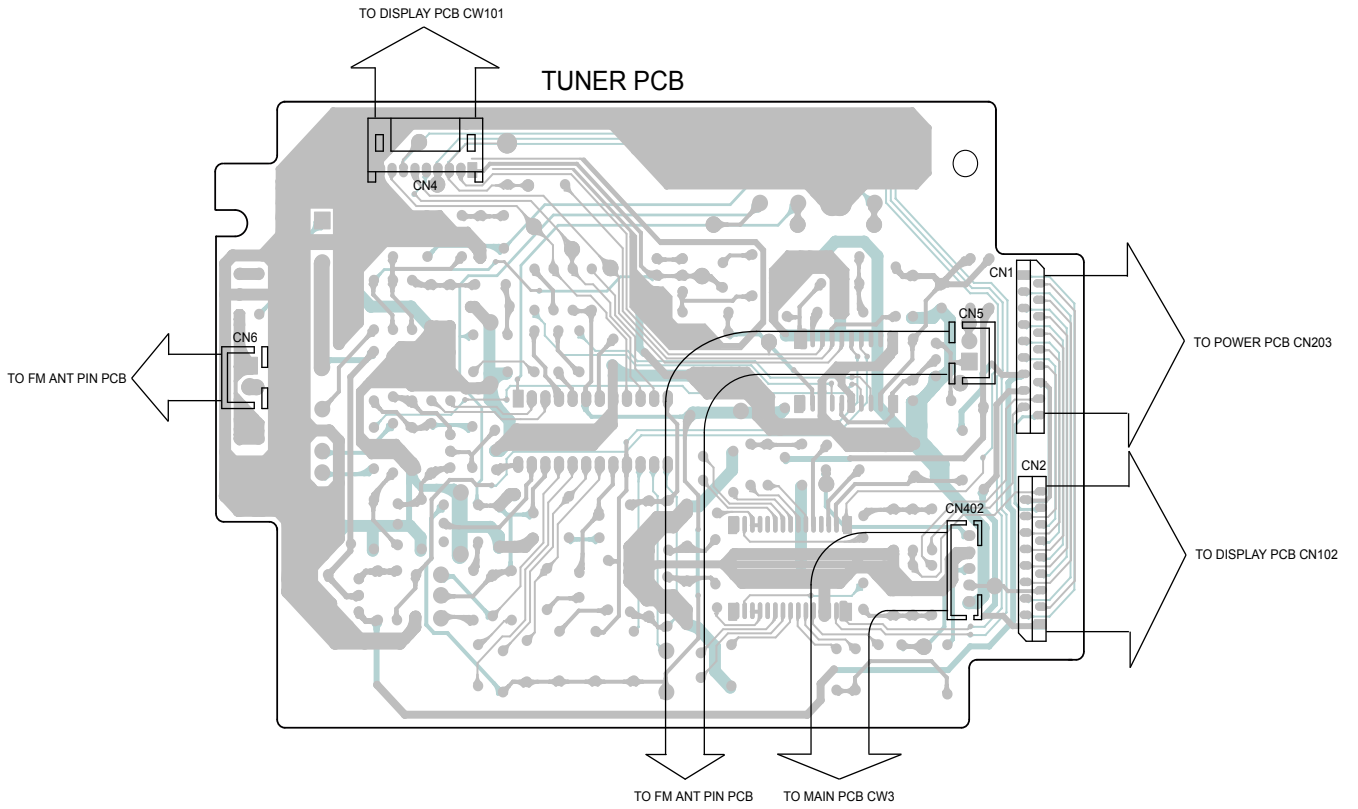
DISPLAY PCB



CONTROL PCB



6 WIRING DIAGRAM



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7 INCLUDED ACCESSORIES

INCLUDED ACCESSORIES

REF. NO	PARTS NO.	DESCRIPTION	REMARKS
	046-R2000010	INSTRUCTION MANUAL - E/F/S [T/C]	
	046-R2EUR010	INSTRUCTION MANUAL - G/I/H [E,UK,SIN,HK]	
	084-SR101200	AC ADAPTER UL 120V/60Hz - BLACK [T/C]	
	084-SR101201	AC ADAPTER UL 120V/60Hz - WHITE [T/C]	
	084-R1EU1100	AC ADAPTER VDE 230V/50Hz - BLACK W/MADE IN CHINA [E]	
	084-R1EU1102	AC ADAPTER VDE 230V/50Hz - BLACK W/O MADE IN CHINA [E]	
	084-R1EU1101	AC ADAPTER VDE 230V/50Hz - WHITE W MADE IN CHINA [E]	
	084-R1EU1103	AC ADAPTER VDE 230V/50Hz - WHITE W/O MADE IN CHINA [E]	
	084-R1UK1400	AC ADAPTER VDE 240V/50Hz - BLACK [UK,HK]	
	084-R1UK1401	AC ADAPTER VDE 240V/50Hz - WHITE [UK,HK]	
	089-00000016	FM LEAD-TYPE ANTENNA - BLACK	
	089-00000019	FM LEAD-TYPE ANTENNA - WHITE	

