

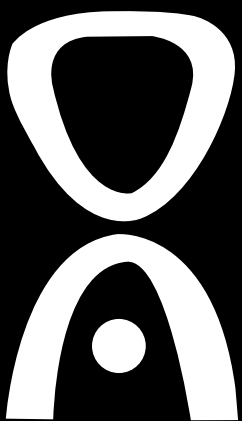
Service Manual

PORTABLE CD/MP3 RADIO CASSETTE RECORDER

SG-331

DAEWOO

DAEWOO ELECTRONICS EUROPE GmbH



DAT H.K. LIMITED

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CD PLAYING SPECIFICATION

Temp 21 °C Humidity 85 %
A.C 230V 50/60Hz D.C 12 V
LOADS 8 ohm Ref.out 50 mW

DATE: 11.11.2003
 MODEL:SG-331
 SAMPLE: ENG.
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MEASURING ITEMS		CONDITION	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
CD MAX. OUTPUT POWER			MW	2000	1800	2000	SONY YDES-7 1KHZ
CD 10% THD OUTPUT POWER			MW	1800	1500	1800	SONY YDES-7 1KHZ
CD LINE OUT VOLTAGE			V	--			0dB 1KHZ TCD-782
MAX. O/P DIS(BASS BOOST .OFF)		1KHZ. 0dB	%	24	28	18	SONY YDES-7 1KHZ
THD AT STANDARD OUTPUT		1KHZ	%	1	--	0.6	TCD-782 W/LOW PASS
SEPARATION		1KHZ	dB	40	35	R46/L43	TCD-782 (SPK O/P)
S/N RATIO		1KHZ	dB		>50	53	TCD-782 (SPK O/P)
INTERRUPTIONS	SCRATCH		MM	0.8	0.6	0.6	PHILIPS #5A/444A OR
	BLACK DOT		MM	0.8	0.6	0.6	ABEX TCD-725/725A
	FINGER PRINT		MM	ALL	CLEAR	ALL	(NO NOISE OUTPUT)
DYNAMIC RANGE			dB		>50		TCD-782 (SPK O/P)
INITIAL. READING TIME			SEC.		<7	4	TCD-782
ACCESS TIME	FIRST TRACK		SEC.		<5	3	TCD-782
	LAST TRACK		SEC.		<14	11	
ECCENTRICITY			MM		0.07		TCD-711
VERTICAL DEVIATION			MM		0.8		TCD-732R
HUM & NOISE		MIN. VOL.	MV		<3	0.8	TCD-782 TNO.8
		MAX. VOL	MV		<10	1.3	BASS BOOST OFF,TONE MAX.
SHOCK ABILITY TCD-782 TNO.1 & 23		CENTER	qm		>100		TENSION GUAGE IMPACT UNIT
		CORNERS	qm		>100		WITHOUT INTERRUPTION
FREQ. RESPONSE 1KHZ=0dB		63HZ	dB				CD-1 (SPK O/P) BASS BOOST OFF
		127HZ	dB	+3	+6	-2	
		250HZ	dB				
		500HZ	dB				
		1KHZ	dB	0	0	0	
		2KHZ	dB				
		4KHZ	dB				
		6.3KHZ	dB				
		8KHZ	dB				
		10KHZ	dB	0	+3	0	
		20KHZ	dB	+3	+6	-1	

REMARK : OTHER SPEC ARE SUBJECT TO CD MECHANISM SPECIFY.

CASSETTE RECORDING SPECIFICATION

Temp 21 °C Humidity 85 %
A.C 230 V 60Hz D.C 12 V
LOADS 8 ohm Ref.out 50 mW

DATE: 11.11.2003

MODEL: SG-331

SAMPLE:

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MEASURING ITEMS	CONDITION	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
R/P MAX. OUTPUT POWER		MW	2000	1800	2200	MTT-112BN/MTT-501
R/P 10% DIST. O/P POWER		MW	2000	1800	1620	MTT-112BN/MTT-501
R/PMAX. O/P DIS	1KHZ. 0dB	%	20	28	24	
DIST.AT STANDARD O/P		%	4	8	7	MTT-118N/MTT-501
R/P DIFFERENCE		dB		<3		MTT-118N/MTT-501
R/P SEPARATION		dB	35	28	R37/L40	MTT-114N/MTT-501
R/P CROSS TALK		dB	25	22		* W/B.P.F W/O B.P.F
R/P S/N RATIO		dB	25	22	24	MTT-112BN/MTT-501
R/P ERASE RATIO		dB	25	22	25	MTT-112BN/MTT-501
TAPE SPEED AT HI-SPEED		HZ				MTT-111N
R/P CH BALANCE		dB		<3	0	MTT-118N/MTT-501
HI-SPEED REC. FIDELITY	125HZ	dB				MTT-257/MTT-501
1KHZ=0dB	6.3KHZ	dB				
MIC RECORDING SENS		dBV				S.R.L.= -66dBV; MTT-118N
MIC REC.ALC EFFECT		dB				+30dBV OF S.R.L.
REC.LEVEL VS TAPE SAT.	FM:DOM.22.5KHZ.1KHZ	dB	0	+/-3	+2	
	FM:DOM.45KHZ.1KHZ.	dB	0	+/-3	+1	
	CD:-10dB.1KHZ	dB	0	+/-3	+2	
	CD:-20dB.1KHZ	dB	0	+/-3	-1	
ALC REC.DISTORTION		%				+30dBV OF S.R.L.
R/P FREQ . RESPONSE						MTT-256R
315HZ=0dB	63HZ	dB				VOL AT 75% POSITION
	125HZ	dB		+/-3	-0.5	100HZ, -2
	250HZ	dB				
	315HZ	dB				
	500HZ	dB				
	1KHZ	dB		0	0	
	2KHZ	dB				
	4KHZ	dB				
	6.3KHZ	dB		+3-4	-2	
	8KHZ	dB		+3-6		
	10KHZ	dB			0	

REMARK : OTHER SPEC ARE SUBJECT TO CASS. MECHANISM SPECIFY.

