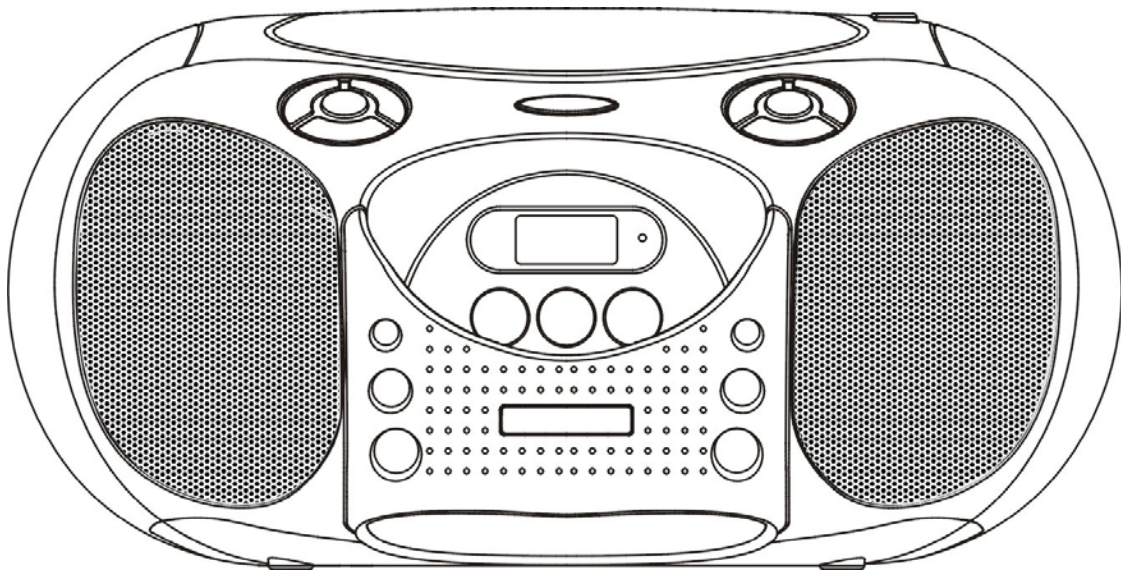


Service Manual

Model: PB120N



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SPECIFICATIONS

Model No PB120

Date:2011-04-02

Section AM

Pate: 1 of 5

Measuring Items	Condition	Unit	Normal	Limit	Test Data		
					1	2	3
Frequency Range	Low End	KHz	522	+/-10			
	High End	KHz	1620	+/-20			
Intermediate Frequency		KHz	455	+/-5			
Max. Sensitivity	600KHz	dB	80	84			
	1000KHz	dB	80	84			
	1400KHz	dB	80	84			
-20dB Quieting S/N Sensitivity	600KHz	dB	88	96			
	1000KHz	dB	88	96			
	1400KHz	dB	88	96			
Dial Calibration	600KHz	KHz		30			
	1000KHz	KHz		40			
	1400KHz	KHz		50			
IF Rejection	600KHz	dB	40	35			
Image Rejection	1400KHz	dB	30	25			
Distortion at Standard Output	1000KHz	%		3			
RF Overload Distortion at 100Db/M	Mod. 30%	%		5			
	Mod. 80%/60%	%		6			
10% THD Max. Output Power at 80% Mod	1000KH	W	1.8	1.5			
Distortion at Max Volume AII Controls Max	Mod. 30%	%					
	Mod. 80%/60%	%		25			
-6Db Audio Fidelity Frequency Response	LOW	Hz	100	150			
	High	KHz	2.5	2.2			
Bandwidth -6dB	1000KHz	KHz		4-11			
S/N Ratio at 5Mv/M Input	1000KHz	dB	35	30			
Tweet (Whistle) at 5Mv/M	2nd IF	%		7			
	3rd IF	%		7			
ACA +/-10KHz	1000KHz	dB	26	20			
Modulation Hum	1000KHz	dB	40	35			
Noise Output (Hum and Noise)	Min. Volume	mV		3			
AGC/Figure of Merit Effect 100Mv/M	1000KHz	dB	40	35			
Auto Tuning Stop(Seek)Sensitivity	600KHz	dB					
	1000KHz	dB					
	1400KHz	dB					
Fall Out Voltage (AC)	1000KHz	%		<70			
Fall Out Voltage (DC)	1000KHz	%		<70			