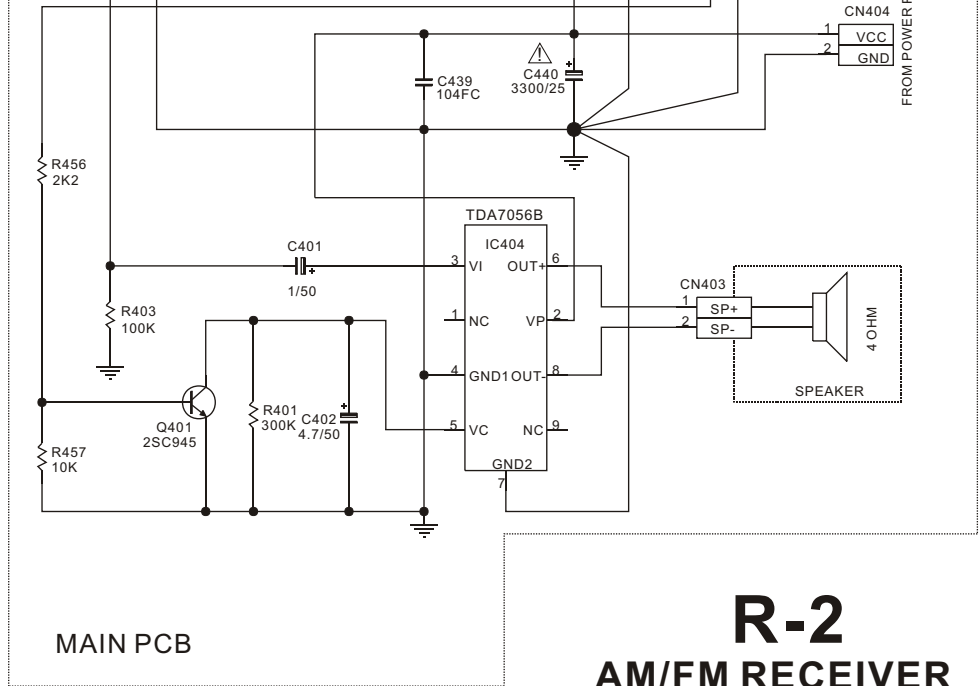
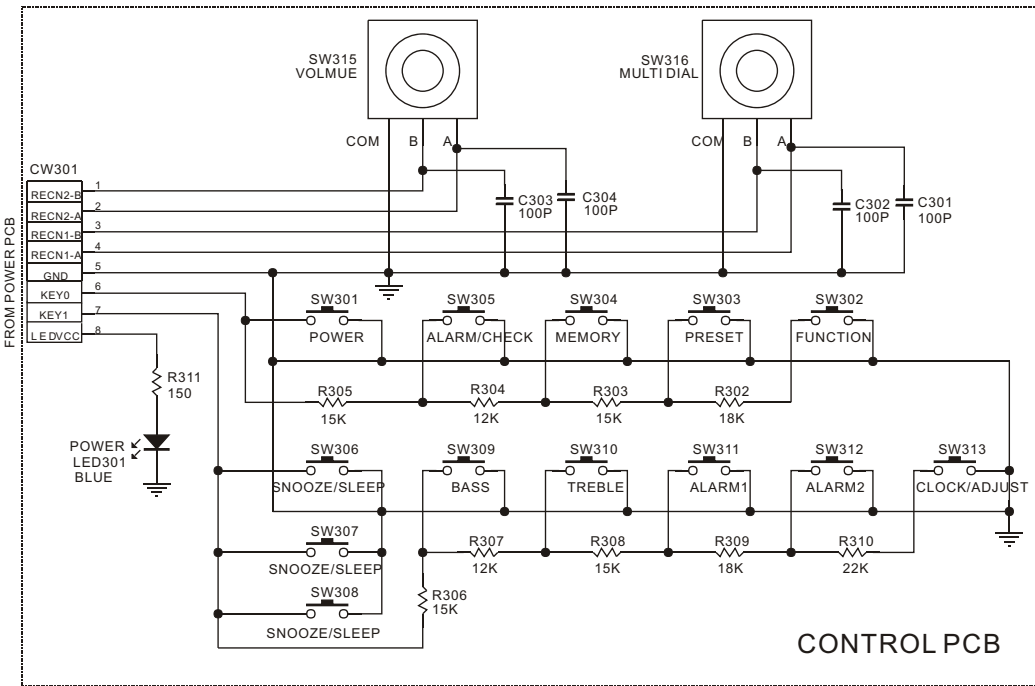