MEASURING ITEMS	CONDITION	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
MIC SENSITIVITY	RATED POWER 1800MW	dBV				MAX. VOL/EQ CENTER 1KHZ
MIC OVERLOAD I/P CAPACITY	O/P <5% THD	dBV				EQ CENTER 1KHZ
MIC INPUT IMPEDANCE		K OHM				

PREPARE BY : LIN

CASSETTE PLAYBACK SPECIFICATION

Temp 21 °C Humidity 85 %
A.C 230 V 60Hz D.C 12 V
LOADS 8 ohm Ref.out 50 mW

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MEASURING ITEMS	CONDITION	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
MAX. OUTPUT POWER		MW	2200	2000	2400	MTT-112BN
10% THD DIST. O/P POWER		MW	2000	1800	1800	MTT-112BN
MAX. O/P DIS(BASS BOOST OFF)	1KHZ. 0dB	%	20	28	25	MTT-112BN
DIST.AT STANDARD O/P		%	1	3	2	MTT-118N
TAPE SPEED		%	+2/-1	+3/-2	+1	MTT-111N
WOW &FLUTTER		%	0-2	0.35	0.09	MTT-111N
L/R CH SEPARATION		dB	35	30	R37/L36	MTT-141N
TRACK CROSS TALK		dB	60	50		. ____ MTT-141N, * W/O B.P.F.
HUM & NOISE	MIX. VOL	MV	1	3	0.7	MTT-501
	MAX. VOL	MV	20	60	20	BASS BOOST OFF
S/N RATIO		dB	35	30	48	MTT-112BN/MTT-501
WINDING TIME	F . FWD.	SEC		<170		C-60 TYPE
	F . REW.	SEC		<170		
L/R CH. DIFFERENCE		dB	0	<3	0	MTT-118N
FORWARD /REVERSE DIFF.		dB	--	--		MTT-118N
CASS. TAPE A/B O/P DIFF		dB	--	--		MTT-118N
TORQUE	PLAY	q-cm		35-70		TORQUE METER
	F . FWD.	q-cm		>55		
	F . REW.	q-cm		>55		
FREQ . RESPONSE 315HZ=0dB	63HZ	dB				MTT-256R
	125HZ	dB		+/-3	-2	
	250HZ	dB				
	315HZ	dB				
	500HZ	dB				
	1KHZ	dB		0	0	
	2KHZ	dB				
	4KHZ	dB				
	6.3KHZ	dB		+/-3	6	
	8KHZ	dB		+6		
	10KHZ	dB				
LEVEL BALANCE	PHONO	dB				180MV RMS. PHONO
	AUX/CD	dB				180MV RMS. AUX/CD
	FM	dB		0	0	45KHZ DEV. IMV
	AM	dB		<3	-1	60% MOD. 74dB/M
	CASS	dB		<3	+1	MTT-112BN 0dB
	CD	dB		-5/+3	-5	-10dB 1KHZ
BASS BOOST EFFECT	125HZ	dB	8	6	8.5	BASS BOOST FROM OFF TO ON

PREPARE BY : ____ LIN ____

REMARK : OTHER SPEC ARE SUB JECT TO CASS. MECHANISM SPECIFY.

FM MPX SPECIFICATION

Temp 21 °C Humidity 85 %

A.C 230 V 60Hz D.C 12 V

LOADS 8 ohm Ref.out 50 mW

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MODEL: SG-331

SAMPLE:

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MEASURING ITEMS	CONDITION	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
MAX.SENSITIVITY	90MHZ	dB	--	--		75KHZ DEV
	98MHZ	dB	--	--		
	106MHZ	dB	--	--		
-30dB S/N SENS.	90MHZ	dB	24	30		
	98MHZ	dB	24	30		
	106MHZ	dB	24	30		
STEREO SEPARATION	100HZ	dB	26	20		WITH 19KHZ FILTER
	1kHz	dB	26	20	R256B/L266B	
	10KHZ	dB	26	20		
STEREO LIGHT SENS.	98MHZ	dB	24	30	18	
PILOT SIGNAL REJECTION	98MHZ	dB	40	35		75KHZ DEV.1MV
STEREO S/N RATIO	98MHZ	dB	--	--		75KHZ DEV.1MV WITH 19KHZ FILTER
MONO/STEREO O/P DIFFERENCE	98MHZ	dB	0	<3		
THD AT STANDARD OUTPUT	98MHZ	%	3	<5		WITH 19KHZ FILTER
ST-VCO FREQ.TEMP.DRIFT	76KHZ	HZ				AT 25°C +/-25°C
MIN.PILOT SIGNAL LEVEL		%	5	7		ST.LED START LIGHT UP

REMARK:	MOD.	DESCRIPTION	L+R	L-R	PILOT
.....	45%	45%	10%

MEMORY BACK UP SPECIFICATION

MEASURING ITEMS	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
MEMORY BACKUP CURRENT WITH BATTERY	mA	--	--		DISCONNECT AC POWER
TUNER PRESET STATION BACK UP TIME	MIN	--	--		DISCONNECT AC POWER AND WITHOUT BATTERY

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FM RADIO SPECIFICATION

Temp 21 °C Humidity 85 %
A.C 230 V 60Hz D.C 12 V
LOADS 8 ohm Ref.out 50 mW

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MODEL: SG-331
SAMPLE:
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MEASURING ITEMS	CONDITION	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
FREQUENCY RANGE	LOW END	MHZ	87. 50	+/-0.3	87. 3	
	HIGH END	MHZ	108. 50	+/-0.3	108. 58	
INTERMEDIATE FREQ		MHZ	10. 7	+/-0.1	10.73	
MAX.SENSITIVITY	90MHZ	dB	16	20	11	
	98MHZ	dB	16	20	10	
	106MHZ	dB	16	20	10	
-30dB QUIETING SENSITIVITY	90MHZ	dB	22	26	16	
	98MHZ	dB	22	26	17	
	106MHZ	dB	22	26	18	
DIAL CALIBRATION	ALL POINTS	MHZ		<0.5		
IMAGE REJECTION	90MHZ	dB	26	20	>45	
	98MHZ	dB	26	20		
	106MHZ	dB	26	20	>45	
I.F. REJECTION	90MHZ	dB	65	55	>45	
SPURIOUS REJECTION	98MHZ	dB	55	45		
-3dB LIMITING SENS	98MHZ	dB	25	30	18	
-3dB AFC HOLDING RANGE	98MHZ	KHZ	450	350-600		
AM SUPPRESSION	98MHZ	dB	40	30	>60	
RF OVERLOAD DIST.	98MHZ	%	3	5	4. 5	100dB 75KHZ DEV
10% DIST. O/P POWER	98MHZ	MW	1800	1600	1800	* 1KHZ ; 400HZ 75KHZ DEV
MAX. O/P POWER	98MHZ	MW	2200	2000	2400	* 1KHZ ; 400HZ 75KHZ DEV
MAX O/P DIST.(BASS BOOST OFF)	98MHZ	%	20	28	24	* 1KHZ ; 400HZ 75KHZ DEV
-3dB AUDIO FIDELITY	LOW FREQ	HZ	200	250	56	75uS PRE-EMPHASIS
	HIGH FREQ	HZ	15K	10K	4K8	VOL AT 75%POSITION
S/N RATIO	98MHZ	dB	45	40	45	22.5KHZ DEV. 1MV
DIST .AT STANDARD O/P	98MHZ	%	1	3	1. 4	
MODULATION HUM	98MHZ	dB	50	40	45	22.5KHZ DEV. 100dB
AUTO TUNING SEEK SENS	90MHZ	dB	--	--		
	98MHZ	dB	--	--		
	106MHZ	dB	--	--		
AUTO SEEK ACCURACY		KHZ	--	--		

