DJ-S17 E/TFH DJ-S47 E

Service Manual

CONTENTS

ALINCO, INC.

SPECIFICATIONS (DJ-S17)

General

Frequency range:	E	: TX144~145.995MHz	*144~145.995MHz
		RX144~145.995MHz	*144~145.995MHz
	TFH:	TX136~173.995MHz	*150~173.995MHz
		RX130~173.995MHz	*150~173.995MHz

* Guaranteed range per specifications

Modulation:	F3E (FM)
Frequency step:	5, 10, 12.5, 15, 20, 25, 30kHz step
Memory channel:	200 channels + 1 call channel + 1 Repeater-Access function memory
Ant. impedance:	50 Ω unbalanced
Frequency stability:	$\pm$5ppm
Mic impedance:	2k Ω
Supply voltage:	DC 7.0~16.0V (EXT DC-IN)
Current consumption:	1.4A (typical) Transmit high at 5W
	250mA (typical) Receive at 500mW
	70mA (typical) Standby
	25mA (typical) Battery save on
Temperature range:	External DC: -10ºC~+60ºC (+14ºF~+140ºF)
	Battery packs: -10ºC~+45ºC (+14ºF~+113ºF)
Ground:	Negative ground
Dimension:	58(W) x 110(H) x 36.4(D)mm
	(2.28"(W) x 4.33"(H) x 1.43"(D))
	(with EBP-65)
Weight:	Approx. 280g (9.9oz)
	(with EBP-65)
Sub audible Tone (CTCSS):	encoder/decoder installed (39 tones)
Sub audible Tone (DCS):	encoder/decoder installed (104codes)

Transmitter

Power output:	Approx. 5W (with EBP-65)
	Approx. 5W (with DC 13.8V)
	Approx. 0.8W (LOW output)
Modulation:	Variable reactance
Spurious emission:	-60dB or less
Max. deviation:	$\pm$5kHz
Mic. impedance:	2k Ω

Receiver

System:	Double-conversion super heterodyne
Sensitivity:	-14.0dB μ (0.2 μ V) or less
Intermediate frequency:	1st IF 21.7MHz 2nd IF 450kHz
Selectivity:	-6dB: 12kHz or more
	-60dB: 26kHz or less
AF output:	500mW (MAX)
	400mW (8 Ω, 10% distortion)

SPECIFICATIONS (DJ-S47)

General

Frequency range:	E: TX430~439.995MHz
	RX430~439.995MHz
Modulation:	F3E (FM)
Frequency step:	5, 10, 12.5, 15, 20, 25, 30kHz step
Memory channel:	200 channels + 1 call channel + 1 Repeater-Access function memory
Ant. impedance:	50 Ω unbalanced
Frequency stability:	±2.5ppm
Mic impedance:	2k Ω
Supply voltage:	DC 7.0~16.0V (EXT DC-IN)
Current consumption:	1.7A (typical) Transmit high at 5W
	250mA (typical) Receive at 500mW
	80mA (typical) Standby
	27mA (typical) Battery save on
Temperature range:	External DC: -10ºC~+60ºC (+14ºF~+140ºF)
	Battery packs: -10ºC~+45ºC (+14ºF~+113ºF)
Ground:	Negative ground
Dimension:	58(W) x 110(H) x 36.4(D)mm
	(2.28"(W) x 4.33"(H) x 1.43"(D))
	(with EBP-65)
Weight:	Approx. 280g (9.9oz)
	(with EBP-65)
Sub audible Tone (CTCSS):	encoder/decoder installed (39 tones)
Sub audible Tone (DCS):	encoder/decoder installed (104 codes)

Transmitter

Power output:	Approx. 4.5W (with EBP-65)
	Approx. 5W (with DC 13.8V)
	Approx. 0.8W (LOW output)
Modulation:	Variable reactance
Spurious emission:	-60dB or less
Max deviation:	±5kHz
Mic. impedance:	2k Ω

Receiver

System:	Double-conversion super heterodyne
Sensitivity:	-12.0dB μ (0.25 μV) or less
Intermediate frequency:	1st IF 38.85MHz 2nd IF 450kHz
Selectivity:	-6dB: 12kHz or more
	-60dB: 26kHz or less
AF output:	500mW (MAX)
	400mW (8 Ω, 10% distortion)

CIRCUIT DESCRIPTION

1) Receiver System

DJ-S17 :The receiver system is a double superheterodyne system with a 21.7 MHz first IF and a 450 kHz second IF.

DJ-S47 :The receiver system is a double superheterodyne system with a 38.85 MHz first IF and a 450 kHz second IF.

1. Front End

DJ-S17 :The received signal at any frequency in the 130.000- to 173.995-MHz (E version : 144.000- to 145.995-MHz) range is passed through the low-pass filter (L101, L102, L103, L113, C108, C120, C121, C124, C125, C126, C127 and C176) and ATT (Attenuator) circuit (Q120, R161, R187 and D112), and tuning circuit (C192, C193, C215, C216, D115, D116, L125 and L126), then amplified by the RF amplifier (Q114). The signal from Q114 is then passed through the tuning circuit (C200, C201, C219, C220, D117, D118, L128 and L129) and converted into 21.7 MHz by the mixer (Q116). The tuning circuit, which consists of C192, C193, C215, C216, L125, L126, variable capacitance diodes D115 and D116 and C200, C201, C219, C220, L128, L129, variable capacitance diodes D117 and D118, is controlled by the tracking voltage from the CPU so that it is optimized for the reception frequency. The local signal from the VCO is passed through the buffer (Q113), and supplied to the source of the mixer (Q116). The radio uses the lower side of the superheterodyne system.

DJ-S47 :The received signal at any frequency in the 430.000- to 439.995-MHz range is passed through the low-pass filter (L101, L102, L103, L113, C108, C120, C121, C124, C125, C126, C127 and C176) and ATT (Attenuator) circuit (Q120, R161, R187 and D112), and tuning circuit (C192, C193, C215, C216, D115, D116, L125 and L126), then amplified by the RF amplifier (Q114). The signal from Q114 is then passed through the tuning circuit (C200, C201, C219, C220, D117, D118, L128 and L129) and converted into 38.85 MHz by the mixer (Q116). The tuning circuit, which consists of C192, C193, C215, C216, L125, L126, variable capacitance diodes D115 and D116 and C200, C201, C219, C220, L128, L129, variable capacitance diodes D117 and D118, is controlled by the tracking voltage from the CPU so that it is optimized for the reception frequency. The local signal from the VCO is passed through the buffer (Q113), and supplied to the source of the mixer (Q116). The radio uses the lower side of the superheterodyne system.

2. ATT (Attenuator) Circuit

This circuit is used in case the receiving signal is disturbed by interfering signal(s), attenuating the receiving signal(s) to reduce the interference. CPU (IC109)'s pin 10 outputs a DC current to drive Q120, controlling D112's resistance to adjust the attenuation value.

3. IF Circuit

DJ-S17 : The mixer(Q116) mixes the received signal with the local signal to obtain the sum of and difference between them. The crystal filter (FL101 , FL102) selects 21.7 MHz frequency from the results and eliminates the signals of the unwanted frequencies. The first IF amplifier (Q119) then amplifies the signal of the selected frequency. After the signal is amplified by the first IF amplifier (Q119), it is input to pin 16 of the demodulator IC (IC103). The second local signal of 21.25 MHz (shared with PLL IC reference oscillation), which is oscillated by the internal oscillation circuit in IC103 and crystal (X101), is input through pin 1 of IC103. Then these two signals are mixed by the internal mixer in IC103 and the result is converted into the second IF signal with a frequency of 450kHz. The second IF signal is output from pin 3 of IC103 tothe ceramic filter (FL103), where the unwanted frequency band of that signal is eliminated, and the resulting signal is sent back to the IC103 through 5 pins.

DJ-S47 : The mixer(Q116) mixes the received signal with the local signal to obtain the sum of and difference between them. The crystal filter (FL101) selects 38.85 MHz frequency from the results and eliminates the signals of the unwanted frequencies. The first IF amplifier (Q119) then amplifies the signal of the selected frequency. After the signal is amplified by the first IF amplifier (Q119), it is input to pin 16 of the demodulator IC (IC103). The second local signal of 38.4 MHz, which is oscillated by the internal oscillation circuit in IC103 and output of tripler circuit (L123, C202, C191, L122, Q115), is input through pin 1 of IC103. Then these two signals are mixed by the internal mixer in IC103 and the result is converted into the second IF signal with a frequency of 450kHz. The second IF signal is output from pin 3 of IC103 tothe ceramic filter (FL103), where the unwanted frequency band of that signal is eliminated, and the resulting signal is sent back to the IC103 through 5 pins.

4. Demodulator Circuit

The second IF signal input via pin 5 is demodulated by the internal limiter amplifier and Quadrature detection circuit in IC103, and output as an audio signal through pin 9.

5. Audio Circuit

The audio signal from pin 9 of IC103 is compensated to the audio frequency characteristics in the de-emphasis circuit (R223, R224, C241, C242) and amplified by the AF amplifier (Q196). The signal is then input to pin 1 of the electronic volume (IC107) for volume adjustment, and output from pin 2. The adjusted signal is sent to the audio power amplifier (IC106) through pin 2 to drive the speaker.

6. Squelch Circuit

Part of the audio signal from pin 9 of IC103 is amplified by the noise filter amplifier and the internal noise amplifier in IC103. The desired noise of the signal is output through pin 14 of IC103 and input to pin 2 of CPU (IC109).

2) Transmitter System

1. Modulator Circuit

The audio signal is converted to an electric signal in either the internal or external microphone, and input to the microphone amplifier (IC102).

IC102 consists of four operational amplifiers; 1st amplifier (pins 1, 2, and 3) is composed of high-pass filter, 2nd amplifier (pins 12, 13, and 14) is composed of pre-emphasis and IDC circuits, 3rd amplifier (pins 8, 9, and 10) is composed of a splatter filter and 4th amplifier (pins 7, 6, and 5) is composed of a splatter filter. The maximum frequency deviation is determined to its optimal value by VR104 and input to the cathode of the variable capacitance diode of the VCO, to change the electric capacity in the oscillation circuit.

2. Power Amplifier Circuit

The transmitted signal is oscillated by the VCO, amplified by the pre-drive amplifier (Q104) and drive amplifier (Q103), and input to the power amplifier (Q102). The signal is then amplified by the power amplifier (Q102) and led to the antenna switch (D101 and D103) and low-pass filter (L104, L103, L102, L101, C107, C108, C109, C110, C111, C120, C121, C124, C125, C126, and C127), where unwanted high harmonic signals are reduced as needed, and the resulting signal is supplied to the antenna.

3. APC Circuit

Part of the transmission power from the low-pass filter is detected by D105, converted to DC, and then amplified by a differential amplifier (Q111). The output voltage controls the bias voltage from the gate of Q102 and Q103 to maintain the transmission power constant.

3) PLL Synthesizer Circuit

1.CPU control

The dividing ratio is obtained by sending data from the CPU (IC109) to pin 10, and sending clock pulses to pin 9 of the PLL IC (IC101). The oscillated signal from the VCO is amplified by the buffer (Q118), then input to pin 8 of IC101. Each programmable divider in IC101 divides the frequency of the input signal by N-value according to the frequency data, to generate a comparison frequency of 5 or 6.25 kHz.

2. Reference Frequency Circuit

DJ-S17 :The reference frequency appropriate for the channel steps is obtained by dividing the 21.25MHz reference oscillation (X101) by 4250 or 3400, according to the data from the CPU (IC109). When the resulting frequency is 5 kHz, channel steps of 5, 10, 15, 20, and 30 kHz are used. When it is 6.25 kHz, steps of 12.5, 25, and 50 kHz are used.

DJ-S47 : The reference frequency appropriate for the channel steps is obtained by dividing the 12.8MHz reference oscillation (X102) by 2048 or 2560, according to the data from the CPU (IC109). When the resulting frequency is 5 kHz, channel steps of 5, 10, 15, 20, and 30 kHz are used. When it is 6.25 kHz, steps of 12.5, 25, and 50 kHz are used.

3. Phase Comparator Circuit

The PLL (IC101) uses the reference frequency, 5 or 6.25 kHz. The phase comparator in the IC101 compares the phase of the frequency from the VCO with that of the comparison frequency, 5 or 6.25 kHz, which is obtained by the internal divider in IC101.

4. PLL Loop Fitter Circuit

If a phase difference is found in the phase comparison between the reference frequency and VCO output frequency, the charge pump output (pin 5) of IC101 generates a pulse signal, which is converted to DC voltage by the PLL loop filter and input to the variable capacitance diode of the VCO unit for oscillation frequency control.

5. VCO Circuit

DJ-S17 : A Colpitts oscillation circuit driven by Q108 directly oscillates the desired frequency. The frequency control voltage determined in the CPU (IC109) and PLL circuit is input to the variable capacitance diodes (D107 and D109). This changes the oscillation frequency, which is amplified by the VCO buffer (Q110) and output from the VCO unit.

DJ-S47 : A Colpitts oscillation circuit driven by Q108 directly oscillates the desired frequency. The frequency control voltage determined in the CPU (IC109) and PLL circuit is input to the variable capacitance diodes (D109 and D110). This changes the oscillation frequency, which is amplified by the VCO buffer (Q110) and output from the VCO unit.

4) CPU and Peripheral Circuits

1. LCD Display Circuit

The CPU turns ON the LCD via segment and common terminals with 1/3 the duty and 1/3 the bias, at the frame frequency of 112.5Hz.

2. Display Lamp Circuit

When the LAMP key is pressed, "L" is output from pin 42 of CPU (IC109) to the bases of Q152 then turns to ON and "H" is output from emitter of Q152 to the bases of Q146 to light LEDs (D131, D132).

3. Reset and Backup Circuits

TWhen the Output Voltage from pin 3 of IC110 drops to 4.5 V or below, the output signal from the reset IC (IC104), which has been input to pin 33 of the CPU (IC109), changes from "H" to "L" level. The CPU will then be in the backup state.

4. S(Signal)Meter Circuit

The DC potential of pin 12 of IC103 is input to pin 1 of the CPU (IC109), converted from an analog to a digital signal, and displayed as the S-meter signal on the LCD.

5. Tone Encoder

DJ-S17 : The CPU (IC109) is equipped with an internal tone encoder. The tone signal (67.0 to 250.3Hz) is output from pin 9 of the CPU to the variable capacitance diode of the VCO and 21.25MHz reference oscillation (X101) of the PLL IC (IC101) for modulation.

DJ-S47 : The CPU (IC109) is equipped with an internal tone encoder. The tone signal (67.0 to 250.3Hz) is output from pin 9 of the CPU to the variable capacitance diode of the VCO and 12.8MHz reference oscillation (X102) of the PLL IC (IC101) for modulation.

6. DCS Encoder

DJ-S17 : The CPU (IC109) is equipped with an internal DCS code encoder. The DCS code (023 to 754) is output from pin 7 of the CPU to 21.25 MHz reference oscillation (X101) of the PLL IC (IC101) for modulation.

DJ-S47 : The CPU (IC109) is equipped with an internal DCS code encoder. The DCS code (023 to 754) is output from pin 7 of the CPU to 12.8 MHz reference oscillation (X102) of the PLL IC (IC101) for modulation.

7. CTCSS, DCS Decoder

The AF signal from the pin 9 of IC103 is filtered by an active filter (IC108) to eliminate the voice range of the signal then amplified and input to the pin 4 of the CPU (IC109). The signal is compared in the CPU with the pre-selected CTCSS and DCS values and the squelch opens in case the value matches.

8. Clock Shift

In case the selected frequency is disturbed by a CPU clock-noise, it may be eliminated by changing the CPU clock frequency. When the clock-shift is set, the pin 31 of the CPU (IC109) becomes Low turning ON the Q124. When Q124 becomes ON, X104's oscillation frequency shifts approximately by 200ppm.

5) M38268MCA-076GP (XA1121)

CPU
Terminal Connection
(TOP VIEW)
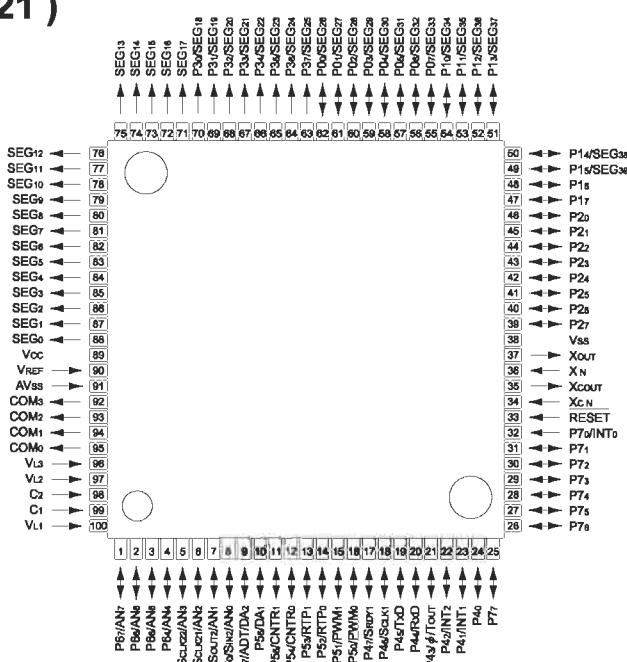
No.	Terminal	Signal	I/O	Description
1	P67/AN7	SMT	I	S-meter input
2	P66/AN6	SQL	I	Noise level input for squelch
3	P65/AN5	BAT	I	Low battery detection input
4	P64/AN4	TIN	I	CTCSS tone input / DCS code input
5	P63/SCLK22/AN3	BP1	I	Band plan 1
6	P62/SCLK21/AN2	BP2	I	Band plan 2
7	P61/SOUT2/AN1	DCSW	O	DCS signal mute
8	P60/SIN2/AN0	FKEY	I	Function / Monitor Key input
9	P57/ADT/DA2	CTOUT	O	CTCSS tone output / DCS tone output
10	P56/DA1	DTOUT	O	DTMF output
11	P55/CNTR1	SCL	O	Serial clock for EEPROM
12	P54/CNTR0	TBST	I/O	Tone burst output
13	P53/RTP1	BP4	I	Band plan 4
14	P52/RTP0	MUTE	I/O	Microphone mute / Bank change input while trunking
15	P51/PWM3	CLK	O	Serial clock output for PLL, and trunking board
16	P50/PWM0	DATA	I/O	Serial data output for PLL, CTCSS / PLL unlock signal input / EVR control output
17	P47/SROY1	TRST	I/O	Trunking board detection (when the unit is turned ON) / Strobe signal to trunking board
18	P46/SCLK1	STBP	O	Strobe for PLL IC
19	P45/TXD	UTX	O	UART data transmission output
20	P44/RXD	URX	I	UART data reception input
21	P43/ΦTOUT	BEEP	I/O	Beep tone/Band plan 3 (when the unit is turned on)
22	P42/INT2	RE2	I	Rotary encoder input
23	P41/INT1	RE1	I	
24	P40	CLO	O	CLONE ON/OFF output
25	P77	PTTK	I	PTT input
26	P76	CHG	I	Battery charge ON/OFF output
27	P75	P5C	O	PLL power ON/OFF output
28	P74	T5C	O	TX power ON/OFF output
29	P73	R5C	O	RX power ON/OFF output
30	P72	AFP	O	AF AMP power ON/OFF output
31	P71	CLSFT	O	CLOCK frequency shift
32	P70/INTO	BU	I	Backup signal detection input
33	RESET	RESET	I	Reset input
34	Xcin		-	-
35	Xcout		-	-
36	Xin	XIN	-	Main clock input
37	Xout	XOUT	-	Main clock output
38	Vss	GND	-	CPU GND
39	P27	PSW	I	Power switch input
40	P26	SDA	O	Serial data for EEPROM
41	P25	C5C	O	C5V power ON/OFF output
42	P24	LAMP	O	Lamp ON/OFF
43	P23	KI0	I	Key matrix input
44	P22	KI1	I	
45	P21	KI2	I	
46	P20	KI3	I	
47	P17	KO3	O	Key matrix output
48	P16	KO2	O	
49	P15/SEG39	KO1	O	
50	P14/SEG38	KO0	O	
51	P13/SEG37	DA3	O	DA converter for Tx output power
52	P12/SEG36	DA2	O	DA converter for Tx output power
53	P11/SEG35	DA1	O	DA converter for Tx output power
54	P10/SEG34	AFC/DA0	O	DA converter for Tx output power
55	P07/SEG33	EXP	I/O	Trunking TXDT control / Voice Scrambler Board detection (when the unit is turned on)
56	P06/SEG32	SD/PO	O	Signal detection output / Tx power Hight or Low

No.	Terminal	Signal	I/O	Description
57	P05/SEG31	SEG31	O	
58	P04/SEG30	SEG30	O	
59	P03/SEG29	SEG29	O	
60	P02/SEG28	SEG28	O	
61	P01/SEG27	SEG27	O	
62	P00/SEG26	SEG26	O	
63	P37/SEG25	SEG25	O	
64	P36/SEG24	SEG24	O	
65	P35/SEG23	SEG23	O	
66	P34/SEG22	SEG22	O	
67	P33/SEG21	SEG21	O	
68	P32/SEG20	SEG20	O	
69	P31/SEG19	SEG19	O	
70	P30/SEG18	SEG18	O	
71	SEG17	SEG17	O	LCD segment signal
72	SEG16	SEG16	O	
73	SEG15	SEG15	O	
74	SEG14	SEG14	O	
75	SEG13	SEG13	O	
76	SEG12	SEG12	O	
77	SEG11	SEG11	O	
78	SEG10	SEG10	O	
79	SEG9	SEG9	O	
80	SEG8	SEG8	O	
81	SEG7	SEG7	O	
82	SEG6	SEG6	O	
83	SEG5	SEG5	O	
84	SEG4	SEG4	O	
85	SEG3	SEG3	O	
86	SEG2	SEG2	O	
87	SEG1	SEG1	O	
88	SEG0	SEG0	O	
89	Vcc	VDD	-	CPU power terminal
90	Vref	Vref	-	AD converter power supply
91	Avss	Avss	-	AD converter GND
92	COM3	COM3	O	LCD COM3 output
93	COM2	COM2	O	LCD COM2 output
94	COM1	COM1	O	LCD COM1 output
95	COM0	COM0	O	LCD COM0 output
96	VL3	VL3	-	LCD power supply
97	VL2	VL2	-	
98	C2	C2	-	-
99	C1	C1	-	-
100	VL1	VL1	I	LCD power supply

SEMICONDUCTOR DATA

1) NMJ2070MT1 (XA0210)
Low Voltage Power Amplifier
Equivalent Circuit
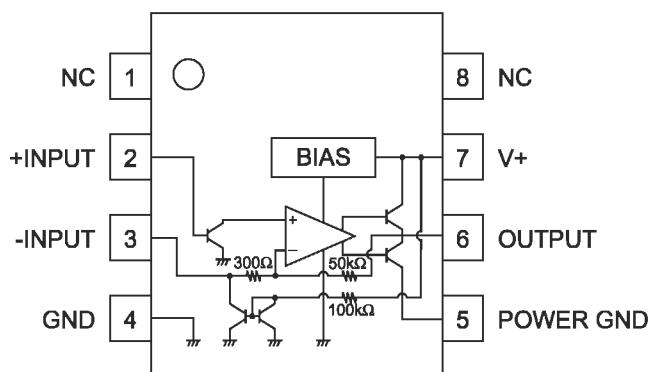
V+=6V, Ta=25±2°C

Parameter	Condition		Symbol	Min.	Typ.	Max.	Unit
Supply voltage			V+	1.8	-	15	V
Idle current	RL=		IQ	-	4	7	mA
Output voltage			Vo	-	2.7	-	V
Input bias current			IB	-	200	-	nA
Output power	THD=10%, f=1kHz	V+=6V, RL=4	Po	0.5	0.6	-	W
		V+=4.5V, RL=4		-	0.32	-	W
		V+=3V, RL=4		-	120	-	mW
		V+=2V, RL=4		-	30	-	mW
	THD=10%, f=1kHz	V+=6V, RL=4		-	500	-	mW
		V+=4.5V, RL=4		-	250	-	mW
Distortion	Po=0.4W, RL=4 , f=1kHz		THD	-	0.25	-	%
Voltage gain	f=1kHz		Av	41	44	47	dB
Input impedance	f=1kHz		ZIN	100	-	-	k
Equivalent input noise voltage	Rs=10k	A curve	Vn1	-	2.5	-	μV
		B=22Hz to 22kHz	Vn2	-	3	-	μV
Power supply voltage rejection ratio	f=100Hz, Cx=100μF		SVR	24	30	-	dB
Power gain band width (−3dB)	RL=8 , Po=250mW		P.B	-	200	-	kHz

2) S24CS64A01-J8T1G (XA1117)
16K bits CMOS Serial EEPROM
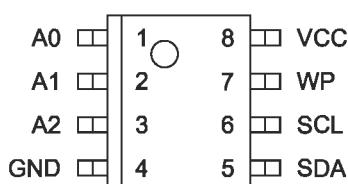
Pin Number	Pin Name	Function
1	A0	Slave address input
2	A1	Slave address input
3	A2	Slave address input
4	GND	Groudd
5	SDA	Serial data input / output
6	SCL	Serial clock input
7	WP	Write protection input Connected to Vcc: Protection valid Connected to GND: Protection invalid
8	VCC	Power supply

Remark See Dimensions for details of the package drawings.