Test Conditions

Approved By: 冼祖国

1. Supply Voltage :AC/DC 127/220 V 60/60Hz

2. Standard Output : 50Mw

3. Speaker Impedance: 8 OHM

SPECIFICATIONS

Model No PB120
Section: FM TUNER

Date:2011-04-02
Page: 2 of 5

Measuring Items	Condition	Unit	Normal	Limit	Test Data		
					1	2	3
Tuning Frequency Range	Low End	MHz	64	+/-0.5			
	High End	MHz	108	+/-0.5			
Intermediate Frequency		MHz	10.7	+/-0.1			
Max. Sensitivity	68MHz	dB		20			
	98MHz	dB		20			
	106MHz	dB		20			
-30dB Quieting S/N Sensitivity	68MHz	dB		26			
	98MHz	dB		26			
	106MHz	dB		26			
Dial Calibration	68MHz	MHz		0.5			
	98MHz	MHz		0.5			
	106MHz	MHz		0.5			
IF Rejection	68MHz	dB	40	35			
Image Rejection	106MHz	dB	26	20			
AM Rejection	98MHz	dB	40	30			
RF Overload Distortion:100dB 75KHz Dev	98MHz	%	3	4			
10%THD Output Power 75KHz Dev	98MHz	W	1.8	1.5			
AC 127V input 10%THD Output value	75KHz Dev 60dB	W	1.8	1.5			
Maximum o/p	75KHz Dev 60dB	W	2	1.8			
Distortion at Max Volume 22.5KHz Dev	98MHz	%		10			
	98MHz	%		25			
-6dBAudio Fidelity	Low Freq	Hz	100	150			
	High Freq	KHz	4.5	4			
-3dB Limiting Sensitivity	98MHz	dB	30	35			
Distortion at Ref Output,75KHz Dev	98MHz	%	1	3			
S/N Ratio with 1mV	98MHz	dB	50	40			
Modulation Hum	98MHz	dB	55	45			
Noise Output (Hum and Noise)	Max Vol	mV					
	Min Vol	mV		<3			
Auto Tuning Stop(Seek) Sensitivity	68MHz	dB					
	98MHz	dB					
	106MHz	dB					
Fall Out Voltage(AC)	98MHz	%		<70			
Fall Out Voltage(DC)	98MHz	%		<70			
Fall Out Voltage 9VDC Clock Backup		%		-30			
AFC Holding -3dB		KHz					
Stereo Separation: 1Mv75KhzDev	100HZ	dB					
	1KHZ	dB		28			
	10KHZ	dB					
Stereo indicator Sensitivity	98MHZ	dB	24	28			
Mono/Stereo Output Difference	98MHZ	dB		1			
L/R Channel Output Difference		dB		3			

Test Conditions

Approved By: 冼祖国

1. Supply Voltage :AC/DC 127/220V 60/60Hz
2. Standard Output : 50 Mw
3. Speaker impedance: 8 OHM

SPECIFICATIONS

Model NO: PB120

Date:2011-04-02

Section: CD

Page: 3 of 5

Measuring Items	Condition	Unit	Normal	Limit	Test Data		
					1	2	3
Distortion at Max Vol CD-1(0dB)	1KHz	%		25			
CD10% THD Output Power CD-1(0dB)	1KHz	W	1.8	1.5			
CD Output Level Voltage(Max)	1KHz	W	2	1.8			
Frequency Response Speaker Output CD-1, 1Khz at Reference Output 0dB	63Hz	dB					
	100Hz	dB		+/-3			
	1KHz	dB					
	10KHz	dB		+/-3			
	20KHz	dB					
THD at Standard Output(at-10dB)	1KHz	%		1			
Separation:CD-1at Speaker Output	100Hz	dB					
	1KHz	dB	45	40			
	10KHz	dB					
S/N Ratio(Input Filter)	TCD-782	dB		50			
Dynamic Range	TCD-782	Sec					
Initial Reading Time	TCD-782	Sec		<10			
Access Time: TCD—782	First Track	Sec		<5			
	Last Track	Sec		<10			
Interruption Philips#444A	Scratch	mm		0.8			
	Black Doc	mm		0.6			
	Fingerprint	mm		0.075			
Eccentricity	TCD-712R	mm					
Vertical Deviation	TCD-713R	mm		0.8			
Hum and Noise	Vol Max	mV		<10			
	Vol Min	mV		<3			
Minimum Operating Voltage(AC)		%		<80			
Minimum Operating Voltage(DC)		%		<70			
Maximum power Consumption	Full load burn-in	W		16			

Test Conditions

1. Supply Voltage : AC/DC 127/220V 60/60Hz
2. Standard Output : 50 mW
3. Speaker impedance: 8 OHM

Approved By: 冼祖国

SPECIFICATIONS

Model N0: PB120

Date: 2011-04-02

Section: Audio

Page: 4 of 5

[illegible]