MW RADIO SPECIFICATION

Temp 21 °C Humidity 85 %
A.C 230 V 60Hz D.C 12 V
LOADS 8 ohm Ref.out 50 mW

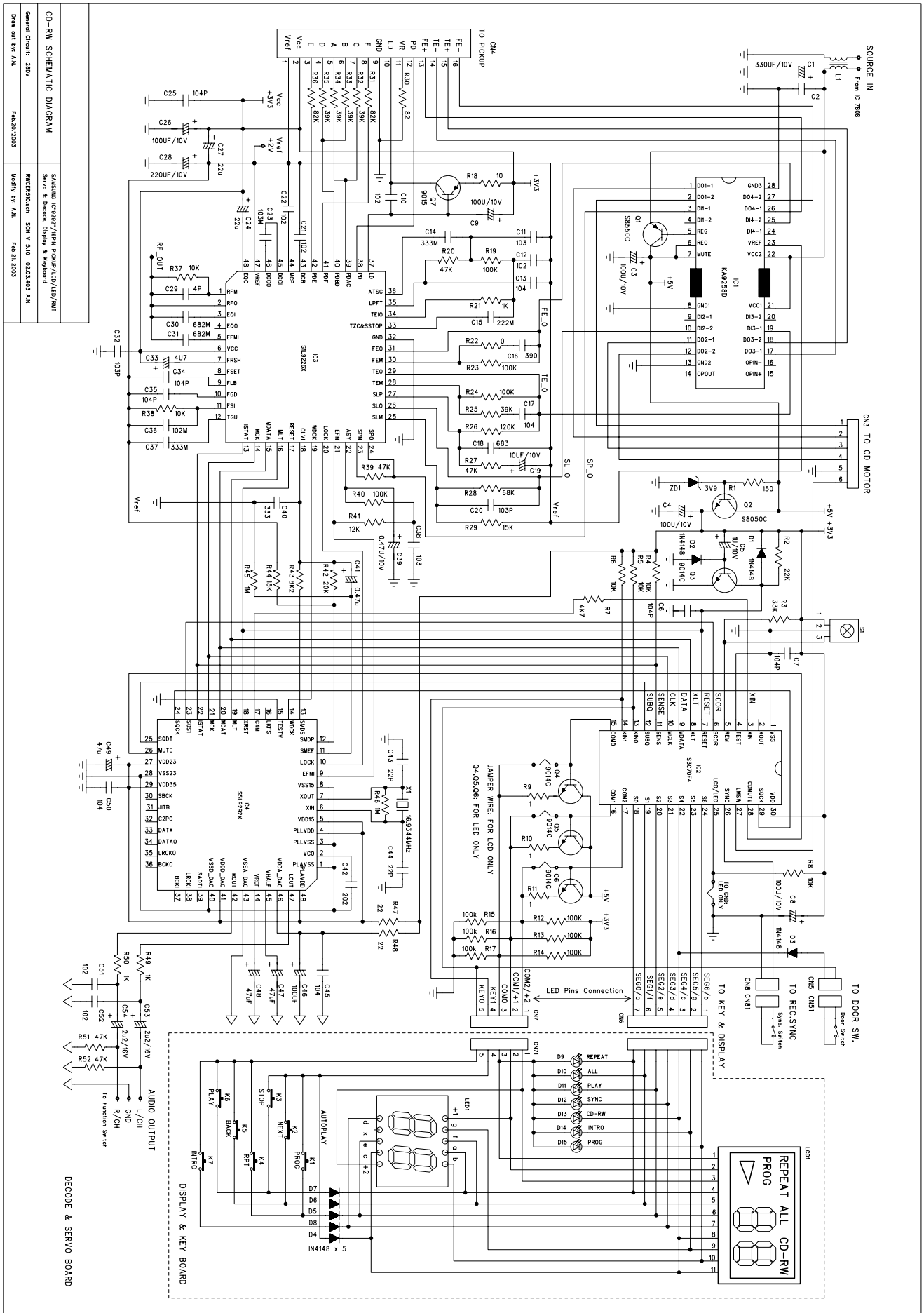
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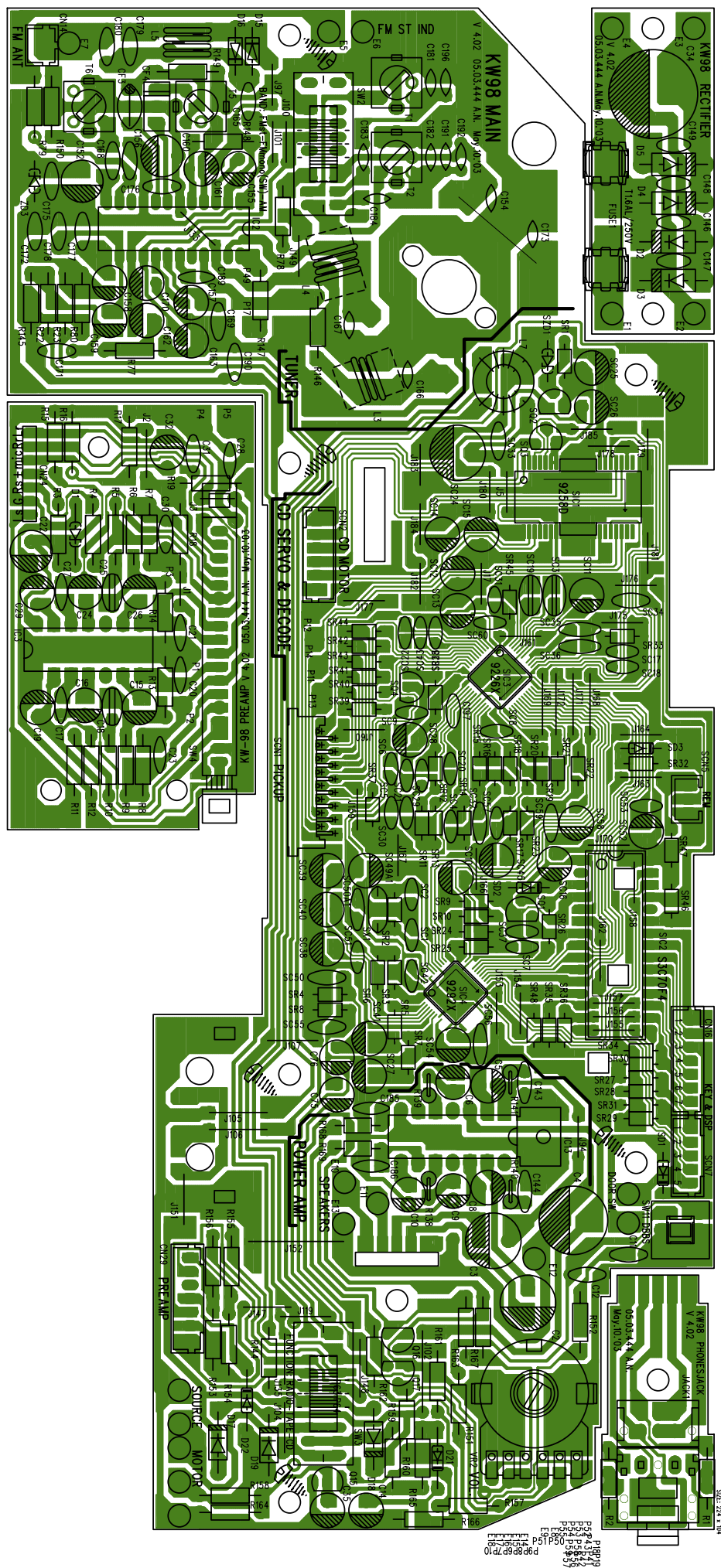
MODEL: SG-331