3) M62429FP/CF0J (XA1118)
Electronic Volume

```
VIN1  |1|          |8| VIN2
VOUT1 |2|  M62429P/FP  |7| VOUT2
GND   |3|          |6| VCC1
DATA  |4|          |5| CLOCK
```

VIN2 ⑧   VOUT2 ⑦   VCC ⑥   CLOCK ⑤

VR 2

VOL AMP 2

VOL AMP 1

REF AMP   Vref

LOGIC
CONTROL

VR 1

① VIN1   ② VOUT1   ③ GND   ④ DATA
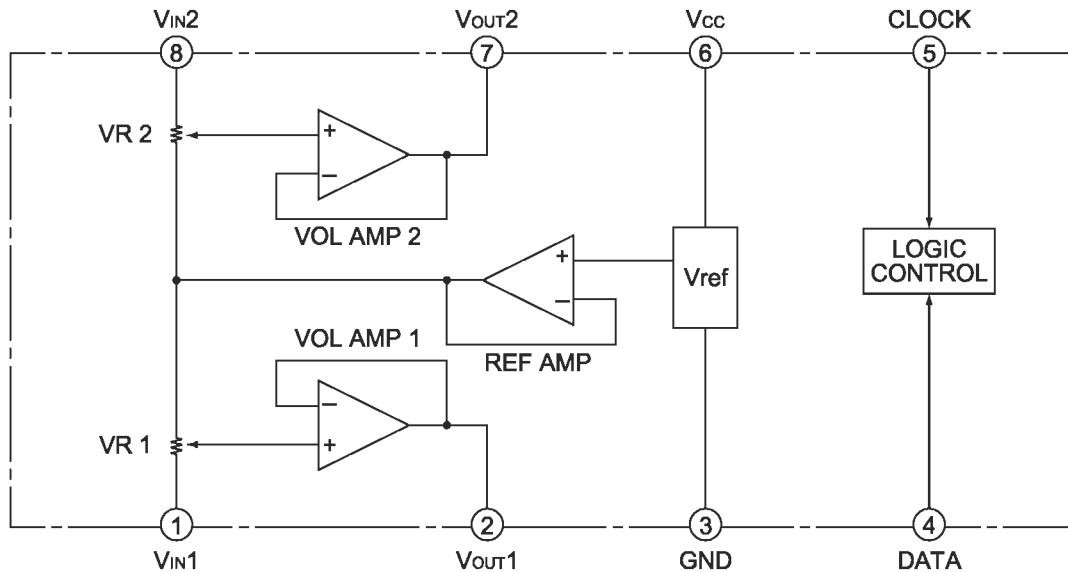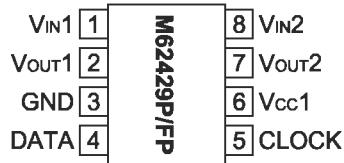
4) LM2902PWR (XA1106)
Quad Operational Amplifiers

```
14 13 12 11 10 9 8

   L2902
   ***
   ****

 1  2  3  4  5  6  7
```
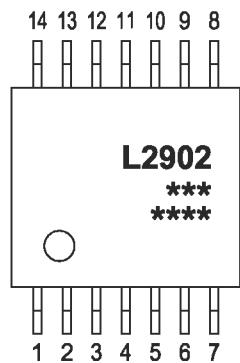
1. Output A
2. Inverting Input A
3. Non-inverting Input A
4. Vcc
5. Non-inverting Input B
5. Inverting Input B
7. Output B
8. Output C
9. Inverting Input C
10. Non-inverting Input C
11. GND
12. Non-inverting Input D
13. Inverting Input D
14. Output D

5) TA31136FN(EL) (XA0404)
Low Power FM IC
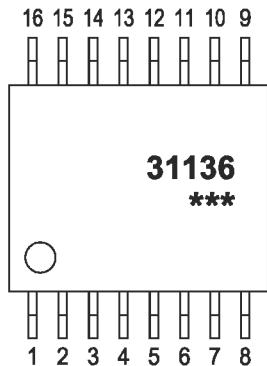
1. OSC IN
2. OSC OUT
3. MIX OUT
4. Vcc
5. IF IN
6. DEC
7. FIL OUT
8. FIL IN
9. AF OUT
10. QUAD
11. IF OUT
12. RSSI
13. N-DET
14. N-REC
15. GND
16. MIC IN
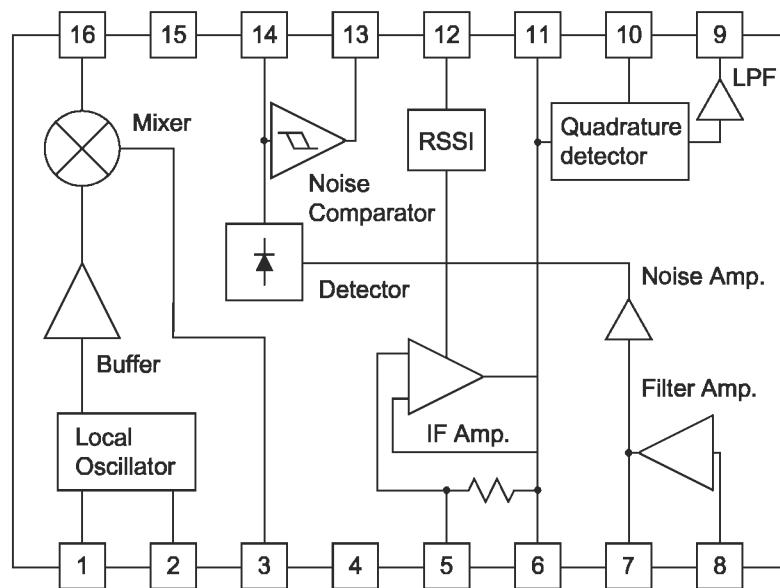
6) S80845CLNB-B66-T2G (XA1120)
C-MOS Voltage Detector
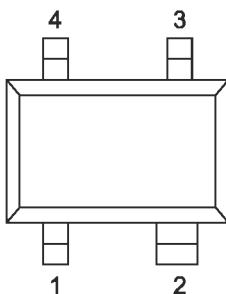
Pin No.	Pin name	Pin description
1	OUT	Voltage detection output pin
2	VDD	Voltage input pin
3	NC*1	No connection
4	VSS	GND pin

*1. The NC pin is electrically open.
　　The NC pin can be connected to VDD or VSS.

7) MB15E07SR (XA1107)
PLL Synthesizer
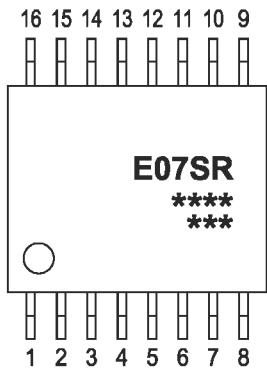
```
16 15 14 13 12 11 10 9
 |  |  |  |  |  |  |  |

        E07SR
        ****
         ***
  O

 |  |  |  |  |  |  |  |
 1  2  3  4  5  6  7  8
```

1. OSC IN
2. N. C.
3. Vp
4. Vcc
5. Do
6. GND
7. Xfin
8. fin

9. CLOCK
10. Data
11. LE
12. PS
13. N. C.
14. LD / fout
15. N. C.
16. N. C.
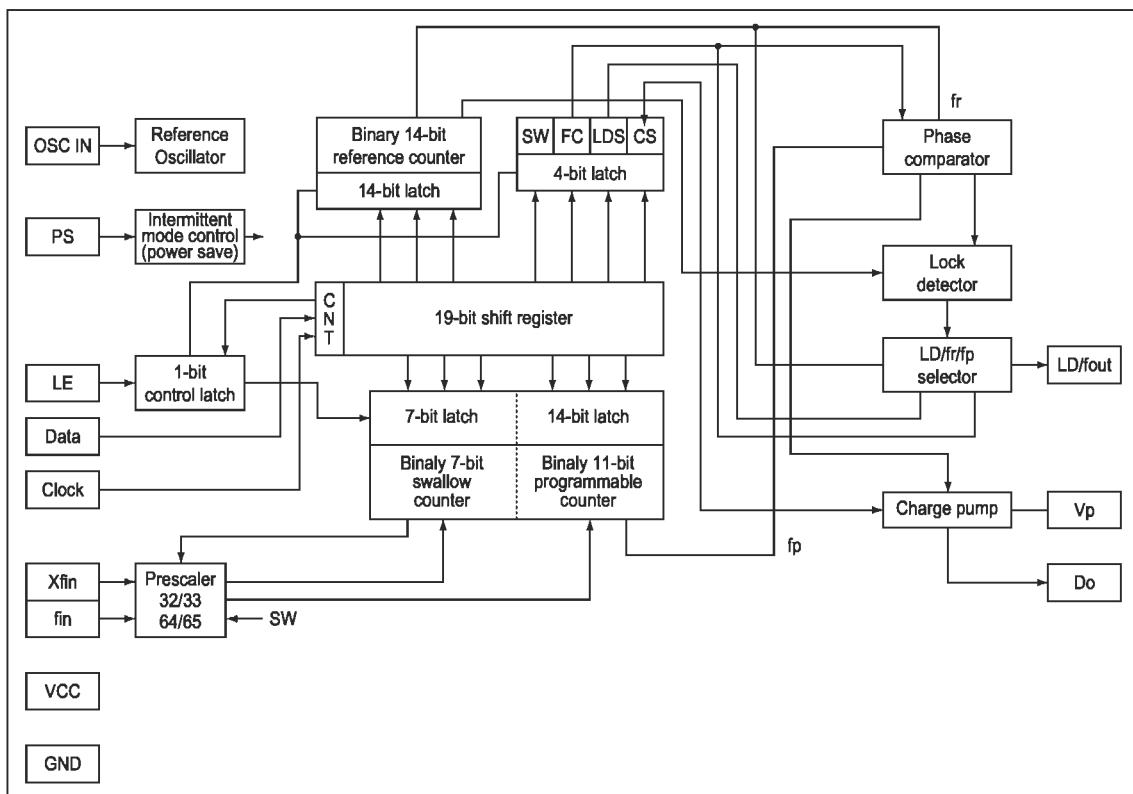
(Vcc=2.7 to 5.0V, Ta=-40°C to +85oC)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Power supply voltage	Vcc	-	2.7	3.75	5.0	V
Power supply current	Icc	2500MHz Vcc=Vp=3.75V		8.0		mA
LPF supply voltage	Vp	-	Vcc	-	5.5	V
Local oscillator input level	Vfin	100MHz to 300MHz	-6		+2	dBm
		300MHz to 2500MHz	-15		+2	
Local oscillator input frequency	fin	-	100		2500	MHz
Xin input level	Vxin	-	0.5		Vcc	Vp-p
Xin input frequency	Fxin	-	3		40	MHz

8) XC6202P502MR (XA1119)

Voltage Regulator
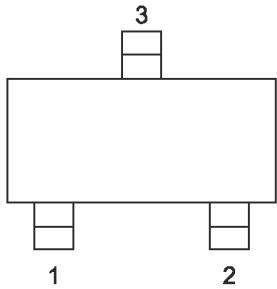
Pin No.	Pin name	Function
1	VOUT	Regulated Voltage Output
2	VIN	Supply Voltage Input
3	VSS	Ground

Absolute Maximum Ratings

Parameter	Symbol	Rating	Units
Input Voltage	VIN	22	V
Output Current	IOUT	500	mA
Output Voltage	VOUT	VSS-0.3~VIN+0.3	V
Power Dissipation	Pd	150	mW
Operating Ambient Temperature	Topr	-40~+85	ºC
Storage Temperature	Tstg	-55~+125	ºC

9) Transistor, Diode and LED outline Drawings

Top View

MA741WA-(TX) XD0251	1SS362(TE85L) XD0338	1SV308(TPH3) XD0339	MAZS0270HL XD0377	1SV314(TPH3,F) XD0403	1SS423(TE85L,F) XD0416	HVC202BTRU-E XD0417
M2P	C3	TX	2-	V6	W9	A0
RB521S-30TE61 XD0418	**1SS400TE61** XD0419	**FA3J3STP** XD0420	**1SV323(TPH3,H)** XD0421	**HSC277TRF-E** XD0422	**HVC132TRF-E** XD0423	**S3JB-T** XD0424
C	A		V7		P2	GW** 3J
SML-310MTT86 XL0036	**SML-521MUWT86** XL0097	**3SK293 TE85L** XE0053	**SSM3K15FV(TPL)** XE0069	**2SK3475(TE12L,F)** XE0070	**2SK3476(TE12L,Q)** XE0071	**2SB766A-(TX)R** XT0170
	GREEM RED	D S / UF / S G	D / DP / G S	W * B / G S D	S / G UC F D / S	B / B C E
2SC5066FT-Y XT0180	**2SC6026MFV** XT0210	**2SA1955FV-A(TPL3)** XT0212	**2SC5659T2L** XT0213	**HN2C01FE-GR(T5L,F)** XT0214	**15GN03F-TL-E** XT0219	**RN1107MFV(TPL3)** XU0210
C / M2 / B E	C / HY / B E	C / GA / B E	C / AP / B E	6 5 4 / L1G / 1 2 3	C / ZC / B E	C / XH / B E Rb=10kohm Rbe=47kohm
RN2107MFV(TPL3) XU0211	**RN2115MFV(TPL3)** XU0212	**RN1111MFV(TPL3),F** XU0213	**RN2111MFV(TPL3)** XU0220			
C / YH / B E Rb=10kohm Rbe=47kohm	C / YS / B E Rb=2.2kohm Rbe=10kohm	C / XM / B E Rb= min :7kohm typ. : 10kohm max :13kohm Rbe=none	C / YM / B E Rb=min:7kohm typ. : 10kohm max :13kohm Rbe=none			

For HN2C01FE-GR(T5L,F) XT0214:

```
1 [   Q1   ] 6
2 [        ] 5
3 [   Q2   ] 4
```

10) LCD Connection (EL0059)
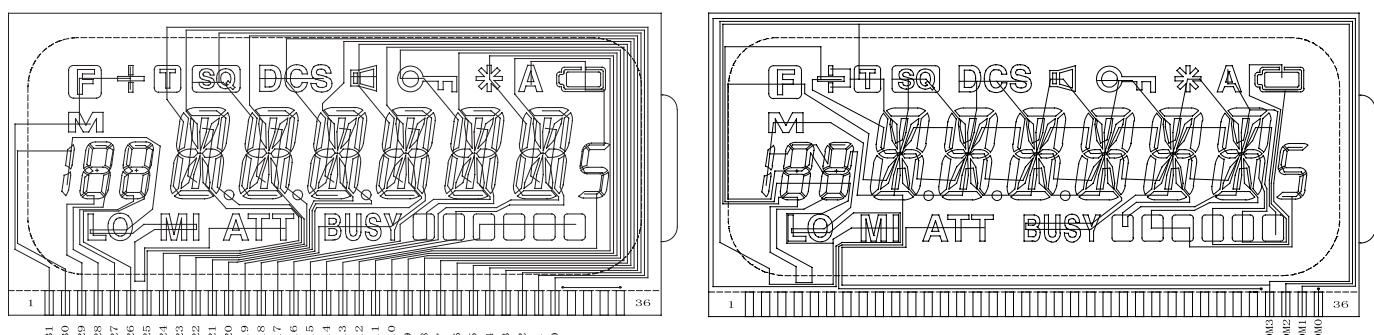
SEGMENT

COMMON

EXPLODED VIEW

1) Front View
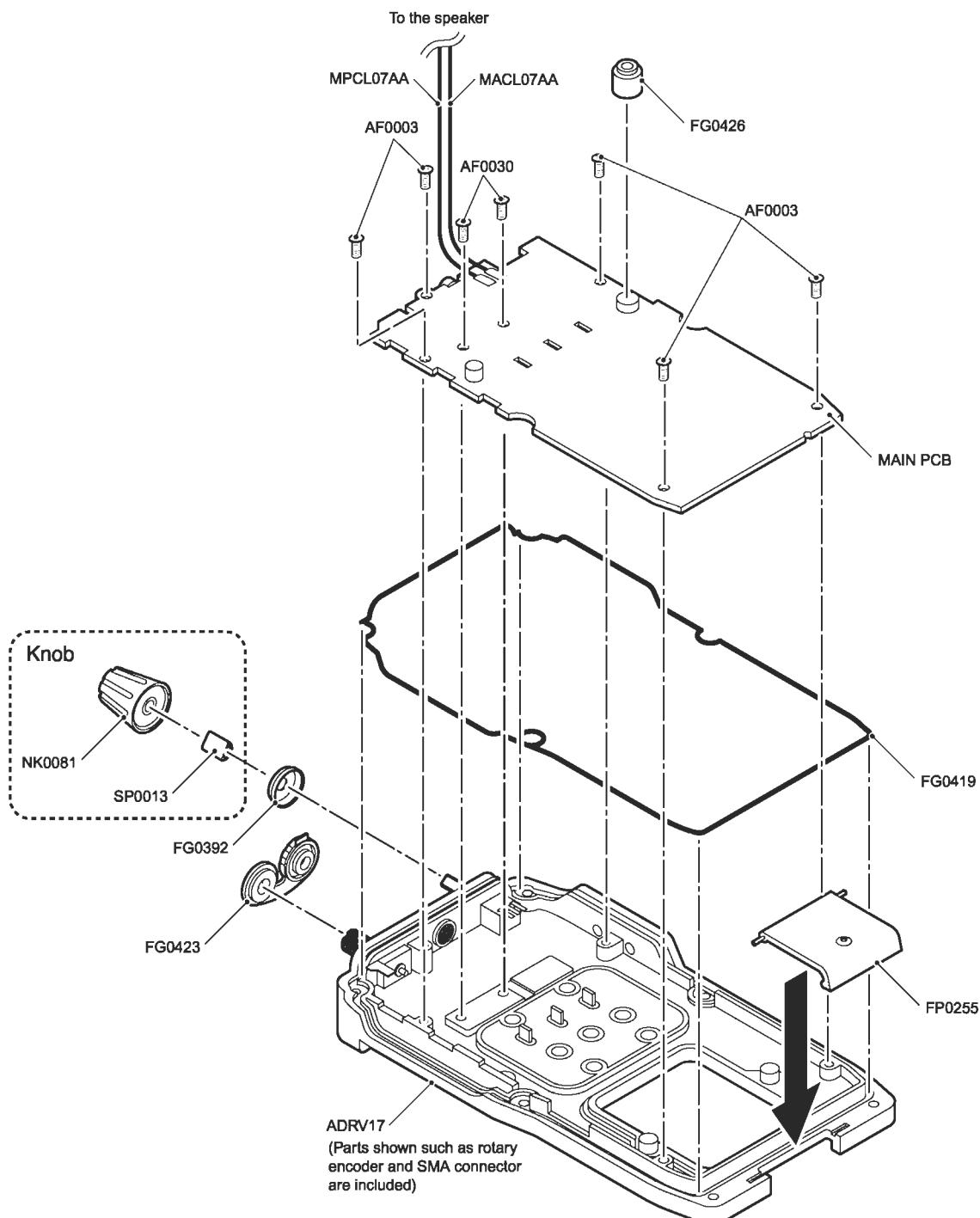
2) Rear View
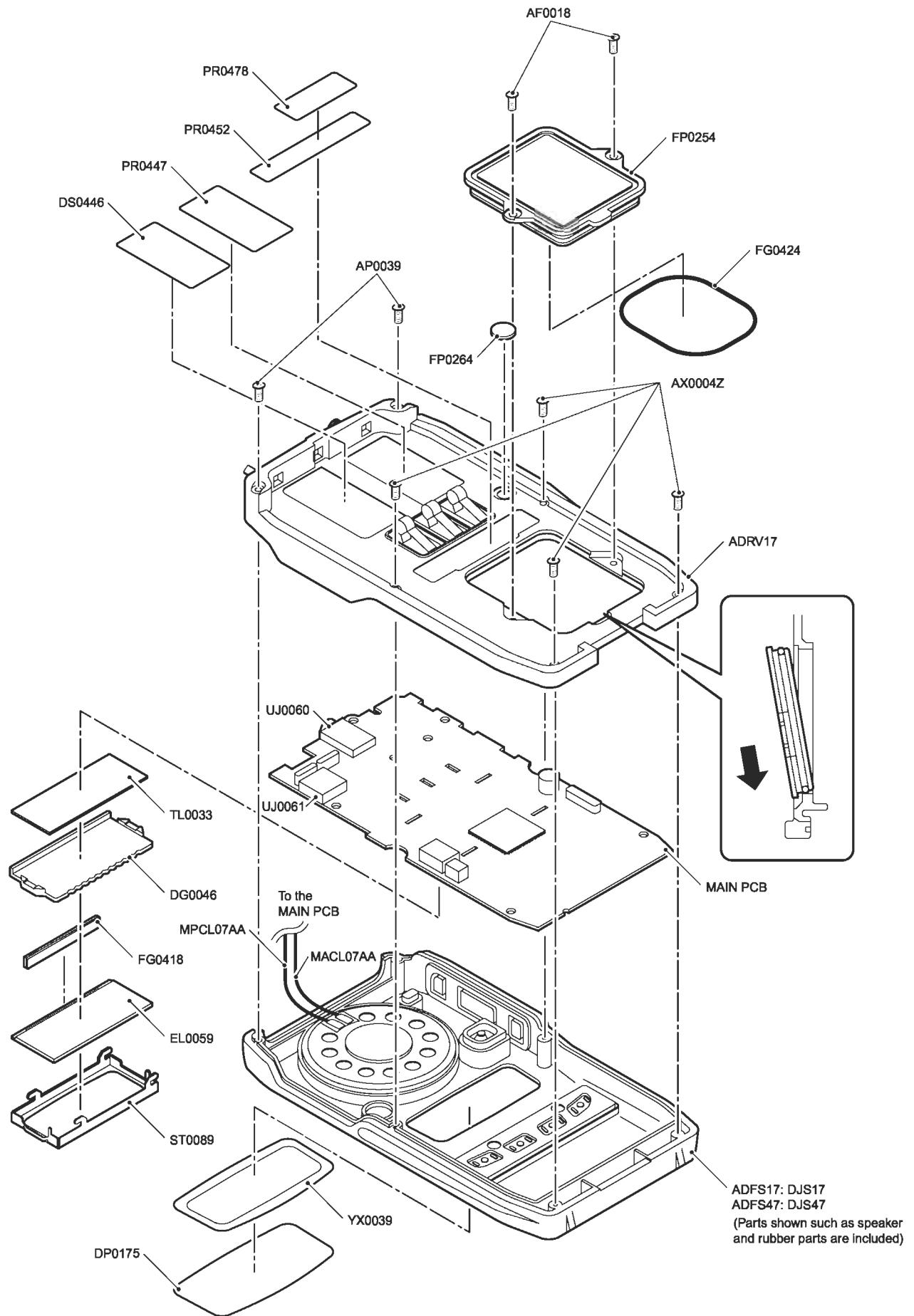
PR0478