Test Conditions

Approved By: 冼祖国

1. Supply Voltage : AC/DC 127/220 V 60/60Hz
2. Standard Output : 50 Mw
3. Speaker impedance: 8 OHM

SPECIFICATIONS

Model NO: PB120

Date:2011-04-02

Section: AUX SECTION

Page: 5 of 5

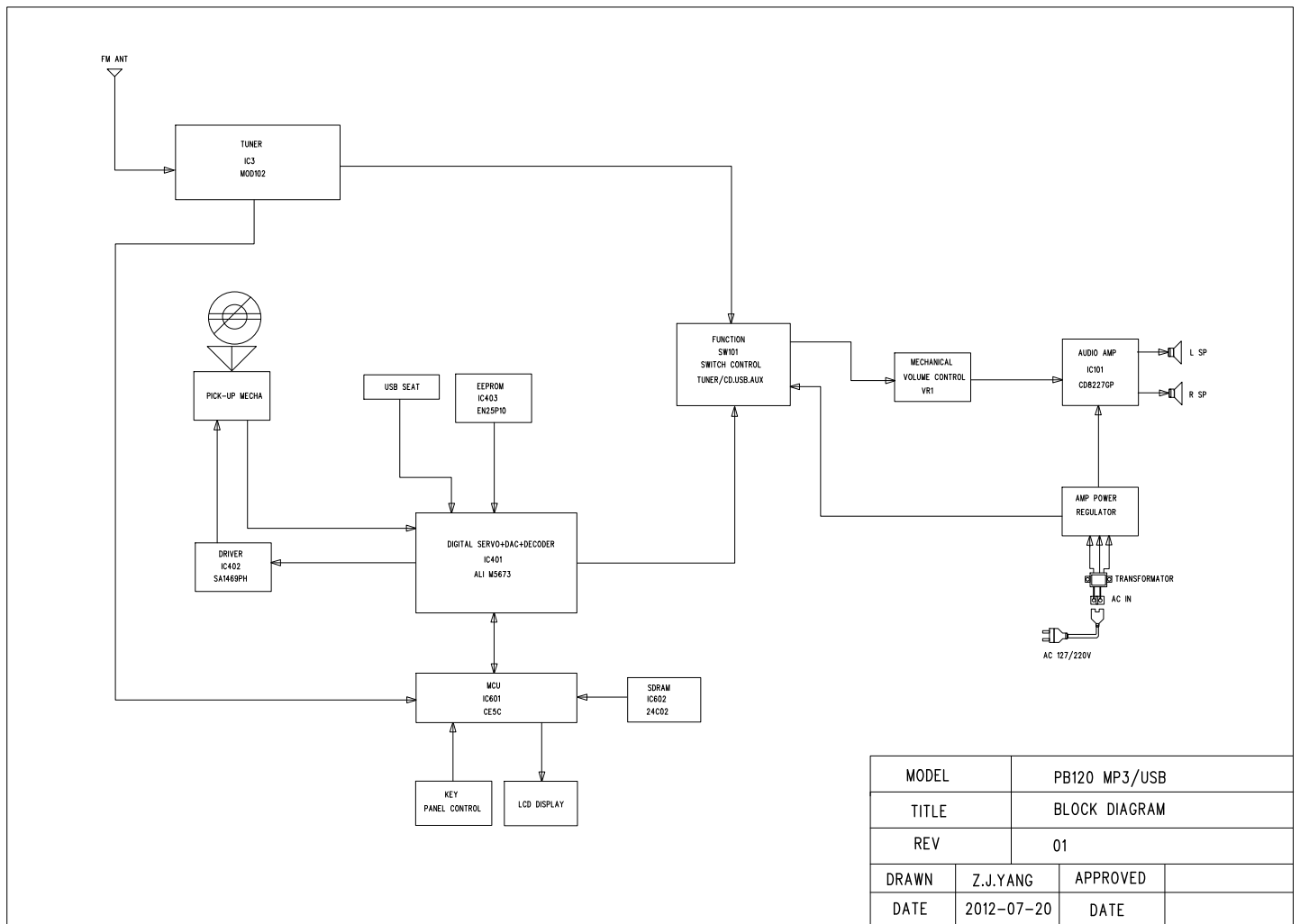
Measuring Items	Condition	Unit	Normal	Limit	Test Data		
					1	2	3
10%T.H.D Power O/P	300MV(Input)	W	1.8	1.5			
Stereo Separation	180MV(Input)	dB	38	35			
Min Hum	180MV(Input)	mV	0.7	2			
Max Hum		mV					
S/N		dB	55	50			
Total Harmonic Distortion		%	0.5	1			

Test Conditions

1. Supply Voltage : AC/DC 127/220V 60/60Hz
2. Standard Output : 50 Mw
3. Speaker impedance: 8 OHM

Approved By: 冼祖国

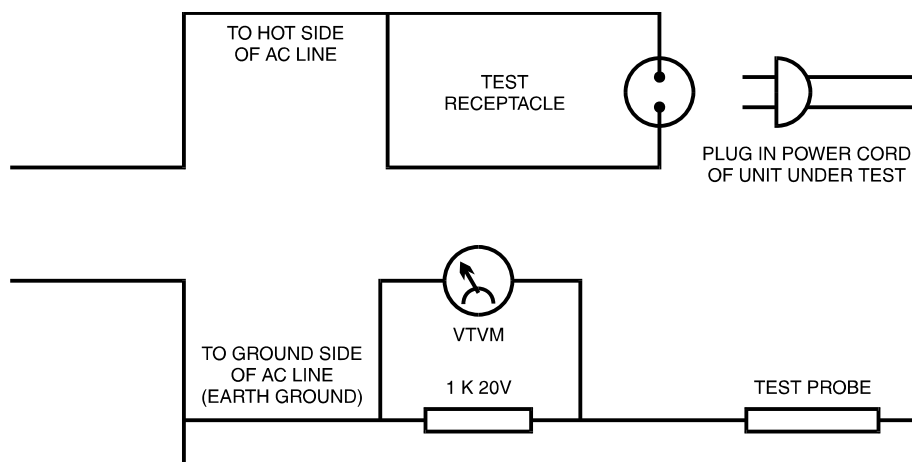
BLOCK DIAGRAM



SAFETY CHECKS

Important Note!!! Do the following safety checks after servicing this unit.

1. Remove all the externally connected test equipment and wires before testing the unit.
2. Use the safety test circuit as shown below.
3. Plug the power cord or unit to be tested into the test receptacle.
4. Switch the unit being tested to ON or PLAY.
5. Connect external jack/terminal contact VTVM across a 1k resistor in the test circuit. Set the meter to a high (150V AC) scale to avoid meter damage and then touch the points with the test probe. If the meter reading indicates less than 3 volts on all test points, set the meter to a low (3V AC) scale and repeat the test.
6. Any reading greater than 0.2 volt indicates a potential shock hazard. If this occurs, determine the cause of the leakage, correct the problem, and repeat the safety test.



SAFETY TEST CIRCUIT

CD PLAYER CHECKING PROCEDURES

A. WAVE E/F BALANCE ADJUSTMENT

- 1) Test Point : VC, TS10.
- 2) Test Disc : Sony Test CD Type 3.
- 3) Test Equipment :
Scope : DC 0.2 V 0.5 ms.
- 4) Test Mode : Play Sony CD, Type 3, Track 1, Press FF.
(Fast Forward), Until A=B (as Figure Bellow).