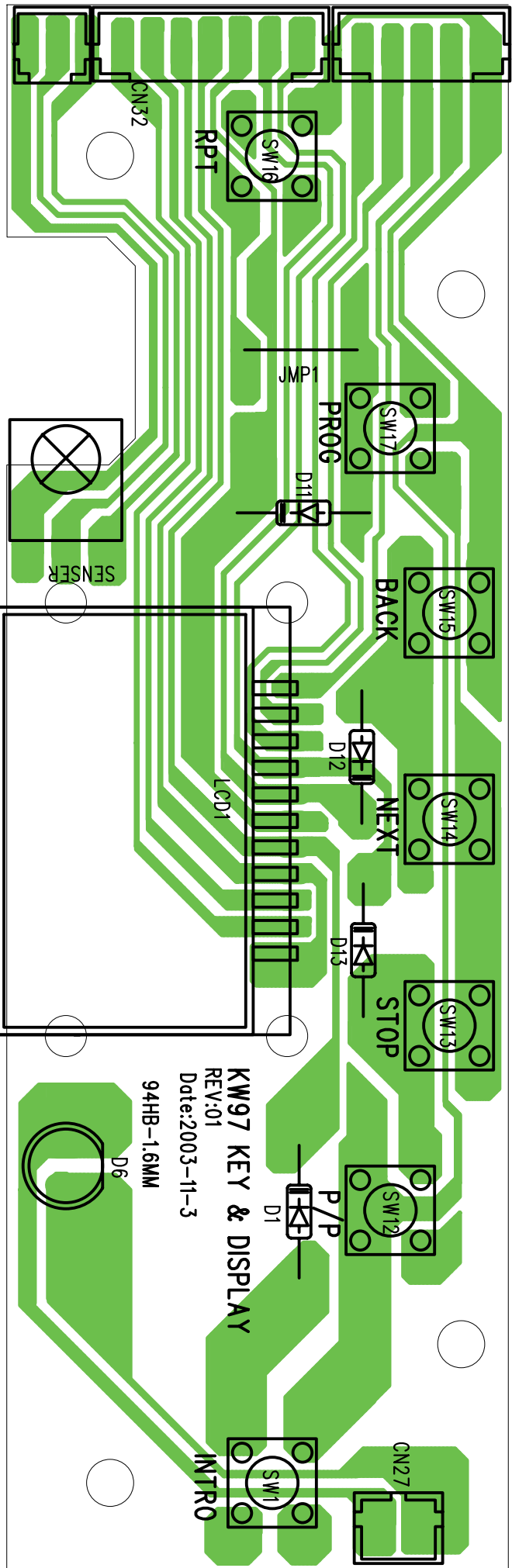
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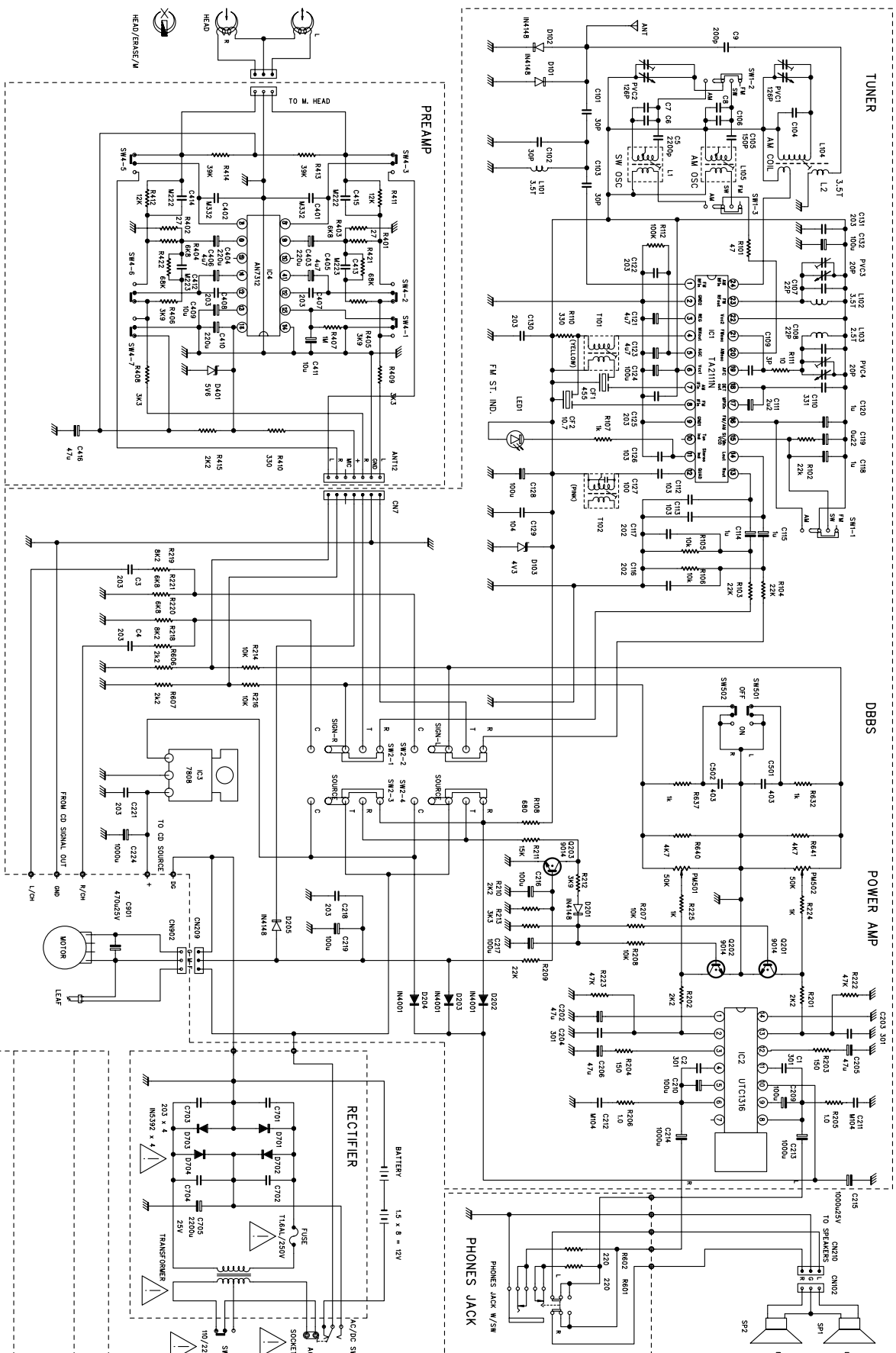
MEASURING ITEMS	CONDITION	UNIT	NORMAL	LIMIT	DATA	TEST CONDITION
FREQUENCY RANGE	LOW END	KHZ	525	+/-5	522	
	HIGH END	KHZ	1630	+/-15	1630	
INTERMEDIATE FREQ		KHZ	465	+/-3	465	
MAX.SENSITIVITY	600KHZ	dB	50	58	51	
	1000KHZ	dB	50	58	50	
	1400KHZ	dB	50	58	49	
-20dB QUIETING SENSITIVITY	600KHZ	dB	58	64	63	
	1000KHZ	dB	58	64	62	
	1400KHZ	dB	58	64	61	
DIAL CALIBRATION	ALL POINTS	KHZ		<30		POINTER WITHIN LETTERING
IMAGE REJECTION	600KHZ	dB	50	40	>45	
	1000KHZ	dB	50	40		
	1400KHZ	dB	50	40	37	
I.F. REJECTION	600KHZ	dB	45	40	>45	
-6dB BAND WIDTH	1000KHZ	KHZ		4-8	20	
ACA +/- 10KHZ	1000KHZ	dB	20	15	27	
AGC FIGURE OF MERIT	1000KHZ	dB	45	40	46	100dB/M
RF OVERLOAD DIST.	1000KHZ	%	3	5	1	100dB/M 60% MOD
10% DIST. O/P POWER	1000KHZ	MW	1800	1600	1620	___*___1KHZ ; ___400HZ 60% MOD.
MAX. O/P POWER	1000KHZ	MW	1800	1600	1800	___*___1KHZ ; ___400HZ 60% MOD.
MAX. O/P. DIS	1000KHZ	%	20	25	13	___*___1KHZ ; ___400HZ 60% MOD.
-6dB AUDIO FIDELITY	LOW FREQ	HZ	100	150	72	VOL. AT 75% POSITION
	HIGH FREQ	HZ	3K	2K2	4K3	ADJUST MOD .TO REF
TWEET AT 1MV/M - 5MV/M	2 IF	%		<10		
	3 IF	%		<10		
S/N WITH 74dB/M	1000KHZ	dB	35	30	34	
DIST. AT STANDARD O/P	1000KHZ	%	3	5	2. 40%	
MODULATION HUM 100dB/M	1000KHZ	dB	40	35	34	
MIN. VOL. FEEDTHROUGH NOISE & HUM	MIN. VOL	MV	1	3	2. 8	
AUTO TUNING SEEK SENS	600KHZ	dB	--	--		
	1000KHZ	dB	--	--		
	1400KHZ	dB	--	--		
AUTO SEEK ACCURACY		KHZ	--	--		