PR0452

PR0447

DS0446

AF0018

FP0254

FG0424

AP0039

FP0264

AX0004Z

ADRV17

UJ0060

UJ0061

TL0033

DG0046

FG0418

EL0059

ST0089

To the
MAIN PCB

MPCL07AA

MACL07AA

MAIN PCB

YX0039

DP0175

ADFS17: DJS17
ADFS47: DJS47
(Parts shown such as speaker
and rubber parts are included)

PARTS LIST<DJ-S17>

MAIN Unit

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
C101	CU3035	Chip C	C1608JB1H102KT-AS		C156	CU3515	Chip C	GRP1552C1H220JZ01E	
C102	CU3035	Chip C	C1608JB1H102KT-AS		C157	CU3502	Chip C	GRP1554C1H1R0CZ01E	
C103	CU3023	Chip C	C1608CH1H101JT-AS		C158	CU3535	Chip C	GRP155B11H102KA01E	
C104	CU3513	Chip C	GRP1552C1H150JZ01E		C159	CU3531	Chip C	GRP155B11H471KD01E	
C105	CU3523	Chip C	GRP1552C1H101JD01E		C160	NC			
C106	CU3503	Chip C	GRP1554C1H2R0CZ01E		C161	NC			
C107	CU3013	Chip C	C1608CH1H150JT-AS		C162	CU3529	Chip C	GRP155B11H331KD01E	
C108	CU3014	Chip C	C1608CH1H180JT-AS		C163	CS0426	Chip Tantalum	F931A106MAA	
C109	CU3016	Chip C	C1608CH1H270JT-AS	TFH	C164	CS0426	Chip Tantalum	F931A106MAA	
C109	CU3018	Chip C	C1608CH1H390JT-AS	E, EUK	C165	CU3554	Chip C	GRP155B11A104KA01E	
C110	CU3017	Chip C	C1608CH1H330JT-AS		C166	CU3535	Chip C	GRP155B11H102KA01E	
C111	CU3019	Chip C	C1608CH1H470JT-AS		C167	NC			
C112	CU3015	Chip C	C1608CH1H220JT-AS		C168	CU3535	Chip C	GRP155B11H102KA01E	
C113	CU3015	Chip C	C1608CH1H220JT-AS		C169	CU3535	Chip C	GRP155B11H102KA01E	
C114	CU3018	Chip C	C1608CH1H390JT-AS	TFH	C170	NC			
C114	CU3019	Chip C	C1608CH1H470JT-AS	E, EUK	C171	CU3535	Chip C	GRP155B11H102KA01E	
C115	CU3516	Chip C	GRP1552C1H270JZ01E		C172	NC			
C116	CU3535	Chip C	GRP155B11H102KA01E		C173	CU3535	Chip C	GRP155B11H102KA01E	
C117	CU3517	Chip C	GRP1552C1H330JZ01E		C174	CS0396	Chip Tantalum	TMCP1D104MTR	
C118	CU3502	Chip C	GRP1554C1H1R0CZ01E		C176	CU3511	Chip C	GRP1552C1H100JZ01E	
C119	CU3502	Chip C	GRP1554C1H1R0CZ01E		C177	CU3513	Chip C	GRP1552C1H150JZ01E	
C120	CU3012	Chip C	C1608CH1H120JT-AS		C178	CU3503	Chip C	GRP1554C1H2R0CZ01E	
C121	CU3005	Chip C	C1608CH1H040CT-AS		C179	CU3133	Chip C	TMK107BJ105KA-T	
C122	CU3547	Chip C	GRP155B11C103KA01E		C180	CU3535	Chip C	GRP155B11H102KA01E	
C123	CU3517	Chip C	GRP1552C1H330JZ01E		C181	CU3535	Chip C	GRP155B11H102KA01E	
C124	CU3012	Chip C	C1608CH1H120JT-AS		C182	CU3133	Chip C	TMK107BJ105KA-T	
C125	CU3013	Chip C	C1608CH1H150JT-AS		C183	CS0398	Chip Tantalum	TMCP0J225MTR	
C126	CU3013	Chip C	C1608CH1H150JT-AS		C184	CU3506	Chip C	GRP1552C1H5R0CZ01E	
C127	CU3013	Chip C	C1608CH1H150JT-AS		C185	CU3535	Chip C	GRP155B11H102KA01E	
C128	CU3554	Chip C	GRP155B11A104KA01E		C186	CU3554	Chip C	GRP155B11A104KA01E	
C129	CU3535	Chip C	GRP155B11H102KA01E		C187	CU3511	Chip C	GRP1552C1H100JZ01E	
C130	CU3535	Chip C	GRP155B11H102KA01E		C188	CU3535	Chip C	GRP155B11H102KA01E	
C131	CU3512	Chip C	GRP1552C1H120JZ01E		C189	CU3535	Chip C	GRP155B11H102KA01E	
C132	CU3547	Chip C	GRP155B11C103KA01E		C190	CU3504	Chip C	GRP1553C1H3R0CZ01E	
C133	CU3535	Chip C	GRP155B11H102KA01E		C191	NC			
C134	CU3547	Chip C	GRP155B11C103KA01E		C192	CU3504	Chip C	GRP1553C1H3R0CZ01E	
C135	CU3535	Chip C	GRP155B11H102KA01E		C193	CU3503	Chip C	GRP1554C1H2R0CZ01E	TFH
C136	CU3535	Chip C	GRP155B11H102KA01E		C193	CU3504	Chip C	GRP1553C1H3R0CZ01E	E, EUK
C137	CU3511	Chip C	GRP1552C1H100JZ01E		C194	CU3535	Chip C	GRP155B11H102KA01E	
C138	CU3523	Chip C	GRP1552C1H101JD01E		C195	CU3512	Chip C	GRP1552C1H120JZ01E	
C139	CU3501	Chip C	GRP1554C1HR50CZ01E		C196	CU3559	Chip C	GRM155B30J105KE18D	
C140	CU3501	Chip C	GRP1554C1HR50CZ01E		C197	NC			
C141	CU3535	Chip C	GRP155B11H102KA01E		C198	NC			
C142	CS0441	Chip Tantalum	TMCMA0J226MTRF		C199	CU3535	Chip C	GRP155B11H102KA01E	
C143	CU3535	Chip C	GRP155B11H102KA01E		C200	CU3503	Chip C	GRP1554C1H2R0CZ01E	
C144	CU3535	Chip C	GRP155B11H102KA01E		C201	CU3503	Chip C	GRP1554C1H2R0CZ01E	
C145	CU3535	Chip C	GRP155B11H102KA01E		C202	NC			
C146	CU3535	Chip C	GRP155B11H102KA01E		C204	CU3535	Chip C	GRP155B11H102KA01E	
C147	CU3516	Chip C	GRP1552C1H270JZ01E		C205	CU3535	Chip C	GRP155B11H102KA01E	
C148	CU3535	Chip C	GRP155B11H102KA01E		C206	CU3535	Chip C	GRP155B11H102KA01E	
C149	CU3535	Chip C	GRP155B11H102KA01E		C207	CU3547	Chip C	GRP155B11C103KA01E	
C150	CU3503	Chip C	GRP1554C1H2R0CZ01E		C208	CU3524	Chip C	GRP1552C1H121JD01E	
C151	CU3502	Chip C	GRP1554C1H1R0CZ01E		C209	CU3515	Chip C	GRP1552C1H220JZ01E	
C152	NC				C210	NC			
C153	NC				C211	CU3547	Chip C	GRP155B11C103KA01E	
C154	NC				C212	CU3523	Chip C	GRP1552C1H101JD01E	
C155	CU3559	Chip C	GRM155B30J105KE18D		C213	CU3535	Chip C	GRP155B11H102KA01E	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
C214	CU3535	Chip C	GRP155B11H102KA01E		C274	CU3514	Chip C	GRP1552C1H180JZ01E	
C215	CU3517	Chip C	GRP1552C1H330JZ01E		C275	CU3543	Chip C	GRP155B11E472KD01E	
C216	CU3520	Chip C	GRP1552C1H560JD01E		C276	CU3535	Chip C	GRP155B11H102KA01E	
C217	CU3535	Chip C	GRP155B11H102KA01E		C277	CU3133	Chip C	TMK107BJ105KA-T	
C218	CU3547	Chip C	GRP155B11C103KA01E		C278	CU3535	Chip C	GRP155B11H102KA01E	
C219	CU3521	Chip C	GRP1552C1H680JD01E		C279	CS0439	Chip Tantalum	TMCMA0J476MTRF	
C220	CU3519	Chip C	GRP1552C1H470JZ01E		C280	CU3554	Chip C	GRP155B11A104KA01E	
C221	CU3502	Chip C	GRP1554C1H1R0CZ01E		C281	CE0437	Electrolytic C	10CE150BSS	
C222	CU3507	Chip C	GRP1552C1H6R0DZ01E		C282	CU3554	Chip C	GRP155B11A104KA01E	
C223	CU3502	Chip C	GRP1554C1H1R0CZ01E		C283	CU3551	Chip C	GRP155B11C223KD01E	
C224	CU3535	Chip C	GRP155B11H102KA01E		C284	CU3551	Chip C	GRP155B11C223KD01E	
C225	CU3535	Chip C	GRP155B11H102KA01E		C285	CU3535	Chip C	GRP155B11H102KA01E	
C226	CU3133	Chip C	TMK107BJ105KA-T		C286	CU3535	Chip C	GRP155B11H102KA01E	
C227	CU3537	Chip C	GRP155B11H152KA01E		C287	CU3554	Chip C	GRP155B11A104KA01E	
C228	CU3547	Chip C	GRP155B11C103KA01E		C288	CU3559	Chip C	GRM155B30J105KE18D	
C229	CU3547	Chip C	GRP155B11C103KA01E		C289	CS0441	Chip Tantalum	TMCMA0J226MTRF	
C230	CU3554	Chip C	GRP155B11A104KA01E		C290	CS0397	Chip Tantalum	TMCP1C105MTR	
C231	CU3554	Chip C	GRP155B11A104KA01E		C291	CU3535	Chip C	GRP155B11H102KA01E	
C232	CU3522	Chip C	GRP1552C1H820JD01E		C292	CS0440	Chip Tantalum	TMCMB1C476MTRF	
C233	CU3535	Chip C	GRP155B11H102KA01E		C293	CU3559	Chip C	GRM155B30J105KE18D	
C234	CU3554	Chip C	GRP155B11A104KA01E		C294	CU3554	Chip C	GRP155B11A104KA01E	
C235	CU3554	Chip C	GRP155B11A104KA01E		C295	CU3535	Chip C	GRP155B11H102KA01E	
C236	CU3523	Chip C	GRP1552C1H101JD01E		C296	CU3554	Chip C	GRP155B11A104KA01E	
C237	CU3554	Chip C	GRP155B11A104KA01E		C297	CU3553	Chip C	GRP155B11A473KA01E	
C238	CU3535	Chip C	GRP155B11H102KA01E		C298	CU3535	Chip C	GRP155B11H102KA01E	
C239	CU3535	Chip C	GRP155B11H102KA01E		C299	CU3535	Chip C	GRP155B11H102KA01E	
C240	NC				C300	NC			
C241	CU3554	Chip C	GRP155B11A104KA01E		C301	NC			
C242	CU3547	Chip C	GRP155B11C103KA01E		C302	CU3535	Chip C	GRP155B11H102KA01E	
C243	CU3535	Chip C	GRP155B11H102KA01E		C303	CU3551	Chip C	GRP155B11C223KD01E	
C244	CU3554	Chip C	GRP155B11A104KA01E		C304	CU3552	Chip C	GRP155B11A333KA01E	
C245	CS0441	Chip Tantalum	TMCMA0J226MTRF		C305	NC			
C246	CU3559	Chip C	GRM155B30J105KE18D		C306	CU3535	Chip C	GRP155B11H102KA01E	
C247	CU3535	Chip C	GRP155B11H102KA01E		C307	CS0439	Chip Tantalum	TMCMA0J476MTRF	
C248	CU3535	Chip C	GRP155B11H102KA01E		C308	CU3535	Chip C	GRP155B11H102KA01E	
C249	CU3547	Chip C	GRP155B11C103KA01E		C309	CU3535	Chip C	GRP155B11H102KA01E	
C250	CU3535	Chip C	GRP155B11H102KA01E		C310	CU3535	Chip C	GRP155B11H102KA01E	
C251	CU3547	Chip C	GRP155B11C103KA01E		C311	CU3535	Chip C	GRP155B11H102KA01E	
C252	CU3523	Chip C	GRP1552C1H101JD01E		C312	CS0426	Chip Tantalum	F931A106MAA	
C253	CU3535	Chip C	GRP155B11H102KA01E		C313	CU3535	Chip C	GRP155B11H102KA01E	
C254	CU3535	Chip C	GRP155B11H102KA01E		C314	CU3547	Chip C	GRP155B11C103KA01E	
C255	CU3554	Chip C	GRP155B11A104KA01E		C315	CU3547	Chip C	GRP155B11C103KA01E	
C256	CU3554	Chip C	GRP155B11A104KA01E		C316	CU3535	Chip C	GRP155B11H102KA01E	
C257	CS0441	Chip Tantalum	TMCMA0J226MTRF		C317	CU3535	Chip C	GRP155B11H102KA01E	
C258	CU3554	Chip C	GRP155B11A104KA01E		C318	CU3535	Chip C	GRP155B11H102KA01E	
C259	CU3535	Chip C	GRP155B11H102KA01E		C319	CU3535	Chip C	GRP155B11H102KA01E	
C260	CU3527	Chip C	GRP1552C1E221JD01E		C320	CU3554	Chip C	GRP155B11A104KA01E	
C261	CU3519	Chip C	GRP1552C1H470JZ01E		C321	CS0439	Chip Tantalum	TMCMA0J476MTRF	
C262	CU3554	Chip C	GRP155B11A104KA01E		C322	CU3554	Chip C	GRP155B11A104KA01E	
C263	CU3535	Chip C	GRP155B11H102KA01E		C323	CU3547	Chip C	GRP155B11C103KA01E	
C264	CU3554	Chip C	GRP155B11A104KA01E		C324	CU3547	Chip C	GRP155B11C103KA01E	
C265	CU3537	Chip C	GRP155B11H152KA01E		C325	CU3535	Chip C	GRP155B11H102KA01E	
C266	CU3554	Chip C	GRP155B11A104KA01E		C326	CE0436	Electrolytic C	16CE47BSS	
C267	CU3527	Chip C	GRP1552C1E221JD01E		C327	CU3133	Chip C	TMK107BJ105KA-T	
C268	CU3535	Chip C	GRP155B11H102KA01E		C328	CU3535	Chip C	GRP155B11H102KA01E	
C269	CU3547	Chip C	GRP155B11C103KA01E		C331	CU3535	Chip C	GRP155B11H102KA01E	
C270	CU3535	Chip C	GRP155B11H102KA01E		C332	CU3554	Chip C	GRP155B11A104KA01E	
C271	CU3535	Chip C	GRP155B11H102KA01E		C334	NC			
C272	CU3559	Chip C	GRM155B30J105KE18D		C336	CS0396	Chip Tantalum	TMCP1D104MTR	
C273	CU3513	Chip C	GRP1552C1H150JZ01E		C347	CU3535	Chip C	GRP155B11H102KA01E	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
C348	CU3507	Chip C	GRP1552C1H6R0DZ01E		IC106	XA0210	IC	NJM2070M T1	
C349	CU3559	Chip C	GRM155B30J105KE18D		IC107	XA1118	IC	M62429FP/CF0J	
C350	CU3559	Chip C	GRM155B30J105KE18D		IC108	XA1106	IC	LM2902PWR	
C351	CU3133	Chip C	TMK107BJ105KA-T		IC109	XA1121	CPU	M38268MCA-076GP#UO	
C352	CU3535	Chip C	GRP155B11H102KA01E		IC110	XA1119	IC	XC6202P502MR	
C353	CU3535	Chip C	GRP155B11H102KA01E		JK101	UJ0060	Jack	HSJ1594-010150	
C354	CU3535	Chip C	GRP155B11H102KA01E		JK102	UJ0061	Jack	LD-0208-1.3	
C355	CS0398	Chip Tantalum	TMCP0J225MTR		L101	QS401556	Coil	0.40-1.55-6TL	
C356	CU3547	Chip C	GRP155B11C103KA01E		L102	QS402006	Coil	0.40-2.0-6TL	
C357	NC				L103	QS402006	Coil	0.40-2.0-6TL	
C358	NC				L104	QS401405	Coil	0.40-1.4-5TL	
C360	CU3535	Chip C	GRP155B11H102KA01E		L105	QS501403	Coil	0.50-1.4-3TL	
C362	CU3535	Chip C	GRP155B11H102KA01E		L106	QC0757	Coil	C1608CB22NJ	
C363	CU3535	Chip C	GRP155B11H102KA01E		L107	QC0809	Chip Inductor	MLG1005S56NJT	
C372	CU3035	Chip C	C1608JB1H102KT-AS		L108	QS30200D	Coil	0.30-2.0-13TL	
CN101	NC				L109	QC0810	Chip Inductor	MLG1005S68NJT	
CN102	NC				L110	QC0765	Chip Inductor	C1608CBR10J	
CN103	NC				L111	QC0808	Chip Inductor	MLG1005S47NJT	
D101	XD0422	Chip Diode	HSC277TRF-E		L112	QC0773	Chip Inductor	C1608CBR47J	
D102	XD0419	Chip Diode	1SS400TE61		L113	QS402057	Coil	0.40-2.05-7TL	
D103	XD0422	Chip Diode	HSC277TRF-E		L114	QB0057	Chip Inductor	MPZ1608S101AT	
D104	XD0417	Chip Diode	HVC202BTRU-E		L115	QB0057	Chip Inductor	MPZ1608S101AT	
D105	XD0251	Chip Diode	MA741WA-(TX)		L116	QC0812	Chip Inductor	MLG1005SR10JT	
D106	NC				L117	QC0818	Chip Inductor	C2012H82NH	
D107	XD0421	Chip Diode	1SV323(TPH3,H)		L118	QB0057	Chip Inductor	MPZ1608S101AT	
D108	XD0422	Chip Diode	HSC277TRF-E		L120	QC0816	Chip Inductor	MLG1005SR22JT	
D109	XD0421	Chip Diode	1SV323(TPH3,H)		L121	QC0812	Chip Inductor	MLG1005SR10JT	
D110	NC				L122	NC			
D111	NC				L123	NC			
D112	XD0423	Chip Diode	HVC132TRF-E		L124	QC0773	Chip Inductor	C1608CBR47J	
D113	XD0422	Chip Diode	HSC277TRF-E		L125	QC0764	Chip Inductor	C1608CB82NJ	
D114	XD0422	Chip Diode	HSC277TRF-E		L126	QC0763	Chip Inductor	C1608CB68NJ	
D115	XD0421	Chip Diode	1SV323(TPH3,H)		L127	QC0773	Chip Inductor	C1608CBR47J	
D116	XD0421	Chip Diode	1SV323(TPH3,H)		L128	QC0764	Chip Inductor	C1608CB82NJ	
D117	XD0421	Chip Diode	1SV323(TPH3,H)		L129	QC0763	Chip Inductor	C1608CB68NJ	
D118	XD0421	Chip Diode	1SV323(TPH3,H)		L130	QC0820	Chip Inductor	LB2518T151K	
D119	XL0097	Chip LED	SML-521MUWT86		L131	QC0842	Chip Inductor	LB2518T221K	
D120	XD0338	Chip Diode	1SS362(TE85L)		LCD101	EL0059	LCD	LCD DJ170	
D121	XD0419	Chip Diode	1SS400TE61		MIC101	EY0027	Microphone	EM142	
D122	XD0424	Chip Diode	S3JB-T		Q101	XT0210	Transistor	2SC6026MFV-GR	
D123	XD0420	Chip Diode	FA3J3STP		Q102	XE0071	FET	2SK3476(TE12L,Q)	
D124	XD0338	Chip Diode	1SS362(TE85L)		Q103	XE0070	FET	2SK3475(TE12L,F)	
D125	XD0420	Chip Diode	FA3J3STP		Q104	XT0180	Transistor	2SC5066FT-Y (TE85L)	
D126	XL0036	Chip LED	SML-310MTT86		Q105	NC			
D127	XL0036	Chip LED	SML-310MTT86		Q106	XT0213	Transistor	2SC5659T2L	
D128	NC				Q107	XT0213	Transistor	2SC5659T2L	
D129	NC				Q108	XT0180	Transistor	2SC5066FT-Y (TE85L)	
D130	XD0416	Chip Diode	1SS423(TE85L,F)		Q109	NC			
D131	XL0036	Chip LED	SML-310MTT86		Q110	XT0180	Transistor	2SC5066FT-Y (TE85L)	
D132	XL0036	Chip LED	SML-310MTT86		Q111	XT0214	Transistor	HN2C01FE-GR(T5L,F)	
D133	XD0418	Chip Diode	RB521S-30TE61		Q112	XU0210	Transistor	RN1107MFV(TPL3)	
D134	XD0418	Chip Diode	RB521S-30TE61		Q113	XT0219	Transistor	15GN03F-TL-E	
FL101	XF0041	MCF	UM5 21.7M 21R15A5		Q114	XE0053	FET	3SK293 TE85L	
FL102	XF0041	MCF	UM5 21.7M 21R15A5		Q115	NC			
FL103	XC0060	Filter	ALFYM450F=K		Q116	XE0053	FET	3SK293 TE85L	
IC101	XA1107	IC	MB15E07SR		Q117	XU0210	Transistor	RN1107MFV(TPL3)	
IC102	XA1106	IC	LM2902PWR		Q118	XT0219	Transistor	15GN03F-TL-E	
IC103	XA0404	IC	TA31136FN(EL)		Q119	XT0213	Transistor	2SC5659T2L	
IC104	XA1120	IC	S80845CLNB-B66-T2G		Q120	XT0210	Transistor	2SC6026MFV-GR	
IC105	XA1117	IC	S24CS64A01-J8T1G		Q121	XU0212	Transistor	RN2115MFV(TPL3)	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
Q122	XU0210	Transistor	RN1107MFV(TPL3)		R132	RK3531	Chip R	ERJ2GEJ271X	
Q123	NC				R133	RK3550	Chip R	ERJ2GEJ103X	
Q124	XU0220	Transistor	RN2111MFV(TLP3)		R134	RK3551	Chip R	ERJ2GEJ123X	TFH
Q125	XU0210	Transistor	RN1107MFV(TPL3)		R135	RK3551	Chip R	ERJ2GEJ123X	
Q126	XU0210	Transistor	RN1107MFV(TPL3)		R136	RK3538	Chip R	ERJ2GEJ102X	
Q127	XU0220	Transistor	RN2111MFV(TLP3)		R137	RK3549	Chip R	ERJ2GEJ822X	E, EUK
Q128	XT0210	Transistor	2SC6026MFV−GR		R137	RK3553	Chip R	ERJ2GEJ183X	TFH
Q129	XT0210	Transistor	2SC6026MFV−GR		R138	RK3562	Chip R	ERJ2GEJ104X	
Q130	XT0170	Transistor	2SB766A−(TX)R		R139	RK3550	Chip R	ERJ2GEJ103X	
Q131	XT0210	Transistor	2SC6026MFV−GR		R140	NC			
Q132	XT0170	Transistor	2SB766A−(TX)R		R141	RK3557	Chip R	ERJ2GEJ393X	
Q133	XE0069	FET	SSM3K15FV(TPL3,Z)		R142	NC			
Q134	XU0210	Transistor	RN1107MFV(TPL3)		R143	RK3546	Chip R	ERJ2GEJ472X	
Q135	XT0214	Transistor	HN2C01FE−GR(T5L,F)		R144	NC			
Q136	XT0170	Transistor	2SB766A−(TX)R		R145	RK3550	Chip R	ERJ2GEJ103X	
Q137	XT0212	Transistor	2SA1955FV−A(TPL3)		R146	RK3537	Chip R	ERJ2GEJ821X	
Q138	XT0212	Transistor	2SA1955FV−A(TPL3)		R147	RK3526	Chip R	ERJ2GEJ101X	
Q139	XT0214	Transistor	HN2C01FE−GR(T5L,F)		R148	RK3542	Chip R	ERJ2GEJ222X	
Q140	XT0212	Transistor	2SA1955FV−A(TPL3)		R149	NC			
Q141	XT0210	Transistor	2SC6026MFV−GR		R150	RK3550	Chip R	ERJ2GEJ103X	
Q142	XU0213	Transistor	RN1111MFV(TPL3),F		R151	RK3550	Chip R	ERJ2GEJ103X	
Q143	NC				R152	RK3547	Chip R	ERJ2GEJ562X	
Q144	XU0210	Transistor	RN1107MFV(TPL3)		R154	RK3570	Chip R	ERJ2GEJ474X	
Q145	XU0211	Transistor	RN2107MFV(TPL3)		R155	RK3542	Chip R	ERJ2GEJ222X	
Q146	XU0213	Transistor	RN1111MFV(TPL3),F		R156	RK3538	Chip R	ERJ2GEJ102X	
Q147	XE0069	FET	SSM3K15FV(TPL3,Z)		R157	RK3550	Chip R	ERJ2GEJ103X	
Q148	XE0069	FET	SSM3K15FV(TPL3,Z)		R159	RK3539	Chip R	ERJ2GEJ122X	
Q149	XT0210	Transistor	2SC6026MFV−GR		R161	RK3538	Chip R	ERJ2GEJ102X	
Q152	XU0211	Transistor	RN2107MFV(TPL3)		R162	RK3564	Chip R	ERJ2GEJ154X	
Q153	XU0211	Transistor	RN2107MFV(TPL3)		R163	RK3522	Chip R	ERJ2GEJ470X	
R101	RK3534	Chip R	ERJ2GEJ471X		R164	RK3550	Chip R	ERJ2GEJ103X	
R102	RK3545	Chip R	ERJ2GEJ392X		R165	RK3544	Chip R	ERJ2GEJ332X	
R103	RK3501	Chip R	ERJ2GE0R00X		R166	RK3530	Chip R	ERJ2GEJ221X	
R104	RK3501	Chip R	ERJ2GE0R00X		R167	RK3542	Chip R	ERJ2GEJ222X	
R105	RK3556	Chip R	ERJ2GEJ333X		R168	RK3526	Chip R	ERJ2GEJ101X	
R106	RK3574	Chip R	ERJ2GEJ105X		R169	RK3550	Chip R	ERJ2GEJ103X	
R107	RK3526	Chip R	ERJ2GEJ101X		R170	RK3530	Chip R	ERJ2GEJ221X	
R108	RK3534	Chip R	ERJ2GEJ471X		R171	RK3526	Chip R	ERJ2GEJ101X	
R109	RK3030	Chip R	MCR03EZHJ221		R172	NC			
R111	RK3542	Chip R	ERJ2GEJ222X		R173	NC			
R112	RK3556	Chip R	ERJ2GEJ333X		R174	RK3530	Chip R	ERJ2GEJ221X	
R113	RK3548	Chip R	ERJ2GEJ682X		R175	RK3550	Chip R	ERJ2GEJ103X	
R114	RK3574	Chip R	ERJ2GEJ105X		R176	RK3570	Chip R	ERJ2GEJ474X	
R115	RK3550	Chip R	ERJ2GEJ103X		R177	RK3550	Chip R	ERJ2GEJ103X	
R116	RK3022	Chip R	MCR03EZHJ470		R178	RK3550	Chip R	ERJ2GEJ103X	
R117	RK3530	Chip R	ERJ2GEJ221X		R179	RK3538	Chip R	ERJ2GEJ102X	
R118	RK3526	Chip R	ERJ2GEJ101X		R180	NC			
R119	RK3566	Chip R	ERJ2GEJ224X		R181	RK3550	Chip R	ERJ2GEJ103X	
R120	RK3550	Chip R	ERJ2GEJ103X		R182	RK3566	Chip R	ERJ2GEJ224X	
R121	RK3538	Chip R	ERJ2GEJ102X		R183	NC			
R122	NC				R184	NC			
R123	RK3522	Chip R	ERJ2GEJ470X		R185	RK3562	Chip R	ERJ2GEJ104X	
R124	NC				R186	RK3550	Chip R	ERJ2GEJ103X	
R125	NC				R187	RK3526	Chip R	ERJ2GEJ101X	
R126	RK3562	Chip R	ERJ2GEJ104X		R188	RK3538	Chip R	ERJ2GEJ102X	
R127	RK3565	Chip R	ERJ2GEJ184X		R189	RK3539	Chip R	ERJ2GEJ122X	
R128	RK3550	Chip R	ERJ2GEJ103X		R190	NC			
R129	RK3574	Chip R	ERJ2GEJ105X		R191	RK3550	Chip R	ERJ2GEJ103X	
R130	RK3538	Chip R	ERJ2GEJ102X		R192	RK3558	Chip R	ERJ2GEJ473X	
R131	RK3552	Chip R	ERJ2GEJ153X		R193	RK3562	Chip R	ERJ2GEJ104X	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
R194	RK3522	Chip R	ERJ2GEJ470X		R257	RK3538	Chip R	ERJ2GEJ102X	
R195	RK3558	Chip R	ERJ2GEJ473X		R258	RK3574	Chip R	ERJ2GEJ105X	
R196	RK3558	Chip R	ERJ2GEJ473X		R259	RK3566	Chip R	ERJ2GEJ224X	
R197	RK3574	Chip R	ERJ2GEJ105X		R260	NC			
R198	RK3574	Chip R	ERJ2GEJ105X		R261	RK3574	Chip R	ERJ2GEJ105X	
R199	RK3553	Chip R	ERJ2GEJ183X		R262	RK3562	Chip R	ERJ2GEJ104X	
R200	RK3560	Chip R	ERJ2GEJ683X		R263	RK3562	Chip R	ERJ2GEJ104X	
R201	RK3522	Chip R	ERJ2GEJ470X		R264	RK3558	Chip R	ERJ2GEJ473X	
R202	RK3539	Chip R	ERJ2GEJ122X		R265	RK3536	Chip R	ERJ2GEJ681X	
R203	RK3566	Chip R	ERJ2GEJ224X		R266	RK3518	Chip R	ERJ2GEJ220X	
R204	RK3574	Chip R	ERJ2GEJ105X		R267	NC			
R205	RK3574	Chip R	ERJ2GEJ105X		R269	RK3532	Chip R	ERJ2GEJ331X	
R206	RK3558	Chip R	ERJ2GEJ473X		R270	RK3560	Chip R	ERJ2GEJ683X	
R207	RK3556	Chip R	ERJ2GEJ333X		R272	RK3556	Chip R	ERJ2GEJ333X	
R208	NC				R273	RK3566	Chip R	ERJ2GEJ224X	
R209	RK3526	Chip R	ERJ2GEJ101X		R274	RK3544	Chip R	ERJ2GEJ332X	
R210	RK3522	Chip R	ERJ2GEJ470X		R275	RK3566	Chip R	ERJ2GEJ224X	
R211	RK3558	Chip R	ERJ2GEJ473X		R276	RK3560	Chip R	ERJ2GEJ683X	
R212	RK3550	Chip R	ERJ2GEJ103X		R277	RK3552	Chip R	ERJ2GEJ153X	
R213	RK3562	Chip R	ERJ2GEJ104X		R278	RK3562	Chip R	ERJ2GEJ104X	
R214	RK3564	Chip R	ERJ2GEJ154X		R279	RK3558	Chip R	ERJ2GEJ473X	
R215	RK3562	Chip R	ERJ2GEJ104X		R280	RK3556	Chip R	ERJ2GEJ333X	
R216	RK3538	Chip R	ERJ2GEJ102X		R281	RK3017	Chip R	MCR03EZHJ180	
R218	RK3558	Chip R	ERJ2GEJ473X		R282	RK3514	Chip R	ERJ2GEJ100X	
R219	RK3564	Chip R	ERJ2GEJ154X		R283	RK3554	Chip R	ERJ2GEJ223X	
R220	RK3556	Chip R	ERJ2GEJ333X		R284	RK3561	Chip R	ERJ2GEJ823X	
R221	RK3550	Chip R	ERJ2GEJ103X		R285	RK3550	Chip R	ERJ2GEJ103X	
R222	RK3558	Chip R	ERJ2GEJ473X		R286	RK3570	Chip R	ERJ2GEJ474X	
R223	RK3550	Chip R	ERJ2GEJ103X		R287	RK3550	Chip R	ERJ2GEJ103X	
R224	RK3550	Chip R	ERJ2GEJ103X		R288	RK3550	Chip R	ERJ2GEJ103X	
R225	RK3554	Chip R	ERJ2GEJ223X		R289	RK3565	Chip R	ERJ2GEJ184X	
R226	RK3554	Chip R	ERJ2GEJ223X		R290	RK3017	Chip R	MCR03EZHJ180	
R227	RK3559	Chip R	ERJ2GEJ563X		R291	RK3551	Chip R	ERJ2GEJ123X	
R228	RK3550	Chip R	ERJ2GEJ103X		R292	RK3569	Chip R	ERJ2GEJ394X	
R229	RK3550	Chip R	ERJ2GEJ103X		R293	RK3532	Chip R	ERJ2GEJ331X	
R230	RK3562	Chip R	ERJ2GEJ104X		R294	RK3562	Chip R	ERJ2GEJ104X	
R231	RK3538	Chip R	ERJ2GEJ102X		R295	RK3538	Chip R	ERJ2GEJ102X	
R232	RK3566	Chip R	ERJ2GEJ224X		R296	RK3530	Chip R	ERJ2GEJ221X	
R234	RK3550	Chip R	ERJ2GEJ103X		R297	RK3546	Chip R	ERJ2GEJ472X	
R235	RK3562	Chip R	ERJ2GEJ104X		R298	RK3550	Chip R	ERJ2GEJ103X	
R236	RK3562	Chip R	ERJ2GEJ104X		R299	RK3550	Chip R	ERJ2GEJ103X	
R237	RK3522	Chip R	ERJ2GEJ470X		R300	RK3538	Chip R	ERJ2GEJ102X	
R238	RK3550	Chip R	ERJ2GEJ103X		R301	RK3501	Chip R	ERJ2GE0R00X	
R239	RK3563	Chip R	ERJ2GEJ124X		R302	RK3538	Chip R	ERJ2GEJ102X	
R240	RK3562	Chip R	ERJ2GEJ104X		R303	RK3550	Chip R	ERJ2GEJ103X	
R242	RK3501	Chip R	ERJ2GE0R00X		R304	RK3546	Chip R	ERJ2GEJ472X	
R243	RK3550	Chip R	ERJ2GEJ103X		R305	RK3550	Chip R	ERJ2GEJ103X	
R244	RK3564	Chip R	ERJ2GEJ154X		R306	RK3550	Chip R	ERJ2GEJ103X	
R245	RK3544	Chip R	ERJ2GEJ332X		R308	RK3574	Chip R	ERJ2GEJ105X	
R246	RK3562	Chip R	ERJ2GEJ104X		R309	RK3574	Chip R	ERJ2GEJ105X	
R247	RK3564	Chip R	ERJ2GEJ154X		R310	RK3550	Chip R	ERJ2GEJ103X	
R248	RK3538	Chip R	ERJ2GEJ102X		R311	RK3550	Chip R	ERJ2GEJ103X	
R249	NC				R312	RK3570	Chip R	ERJ2GEJ474X	
R250	RK3550	Chip R	ERJ2GEJ103X		R313	RK3550	Chip R	ERJ2GEJ103X	
R251	RK3561	Chip R	ERJ2GEJ823X		R314	RK3554	Chip R	ERJ2GEJ223X	
R252	RK3556	Chip R	ERJ2GEJ333X		R315	RK3542	Chip R	ERJ2GEJ222X	
R253	RK3566	Chip R	ERJ2GEJ224X		R316	RK3550	Chip R	ERJ2GEJ103X	
R254	RK3550	Chip R	ERJ2GEJ103X		R317	RK3570	Chip R	ERJ2GEJ474X	
R255	RK3562	Chip R	ERJ2GEJ104X		R318	RK3550	Chip R	ERJ2GEJ103X	
R256	RK3562	Chip R	ERJ2GEJ104X		R319	RK3554	Chip R	ERJ2GEJ223X	