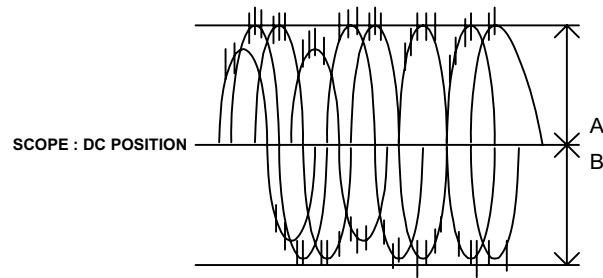


Figure A

B. FOCUS-BIAS ADJUSTMENT

- 1) Test Point : VC RFO.
- 2) Test Disc : Sony Test CD, Type 3.
- 3) Test Equipment :
Scope : DC 0.5 V 0.5 μ s.
- 4) Test Mode : Play Sony CD, Type 3, Track 1,
Make Wave Form (Eye Pattern) Max. And Clear.

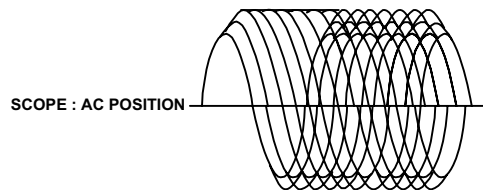
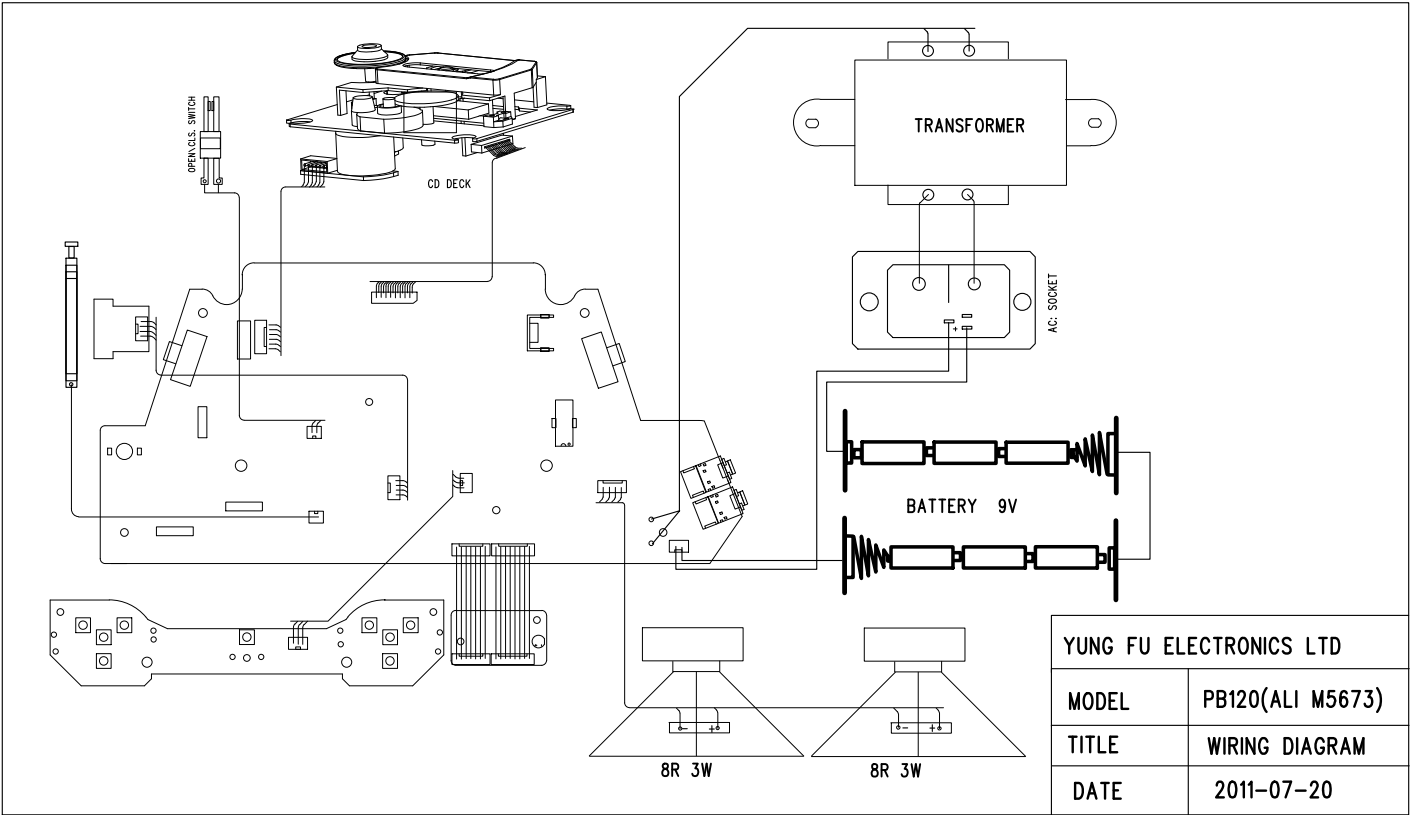
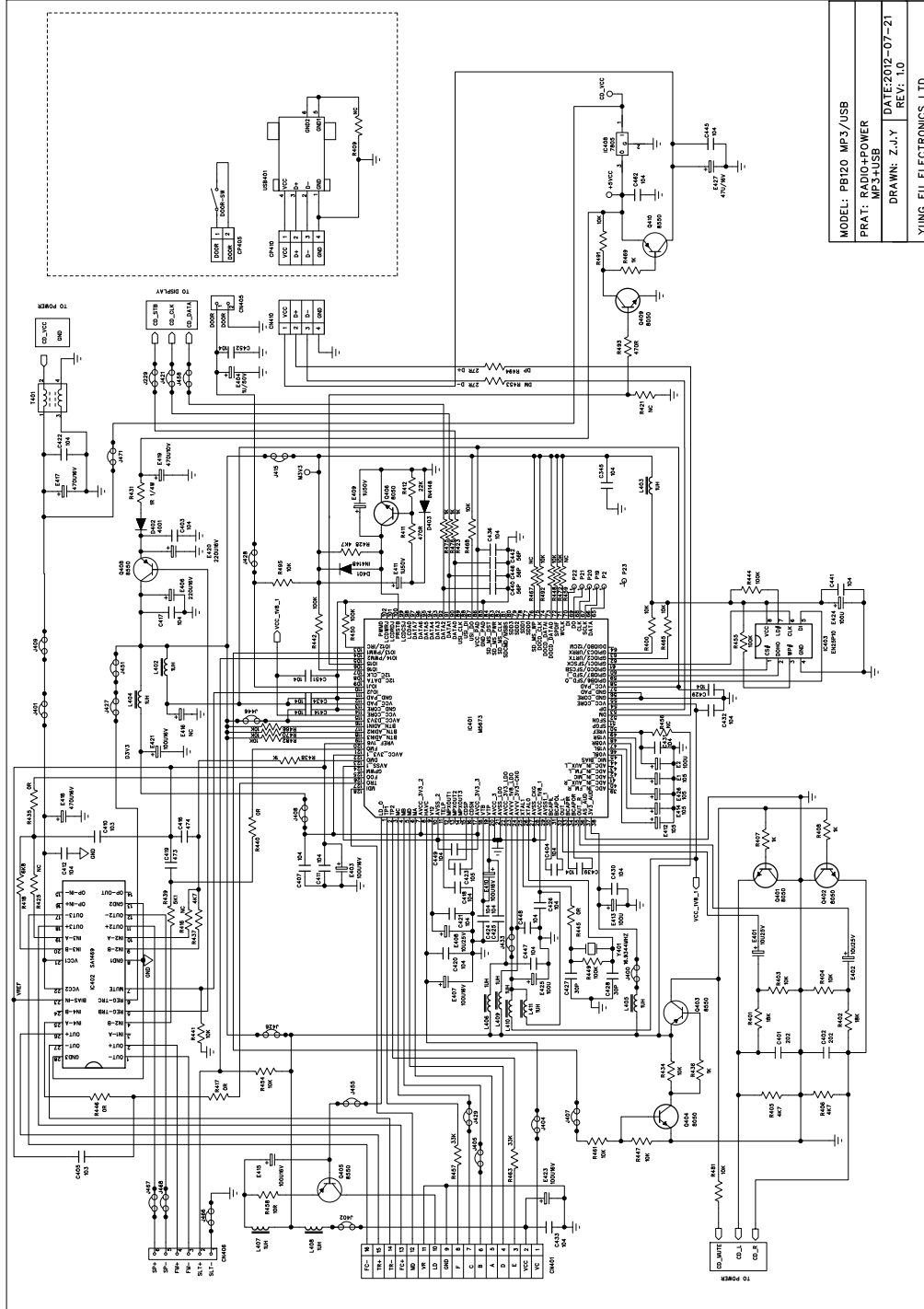