FM/SW/AM RADIO & CASSETTE RECORDER WITH CD PLAYER



SG-331 ALIGNMENT PROCEDURES

AM IF. ALIGNMENT

- 1, Set the FUNCTION switch to “RADIO” position.
- 2, Set the BAND switch to “AM” position.
- 3, Connect a SWEEPSCOPE OUTPUT to AM standard radiating loop antenna and match the direction for built-in ferrite bar of AM antenna.
- 4, Connect a SWEEPSCOPE INPUT to pin 13 or 14 of IC1 through a 1uf capacitor and GND.

STEP	SET SIGNAL	SET DIAL	ADJUST	ADJUST FOR
1	465KHz	LOW-END OF BAND	T5(IFT,YELLOW)	CENTER & MAXIMUM OUTPUT

AM RF. ALIGNMENT

- 1, Connect a RF GENERATOR to the standard radiating loop antenna.
- 2, Connect a SCOPE and VTVM across the speaker output

STEP	SET	SET DIAL	ADJUST	ADJUST FOR
1	520KHz	LOW-END OF	T2(AM OSC)	MAXIMUM OUTPUT
2	1620KHz	HIGH-END OF	PVC3 (AM OSC	MAXIMUM OUTPUT
3	REPEAT	STEP 1 & 2	TO MAXIMUM	
4	612KHz	NEAR 612KHz	L104(AM SENS COIL)	MAXIMUM OUTPUT
5	1404KHz	NEAR 1404KHz	PVC4 (AM ANT	MAXIMUM OUTPUT
	REPEAT	STEP 4 & 5	TO MAXIMUM	

FM IF. ALIGNMENT

- 1, Set the BAND switch to “FM” position.
- 2, Connect a SWEEPSCOPE OUTPUT to pin 23 of IC1 through a 20pf capacitor and GND.
- 3, Connect a SWEEPSCOPE INPUT to pin 13 or 14 of IC1 through a 1uf capacitor and GND.

STEP	SET SIGNAL	SET DIAL	ADJUST	ADJUST FOR
1	10.7MHz		T6(FM DISCRI.,PINK)	WITH 10.7MHz AT ZERO CROSSOVER & MAKE THE “S” CURVE TO FINER.
2	REPEAT	STEP 1 TO	FINE	

FM RF. ALIGNMENT

- 1, Connect a RF GENERATOR to the terminal of FM telescope antenna and GND.
- 2, Connect a SCOPE and VTVM across the speaker output.

STEP	SET SIGNAL	SET DIAL	ADJUST	ADJUST FOR
1	87.5MHz	LOW-END OF BAND	L3 (FM OSC)	MAXIMUM OUTPUT
2	108MHz	HIGH-END OF BAND	PVC1 (FM OSC TRIMMER)	MAXIMUM OUTPUT
3	REPEAT	STEP 1 & 2	TO MAXIMUM	
4	90.1MHz	NEAR 90.1MHz	L4(FM SENS COIL)	MAXIMUM OUTPUT
5	106.1MHz	NEAR 106.1MHz	PVC2(FM ANT TRIMMER)	MAXIMUM OUTPUT
6	REPEAT	STEP 4 & 5	TO MAXIMUM	

CASSETTE PARTS ALIGNMENT

- 1, MOTOR SPEED: Adjust the screw at motor back side to make the output signal near 3KHz while play the 3KHz standard tape. It used frequency meter connected output.
- 2, HEAD AZIMUTH: Adjust the screw of head azimuth to make the 6.3KHz signal to maximum. pe and used VTVM connected output.