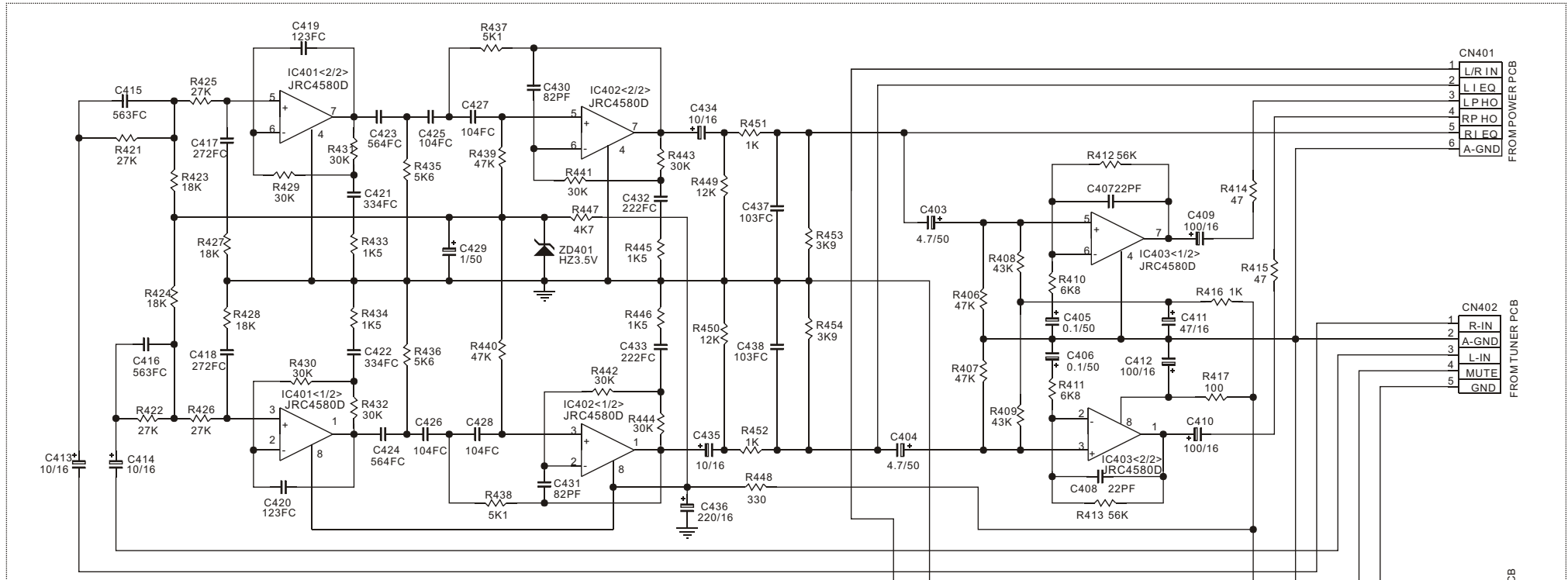
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TEAC