Ref. No.	Parts No.	Description	Parts Name	Version
R320	RK3574	Chip R	ERJ2GEJ105X	
R321	NC			
R322	NC			
R323	RK3550	Chip R	ERJ2GEJ103X	
R324	RK3548	Chip R	ERJ2GEJ682X	
R325	RK3559	Chip R	ERJ2GEJ563X	
R326	RK3559	Chip R	ERJ2GEJ563X	
R327	RK3550	Chip R	ERJ2GEJ103X	
R328	RK3550	Chip R	ERJ2GEJ103X	
R330	RK3546	Chip R	ERJ2GEJ472X	
R331	RK3546	Chip R	ERJ2GEJ472X	
R332	RK3546	Chip R	ERJ2GEJ472X	
R333	RK3546	Chip R	ERJ2GEJ472X	
R334	RK3562	Chip R	ERJ2GEJ104X	
R335	RK3562	Chip R	ERJ2GEJ104X	
R336	RK3562	Chip R	ERJ2GEJ104X	
R337	RK3550	Chip R	ERJ2GEJ103X	
R338	RK3542	Chip R	ERJ2GEJ222X	
R339	RK3550	Chip R	ERJ2GEJ103X	
R340	RK3550	Chip R	ERJ2GEJ103X	
R341	RK3550	Chip R	ERJ2GEJ103X	
R342	RK3538	Chip R	ERJ2GEJ102X	
R343	RK3550	Chip R	ERJ2GEJ103X	
R344	RK3537	Chip R	ERJ2GEJ821X	
R345	RK3558	Chip R	ERJ2GEJ473X	
R346	NC			
R347	NC			
R348	RK3552	Chip R	ERJ2GEJ153X	
R349	NC			
R350	RK3562	Chip R	ERJ2GEJ104X	
R351	RK3550	Chip R	ERJ2GEJ103X	
R352				
R353	RK3546	Chip R	ERJ2GEJ472X	
R354	RK3550	Chip R	ERJ2GEJ103X	
R355	RK3550	Chip R	ERJ2GEJ103X	
R357	RK3501	Chip R	ERJ2GE0R00X	
R358	NC			
R359	NC			
R360	NC			
R361	NC			
R362	RK3536	Chip R	ERJ2GEJ681X	
R363	RK3558	Chip R	ERJ2GEJ473X	
R364	RK1018	Chip R	ERJ8GEYJ101V	
R365	RK3546	Chip R	ERJ2GEJ472X	
R366	RK3566	Chip R	ERJ2GEJ224X	
R367	RK3558	Chip R	ERJ2GEJ473X	
R368	RK3548	Chip R	ERJ2GEJ682X	
R369	RK3538	Chip R	ERJ2GEJ102X	
R370	RK3501	Chip R	ERJ2GE0R00X	
R371	RK3546	Chip R	ERJ2GEJ472X	
R372	RK3550	Chip R	ERJ2GEJ103X	
R373	RK3546	Chip R	ERJ2GEJ472X	
R374	RK3562	Chip R	ERJ2GEJ104X	
R375	RK3550	Chip R	ERJ2GEJ103X	
R376	RK3562	Chip R	ERJ2GEJ104X	
R377	RK3562	Chip R	ERJ2GEJ104X	
R378	RK3566	Chip R	ERJ2GEJ224X	
R379	RK3562	Chip R	ERJ2GEJ104X	
R380	RK3566	Chip R	ERJ2GEJ224X	
R381	RK3554	Chip R	ERJ2GEJ223X	

Ref. No.	Parts No.	Description	Parts Name	Version
R382	RK3038	Chip R	MCR03EZHJ102	
R384	NC			
R385	RK3038	Chip R	MCR03EZHJ102	TFH
R385	RK3064	Chip R	MCR03EZHJ154	E, EUK
R386	NC			
R387	NC			
R388	RK3550	Chip R	ERJ2GEJ103X	
R392	RK3550	Chip R	ERJ2GEJ103X	
R393	RK3534	Chip R	ERJ2GEJ471X	
R394	RK3531	Chip R	ERJ2GEJ271X	
R395	RK3556	Chip R	ERJ2GEJ333X	
R396	RK3556	Chip R	ERJ2GEJ333X	
R398	RK3558	Chip R	ERJ2GEJ473X	TFH
R398	RK3570	Chip R	ERJ2GEJ474X	E, EUK
R401	RK3501	Chip R	ERJ2GE0R00X	
R402	RK3501	Chip R	ERJ2GE0R00X	
R403	RK3570	Chip R	ERJ2GEJ474X	
R404	RK3550	Chip R	ERJ2GEJ103X	
R405	RK3542	Chip R	ERJ2GEJ222X	
R406	RK3546	Chip R	ERJ2GEJ472X	
R407	RK3562	Chip R	ERJ2GEJ104X	
R408	RK3526	Chip R	ERJ2GEJ101X	
SW101	UU0041	Switch	EVQP4203M	
SW102	UU0041	Switch	EVQP4203M	
SW103	UU0041	Switch	EVQP4203M	
TC101	CT0050	Trimmer	TZY2Z100A001R00	
TH101	XS0052	Thermistor	NTCG104LH104JT1	
VR101	RH0233	Trimmer R	RH02B1C15X	
VR102	NC			
VR103	RH0225	Trimmer R	RH02B1CS3X	
VR104	RH0225	Trimmer R	RH02B1CS3X	
VR105	NC			
W101	MPCL07AA	Wire	#30P02-070-02	
W102	MACL07AA	Wire	#30A02-070-02	
W103	MACLH2GG	Wire	#30AH1-025-H1	E, EUK
W103	NC			TFH
X101	XQ0175	Crystal	SX2112 21.25MHDG0687	
X102	NC			
X103	XK0004	Discriminator	CDBLB450KCAY24-B0	
X104	XQ0184	Crystal	AT49 3.6864M	
	UP0541	PCB	DJ170 INTEGRATED	
	FM0265A		HEAT SINK, DJV17	
	TS0183	VCO CASE	VCO CASE	
	TZ0049		SILICON DUMPER	

Mechanical Unit

Ref. No.	Parts No.	Description	Parts Name	Version
	ADFS17	FRONT CASE ASSY	FRONT CASE ASSY S17	
	ADRV17	REAR CASE ASSY	REAR CASE ASSY V17	
	AF0003	SCREW	XQN2+C3FN	
	AF0018	SCREW	XQN2+C4FZ	
	AF0030	SCREW	XQN2+A6FN(58364-0001	
	AP0039	SCREW	PH P2+20 FE/3BBC	
	AX0004Z	SCREW	PT 3P 2X8 BBC AX0004	
	DG0046		LCD LIGHT	
	DP0175		LCD PANEL S45	
	FG0392		WATERPROOF	

Ref. No.	Parts No.	Description	Parts Name	Version
	FG0418		LCD RUB CONE	
	FG0419		WATERPROOF RUBBER	
	FG0423		JACK CAP DJ170	
	FG0424		O RING (R COVER)	
	FG0426		MIC RUBBER	
	FP0254		REAR COVER	
	FP0255		ROCK LEVER	
	FP0264		BLIND SEAL	
	NK0081		VOL KNOB	
	SP0013		LECTRA #7800	
	ST0089		LCD HOLDER	
	TL0033		REFLECTIVE SHEET	
	YX0039		LCD TAPE DJS45	

Packing Unit

Model : DJ-S17

Ref. No.	Parts No.	Description	Parts Name	Version
	EA0141	ANTENNA	ANTENNA EA0141	E, EUK
	EA0142	ANTENNA	ANTENNA EA0142	TFH
	EG0062	BATTERY	NI-MH BATTERY EBP65	TFH
	EG0065	BATTERY	NI-MH BATTERY EBP65A	E, EUK
	EDC147	ADAPTOR	EDC147 ADAPTOR(E)	E, TFH
	EDC148	ADAPTOR	EDC148 ADAPTOR(UK)	EUK
	PR0478		SERIAL SEAL	
	DS0446		NITTO MODEL PLATE(S)	
	PR0514		EPSON 10X49 LABEL(W)	
	PS0545	INSTRUCTION MANUAL	INSTRUCTION DJS17T	
	PK0119	CIRCUIT DIAGRAM	SCHEMATIC DJS17	
	HK0662		INDI BOX DJS17T	
	HU0234		INNER DJ170	
	HP0031		PLA.BAG 5X100X200	
	AA0076		PH M3+6FE/B·ZN	
	BB0009Y	HAND STRAP	HAND STRAP DJS41	
	BH0017	BELT CLIP	BELT CLIP	
	HP0003		PLA.BAG 5X75X110	

CAUTION:
RISK OF EXPLOSION IF BATTERY IS REPLACED BY
AN INCORRECT TYPE. DISPOSE OF USED BATTERIES
ACCORDING TO THE INSTRUCTIONS.