Figure B

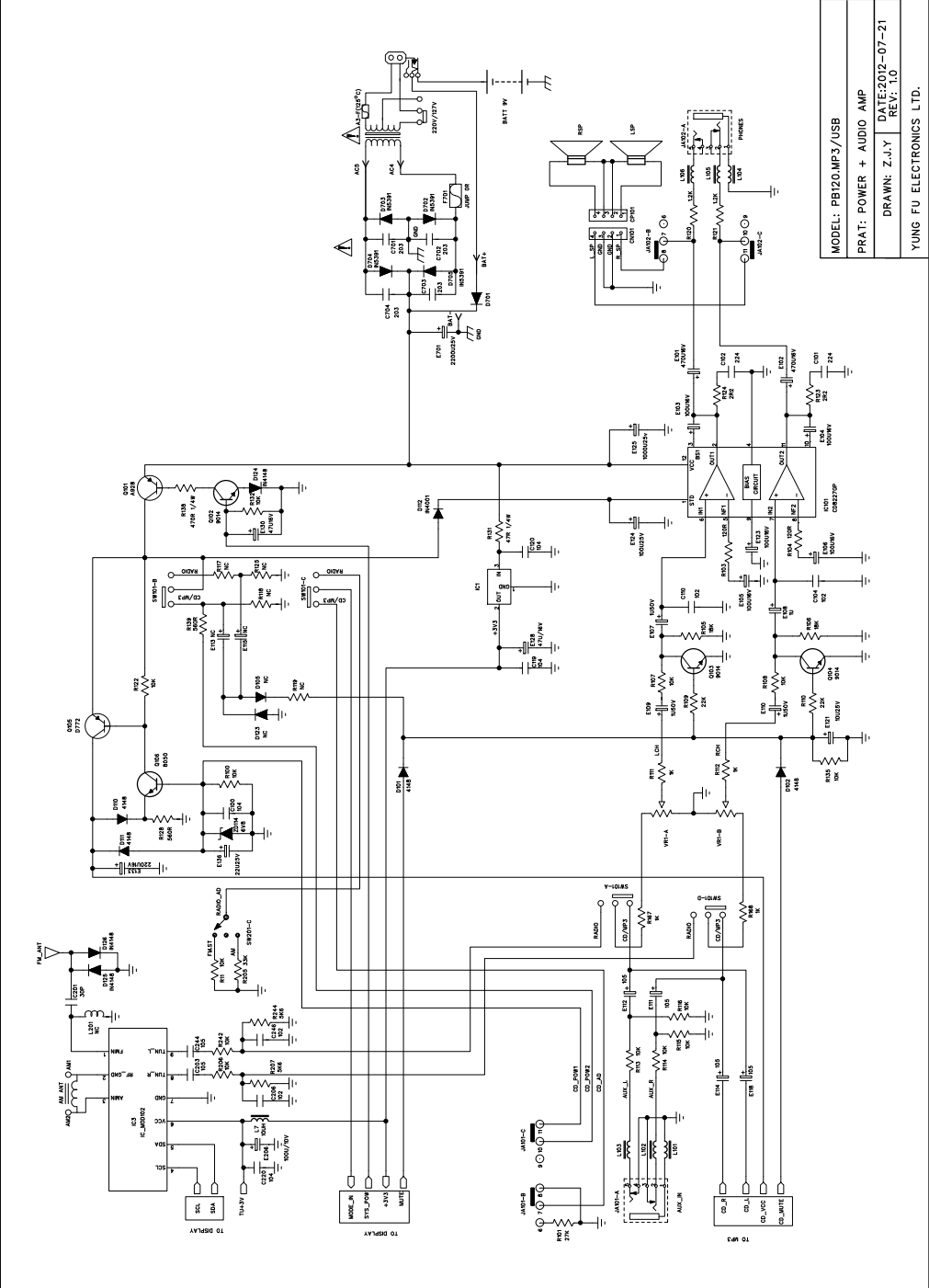
WIRING DIAGRAM



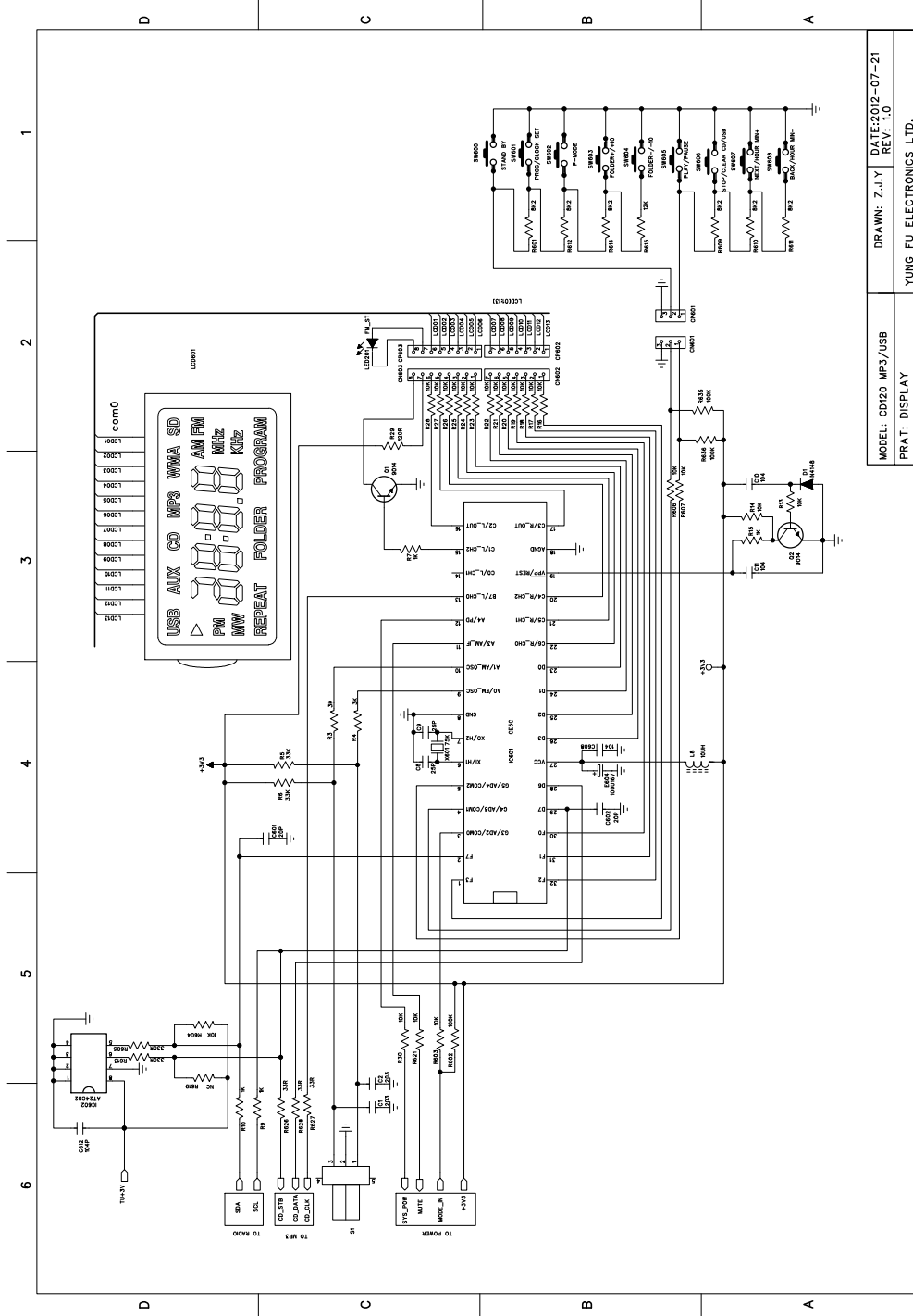
SCHEMATIC DIAGRAMS



SCHEMATIC DIAGRAMS



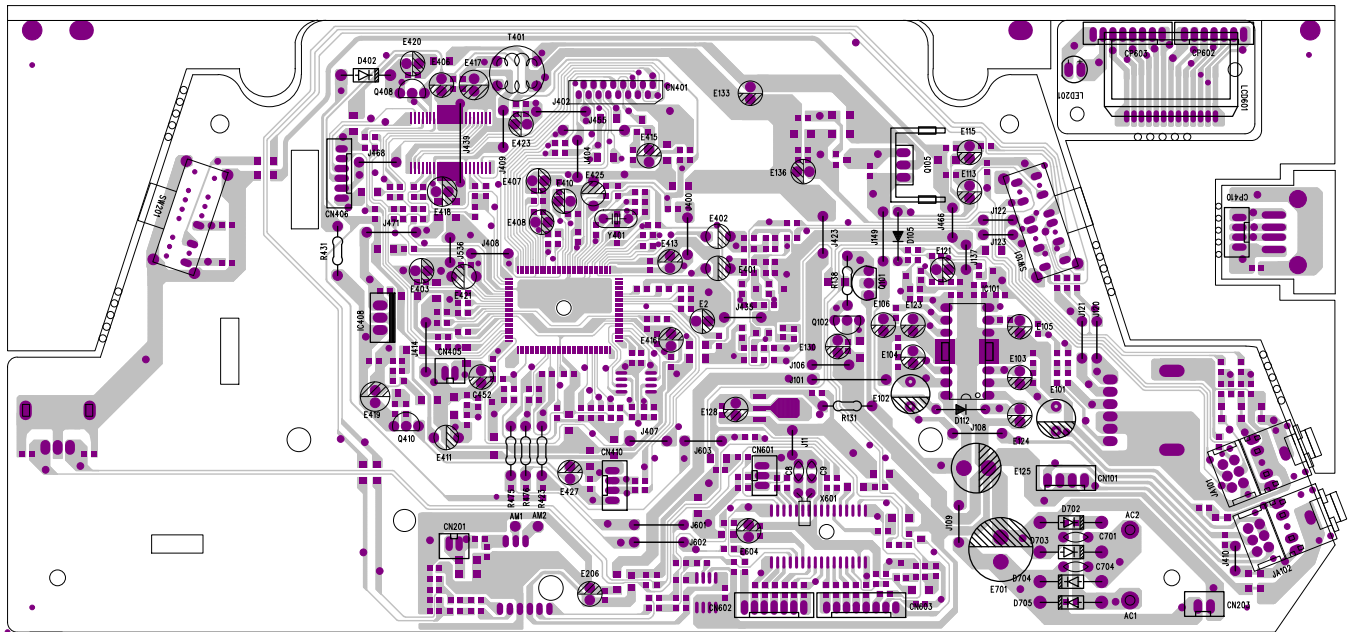