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
1		IC: UTC1316	1	
2		KA7808 (SAM SOUNG)	1	
3		KA7805 (SAM SOUNG)	1	
4		AN7312	1	
5		SP2111	1	
6		LCD DRIVER PCB IC HT1621B (22K OHM)	1	
7		IR HEAD (5V)	1	
8	PVC	126PF/20PF	1	
9	IF:	PINK: (7mm) 7T	1	
10		RED: (7mm) 100: 10T	1	
11		YELLOW: (7mm) 157: 15T	1	
12		CERAMIC FILTER: 10.7MHz(RED) <3PINS>	1	
13		465kHz <3PINS>	1	
14	PCB:	KW-98MP3 MAIN(V3.00) (94V0)	1	
15		KW-98MP3 RECTIFIER (V3.00)	1	
16		KW-98MP3 PREAMP (V3.00)	1	
17		KW-98MP3 HONES.JACK<V3.00>	1	
18		KW-97MP3 KEY REV:02	1	
19	SWITCH:	FUNCTION SS 43 D06M13 <8C>	1	
20		BAND SS43D06M13	1	
21		RECORD PS6P2T	1	
22		TACH 5mm<TS-1150AB>	7	
23		DBBS: PS-22E06	1	
24		CD DOOR(LS-21)	1	
25		FUSE HOLDER:	2	
26	FUSE:	5x20mm <250V/T2.5L>	1	
27		FUSE LABEL:	1	
28		LCD DISPLAY <3个8> L=35MM 98MP3	1	
29	INFRARED EMISSIVE TUBES Φ3mm L=30mm		1	
30		POTENTIOMETER R1615G12 A1 L=25MM	1	
31		HEADPHONE JACK 3507-202	1	
32	LED	Φ3mm GREEN L=19MM	1	
33	LED	IN 4148	4	
34		IN 4001	3	
35		IN 5392	6	
36	COIL:	15UH	3	PHONE JACK X 3
37		6.8V ZENER	1	
38		3.9V ZENER	1	
39	TRANSISTOR:	9014 C	4	

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
40		B772(NEC)	1	
41		S8050	1	
42		FM COIL: $\Phi 0.75$ 5mm $2\frac{1}{27}$	1	
43		$\Phi 0.75$ 5mm $3\frac{1}{27}$	2	
44		AM COIL: 110: 20T (3+1) L=125mm	1	
45		FERRITE COIL: 18x10x12	3	
46		25x15x10	3	
47		18x10x6	1	
48		16x12x8	1	
49		FERRITE BRACKET $\Phi 10 \times 30$ mm	2	
50		FERRITE $\Phi 10 \times 60$ mm	1	
51		CAP:<25V> NPO		
52		3pf	1	
53		25pf	2	
54		20pf	1	
55		30pf	3	
56		150pf	1	
57		300pf	2	
58		PVC:<25V> (+/-10%)		
59		102pf	1	
60		103(0.01uf)	3	
61		203(0.02uf)	8	
62		403(0.04uf)	2	
63		104(0.1uf)	7	
64		153(0.015uf)	2	
65		222(0.0022uf)	4	
66		333(0.033uf)	2	
67		PVC:(+/-10%)		
68		222(0.0022uf)	2	
69		ELECT CAP:(+/-10%)		
70		0.22uf/50v ($\Phi 5$ mmx11.5mm)	1	
71		1uf/50v ($\Phi 5$ mmx11.5mm)	3	
72		3.3uf/50v ($\Phi 5$ mmx11.5mm)	2	
73		4.7uf/50v ($\Phi 5$ mmx11.5mm)	4	
74		10uf/25v ($\Phi 5$ mmx11.5mm)	3	
75		47uf/16v ($\Phi 5$ mmx11.5mm)	6	
76		ELECT CAP:(+/-20%)		
77		100uf/16v ($\Phi 6$ mmx11.5mm)	5	

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
78		220uf/16v (Φ6mmx12.5mm)	3	
79		220uf/25v (Φ8mmx12.5mm)	1	MOTOR X 1
80		470uf/10v (Φ8mmx12.5mm)	2	
81		1000uf/10v (Φ8mmx13.5mm)	1	
82		1000uf/25v (Φ10mmx17.5mm)	2	
83		2200uf/25v (Φ13mmx21.5mm)	1	
84		RESISTOR 1/4:(+/-10%)		
85		1 OHM	2	
86		10 OHM	2	
87		15 OHM	2	
88		33 OHM	1	
89		47 OHM	1	
90		220 OHM	2	
91		330 OHM	3	
92		820 OHM	1	
93		1K OHM	5	
94		1.5K OHM	1	
95		2.2K OHM	4	
96		3.3K OHM	1	
97		3.9K OHM	1	
98		4.7K OHM	7	
99		5.6K OHM	2	
100		6.8K OHM	2	
101		10K OHM	2	
102		12K OHM	4	
103		15K OHM	1	
104		22K OHM	4	
105		39K OHM	3	
106		68K OHM	2	
107		1M OHM	1	
108		RESISTOR:1/8W		
109		220 OHM	2	
110		HSG:(2.0mm)		
111		7PIN	1	
112		HSG (2.0mm) 28#		
113		SINGLE HEAD 7PIN 6 W/ WHITE.BLUE.YELLOW.ORANGE.RED.BROWN L=500mm	1	DISPLAY X 1
114		SINGLE HEAD 6PIN RED.ORANGE.BLUE.WHITE.BLACK.GREY L=500mm	1	KEY PCB X 1
115		HSG (2.5mm) 26#		
116		SINGLE HEAD 2PIN W/WIRE RED BLACK L=380mm	1	

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
117		SINGLE HEAD 2PIN W/WIRE GREEN.BLUE L=380mm	1	
118		HSG W/WIRE (2.0mm)26#		
119		SINGLE HEAD 2PIN RED.BLACK L=400mm	1	
120		HSG W/WIRE (2.0n 1 HEAD 7PIN CABLE L=170MM	1	
121		WIRE: 26#		
122		ORANGE 40MM	1	FLY WIRE X 1
123		RED 60MM	1	MPEG PCB X 1
124		WHITE 色 80MM	1	IR PCB X 1
125		RED 80MM	1	IR PCB X 1
126		GREEN 80MM	1	IR PCB X 1
127		GREEN 120mm	1	AC PCB X1
128		BLACK 120mm	1	SP"L""-x1 DC“-” x1
129		BLACK 130mm	1	MOTOR 1 X1
130		ORANGE 130mm	1	
131		GREEN 150mm	2	
132		YELLOW 150mm	1	
133		BLACK 250MM	1	
134		黑色 480MM	1	
135		棕色 480MM	1	
136		红色 280MM	1	
137		红色 220mm	1	
138		绿色 380mm	1	
139		STEAL WIRE:2.0mm	1	
140		(KW-98MP3 CE) DOUBLE 3PINSHIELD CABLE L=140MMΦ1.8MM	1	
141		HSG STEAL WIRE:2.5mm	1	
142		(KW-98MP3 CE) 3PIN HSG DOUBLE CABLE L=450MMΦ1.8MM	1	
143		DOUBLE HSG: (2.0mm) 28#		
144		(KW-98MP3 CE) 2 HSG 6PIN CABLE L=350mm	1	
145		HSG: (1.0mm)		
146		(KW-98MP3 CE) 16 PIN CD HEAD W/ WIRE L=200MM	1	
147		SCREW: MS/PH 2.6x5	1	
148		TA/PH2x10	1	
149		TA/PH 3x10	2	
150		TA/PH 3x16	5	
151		TA/PH2x6	1	
152		TA/WH 1.8x6	3	
153		MS/BH 3x8	1	
154		TA/PH 3x8	10	