PARTS LIST<DJ-S47>

MAIN Unit

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
C101	CU3031	Chip C	C1608JB1H471KT-AS		C158	NC			
C102	CU3031	Chip C	C1608JB1H471KT-AS		C159	CU3531	Chip C	GRP155B11H471KD01E	
C103	CU3031	Chip C	C1608JB1H471KT-AS		C160	CU3511	Chip C	GRP1552C1H100JZ01E	
C104	CU3510	Chip C	GRP1552C1H9R0DZ01E		C161	CU3504	Chip C	GRP1553C1H3R0CZ01E	
C105	CU3511	Chip C	GRP1552C1H100JZ01E		C162	CU3527	Chip C	GRP1552C1E221JD01E	
C106	CU3503	Chip C	GRP1554C1H2R0CZ01E		C163	CS0426	Chip Tantalum	F931A106MAA	
C107	CU3006	Chip C	C1608CH1H050CT-AS		C164	CS0426	Chip Tantalum	F931A106MAA	
C108	CU3006	Chip C	C1608CH1H050CT-AS		C165	CU3554	Chip C	GRP155B11A104KA01E	
C109	CU3009	Chip C	C1608CH1H080DT-A		C166	CU3531	Chip C	GRP155B11H471KD01E	
C110	CU3012	Chip C	C1608CH1H120JT-AS		C167	CU3547	Chip C	GRP155B11C103KA01E	
C111	CU3013	Chip C	C1608CH1H150JT-AS		C168	CU3531	Chip C	GRP155B11H471KD01E	
C112	CU3011	Chip C	C1608CH1H100DT-AS		C169	CU3531	Chip C	GRP155B11H471KD01E	
C113	CU3011	Chip C	C1608CH1H100DT-AS		C170	NC			
C114	CU3015	Chip C	C1608CH1H220JT-AS		C171	CU3515	Chip C	GRP1552C1H220JZ01E	
C115	CU3512	Chip C	GRP1552C1H120JZ01E		C172	NC			
C116	CU3531	Chip C	GRP155B11H471KD01E		C173	CU3531	Chip C	GRP155B11H471KD01E	
C117	NC				C174	CS0396	Chip Tantalum	TMCP1D104MTR	
C118	CU3501	Chip C	GRP1554C1HR50CZ01E		C176	NC			
C119	CU3501	Chip C	GRP1554C1HR50CZ01E		C177	CU3505	Chip C	GRP1552C1H4R0CZ01E	
C120	NC				C178	CU3503	Chip C	GRP1554C1H2R0CZ01E	
C121	NC				C179	CU3133	Chip C	TMK107BJ105KA-T	
C122	CU3547	Chip C	GRP155B11C103KA01E		C180	CU3531	Chip C	GRP155B11H471KD01E	
C123	NC				C181	CU3531	Chip C	GRP155B11H471KD01E	
C124	CU3005	Chip C	C1608CH1H040CT-AS		C182	CU3133	Chip C	TMK107BJ105KA-T	
C125	CU3006	Chip C	C1608CH1H050CT-AS		C183	CS0398	Chip Tantalum	TMCP0J225MTR	
C126	CU3006	Chip C	C1608CH1H050CT-AS		C184	NC			
C127	CU3006	Chip C	C1608CH1H050CT-AS		C185	CU3531	Chip C	GRP155B11H471KD01E	
C128	CU3554	Chip C	GRP155B11A104KA01E		C186	CU3554	Chip C	GRP155B11A104KA01E	
C129	CU3531	Chip C	GRP155B11H471KD01E		C187	CU3523	Chip C	GRP1552C1H101JD01E	
C130	CU3531	Chip C	GRP155B11H471KD01E		C188	CU3531	Chip C	GRP155B11H471KD01E	
C131	NC				C189	CU3531	Chip C	GRP155B11H471KD01E	
C132	CU3547	Chip C	GRP155B11C103KA01E		C190	CU3505	Chip C	GRP1552C1H4R0CZ01E	
C133	CU3531	Chip C	GRP155B11H471KD01E		C191	CU3505	Chip C	GRP1552C1H4R0CZ01E	
C134	CU3547	Chip C	GRP155B11C103KA01E		C192	CU3503	Chip C	GRP1554C1H2R0CZ01E	
C135	CU3531	Chip C	GRP155B11H471KD01E		C193	CU3502	Chip C	GRP1554C1H1R0CZ01E	
C136	CU3531	Chip C	GRP155B11H471KD01E		C194	CU3531	Chip C	GRP155B11H471KD01E	
C137	CU3511	Chip C	GRP1552C1H100JZ01E		C195	CU3506	Chip C	GRP1552C1H5R0CZ01E	
C138	NC				C196	CU3559	Chip C	GRM155B30J105KE18D	
C139	NC				C197	CU3520	Chip C	GRP1552C1H560JD01E	
C140	NC				C198	CU3502	Chip C	GRP1554C1H1R0CZ01E	
C141	CU3513	Chip C	GRP1552C1H150JZ01E		C199	CU3531	Chip C	GRP155B11H471KD01E	
C142	CS0441	Chip Tantalum	TMCMA0J226MTRF		C200	CU3502	Chip C	GRP1554C1H1R0CZ01E	
C143	CU3531	Chip C	GRP155B11H471KD01E		C201	CU3502	Chip C	GRP1554C1H1R0CZ01E	
C144	CU3531	Chip C	GRP155B11H471KD01E		C202	CU3524	Chip C	GRP1552C1H121JD01E	
C145	CU3531	Chip C	GRP155B11H471KD01E		C203	CU3505	Chip C	GRP1552C1H4R0CZ01E	
C146	CU3531	Chip C	GRP155B11H471KD01E		C204	CU3531	Chip C	GRP155B11H471KD01E	
C147	NC				C205	CU3535	Chip C	GRP155B11H102KA01E	
C148	CU3507	Chip C	GRP1552C1H6R0DZ01E		C206	CU3531	Chip C	GRP155B11H471KD01E	
C149	CU3531	Chip C	GRP155B11H471KD01E		C207	CU3547	Chip C	GRP155B11C103KA01E	
C150	NC				C208	CU3523	Chip C	GRP1552C1H101JD01E	
C151	CU3501	Chip C	GRP1554C1HR50CZ01E		C209	CU3511	Chip C	GRP1552C1H100JZ01E	
C152	CU3516	Chip C	GRP1552C1H270JZ01E		C210	CU3547	Chip C	GRP155B11C103KA01E	
C153	CU3507	Chip C	GRP1552C1H6R0DZ01E		C211	CU3547	Chip C	GRP155B11C103KA01E	
C154	CU3523	Chip C	GRP1552C1H101JD01E		C212	CU3505	Chip C	GRP1552C1H4R0CZ01E	
C155	CU3559	Chip C	GRM155B30J105KE18D		C213	CU3531	Chip C	GRP155B11H471KD01E	
C156	CU3511	Chip C	GRP1552C1H100JZ01E		C214	CU3531	Chip C	GRP155B11H471KD01E	
C157	CU3501	Chip C	GRP1554C1HR50CZ01E		C215	CU3512	Chip C	GRP1552C1H120JZ01E	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
C216	CU3513	Chip C	GRP1552C1H150JZ01E		C276	CU3531	Chip C	GRP155B11H471KD01E	
C217	CU3531	Chip C	GRP155B11H471KD01E		C277	CU3133	Chip C	TMK107BJ105KA−T	
C218	CU3547	Chip C	GRP155B11C103KA01E		C278	CU3554	Chip C	GRP155B11A104KA01E	
C219	CU3513	Chip C	GRP1552C1H150JZ01E		C279	CS0439	Chip Tantalum	TMCMA0J476MTRF	
C220	CU3513	Chip C	GRP1552C1H150JZ01E		C280	CU3554	Chip C	GRP155B11A104KA01E	
C221	CU3501	Chip C	GRP1554C1HR50CZ01E		C281	CE0437	Electrolytic C	10CE150BSS	
C222	CU3506	Chip C	GRP1552C1H5R0CZ01E		C282	CU3554	Chip C	GRP155B11A104KA01E	
C223	CU3501	Chip C	GRP1554C1HR50CZ01E		C283	CU3551	Chip C	GRP155B11C223KD01E	
C224	CU3551	Chip C	GRP155B11C223KD01E		C284	CU3551	Chip C	GRP155B11C223KD01E	
C225	CU3531	Chip C	GRP155B11H471KD01E		C285	CU3535	Chip C	GRP155B11H102KA01E	
C226	CU3133	Chip C	TMK107BJ105KA−T		C286	CU3535	Chip C	GRP155B11H102KA01E	
C227	CU3537	Chip C	GRP155B11H152KA01E		C287	CU3554	Chip C	GRP155B11A104KA01E	
C228	CU3547	Chip C	GRP155B11C103KA01E		C288	CU3559	Chip C	GRM155B30J105KE18D	
C229	CU3547	Chip C	GRP155B11C103KA01E		C289	CS0441	Chip Tantalum	TMCMA0J226MTRF	
C230	CU3554	Chip C	GRP155B11A104KA01E		C290	CS0397	Chip Tantalum	TMCP1C105MTR	
C231	CU3554	Chip C	GRP155B11A104KA01E		C291	CU3531	Chip C	GRP155B11H471KD01E	
C232	CU3522	Chip C	GRP1552C1H820JD01E		C292	CS0440	Chip Tantalum	TMCMB1C476MTRF	
C233	CU3535	Chip C	GRP155B11H102KA01E		C293	CU3559	Chip C	GRM155B30J105KE18D	
C234	CU3554	Chip C	GRP155B11A104KA01E		C294	CU3554	Chip C	GRP155B11A104KA01E	
C235	CU3554	Chip C	GRP155B11A104KA01E		C295	CU3547	Chip C	GRP155B11C103KA01E	
C236	CU3523	Chip C	GRP1552C1H101JD01E		C296	CU3554	Chip C	GRP155B11A104KA01E	
C237	CU3554	Chip C	GRP155B11A104KA01E		C297	CU3553	Chip C	GRP155B11A473KA01E	
C238	CU3535	Chip C	GRP155B11H102KA01E		C298	CU3535	Chip C	GRP155B11H102KA01E	
C239	CU3531	Chip C	GRP155B11H471KD01E		C299	CU3531	Chip C	GRP155B11H471KD01E	
C240	NC				C300	NC			
C241	CU3554	Chip C	GRP155B11A104KA01E		C301	NC			
C242	CU3547	Chip C	GRP155B11C103KA01E		C302	CU3531	Chip C	GRP155B11H471KD01E	
C243	CU3531	Chip C	GRP155B11H471KD01E		C303	CU3551	Chip C	GRP155B11C223KD01E	
C244	CU3554	Chip C	GRP155B11A104KA01E		C304	CU3552	Chip C	GRP155B11A333KA01E	
C245	CS0441	Chip Tantalum	TMCMA0J226MTRF		C305	NC			
C246	CU3559	Chip C	GRM155B30J105KE18D		C306	CU3531	Chip C	GRP155B11H471KD01E	
C247	CU3531	Chip C	GRP155B11H471KD01E		C307	CS0439	Chip Tantalum	TMCMA0J476MTRF	
C248	CU3535	Chip C	GRP155B11H102KA01E		C308	CU3531	Chip C	GRP155B11H471KD01E	
C249	CU3547	Chip C	GRP155B11C103KA01E		C309	CU3531	Chip C	GRP155B11H471KD01E	
C250	CU3531	Chip C	GRP155B11H471KD01E		C310	CU3531	Chip C	GRP155B11H471KD01E	
C251	CU3547	Chip C	GRP155B11C103KA01E		C311	CU3531	Chip C	GRP155B11H471KD01E	
C252	CU3523	Chip C	GRP1552C1H101JD01E		C312	CS0426	Chip Tantalum	F931A106MAA	
C253	CU3535	Chip C	GRP155B11H102KA01E		C313	CU3531	Chip C	GRP155B11H471KD01E	
C254	CU3535	Chip C	GRP155B11H102KA01E		C314	CU3547	Chip C	GRP155B11C103KA01E	
C255	CU3554	Chip C	GRP155B11A104KA01E		C315	CU3547	Chip C	GRP155B11C103KA01E	
C256	CU3554	Chip C	GRP155B11A104KA01E		C316	CU3535	Chip C	GRP155B11H102KA01E	
C257	CS0441	Chip Tantalum	TMCMA0J226MTRF		C317	CU3531	Chip C	GRP155B11H471KD01E	
C258	CU3554	Chip C	GRP155B11A104KA01E		C318	CU3531	Chip C	GRP155B11H471KD01E	
C259	CU3531	Chip C	GRP155B11H471KD01E		C319	CU3531	Chip C	GRP155B11H471KD01E	
C260	CU3527	Chip C	GRP1552C1E221JD01E		C320	CU3554	Chip C	GRP155B11A104KA01E	
C261	CU3519	Chip C	GRP1552C1H470JZ01E		C321	CS0439	Chip Tantalum	TMCMA0J476MTRF	
C262	CU3554	Chip C	GRP155B11A104KA01E		C322	CU3554	Chip C	GRP155B11A104KA01E	
C263	CU3531	Chip C	GRP155B11H471KD01E		C323	CU3547	Chip C	GRP155B11C103KA01E	
C264	CU3554	Chip C	GRP155B11A104KA01E		C324	CU3547	Chip C	GRP155B11C103KA01E	
C265	CU3537	Chip C	GRP155B11H152KA01E		C325	CU3531	Chip C	GRP155B11H471KD01E	
C266	CU3554	Chip C	GRP155B11A104KA01E		C326	CE0436	Electrolytic C	16CE47BSS	
C267	CU3527	Chip C	GRP1552C1E221JD01E		C327	CU3133	Chip C	TMK107BJ105KA−T	
C268	CU3535	Chip C	GRP155B11H102KA01E		C328	CU3531	Chip C	GRP155B11H471KD01E	
C269	CU3547	Chip C	GRP155B11C103KA01E		C331	CU3535	Chip C	GRP155B11H102KA01E	
C270	CU3535	Chip C	GRP155B11H102KA01E		C332	CU3554	Chip C	GRP155B11A104KA01E	
C271	CU3531	Chip C	GRP155B11H471KD01E		C334	CU3502	Chip C	GRP1554C1H1R0CZ01E	
C272	CU3559	Chip C	GRM155B30J105KE18D		C336	CS0396	Chip Tantalum	TMCP1D104MTR	
C273	CU3513	Chip C	GRP1552C1H150JZ01E		C347	CU3531	Chip C	GRP155B11H471KD01E	
C274	CU3514	Chip C	GRP1552C1H180JZ01E		C349	CU3559	Chip C	GRM155B30J105KE18D	
C275	CU3543	Chip C	GRP155B11E472KD01E		C350	CU3559	Chip C	GRM155B30J105KE18D	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
C351	CU3133	Chip C	TMK107BJ105KA-T		IC107	XA1118	IC	M62429FP/CF0J	
C352	CU3531	Chip C	GRP155B11H471KD01E		IC108	XA1106	IC	LM2902PWR	
C353	CU3531	Chip C	GRP155B11H471KD01E		IC109	XA1121	CPU	M38268MCA-076GP#UO	
C354	CU3531	Chip C	GRP155B11H471KD01E		IC110	XA1119	IC	XC6202P502MR	
C355	CS0398	Chip Tantalum	TMCP0J225MTR		JK101	UJ0060	Jack	HSJ1594-010150	
C356	CU3547	Chip C	GRP155B11C103KA01E		JK102	UJ0061	Jack	LD-0208-1.3	
C357	NC				L101	QS401405	Coil	0.40-1.4-5TL	
C358	NC				L102	QS401405	Coil	0.40-1.4-5TL	
C359	CU3531	Chip C	GRP155B11H471KD01E		L103	QS401405	Coil	0.40-1.4-5TL	
C360	CU3531	Chip C	GRP155B11H471KD01E		L104	QS4011Z4	Coil	E2-0.4-1.1-4TL	
C362	CU3531	Chip C	GRP155B11H471KD01E		L106	QC0749	Chip Inductor	C1608CB1N5K	
C363	CU3531	Chip C	GRP155B11H471KD01E		L107	QC0801	Chip Inductor	MLG1005S12NJT	
C372	CU3531	Chip C	GRP155B11H471KD01E		L108	QS30200D	Coil	0.30-2.0-13TL	
CN101	NC				L109	QC0804	Chip Inductor	MLG1005S22NJT	
CN102	NC				L110	QC0763	Chip Inductor	C1608CB68NJ	
CN103	NC				L111	QC0803	Chip Inductor	MLG1005S18NJT	
D101	XD0339	Chip Diode	1SV308(TPH3)		L112	QC0773	Chip Inductor	C1608CBR47J	
D102	XD0419	Chip Diode	1SS400TE61		L113	QS501405	Coil	E2-0.5-1.4-5TL	
D103	XD0339	Chip Diode	1SV308(TPH3)		L114	QB0057	Chip Inductor	MPZ1608S101AT	
D104	NC				L115	QB0057	Chip Inductor	MPZ1608S101AT	
D105	XD0251	Chip Diode	MA741WA-(TX)		L116	QC0804	Chip Inductor	MLG1005S22NJT	
D106	NC				L117	QC0860	Chip Inductor	C2012H10NH	
D107	NC				L118	QB0057	Chip Inductor	MPZ1608S101AT	
D108	XD0422	Chip Diode	HSC277TRF-E		L120	QC0812	Chip Inductor	MLG1005SR10JT	
D109	XD0403	Chip Diode	1SV314(TPH3,F)		L121	QC0803	Chip Inductor	MLG1005S18NJT	
D110	XD0403	Chip Diode	1SV314(TPH3,F)		L122	QC0817	Chip Inductor	MLG1005SR27JT	
D111	NC				L123	QC0766	Chip Inductor	C1608CBR12J	
D112	XD0339	Chip Diode	1SV308(TPH3)		L124	QC0768	Chip Inductor	C1608CBR18J	
D113	XD0339	Chip Diode	1SV308(TPH3)		L125	QC0757	Chip Inductor	C1608CB22NJ	
D114	XD0339	Chip Diode	1SV308(TPH3)		L126	QC0755	Chip Inductor	C1608CB15NJ	
D115	XD0403	Chip Diode	1SV314(TPH3,F)		L127	QC0768	Chip Inductor	C1608CBR18J	
D116	XD0403	Chip Diode	1SV314(TPH3,F)		L128	QC0757	Chip Inductor	C1608CB22NJ	
D117	XD0403	Chip Diode	1SV314(TPH3,F)		L129	QC0755	Chip Inductor	C1608CB15NJ	
D118	XD0403	Chip Diode	1SV314(TPH3,F)		L130	QC0820	Chip Inductor	LB2518T151K	
D119	XL0097	Chip LED	SML-521MUWT86		L131	QC0842	Chip Inductor	LB2518T221K	
D120	XD0338	Chip Diode	1SS362(TE85L)		L136	QC0812	Chip Inductor	MLG1005SR10JT	
D121	XD0419	Chip Diode	1SS400TE61		L137	QC0812	Chip Inductor	MLG1005SR10JT	
D122	XD0424	Chip Diode	S3JB-T		LCD101	EL0059	LCD	LCD DJ170	
D123	XD0420	Chip Diode	FA3J3STP		MIC101	EY0027	Microphone	EM142	
D124	XD0338	Chip Diode	1SS362(TE85L)		Q101	XT0210	Transistor	2SC6026MFV-GR	
D125	XD0420	Chip Diode	FA3J3STP		Q102	XE0071	FET	2SK3476(TE12L,Q)	
D126	XL0036	Chip LED	SML-310MTT86		Q103	XE0070	FET	2SK3475(TE12L,F)	
D127	XL0036	Chip LED	SML-310MTT86		Q104	XT0180	Transistor	2SC5066FT-Y (TE85L)	
D128	NC				Q105	XT0180	Transistor	2SC5066FT-Y (TE85L)	
D129	NC				Q106	NC			
D130	XD0416	Chip Diode	1SS423(TE85L,F)		Q107	XT0213	Transistor	2SC5659T2L	
D131	XL0036	Chip LED	SML-310MTT86		Q108	XT0180	Transistor	2SC5066FT-Y (TE85L)	
D132	XL0036	Chip LED	SML-310MTT86		Q109	NC			
D133	XD0418	Chip Diode	RB521S-30TE61		Q110	XT0180	Transistor	2SC5066FT-Y (TE85L)	
D134	XD0418	Chip Diode	RB521S-30TE61		Q111	XT0214	Transistor	HN2C01FE-GR(T5L,F)	
D135	XD0377	Chip Diode	MAZS0270HL		Q112	XU0210	Transistor	RN1107MFV(TPL3)	
FL101	XF0073	MCF	38M15B5F		Q113	XT0180	Transistor	2SC5066FT-Y (TE85L)	
FL102	NC				Q114	XE0053	FET	3SK293 TE85L	
FL103	XC0060	Filter	ALFYM450F=K		Q115	XT0213	Transistor	2SC5659T2L	
IC101	XA1107	IC	MB15E07SR		Q116	XE0053	FET	3SK293 TE85L	
IC102	XA1106	IC	LM2902PWR		Q117	XU0210	Transistor	RN1107MFV(TPL3)	
IC103	XA0404	IC	TA31136FN(EL)		Q118	XT0180	Transistor	2SC5066FT-Y (TE85L)	
IC104	XA1120	IC	S80845CLNB-B66-T2G		Q119	XT0213	Transistor	2SC5659T2L	
IC105	XA1117	IC	S24CS64A01-J8T1G		Q120	XT0210	Transistor	2SC6026MFV-GR	
IC106	XA0210	IC	NJM2070M T1		Q121	XU0212	Transistor	RN2115MFV(TPL3)	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
Q122	XU0210	Transistor	RN1107MFV(TPL3)		R132	RK3530	Chip R	ERJ2GEJ221X	
Q123	NC				R133	RK3550	Chip R	ERJ2GEJ103X	
Q124	XU0220	Transistor	RN2111MFV(TLP3)		R136	RK3538	Chip R	ERJ2GEJ102X	
Q125	XU0210	Transistor	RN1107MFV(TPL3)		R137	RK3554	Chip R	ERJ2GEJ223X	
Q126	XU0210	Transistor	RN1107MFV(TPL3)		R138	RK3562	Chip R	ERJ2GEJ104X	
Q127	XU0220	Transistor	RN2111MFV(TLP3)		R139	RK3550	Chip R	ERJ2GEJ103X	
Q128	XT0210	Transistor	2SC6026MFV-GR		R140	RK3501	Chip R	ERJ2GE0R00X	
Q129	XT0210	Transistor	2SC6026MFV-GR		R141	RK3555	Chip R	ERJ2GEJ273X	
Q130	XT0170	Transistor	2SB766A-(TX)R		R142	RK3550	Chip R	ERJ2GEJ103X	
Q131	XT0210	Transistor	2SC6026MFV-GR		R143	RK3546	Chip R	ERJ2GEJ472X	
Q132	XT0170	Transistor	2SB766A-(TX)R		R144	RK3501	Chip R	ERJ2GE0R00X	
Q133	XE0069	FET	SSM3K15FV(TPL3,Z)		R145	RK3550	Chip R	ERJ2GEJ103X	
Q134	XU0210	Transistor	RN1107MFV(TPL3)		R146	RK3537	Chip R	ERJ2GEJ821X	
Q135	XT0214	Transistor	HN2C01FE-GR(T5L,F)		R147	RK3526	Chip R	ERJ2GEJ101X	
Q136	XT0170	Transistor	2SB766A-(TX)R		R148	RK3542	Chip R	ERJ2GEJ222X	
Q137	XT0212	Transistor	2SA1955FV-A(TPL3)		R149	RK3532	Chip R	ERJ2GEJ331X	
Q138	XT0212	Transistor	2SA1955FV-A(TPL3)		R150	RK3567	Chip R	ERJ2GEJ274X	
Q139	XT0214	Transistor	HN2C01FE-GR(T5L,F)		R151	NC			
Q140	XT0212	Transistor	2SA1955FV-A(TPL3)		R152	RK3542	Chip R	ERJ2GEJ222X	
Q141	XT0210	Transistor	2SC6026MFV-GR		R154	RK3570	Chip R	ERJ2GEJ474X	
Q142	XU0213	Transistor	RN1111MFV(TPL3),F		R155	RK3542	Chip R	ERJ2GEJ222X	
Q143	NC				R156	RK3538	Chip R	ERJ2GEJ102X	
Q144	XU0210	Transistor	RN1107MFV(TPL3)		R157	RK3550	Chip R	ERJ2GEJ103X	
Q145	XU0211	Transistor	RN2107MFV(TPL3)		R159	RK3539	Chip R	ERJ2GEJ122X	
Q146	XU0213	Transistor	RN1111MFV(TPL3),F		R161	RK3538	Chip R	ERJ2GEJ102X	
Q147	XE0069	FET	SSM3K15FV(TPL3,Z)		R162	RK3564	Chip R	ERJ2GEJ154X	
Q148	XE0069	FET	SSM3K15FV(TPL3,Z)		R163	RK3522	Chip R	ERJ2GEJ470X	
Q149	XT0210	Transistor	2SC6026MFV-GR		R164	RK3550	Chip R	ERJ2GEJ103X	
Q152	XU0211	Transistor	RN2107MFV(TPL3)		R165	RK3544	Chip R	ERJ2GEJ332X	
Q153	XU0211	Transistor	RN2107MFV(TPL3)		R166	RK3526	Chip R	ERJ2GEJ101X	
R101	RK3534	Chip R	ERJ2GEJ471X		R167	RK3542	Chip R	ERJ2GEJ222X	
R102	RK3545	Chip R	ERJ2GEJ392X		R168	NC			
R103	RK3550	Chip R	ERJ2GEJ103X		R169	RK3550	Chip R	ERJ2GEJ103X	
R104	RK3501	Chip R	ERJ2GE0R00X		R170	RK3530	Chip R	ERJ2GEJ221X	
R105	NC				R171	RK3526	Chip R	ERJ2GEJ101X	
R106	NC				R172	RK3501	Chip R	ERJ2GE0R00X	
R107	RK3526	Chip R	ERJ2GEJ101X		R173	RK3564	Chip R	ERJ2GEJ154X	
R108	RK3534	Chip R	ERJ2GEJ471X		R174	RK3530	Chip R	ERJ2GEJ221X	
R109	RK3030	Chip R	MCR03EZHJ221		R175	RK3550	Chip R	ERJ2GEJ103X	
R111	RK3542	Chip R	ERJ2GEJ222X		R176	RK3570	Chip R	ERJ2GEJ474X	
R112	RK3556	Chip R	ERJ2GEJ333X		R177	RK3562	Chip R	ERJ2GEJ104X	
R113	RK3548	Chip R	ERJ2GEJ682X		R178	RK3550	Chip R	ERJ2GEJ103X	
R114	NC				R179	RK3538	Chip R	ERJ2GEJ102X	
R115	NC				R180	RK3501	Chip R	ERJ2GE0R00X	
R116	RK3022	Chip R	MCR03EZHJ470		R181	RK3550	Chip R	ERJ2GEJ103X	
R117	RK3530	Chip R	ERJ2GEJ221X		R182	RK3566	Chip R	ERJ2GEJ224X	
R118	RK3526	Chip R	ERJ2GEJ101X		R183	NC			
R119	RK3566	Chip R	ERJ2GEJ224X		R184	NC			
R120	NC				R185	RK3562	Chip R	ERJ2GEJ104X	
R121	RK3538	Chip R	ERJ2GEJ102X		R186	RK3550	Chip R	ERJ2GEJ103X	
R122	RK3542	Chip R	ERJ2GEJ222X		R187	RK3526	Chip R	ERJ2GEJ101X	
R123	RK3522	Chip R	ERJ2GEJ470X		R188	RK3538	Chip R	ERJ2GEJ102X	
R124	RK3526	Chip R	ERJ2GEJ101X		R189	RK3538	Chip R	ERJ2GEJ102X	
R125	NC				R190	RK3530	Chip R	ERJ2GEJ221X	
R126	RK3562	Chip R	ERJ2GEJ104X		R191	RK3550	Chip R	ERJ2GEJ103X	
R127	RK3562	Chip R	ERJ2GEJ104X		R192	RK3558	Chip R	ERJ2GEJ473X	
R128	RK3550	Chip R	ERJ2GEJ103X		R193	RK3562	Chip R	ERJ2GEJ104X	
R129	RK3574	Chip R	ERJ2GEJ105X		R194	RK3522	Chip R	ERJ2GEJ470X	
R130	NC				R195	RK3558	Chip R	ERJ2GEJ473X	
R131	RK3552	Chip R	ERJ2GEJ153X		R196	RK3558	Chip R	ERJ2GEJ473X	