SCHEMATIC DIAGRAMS



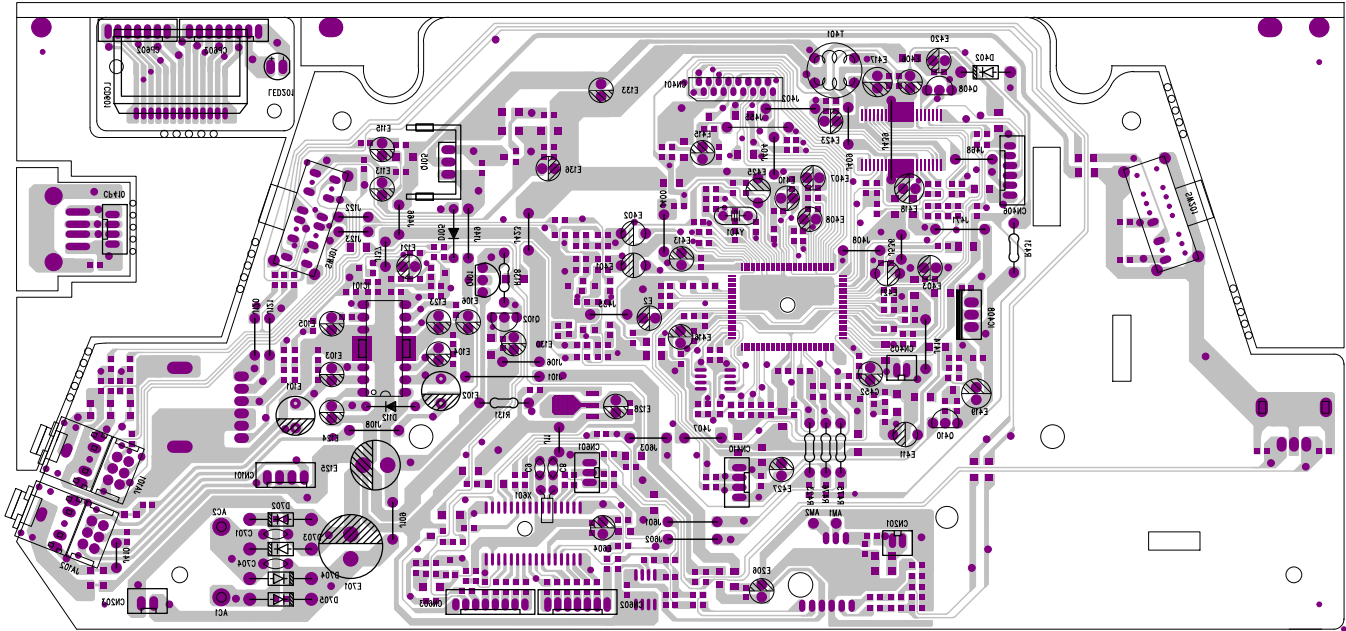
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PRAT: DISPLAY

DRAWN: Z.J.Y DATE:2012-07-21
REV: 1.0
YUNG FU ELECTRONICS LTD.