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
155		TA/PH 3x10	6	
156		MS/KH 2.6x4(SCREWΦ4.1mm)	2	
157		TA/PH3x6	2	
158		TA/PH2.6x8	2	
159		TA/WH 2.6x10	5	
160		TA/PH3x12	2	
161		TA/PH 2.6x8	9	
162		PST2x3	3	
163		MS/PH 3x6	2	
164		TA/WH 3x16	2	
165		TA/WH 3x10	5	
166		AC SOCKET CE APPROVAL	1	
167		SPEAKER 8OHM3W Φ45 3.5"C&T<v6>	2	
168		TRANSFORMER EI 48x24 230V	1	
169		GRILL: "L"GRILL	1	
170		"R"GRILL	1	
171		SPRING: CASSETTE DOOR SPRINGKW-97	1	
172		CD DOOR SPRINGV6 (Φ0.7mm)	1	
173		"+"PLATE KW-98	1	
174		"-PLATE	1	
175		"+-PLATE A	1	
176		"+- PLATE B	1	
177		"+-PLATE C	1	
178		MAGNET Φ30×16×5MM	1	
179		FM ANTENNA	1	
180		FM PLATE 6MM	1	
181		CASSETTE DECK: MOTOR 12V STEREO L=30MM	1	
182		CD DECK S4M SUNG CMS-B31	1	
183		CD RUBBER: RED TY-717<40>	2	
184		GREEN TY-717<30>	2	
185		RUBBER FEET: 10x6x3MM	4	
186		HEAT SINK	1	
187		EYELET 2x4	20	
188		PLASTIC "A"SPEAKER CLIP(KW-98)	2	
189		"B"SPEAKER CLIP (KW-98)	2	
190		SPEAKER RING L	1	
191		SPEAKER RING R	1	
192		TOP CABINET	1	
193		REAR CABINET	1	

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
194		HANDLE	1	
195		BATTERY DOOR	1	
196		CD DOOR	1	
197		CD DOOR HOLER	1	
198		CASSETTE KNOB	1set	
199		CD KNOB	1set	
200		CASSETTE DOOR LENS	1	
201		DIAL LENS	1	
202		DISPLAY LENS	1	
203		DISPLAY LENS CHORME BRACKET	1	
204		CASSETTE LENS CHROME BRACKET	1	
205		BAND SWITCH KNOB	1	
206		FUNCTION KNOB	1	
207		VOLUME KNOB	1	
208		DBBS KNOB	1	
209		POINTER	1	
210		TUNNER KNOB	1	
211		POINTER BRACKET	1	
212		POINTER GEAR HOLDER	1	
213		CASSETTE DOOR BRACKET	1	
214		CASSETTE DOOR	1	
215		CASSETTE DOOR GEAR BRACKET	1	
216		CASSETTE DOOR GEAR HOLDER	1	
217		CD DOOR GEAR	1	
218		CD DOOR GEAR HOLDER	1	
219		PHONEJACK PCB BRACKET	1	
220		RECORDER BRACKET	1	
221		MAGNET BRACKET	1	
222		MAGNET HOLER COVER	1	
223		MAGNET HOLDER	1	
224		DUST COVER	1	
225		MPEG PCB BRACKET	2	
226		VCD PCB BRACKET	1	
227		PACKING: POLYFOAM"L"(KW-97)	1	
228		POLYFOAM"R"(KW-97)	1	
229		GIFTBOX	1	
230		CARTON:52.1X32.4X52.4CM	1	
		WARRANTY CARD	1	
231		INSTRUCTION MANUAL	1	
232		BAR CODE LABEL	1	

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
233		(CLASS 1 LABEL) 2.5X1.6CM	1	
234		WARNING LABEL: 4.7X2.4CM	1	
235		CD LASER LABEL2.7X2.7X2.7CM	1	
236		SERIAL LABEL:S/N:KW41B00001~S/N:KW41B1899	2	
237		RATING LABEL	1	
238		AC CORD	1	
240		PVC	1	
241		CD PROTECTION CARD	1	
242	MAIN	POLYBAG	1	
243	CORD	POLYBAG	1	
244	IB	POLYBAG	1	
245	RC	POLYBAG	1	
246		PCB WASHER: 3x12x1mm	4	
247		FIBER WASHER: 3x8x1mm	2	
248		WIRE: Φ0.5x50mm	52	
249		TUBE INSULATING: Φ2.5x40mm	3	
250		TUBE INSULATING: Φ1.8x10mm	19	
251		NYLON CABLE: 3x120mm	10	
252		BELT: 70x900mm	1	
1		PCB: SPCA718 MP3 BOARD V1.04	1	
2		IC: SAMSUNG SIL9226X01	1	
3		SAMSUNG SIL9290X01	1	
4		KA9259	1	
5		SUNPLUS SPCA718A	1	
6		2BE3L9J HCU04	1	
7		HYUNDAI HY57V161610D	1	
8		27C020	1	
9		HSG: (2.0mm) 2PIN	1	
10		6PIN	2	
11		7PIN	1	
12		HSG:(2.5mm) 2PIN	2	
13		3PIN	1	
14		HSG:(1.0mm) 16PIN	1	
15		IC HOLDER	1	
16		ELECT CAP:(+/- 10%) (Φ5.1mmx12mm)		
17		4.7UF/10V	1	
18		10UF/10V	4	
19		47UF/10V	8	

PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
20		100UF/10V	6	
21		CAP: SMT<25V> (+/-10%)(0805)		
22		22PF	3	
23		33PF	2	
24		39PF	1	
25		82PF	1	
26		390PF	2	
27		470PF	1	
28		680PF	2	
29		102(0.001UF)	3	
30		222(0.0022UF)	3	
31		103(0.01UF)	6	
32		333(0.033UF)	2	
33		683(0.068UF)	2	
34		104(0.1UF)	23	
35		CAP: SMT<25V> (+/-20%)(0805)		
36		474(0.47UF)	2	
37		105(1UF)	1	
38		RESISTOR :SMT<+/-5%> (0805)	1	
39		0 OHM	4	
40		4.7 OHM	2	
41		10 OHM	1	
42		33 OHM	2	
43		82 OHM	1	
44		100 OHM	1	
45		220 OHM	10	
46		1K OHM	2	
47		4.7K OHM	5	
48		8.2K OHM	1	
49		10K OHM	7	
50		12K OHM	1	
51		15K OHM	1	
52		18K OHM	1	
53		22K OHM	2	
54		33K OHM	2	
55		39K OHM	4	
56		47K OHM	1	
57		68K OHM	3	
58		82K OHM	3	
59		100K OHM	4	
60		120K OHM	1	