Ref. No.	Parts No.	Description	Parts Name	Version	Ref. No.	Parts No.	Description	Parts Name	Version
R197	RK3574	Chip R	ERJ2GEJ105X		R260	NC			
R198	RK3574	Chip R	ERJ2GEJ105X		R261	RK3574	Chip R	ERJ2GEJ105X	
R199	RK3555	Chip R	ERJ2GEJ273X		R262	RK3562	Chip R	ERJ2GEJ104X	
R200	RK3560	Chip R	ERJ2GEJ683X		R263	RK3562	Chip R	ERJ2GEJ104X	
R201	RK3522	Chip R	ERJ2GEJ470X		R264	RK3558	Chip R	ERJ2GEJ473X	
R202	RK3538	Chip R	ERJ2GEJ102X		R265	RK3536	Chip R	ERJ2GEJ681X	
R203	RK3566	Chip R	ERJ2GEJ224X		R266	RK3518	Chip R	ERJ2GEJ220X	
R204	RK3574	Chip R	ERJ2GEJ105X		R267	NC			
R205	RK3574	Chip R	ERJ2GEJ105X		R269	RK3532	Chip R	ERJ2GEJ331X	
R206	RK3558	Chip R	ERJ2GEJ473X		R270	RK3560	Chip R	ERJ2GEJ683X	
R207	RK3556	Chip R	ERJ2GEJ333X		R272	RK3556	Chip R	ERJ2GEJ333X	
R208	NC				R273	RK3566	Chip R	ERJ2GEJ224X	
R209	RK3574	Chip R	ERJ2GEJ105X		R274	RK3544	Chip R	ERJ2GEJ332X	
R210	RK3522	Chip R	ERJ2GEJ470X		R275	RK3566	Chip R	ERJ2GEJ224X	
R211	RK3558	Chip R	ERJ2GEJ473X		R276	RK3560	Chip R	ERJ2GEJ683X	
R212	RK3550	Chip R	ERJ2GEJ103X		R277	RK3552	Chip R	ERJ2GEJ153X	
R213	RK3564	Chip R	ERJ2GEJ154X		R278	RK3562	Chip R	ERJ2GEJ104X	
R214	RK3564	Chip R	ERJ2GEJ154X		R279	RK3558	Chip R	ERJ2GEJ473X	
R215	RK3562	Chip R	ERJ2GEJ104X		R280	RK3556	Chip R	ERJ2GEJ333X	
R216	RK3538	Chip R	ERJ2GEJ102X		R281	RK3017	Chip R	MCR03EZHJ180	
R218	RK3558	Chip R	ERJ2GEJ473X		R282	RK3514	Chip R	ERJ2GEJ100X	
R219	RK3564	Chip R	ERJ2GEJ154X		R283	RK3554	Chip R	ERJ2GEJ223X	
R220	RK3556	Chip R	ERJ2GEJ333X		R284	RK3561	Chip R	ERJ2GEJ823X	
R221	RK3550	Chip R	ERJ2GEJ103X		R285	RK3550	Chip R	ERJ2GEJ103X	
R222	RK3558	Chip R	ERJ2GEJ473X		R286	RK3570	Chip R	ERJ2GEJ474X	
R223	RK3550	Chip R	ERJ2GEJ103X		R287	RK3550	Chip R	ERJ2GEJ103X	
R224	RK3550	Chip R	ERJ2GEJ103X		R288	RK3550	Chip R	ERJ2GEJ103X	
R225	RK3554	Chip R	ERJ2GEJ223X		R289	RK3565	Chip R	ERJ2GEJ184X	
R226	RK3554	Chip R	ERJ2GEJ223X		R290	RK3017	Chip R	MCR03EZHJ180	
R227	RK3559	Chip R	ERJ2GEJ563X		R291	RK3551	Chip R	ERJ2GEJ123X	
R228	RK3550	Chip R	ERJ2GEJ103X		R292	RK3569	Chip R	ERJ2GEJ394X	
R229	RK3550	Chip R	ERJ2GEJ103X		R293	RK3532	Chip R	ERJ2GEJ331X	
R230	RK3567	Chip R	ERJ2GEJ274X		R294	RK3562	Chip R	ERJ2GEJ104X	
R231	RK3538	Chip R	ERJ2GEJ102X		R295	RK3538	Chip R	ERJ2GEJ102X	
R232	RK3566	Chip R	ERJ2GEJ224X		R296	RK3530	Chip R	ERJ2GEJ221X	
R234	RK3550	Chip R	ERJ2GEJ103X		R297	RK3546	Chip R	ERJ2GEJ472X	
R235	RK3562	Chip R	ERJ2GEJ104X		R298	RK3549	Chip R	ERJ2GEJ822X	
R236	RK3562	Chip R	ERJ2GEJ104X		R299	RK3544	Chip R	ERJ2GEJ332X	
R237	RK3522	Chip R	ERJ2GEJ470X		R300	RK3538	Chip R	ERJ2GEJ102X	
R238	RK3550	Chip R	ERJ2GEJ103X		R301	RK3501	Chip R	ERJ2GE0R00X	
R239	RK3563	Chip R	ERJ2GEJ124X		R302	RK3538	Chip R	ERJ2GEJ102X	
R240	RK3562	Chip R	ERJ2GEJ104X		R303	RK3550	Chip R	ERJ2GEJ103X	
R242	RK3501	Chip R	ERJ2GE0R00X		R304	RK3546	Chip R	ERJ2GEJ472X	
R243	RK3550	Chip R	ERJ2GEJ103X		R305	RK3550	Chip R	ERJ2GEJ103X	
R244	RK3564	Chip R	ERJ2GEJ154X		R306	RK3550	Chip R	ERJ2GEJ103X	
R245	RK3544	Chip R	ERJ2GEJ332X		R308	RK3574	Chip R	ERJ2GEJ105X	
R246	RK3562	Chip R	ERJ2GEJ104X		R309	RK3574	Chip R	ERJ2GEJ105X	
R247	RK3564	Chip R	ERJ2GEJ154X		R310	RK3550	Chip R	ERJ2GEJ103X	
R248	RK3538	Chip R	ERJ2GEJ102X		R311	RK3550	Chip R	ERJ2GEJ103X	
R249	NC				R312	RK3570	Chip R	ERJ2GEJ474X	
R250	RK3550	Chip R	ERJ2GEJ103X		R313	RK3550	Chip R	ERJ2GEJ103X	
R251	RK3562	Chip R	ERJ2GEJ104X		R314	RK3554	Chip R	ERJ2GEJ223X	
R252	RK3556	Chip R	ERJ2GEJ333X		R315	RK3542	Chip R	ERJ2GEJ222X	
R253	RK3566	Chip R	ERJ2GEJ224X		R316	RK3550	Chip R	ERJ2GEJ103X	
R254	RK3550	Chip R	ERJ2GEJ103X		R317	RK3570	Chip R	ERJ2GEJ474X	
R255	RK3563	Chip R	ERJ2GEJ124X		R318	RK3550	Chip R	ERJ2GEJ103X	
R256	RK3562	Chip R	ERJ2GEJ104X		R319	RK3554	Chip R	ERJ2GEJ223X	
R257	RK3538	Chip R	ERJ2GEJ102X		R320	RK3574	Chip R	ERJ2GEJ105X	
R258	RK3574	Chip R	ERJ2GEJ105X		R321	NC			
R259	RK3566	Chip R	ERJ2GEJ224X		R322	NC			

Ref. No.	Parts No.	Description	Parts Name	Version
R323	RK3550	Chip R	ERJ2GEJ103X	
R324	RK3548	Chip R	ERJ2GEJ682X	
R325	RK3559	Chip R	ERJ2GEJ563X	
R326	RK3559	Chip R	ERJ2GEJ563X	
R327	RK3550	Chip R	ERJ2GEJ103X	
R328	RK3550	Chip R	ERJ2GEJ103X	
R330	RK3546	Chip R	ERJ2GEJ472X	
R331	RK3546	Chip R	ERJ2GEJ472X	
R332	RK3546	Chip R	ERJ2GEJ472X	
R333	RK3546	Chip R	ERJ2GEJ472X	
R334	RK3562	Chip R	ERJ2GEJ104X	
R335	RK3562	Chip R	ERJ2GEJ104X	
R336	RK3562	Chip R	ERJ2GEJ104X	
R337	RK3550	Chip R	ERJ2GEJ103X	
R338	RK3542	Chip R	ERJ2GEJ222X	
R339	RK3550	Chip R	ERJ2GEJ103X	
R340	RK3550	Chip R	ERJ2GEJ103X	
R341	RK3550	Chip R	ERJ2GEJ103X	
R342	RK3538	Chip R	ERJ2GEJ102X	
R343	RK3550	Chip R	ERJ2GEJ103X	
R344	RK3537	Chip R	ERJ2GEJ821X	
R345	RK3558	Chip R	ERJ2GEJ473X	
R346	NC			
R347	NC			
R348	RK3552	Chip R	ERJ2GEJ153X	
R349	NC			
R350	RK3562	Chip R	ERJ2GEJ104X	
R351	RK3550	Chip R	ERJ2GEJ103X	
R352	NC			
R353	RK3546	Chip R	ERJ2GEJ472X	
R354	RK3550	Chip R	ERJ2GEJ103X	
R355	RK3550	Chip R	ERJ2GEJ103X	
R357	RK3501	Chip R	ERJ2GE0R00X	
R358	NC			
R359	NC			
R360	NC			
R361	NC			
R362	RK3536	Chip R	ERJ2GEJ681X	
R363	RK3558	Chip R	ERJ2GEJ473X	
R364	RK1018	Chip R	ERJ8GEYJ101V	
R365	RK3546	Chip R	ERJ2GEJ472X	
R366	RK3566	Chip R	ERJ2GEJ224X	
R367	RK3558	Chip R	ERJ2GEJ473X	
R368	RK3548	Chip R	ERJ2GEJ682X	
R369	RK3538	Chip R	ERJ2GEJ102X	
R370	RK3501	Chip R	ERJ2GE0R00X	
R371	RK3546	Chip R	ERJ2GEJ472X	
R372	RK3550	Chip R	ERJ2GEJ103X	
R373	RK3546	Chip R	ERJ2GEJ472X	
R374	RK3562	Chip R	ERJ2GEJ104X	
R375	RK3550	Chip R	ERJ2GEJ103X	
R376	RK3562	Chip R	ERJ2GEJ104X	
R377	RK3562	Chip R	ERJ2GEJ104X	
R378	RK3566	Chip R	ERJ2GEJ224X	
R379	RK3562	Chip R	ERJ2GEJ104X	
R380	RK3566	Chip R	ERJ2GEJ224X	
R381	RK3554	Chip R	ERJ2GEJ223X	
R382	RK3038	Chip R	MCR03EZHJ102	
R384	RK3058	Chip R	MCR03EZHJ473	
R385	RK3064	Chip R	MCR03EZHJ154	

Ref. No.	Parts No.	Description	Parts Name	Version
R386	NC			
R387	NC			
R388	RK3550	Chip R	ERJ2GEJ103X	
R392	RK3550	Chip R	ERJ2GEJ103X	
R393	RK3534	Chip R	ERJ2GEJ471X	
R394	RK3530	Chip R	ERJ2GEJ221X	
R395	RK3556	Chip R	ERJ2GEJ333X	
R396	RK3556	Chip R	ERJ2GEJ333X	
R398	RK3566	Chip R	ERJ2GEJ224X	
R401	RK3501	Chip R	ERJ2GE0R00X	
R402	RK3501	Chip R	ERJ2GE0R00X	
R403	RK3570	Chip R	ERJ2GEJ474X	
R404	RK3550	Chip R	ERJ2GEJ103X	
R405	RK3542	Chip R	ERJ2GEJ222X	
R406	RK3546	Chip R	ERJ2GEJ472X	
R407	RK3562	Chip R	ERJ2GEJ104X	
R409	RK3534	Chip R	ERJ2GEJ471X	
R410	RK0107	Chip R	ERJ6GEY0R00V	
SW101	UU0041	Switch	EVQP4203M	
SW102	UU0041	Switch	EVQP4203M	
SW103	UU0041	Switch	EVQP4203M	
TC101	NC			
TH101	XS0052	Thermistor	NTCG104LH104JT1	
VR101	RH0233	Trimmer R	RH02B1C15X	
VR102	RH0233	Trimmer R	RH02B1C15X	
VR103	RH0225	Trimmer R	RH02B1CS3X	
VR104	RH0225	Trimmer R	RH02B1CS3X	
VR105	RH0225	Trimmer R	RH02B1CS3X	
W101	MPCL07AA	Wire	#30P02-070-02	
W102	MACL07AA	Wire	#30A02-070-02	
W103	MACLH2GG	Wire	#30AH1-025-H1	
X101	NC			
X102	XQ0194	Crystal	NT3225SA12.8M	
X103	XK0004	Discriminator	CDBLB450KCAY24-B0	
X104	XQ0184	Crystal	AT49 3.6864M	
	TS0183	VCO CASE	VCO CASE	
	UP0541	PCB	DJ170 INTEGRATED	
	FM0265A		HEAT SINK, DJV17	
	TZ0049		SILICON DUMPER	

Mechanical Unit

Ref. No.	Parts No.	Description	Parts Name	Version
	ADFS47	FRONT CASE ASSY	FRONT CASE ASSY S47	
	ADRV17	REAR CASE ASSY	REAR CASE ASSY V17	
	AF0003	SCREW	XQN2+C3FN	
	AF0018	SCREW	XQN2+C4FZ	
	AF0030	SCREW	XQN2+A6FN(58364-0001	
	AP0039	SCREW	PH P2+20 FE/3BBC	
	AX0004Z	SCREW	PT 3P 2X8 BBC AX0004	
	DG0046		LCD LIGHT	
	DP0175		LCD PANEL S45	
	FG0392		WATERPROOF	
	FG0418		LCD RUB CONE	
	FG0419		WATERPROOF RUBBER	
	FG0423		JACK CAP DJ170	
	FG0424		O RING (R COVER)	
	FG0426		MIC RUBBER	

Ref. No.	Parts No.	Description	Parts Name	Version
	FP0254		REAR COVER	
	FP0255		ROCK LEVER	
	FP0264		BLIND SEAL	
	NK0081		VOL KNOB	
	SP0013		LECTRA #7800	
	ST0089		LCD HOLDER	
	TL0033		REFLECTIVE SHEET	
	YX0039		LCD TAPE DJS45	

Packing Unit

Model : DJ-S47

Ref. No.	Parts No.	Description	Parts Name	Version
	EA0143	ANTENNA	ANTENNA EA0143	
	EG0065	BATTERY	NI−MH BATTERY EBP65A	
	EDC147	ADAPTOR	EDC147 ADAPTOR(E)	E
	EDC148	ADAPTOR	EDC148 ADAPTOR(UK)	EUK
	PR0478		SERIAL SEAL	
	DS0446		NITTO MODEL PLATE(S)	
	PR0514		EPSON 10X49 LABEL(W)	
	PS0545	INSTRUCTION MANUAL	INSTRUCTION DJS17T	
	PK0120	CIRCUIT DIAGRAM	SCHEMATIC DJS47	
	HK0663		INDI BOX DJS47T	
	HU0234		INNER DJ170	
	HP0031		PLA.BAG 5X100X200	
	AA0076		PH M3+6FE/B·ZN	
	BB0009Y	HAND STRAP	HAND STRAP DJS41	
	BH0017	BELT CLIP	BELT CLIP	
	HP0003		PLA.BAG 5X75X110	

CAUTION:
RISK OF EXPLOSION IF BATTERY IS REPLACED BY
AN INCORRECT TYPE. DISPOSE OF USED BATTERIES
ACCORDING TO THE INSTRUCTIONS.

ADJUSTMENTS

1) Required Test Equipment

The following items are required to adjust radio parameters

Test Equipment		DJ-S17	DJ-S47
1. Regulated power supply	Supply voltage	13.8 DC	
	Current	3A or more	
2.Digital multimeter	Voltage range	FS = Approx. 20V	
	Current	10A or more	
	Input resistance	High impedance	
3.Oscilloscope	Measurable frequency	Audio frequency	
4.Audio dummy load	Impedance	8Ω	
	Dissipation	1W or more	
	Jack	3.5mmΦ	
5.SSG	Output frequency	200MHz or more	500MHz or more
	Impedance	50Ω, unbalanced	
	Modulation	FM	
6.Power meter	Measurable frequency	200MHz or more	500MHz or more
	Impedance	50Ω, unbalanced	
	Measuring range	10W or more	
7.Audio voltmeter	Measurable frequency	Up to 100kHz	
	Sensitivity	1mV to 10V	
8.Audio generator	Output frequency	67Hz to 10kHz	
	Output impedance	600Ω, unbalanced	
9.Distortion meter /SINAD meter	Measurable frequency	1kHz	
	Input level	Up to 40dB	
	Distortion	1%-100%	
10.Frequency counter	Measurable frequency	200MHz or more	500MHz or more
	Measurable stability	Approx. ±0.1ppm	
11.Linear detector	Measurable frequency	200MHz or more	500MHz or more
	Characteristics	Flat	
	CN	60dB or more	
12. DC Ammeter	Current	3A or more	

Note:

(1). SSG initial setting

Modulation Frequency:1kHz

Modulation Level:3.5kHz

(2). Necessary optional accessory: EDS-10 (Microphone/SpeakerCable)

(3). Reference sensitivity: 12dB SINAD

(4). Specified audio output level: 500mW at 8Ω

(5). Standard audio output level: 50mW at 8Ω

(6). Use an RF cable (3D2W:1M) for test equipment.

(7). Attach a fuse to the RF test equipment.

(8). All SSG outputs are indicated by EMF

(9). Supply voltage for the transceiver:13.8VDC

2)Preparation:

1. Turn off the power of the adjusting unit (the unit hereafter).
2. Remove the screw ①.
3. Remove the rear cover ②.
4. Remove the wire ③. Keep the wire aside as it will be necessary later. This operation is necessary for the DJ-S17E, DJ-S47E and DJ-S47EUK.
5. Turn on the unit by pressing "F" key and "V/M" key together. The display will be blank out for 2 seconds then comes back normal.
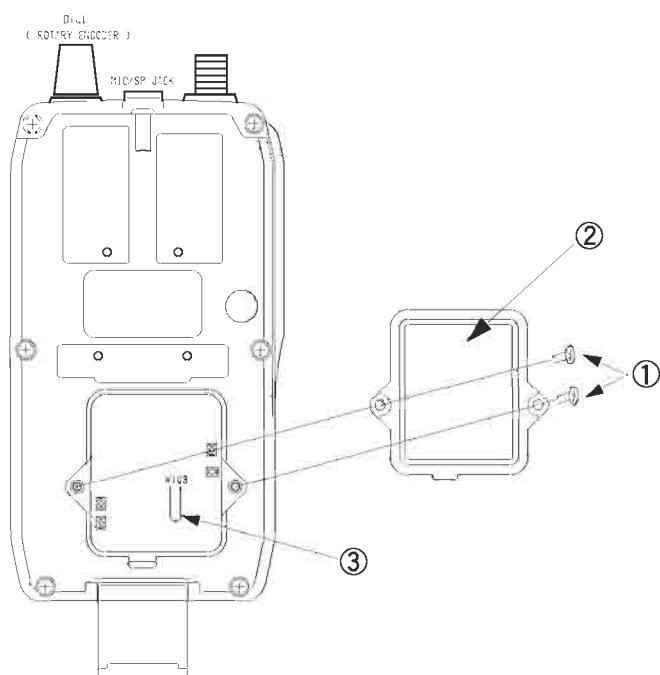
Chart 1 : Removing the rear cover

3) Adjustment mode

The adjustment should be operated in the Adjustment mode. Therefore except for the reference frequency, deviation and tone-deviation adjustments an operator won't touch the components on the board, but most of the adjustments should be done by operating the dial and keys on the unit. During such operation, memory channels are used temporary therefore it is required to program memories before the unit is set to the adjustment mod. Please refer the chart below for the programming channels. The frequencies may be varied within the range of ±0.2MHz depending on the RF environment around your work area, and refer the instruction manual for how to program the memories into the memory-channels.