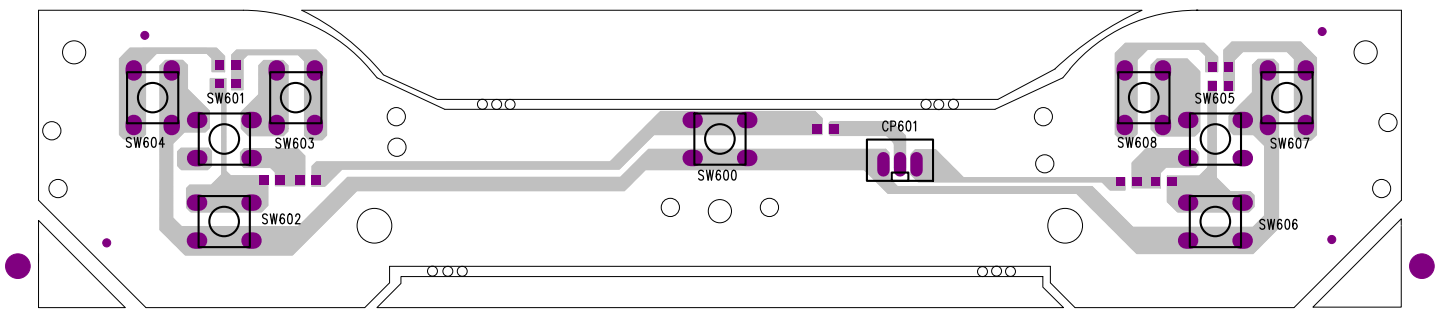
PRINTED CIRCUIT BOARDS



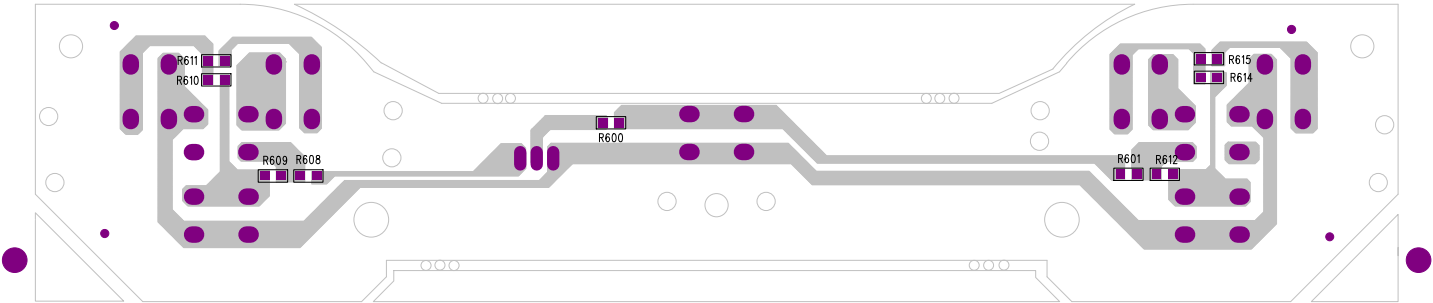
PRINTED CIRCUIT BOARDS



PRINTED CIRCUIT BOARDS



PRINTED CIRCUIT BOARDS



EXPLODED VIEW

MODEL : PB120+MP3+USB+AUX EXPLODED VIEW PART LIST

NO.	DESCRIPTION	QTY
1	CD DOOR	1
2	FM ANTENNA	1
3	SCREW 3.0*10PM	1
4	CD DOOR SPRING	1
5	TOP CABINET	1
6	SCREW 3.0*10PA	8
7	SIDE COVER R	1
8	TOOTH WHEEL	1
9	SCREW 3.0*12PWA	1
10	SIDE COVER L	1
11	SCREW 2.0*12PA	1
12	SANYO CD DECK	1
13	CD CUSHION	4
14	SCREW 2.6X16PWA	4
15	FUNCTION KNOB	1
16	VOLUME KNOB	1
17	MAIN PCB	1
18	SCREW 3.0*8 PA	6
19	BAND KNOB	1
20	TUNING KNOB	1
21	KEY SET L	1
22	KEY SET R	1
23	POWER BUTON	1
24	KEY L	1
25	KEY PCB	1
26	KEY R	1
27	SCREW 3.0*10PA	4
28	KEY PCB BRACKET	1
29	SCREW 3.0*10PA	4
30	SPEAKER CLIP	2
31	SPEAKER	2
32	FRONT CABINET	1
33	SPEAKER GRILL	2
34	DISPLAY INSERT	1

NO.	DESCRIPTION	QTY
35	DISPLAY LENS	1
36	SCREW 2.6*10PA	6
37	HANDLE COVER	1
38	HANDLE	1
39	NAME PLATE	1
40	SCREW 3.0*12PA	2
41	POWER BOX COVER	1
42	POWER PCB	1
43	POWER BOX	1
44	SCREW 3.0*12 PWA	2
45	TRANSFORMER EI-48	1
46	SCREW 3.0*10 PWA	2
47	FIBRE WASHER	1
48	AC SOCKET	1
49	AC SOCKET COVER	1
50	BOTTOM CABINET	1
51	SCREW 3.0*12PA	7
52	BATTERY PLATE (+ -) A	1
53	BATTERY PLATE (-)	1
54	BATTERY PLATE (+)	1
55	BATTERY PLATE (+ -) B	1
56	BATTERY DOOR	1
57	USB PCB	1
58	SCREW 3.0*6 KM	2
59	VOLTAGE SWITCH	1
60	DOUBLE VOLTAGE COVER	1
61	FUSE HOLDER	1