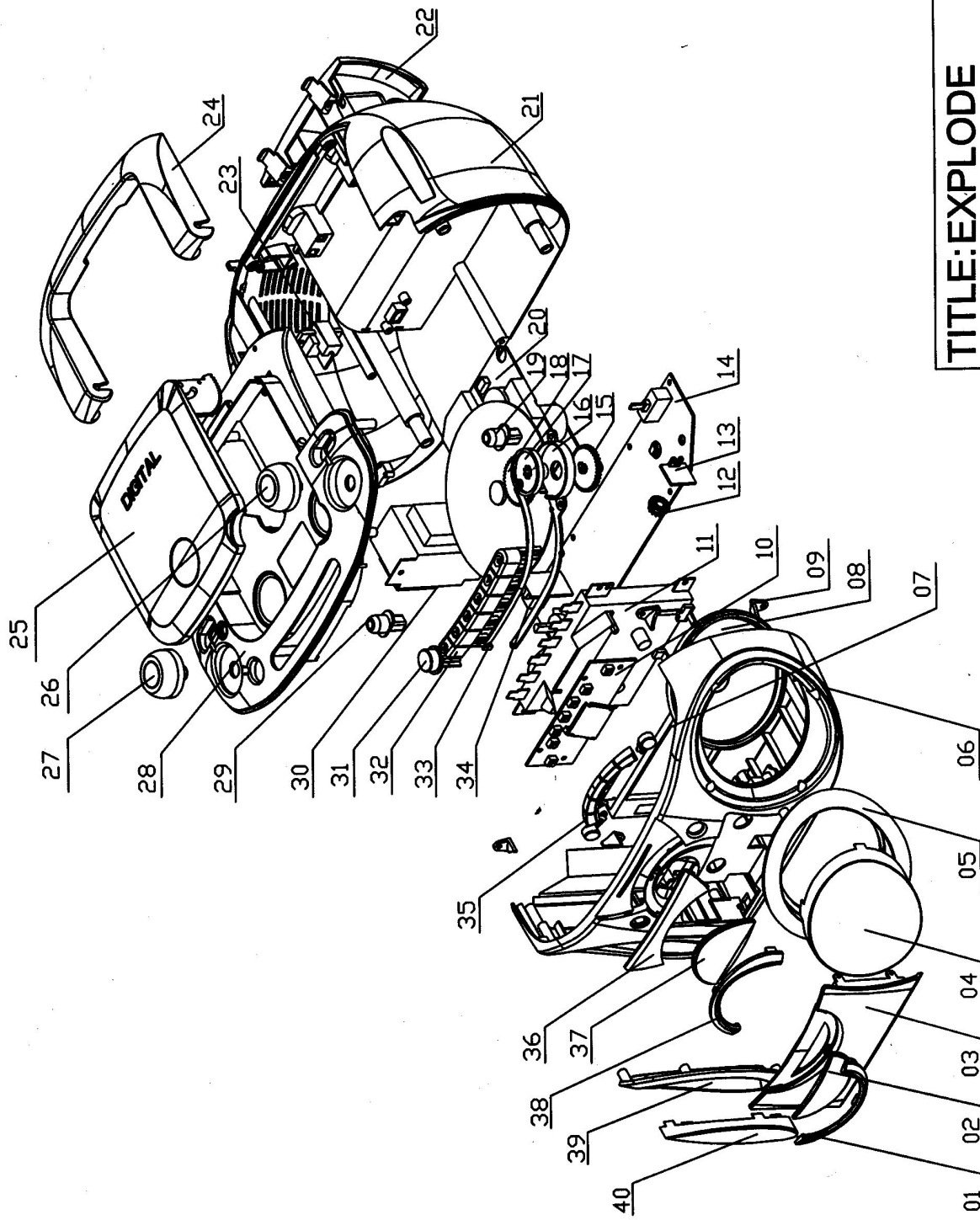
PART LIST

AM:530~1600KHz FM:88~108MH

Model No: SG-331

Item	Part NO	Description	Qty	
61		270K OHM	1	
62		1M OHM	2	
63		CHOKE COIL: 10uH	1	
64		TRANSISTOR: IN4148	1	
65		ZENER DIOE:3.3V	1	
66		ZENER DIOE:3.9V	2	
67		TRANSISTOR: 8050	4	
68		9014	1	
69		9015	1	
70		A733	1	
71		CYSTAT: 16.93MHz	1	
72		27MHz	1	
73		R/C	1	
1		IC: PT 2221	1	
2		P.B.C: KW-89MP3 REMOTE HANDSET V1.01	1	
3		LED: Φ5mm<	1	
4		TRANSISTOR: 9014 C	1	
5		CERAMIC FILTER: 455KHz <2PIN>	1	
6		CAP: 200pf	2	
7		104<0.1uf>	1	
8		ELECT CAP: 47uf/10v	1	
9		RESISTOR 1/8W: 10 OHM	1	
10		BATTERY PLATE: "+"PLATE (1860)	1	
11		"-"PLATE (1860)	1	
12		"+"PLATE (1860)	1	
13		R/C PLASTIC BOTTOM CABINET (KW-89R)	1	
14		FRONT CABINET (KW-89R)	1	
15		BATTERY DOOR (KW-89R)	1	
16		PLASTIC PLATE<8keys> (KW-97MP3)	1	

ITEM	PART NAME	QTY
40	SPEATER-NET(L)	1
39	SPEATER-BRK(L)	1
38	DISPLAY LENS-BRK	1
37	DISPLAY LENS	1
36	INDICATE LENS	1
35	CD-KNOB	1
34	PHONE-BRK	1
33	POINTER	1
32	CASS-KNOB	1
31	BBS-KNOB	1
30	TRANSFORMER	1
29	FUNCTION-KNOB	1
28	CD-BASE	1
27	VOLUME-KNOB	1
26	TURNING-KNOB	1
25	CD DOOR	1
24	HANDLE	1
23	AC JACK	1
22	BATTERY-DOOR	1
21	BACK-CASE	1
20	CD-DECK	1
19	BAND-KNOB	1
18	PVC-GEAR	1
17	POINTER-GEAR	1
16	POINTER-BRK	1
15	TURNING-GEAR	1
14	MAIN-PCB	1
13	GEAR-BRK	2
12	GEAR	2
11	CASS-DECK	1
10	KEY-PCB	1
09	SPEAKER-BRK	4
08	SPEAKER	2
07	CASSDOOR-BRK	1
06	FRONT CASE	1
05	SPEATER-BRK(R)	1
04	SPEATER-NET(R)	1
03	CASSDOOR	1
02	CASSLENS	1
01	CASSLENS-BRK	1



TITLE:EXPLODE

KW-97		PART NO.:	
FILE NAME:		MATERIAL:	
DRAWN:	SCALE:1:4	DATE:	
CHECKED:		DATE:	
APPROVED:		DATE:	

A4

X60 60CX150 150CX350 350CX1000 1000CX	±0.1 ±0.2 ±0.3 ±0.4 ±0.6	±0.5	
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