To enter the adjustment mode, press "KL" for more than 2 seconds to key-lock the unit. Then press the key in order of "FUNC", "VOL", "SQL" 3 times, "KL" and "V/M/C" 3 times. Observe that decimal points appear on the display below 100MHz and 10MHz digits. To exit from the adjustment mode, repeat the whole sequence (key-lock then enter the code in order). NEVER RESET THE UNIT WHILE OPERATING IN THE SET MODE. This may reset whole adjustment values resulting the malfunction of the unit in the operating mode. The chart below shows the adjustment points and interface between the unit and instruments. Please use an attenuator in case the specifications of the linear-detector and frequency counter may exceed the requirement herein.
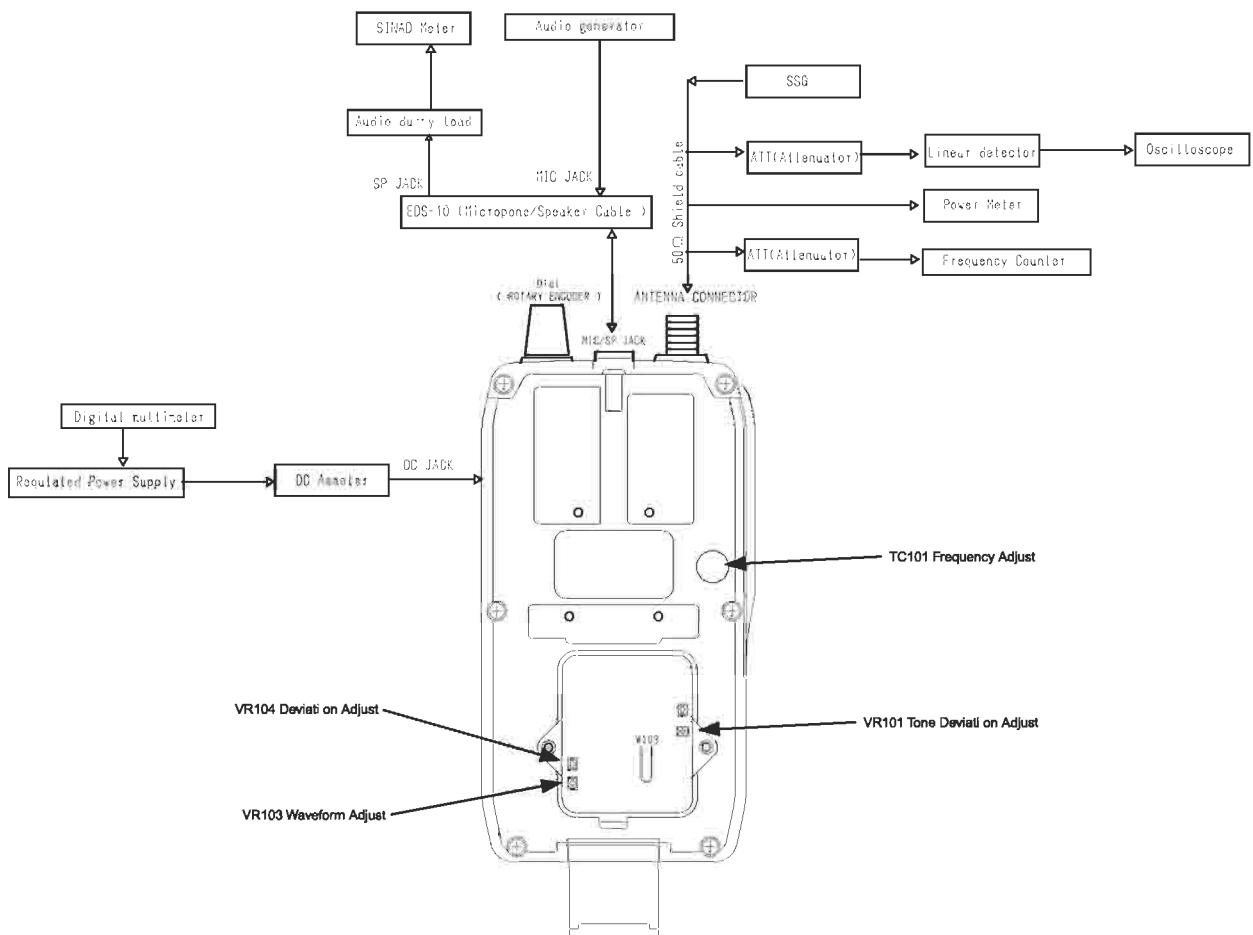
Chart 2 : Adjustment points and interface between the unit and instruments

Table 1: Memory programming for adjustment mode

* Simply memory the frequencies only into the relative memory channels.

Channel	Adjustment menu	Frequency		
		DJ-S17		DJ-S47
		E, EUK	TFH	E, EUK
1	Frequency Adjustment	145.000	162.000	435.000
2	TX-output / High power	145.000	162.000	435.000
3	TX-output / Low power	145.000	162.000	435.000
4	Microphone deviation	145.000	162.000	435.000
8	CTCSS tone deviation	145.000	162.000	435.000
10	Check DCS deviation	145.000	162.000	435.000
11	Check Tone-burst tone deviation	145.000	162.000	435.000
12	Secsitivity adjustment (lower edge)	130.000		401.000
13	Secsitivity adjustment (center of)	145.000	150.000	435.000
14	Secsitivity adjustment (Upper edge)	173.000		479.000
15	Secsitivity adjustment (minimum)	145.000	162.000	435.000
16	Secsitivity adjustment (maximum)	145.000	162.000	435.000
17	S-meter adjustment (1)	145.000	162.000	435.000
18	S-meter adjustment (Full)	145.000	162.000	435.000
19	ATT (Attenuator) adjustment	145.000	162.000	435.000
24	Low-battery icon appearance (Li-ion)	145.000	162.000	435.000
25	Low-battery icon appearance	145.000	162.000	435.000

1. Frequency adjustment

Select memory ch.1.

Press PTT on the unit to transmit and measure the TX frequency. Align TC101 to bring the value to the range specified below.

Specification value :

	DJ-S17	DJ-S47
Specification value	±50Hz	

Necessary instrument : Frequency counter

2. TX output - High power

Select memory ch.2.

Press PTT on the unit to transmit. One of digits 10-1F should appear on the display where memory channel number was shown. Rotate the dial on the unit to adjust the TX power to meet the specification. Release the PTT to finish the adjustment. Be sure to check the consuming current value after the adjustment is completed.

Specification :

	DJ-S17	DJ-S47
TX-output power/High	5.0 watts	
Current consumption	1.5A or less	1.8A or less

Necessary instrument : DC Ammeter / Power meter

3. TX output - Low power

Select memory ch.3.

Press PTT on the unit to transmit. One of digits 0-F should appear on the display where memory channel number was shown. Rotate the dial on the unit to adjust the TX power to meet the specification. Release the PTT to finish the adjustment. Be sure to check the consuming current value after the adjustment is completed.

Specification :

	DJ-S17	DJ-S47
TX-output power/Low	0.8 watts	

Necessary instrument : Power meter

4. Microphone deviation

Select memory ch.4.

Input the signal as specified below from an Audio generator and transmit. Measure the deviation value using a Liner-detector. Align VR104 to bring the value to the range specified below.

Specification :

	DJ-S17	DJ-S47
Microphone deviation	4.3±0.1kHz	

Measuring condition :
(1). Audio generator setting
　　　Frequency : 1kHz
　　　Output Level : 50mV

　　　Necessary instrument : Audio generator / Linear detector
　　　Optional accessory required : EDS-10

5. CTCSS tone 88.5Hz deviation and adjustment of the sign-wave

Select memory ch.8.

Press PTT to automatically transmit 88.5Hz tone. Measure the deviation value using a Liner-detector. Align VR101 to bring the value to the range specified below. Use an oscilloscope to monitor the sign-wave then correct the wave shape (see the chart 3 below). Use VR103 to correct the wave shape if necessary.

OK

NG

NG
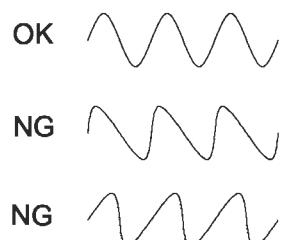
Chart 3: sign-wave correction

Specification :

	MODEL		
	DJ-S17		DJ-S47
	E/EUK	TFH	
CTCSS tone 88.5Hz deviation	0.80±0.05Hz	0.90±0.05Hz	0.80±0.05Hz

Necessary instrument : Linear detector / Oscilloscope

6. Check DCS deviation (255)

Select memory ch.10.

Press PTT to automatically transmit DCS tone (255). Make sure the value is within the specification using a linear-detector.

Specification :

	DJ-S17	DJ-S47
DCS deviation (255)	0.7~1.2kHz	

Necessary instrument : Linear detector

7. Check Tone-burst tone 1750Hz deviation

Select memory ch.11.

Press PTT to automatically transmit a tone-burst tone 1750Hz. Make sure the value is within the specification using a linear-detector.

Specification :

	DJ-S17	DJ-S47
1750Hz Deviation	2.6~3.4kHz	2.4~3.6kHz

Necessary instrument : Linear detector

8. Receiver sensitivity adjustment

Preparation : Set the speaker audio output level to 50mW.

Operation :   There are three points to be adjusted, the lower, central, and upper edges of the receiver's covering range. Set the memory channels accordingly. Input an RF signal from the SSG to the antenna connector then measure output signal at the speaker jack using a SINAD meter. Press "F" (FUNC) key on the unit. One of digits 0-FF should appear on the display where memory channel number was shown. Rotate the dial on the unit to bring the SINAD value to 12dB or better.

a. Lower edge

Condition :

(1). Memory Channel : 12

(2). SSG setting

	MODEL		
	DJ-S17		DJ-S47
	E/EUK	TFH	
Frequency (MHz)	130.000		401.000
RF Output Level (dBμ)	-6.0	-5.0	-3.0
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

b. Center of the covering range
      Condition :
      (1). Memory Channel : 13
      (2). SSG setting

	MODEL		
	DJ-S17		DJ-S47
	E/EUK	TFH	
Frequency (MHz)	145.000	150.000	435.000
RF Output Level (dB μ)	-8.0		-6.0
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

c. Upper edge
      (1). Memory Channel:14
      (2). SSG setting

	MODEL		
	DJ-S17	DJ-S47	
Frequency (MHz)	173.000	479.000	
RF Output Level (dB μ)	-8.0	-5.0	-6.0
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

      Necessary instruments : Audio voltmeter / SSG / SINAD Meter / Audio dummy load
      Optional accessory required : EDS-10

Note:
Press "FUNC" key or leave the unit for 5 seconds to enter the new values and go to the next adjustment procedure. Memory number should appear on the display when the unit exits the sensitivity adjustment.

9. Squelch adjustments:

Select the memory channel number accordingly to adjust the level Min and Max.
Input an RF signal to the antenna connector from SSG then press FUNC key on the unit. A beep ("pip") sounds and completes the adjustment.

a. Squelch level (Min.)
      Condition :
      (1). Memory Channel : 15
      (2). SSG setting

	MODEL		
	DJ-S17		DJ-S47
	E/EUK	TFH	
Frequency (MHz)	145.000	162.000	435.000
RF Output Level (dB μ)	-11.0		-10.0
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

b. Squelch level (Max.)

Condition :

(1). Memory Channel : 16

(2). SSG setting

	MODEL		
	DJ-S17		DJ-S47
	E/EUK	TFH	
Frequency (MHz)	145.000	162.000	435.000
RF Output Level (dBμ)	0		
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

Necessary instrument : SSG

10. S-meter adjustments

Select the memory channel number accordingly to adjust the S-meter level 1 and full.

Input an RF signal to the antenna connector from SSG then press FUNC key on the unit. A beep ("pip") sounds and completes the adjustment.

a. S-meter level 1

Condition :

(1). Memory Channel : 17

(2). SSG setting

	MODEL		
	DJ-S17		DJ-S47
	E/EUK	TFH	
Frequency (MHz)	145.000	162.000	435.000
RF Output Level (dBμ)	0		
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

b. S-meter level Full

Condition:

(1). Memory Channel : 18

(2). SSG setting

	MODEL		
	DJ-S17		DJ-S47
	E/EUK	TFH	
Frequency (MHz)	145.000	162.000	435.000
RF Output Level (dBμ)	20.0		
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

Necessary instrument : SSG

11. Attenuator adjustment

Select the memory ch.19.

Input an RF signal to the antenna connector from SSG then press FUNC key on the unit.

One of digits 0-FF should appear on the display where memory channel number was shown. Rotate the dial on the unit to adjust to the point that the S-meter's 3rd segment turns to 4th for DJ-S17, 4th to 5th for the DJ-S47. It is acceptable if the 4th(S17) or 5th(S47) segment blinks at this moment.

Condition:

(1). SSG setting

	MODEL		
	DJ-S17		**DJ-S47**
	E/EUK	TFH	
Frequency (MHz)	145.000	162.000	435.000
RF Output Level (dB μ)	20.0		
Modulation Frequency (kHz)	1		
Modulation Level (kHz)	3.5		

Necessary instrument : SSG

Note:

(1) Press "FUNC" key or leave the unit for 5 seconds to go to the next adjustment procedure. Memory number should appear on the display when the unit exits this adjustment point.

(2) The S-meter adjustment should be completed before you perform this operation.

12. Low-battery icon appearance (Li-ion)

Select the memory ch.24.

Press "F" (FUNC) key on the unit. One of digits 0-FF should appear on the display where memory channel number was shown. Rotate the dial on the unit to select "67". The value can be varied by rotating the dial, but select always 67.

Note:

Press "FUNC" key or leave the unit for 5 seconds to go to the next adjustment procedure.

Memory number should appear on the display when the unit exits this adjustment point.

13. Low-battery icon appearance (Alkaline)

Select the memory ch.25.

Press "F" (FUNC) key on the unit. One of digits 0-FF should appear on the display where memory channel number was shown. Rotate the dial on the unit to select "69" (DJ-S47:"6A"). The value can be varied by rotating the dial, but select always 69 (DJ-S47:6A).

Note:

Press "FUNC" key or leave the unit for 5 seconds to go to the next adjustment procedure.

Memory number should appear on the display when the unit exits this adjustment point.

4) Re-assembly

1. Turn off the unit.
2. In case of DJ-S17E, DJ-S47E and DJ-S47EUK, re-solder the wire ③. This sequence is not required for other versions.
3. According to the instruction below ④, mount the rear-cover ②.
4. Securely screw ① to fix the cover.
5. Turn on the unit by pressing "F" key and "V/M" key together to reset the CPU. The display will be blank out for 2 seconds then comes back normal.

Chart 4 : Re-assembly the rear cover
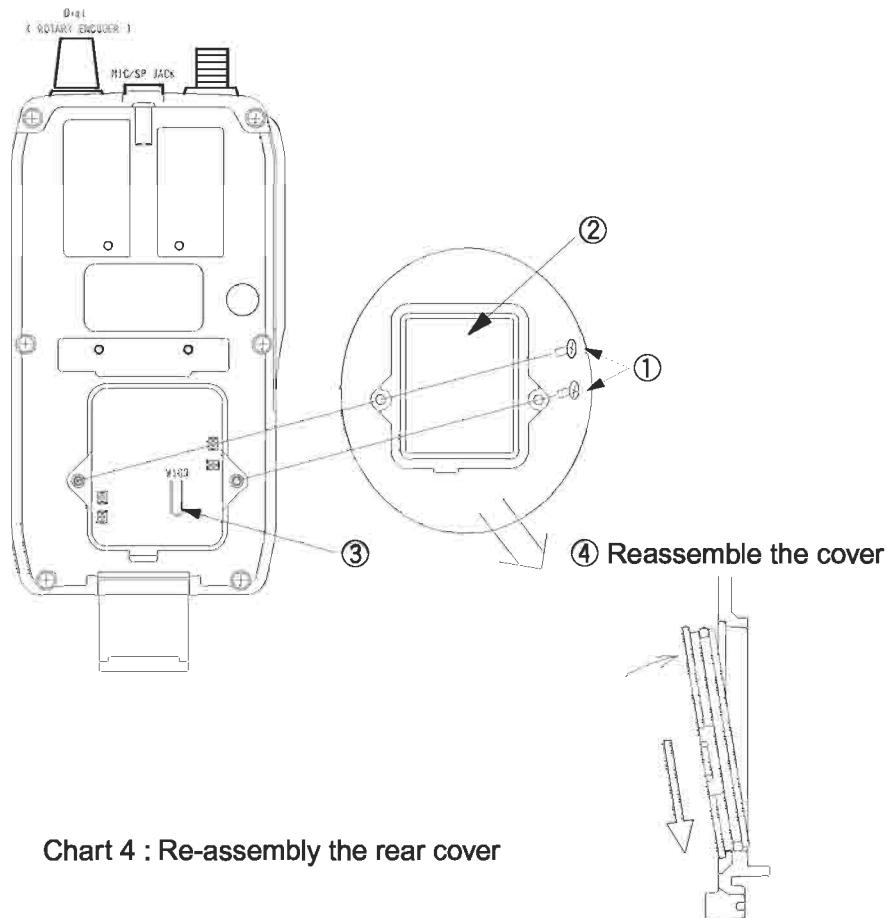
PC BOARD VIEW