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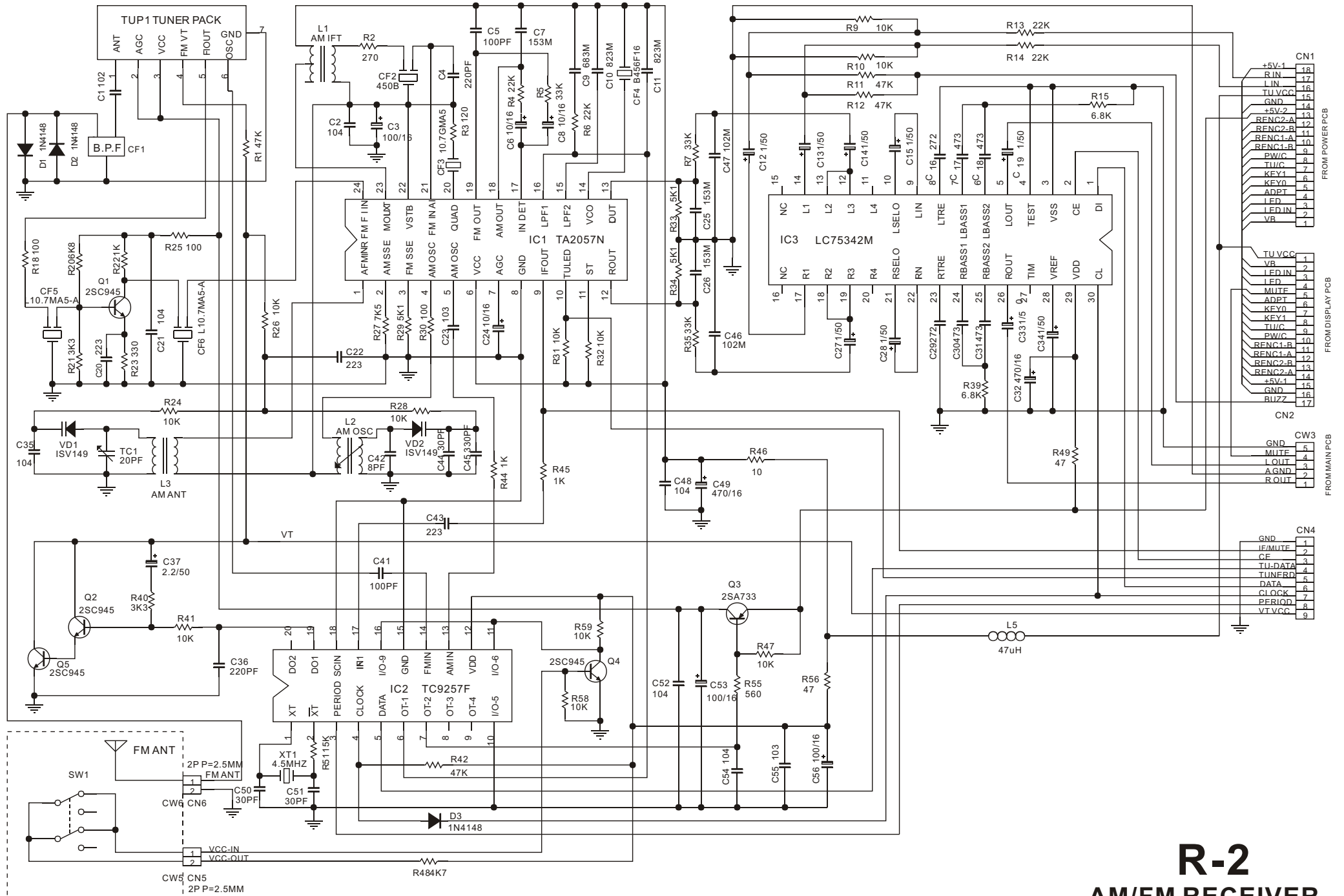
NOV 2005