## MAIN SIDE A (DJ-S17)
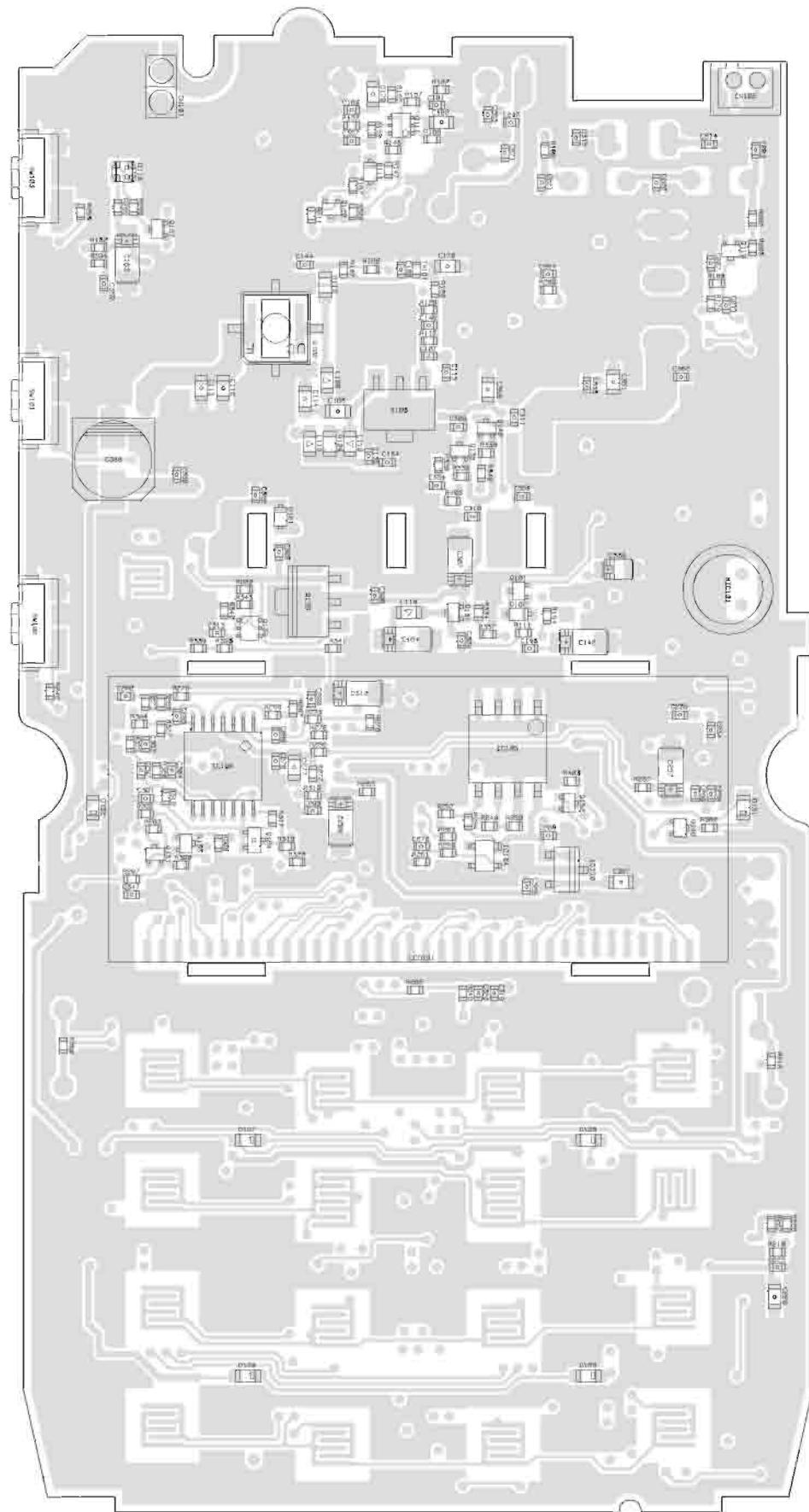
MAIN SIDE B (DJ-S17)
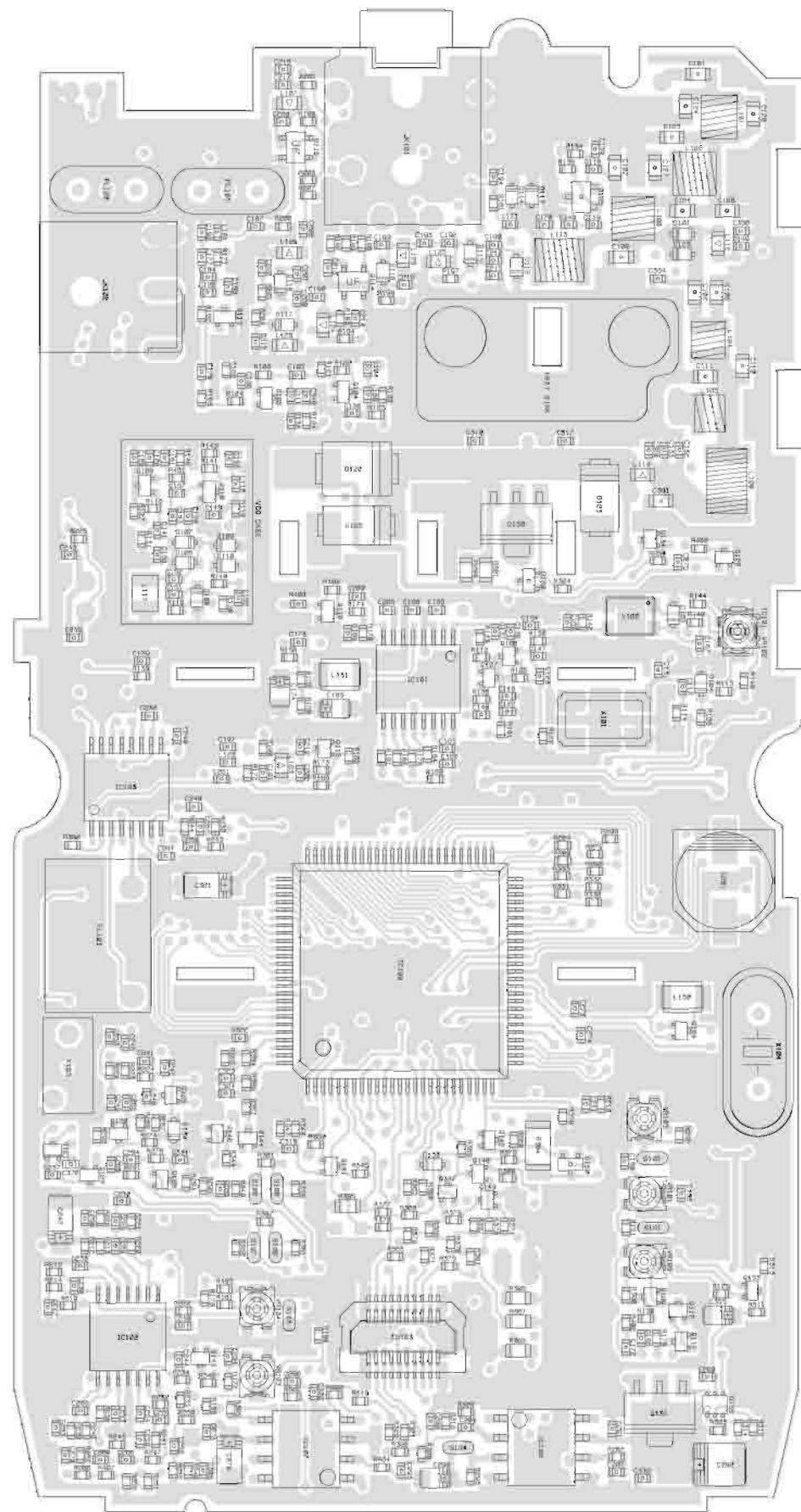
MAIN SIDE A (DJ-S47)
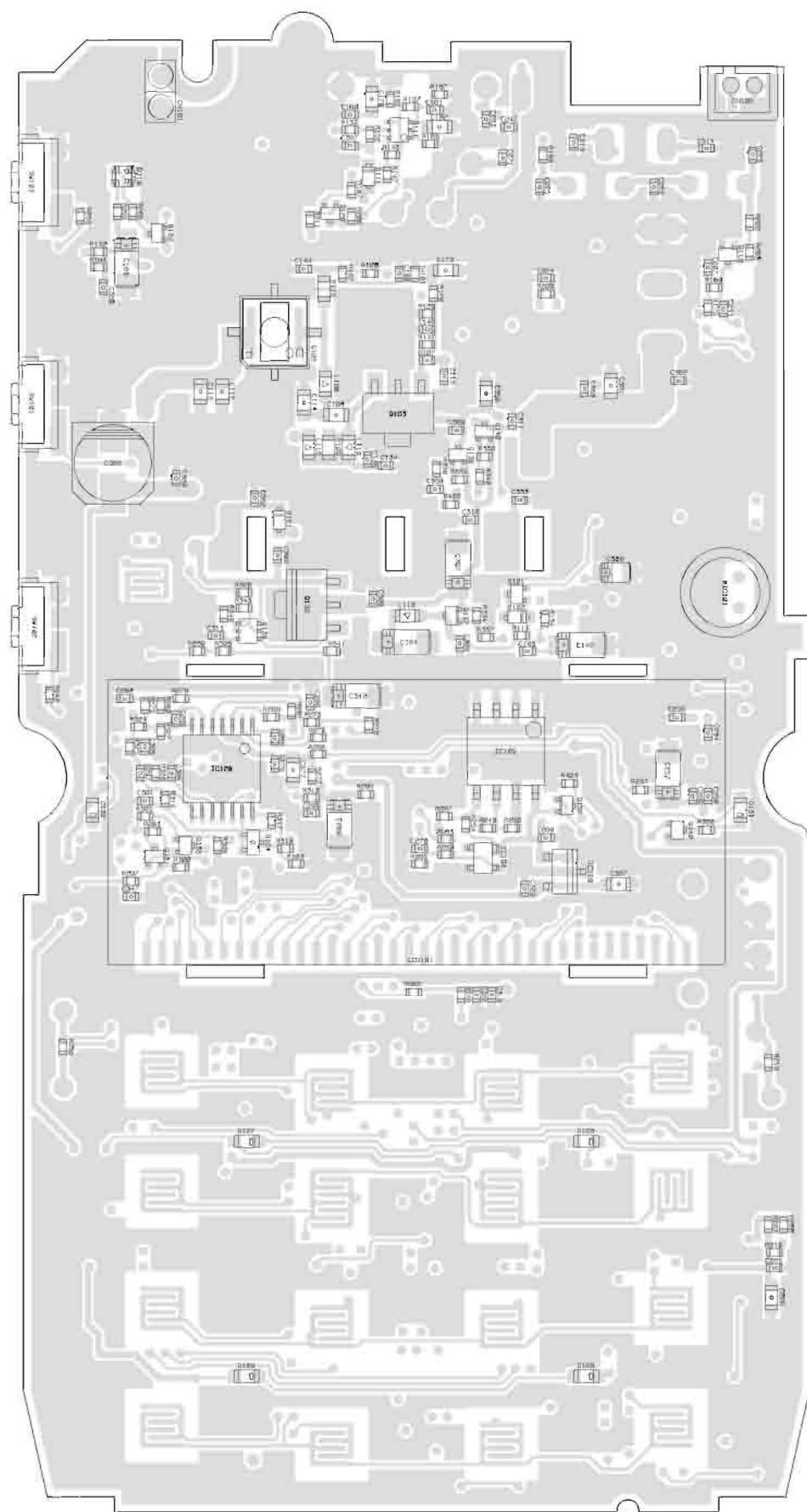
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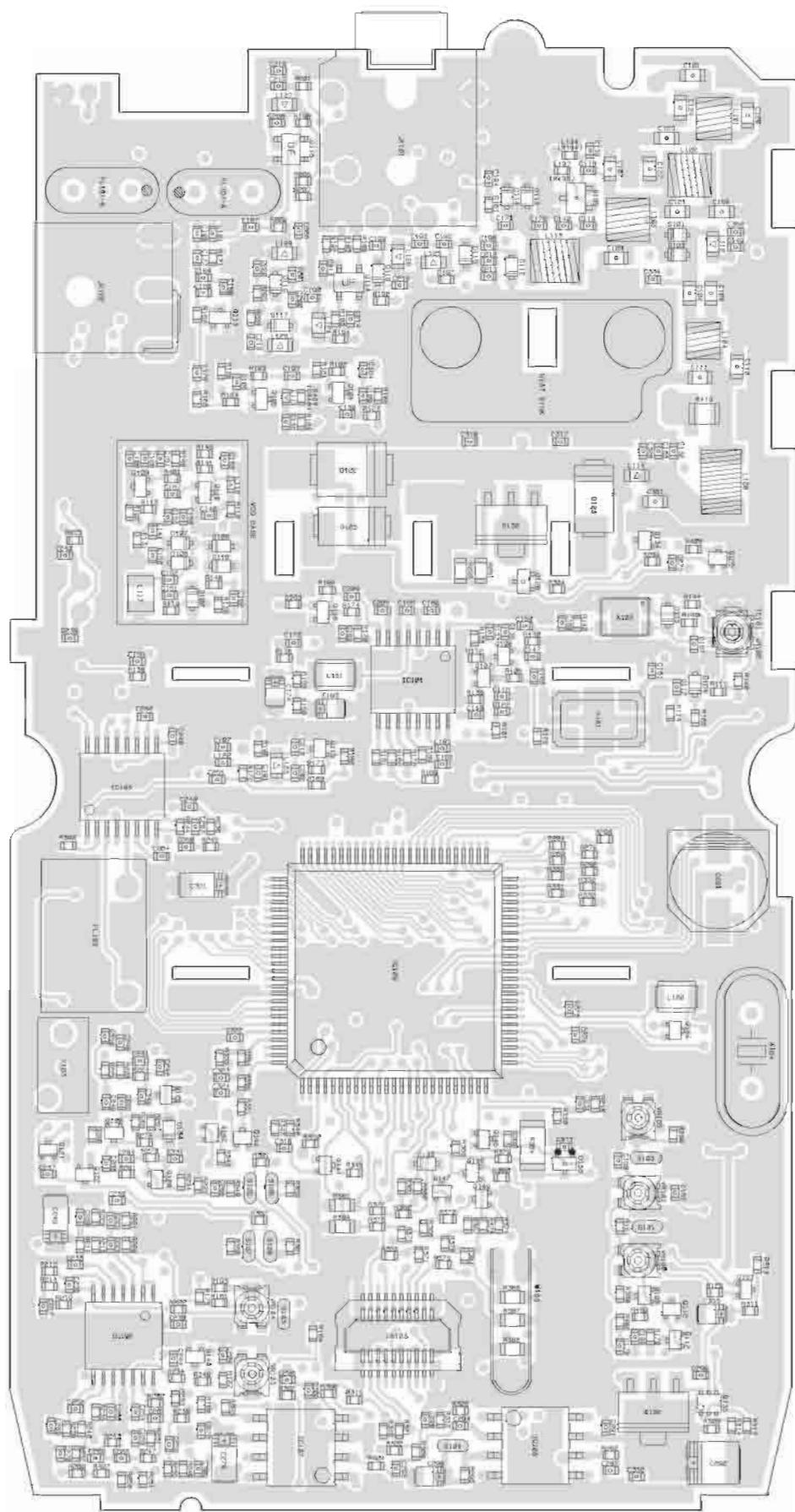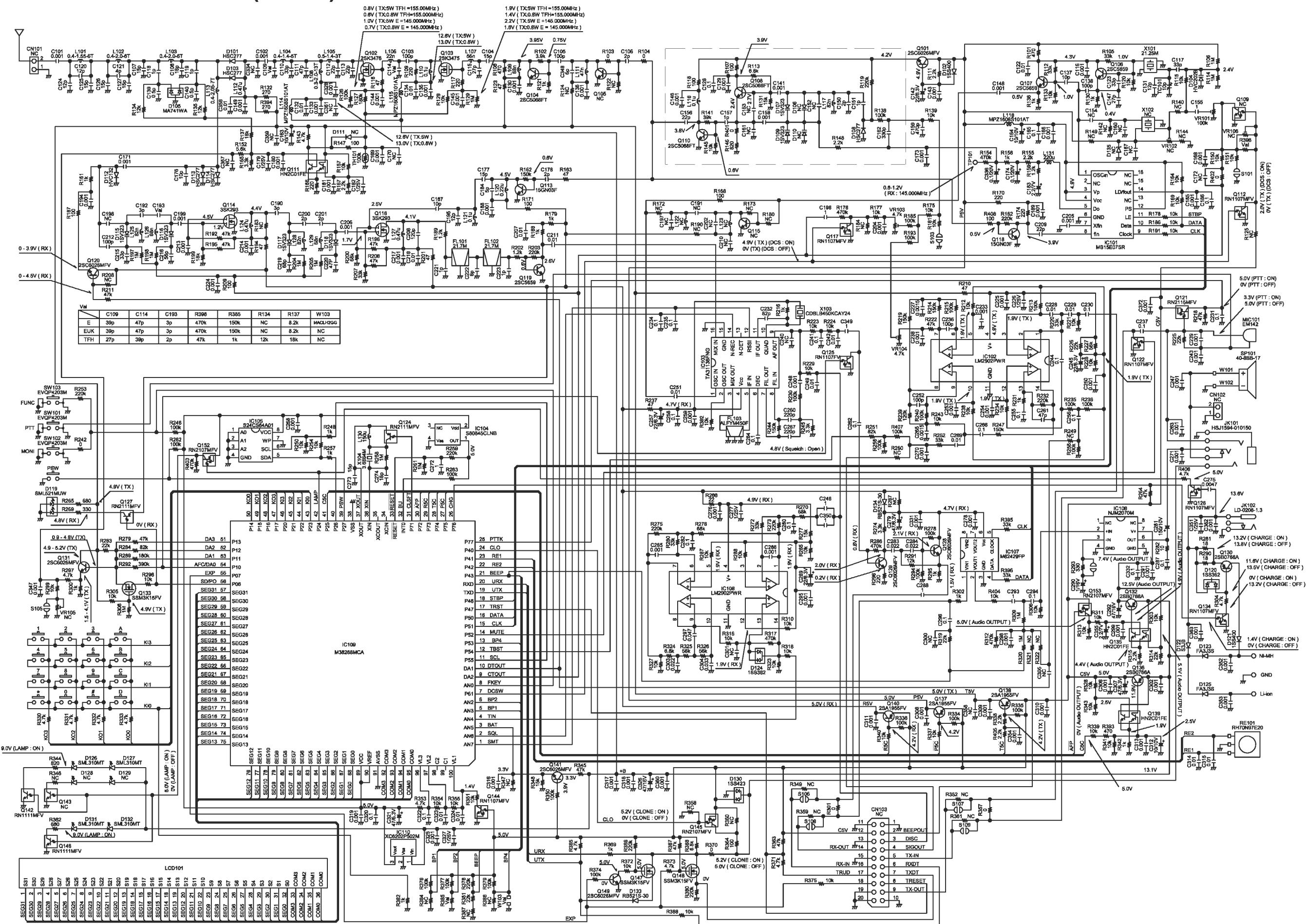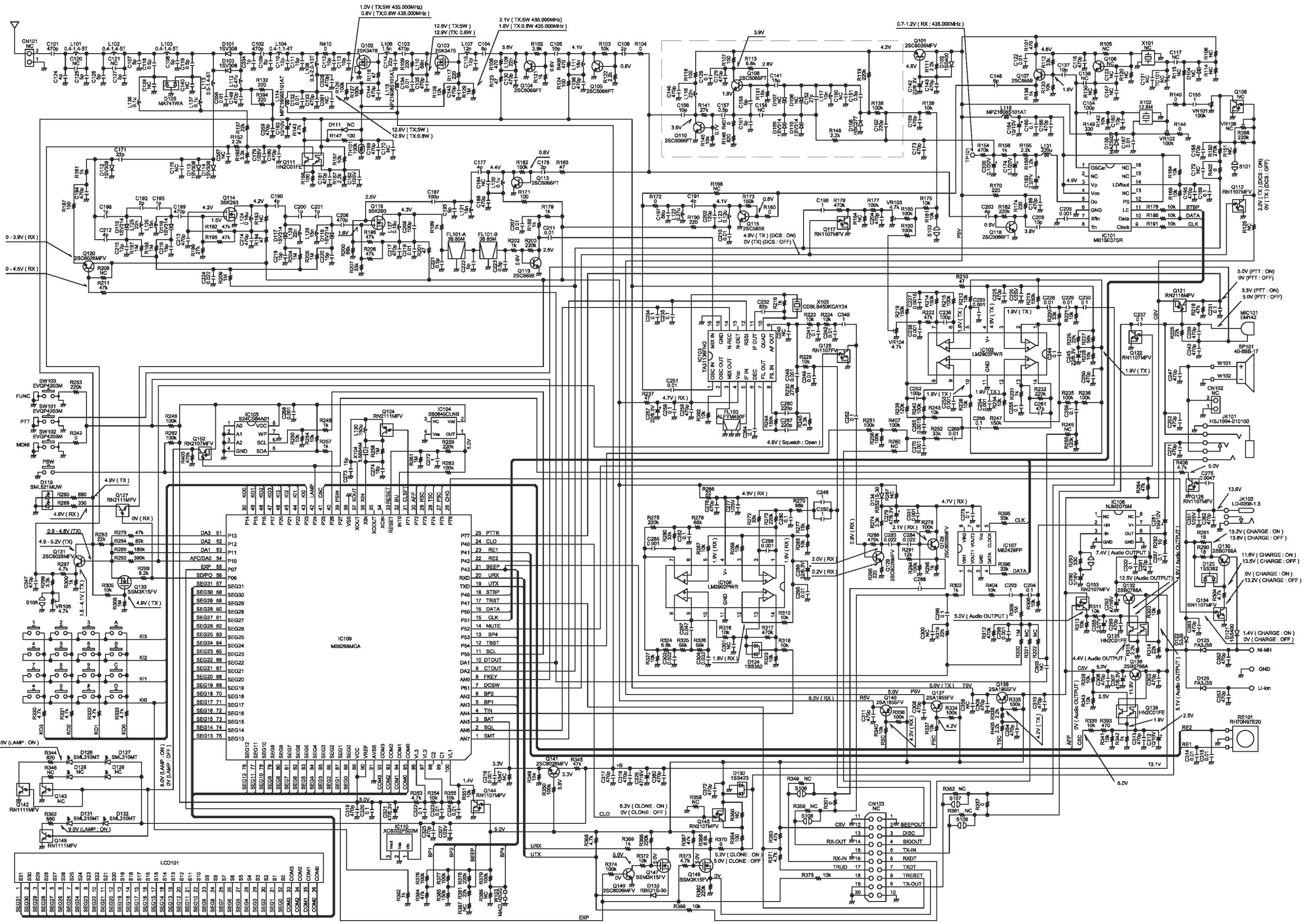
BLOCK DIAGRAM (DJ-S17)
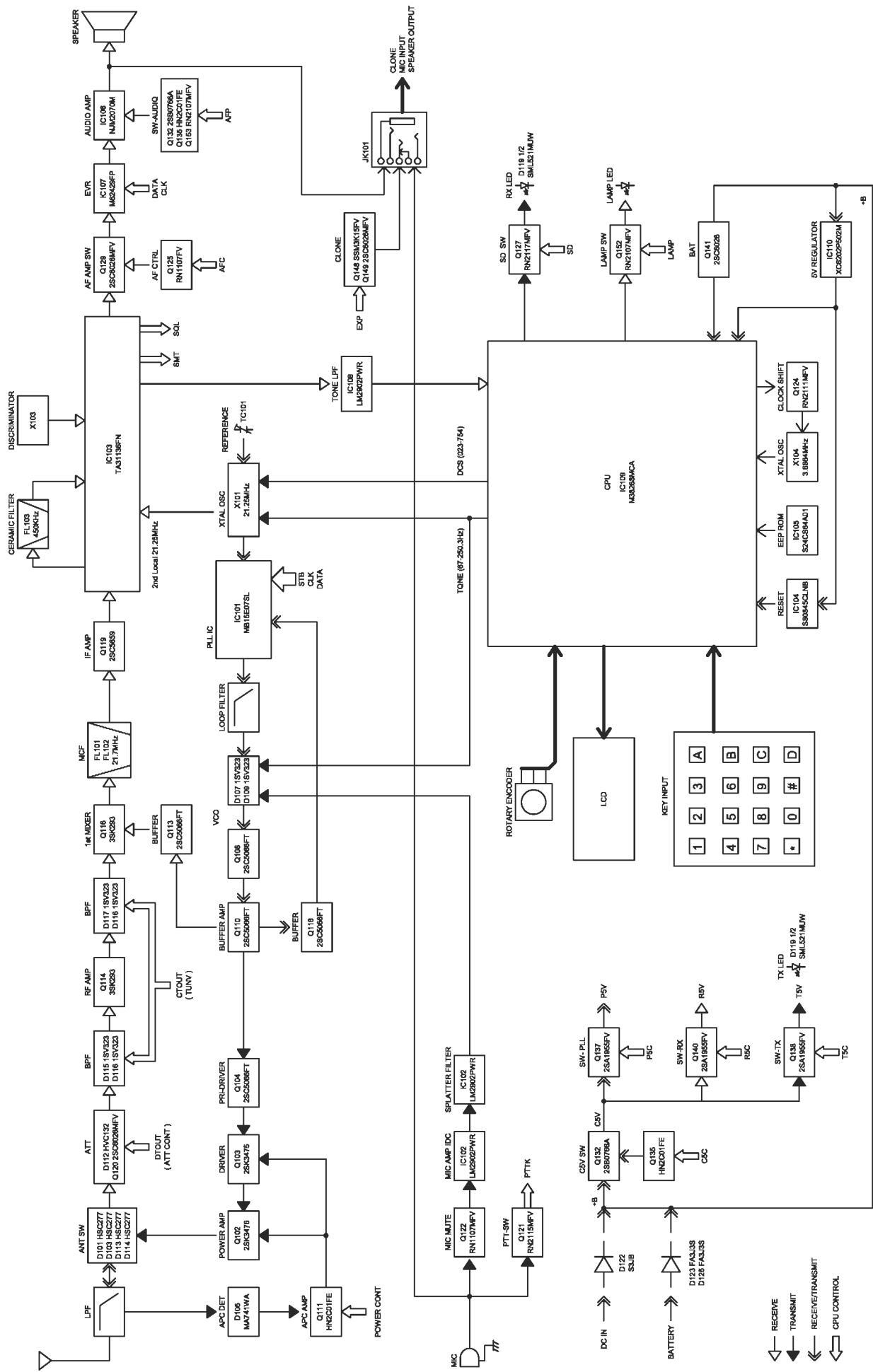
BLOCK DIAGRAM (DJ-S47)
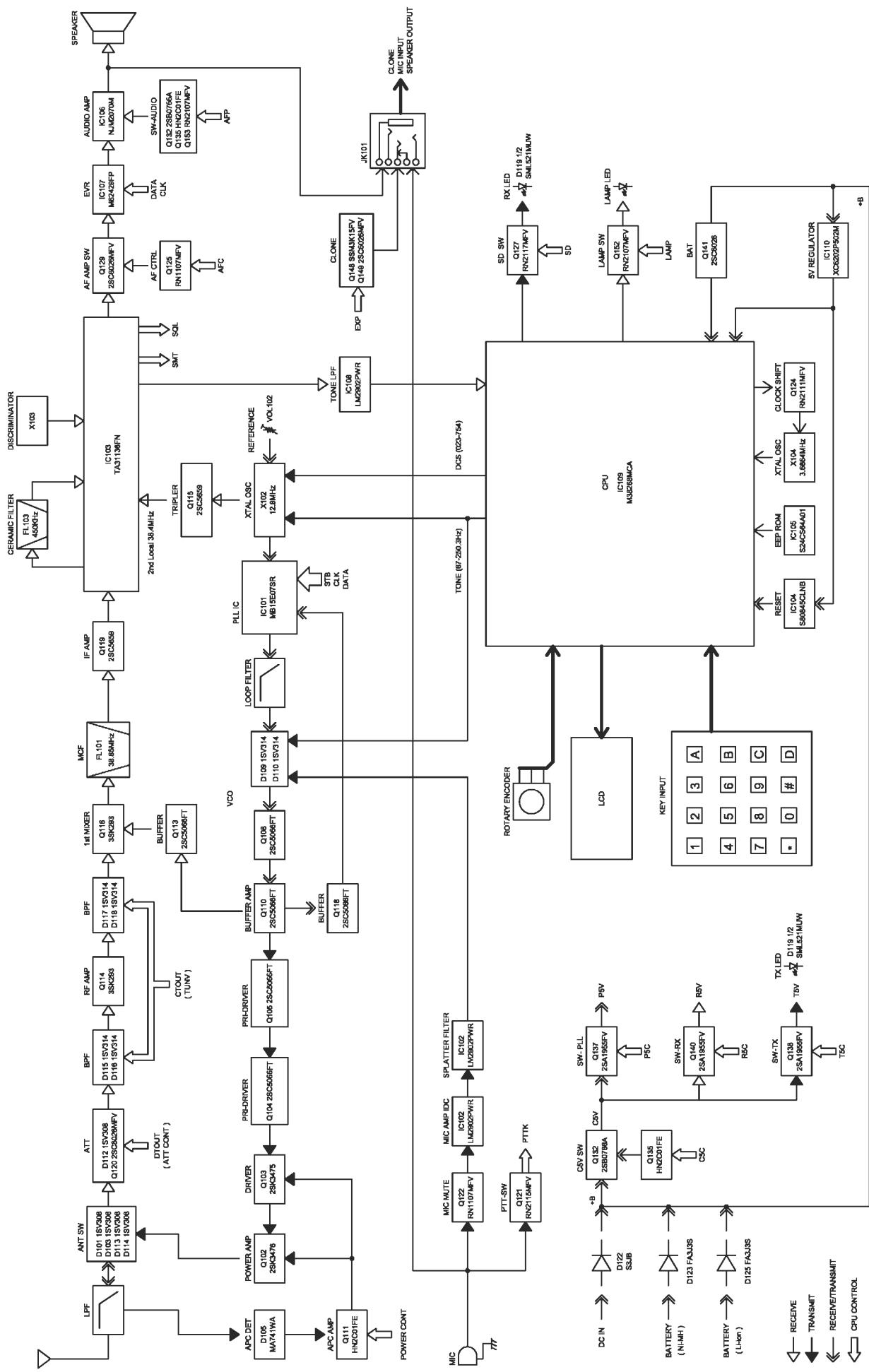
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