PREPARED IN HONG KONG



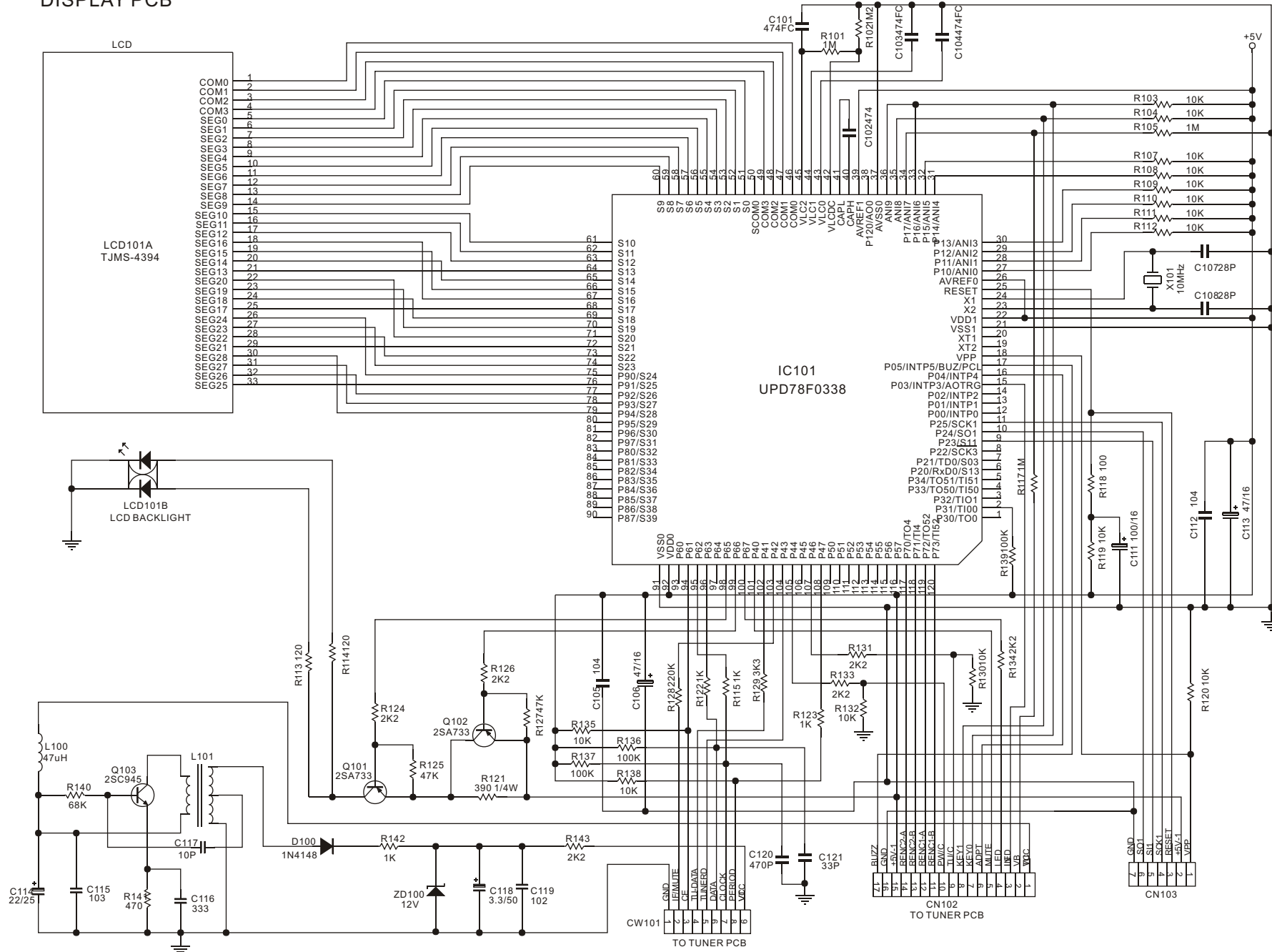
R-2 AM/FM RECEIVER

TUNER PCB



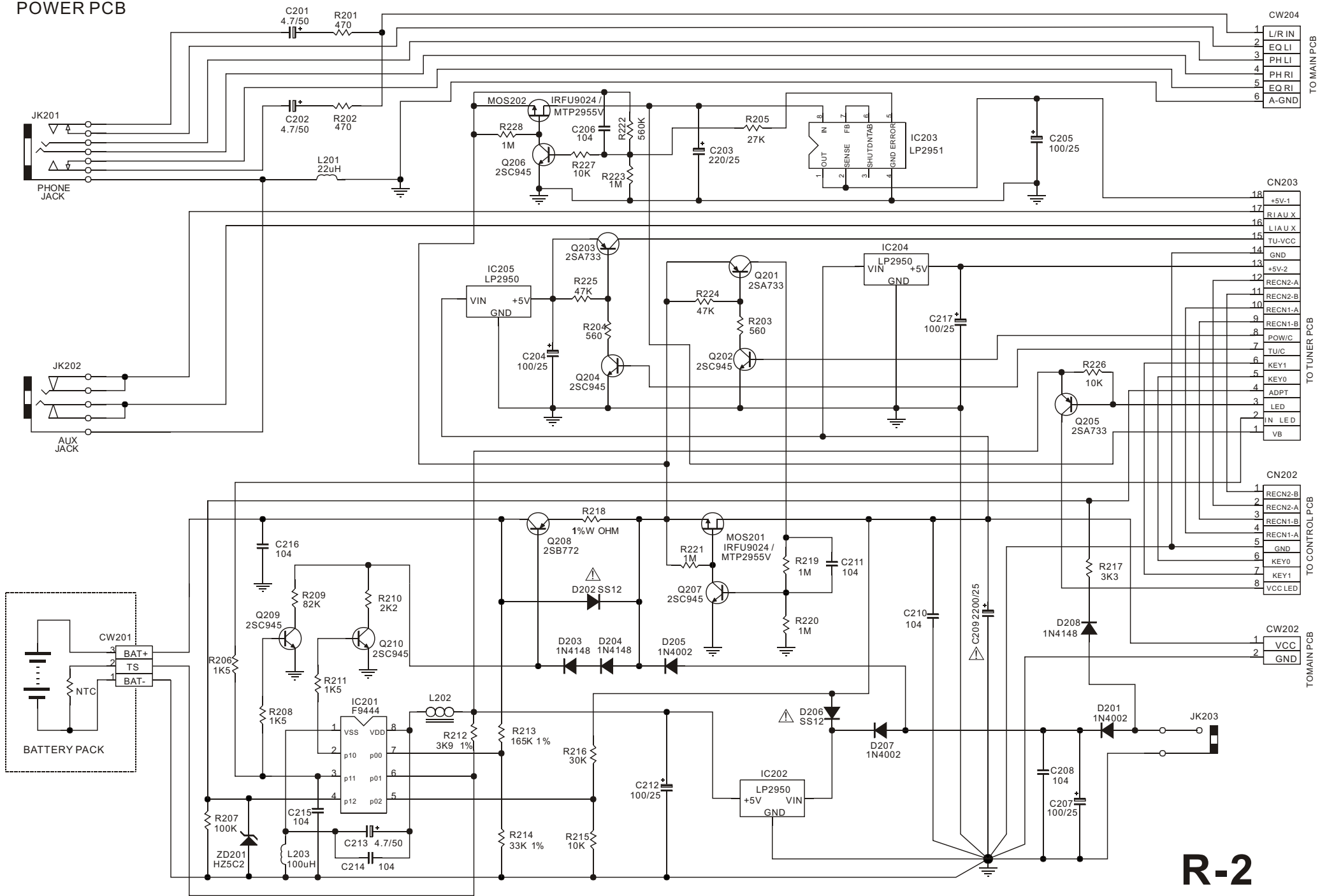
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AM/FM RECEIVER

DISPLAY PCB



R-2
AM/FM RECEIVER

POWER PCB



CW204	1	L/R IN
	2	EQ LI
	3	PH LI
	4	PH RI
	5	EQ RI
	6	A-GND

TO MAIN PCB

CN203	18	+5V-1
	17	RIAUX
	16	LIAUX
	15	TU-VCC
	14	GND
	13	+5V-2
	12	REC2-A
	11	REC2-B
	10	REC1-A
	9	REC1-B
	8	POW/C
	7	TU/C
	6	KEY1
	5	KEY0
	4	ADPT
	3	LED
	2	IN LED
	1	VB

TO TUNER PCB

CN202	1	REC2-B
	2	REC2-A
	3	REC1-B
	4	REC1-A
	5	GND
	6	KEY0
	7	KEY1
	8	VCC LED

TO CONTROL PCB

CW202	1	VCC
	2	GND

TO MAIN PCB

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AM/FM RECEIVER