DJ-G5

Service Manual

CONTENTS

General

			VHF	UHF
Receiver range(MHz)	DJ-G5T	L-band	108.000~173.995 (AM FM)	420.000~479.995 (FM)
		R-band	1 30.000~I 73.995 (FM)	
	DJ-G5E		144.000~145.995	430.000~439.995
Transmitter range(MHz)	DJ-G5T		144.000~147.995	438.000~449.995
	DJ-G5E		144.000~145.995	430.000~439.995
Modulation			F2E.,F3E(FM)	
Antenna impedance			50 ohm	
Operating temperature range			-10 ~ +60*C	
Supply voltage (rated voltage)	External (V)		4.5~16.0(13.8)	
	Ni-Cd(V)		4.5~16.0(4.8)	
Current (regulated supply voltage)	Tx Hi: 13.8VDC(external)		approx. 1.4A	approx. 1.5A
	Tx Hi: 9.6VDC(Ni-Cd)		approx. 1.4A	approx. 1.5A
	Tx Hi: 7.2VDC(Ni-Cd)		approx. 1.4A	approx. 1.5A
	Tx Hi: 4.8VDC(Ni-Cd)		approx. 1.0A	approx. 1.2A
	TxMid: 4.8VDC(Ni-Cd)		approx. 0.8A	
	TxLo: 4.8VDC(Ni-Cd)		approx. 0.5A	
	Rxsquelched(twinband)		approx. 85mA	
	Rxsquelched(monoband)		approx. 50mA	
	Rx Battery-Save On (800/200 twin band)		approx. 25mA	
Ground			Negative ground	
Microphone impedance			2k ohm	
Dimensions without projection (with projections)			W57(63) x H138(155) x D27.5(31.5)	
Weight (Ant. belt-clip, strap, and Ni-Cd EBP-33N inclusive)			approx. 350g	

Transmitter

		VHF	UHF
Power output (regulated supply voltage)	Hi: 13.8VDC(external)	approx. 5W	
	Hi: 9.6VDC(Ni-Cd)	approx. 4.5W	
	Hi: 7.2VDC(Ni-Cd)	approx. 3.5w	approx. 3W
	Hi: 4.8VDC(Ni-Cd)	approx. I.5W	approx. 1 W
Modulation		Variable reactance	
Maximum deviation		+/-5kHz	
Spurious emission		notmorethan-60dB	

Receiver

			VHF	UHF
System			Double-conversion superheterodyne	
First I.F.			38.9MHz	45.1 MHz
Second I.F.			455kHz	
Sensitivity		L-band: 144.000~147.995MHz R-band: 438.000~449.995MHz	better than -16dBu	better than -15dBu
	DJ-G5T	L-band: 438.000~449.995MHz R-band: 144.000~147.995MHz	better than -12dBu	
		L-band: 144.000~145.995MHz R-band: 430.000~439.995MHz	better than -16dBu	better than -15dBu
	DJ-G5E	L-band: 430.000~439.995MHz R-band: 144.000~145.995MHz	better than-12dBu	
Squelch sensitivity			better than-20dBu (0.1uV)	
Selectivity (-6dB/-60dB)			more than 12kHz / less than 30kHz	
A.F.output(@10% distortion)			100mW(8ohm load)	

CIRCUIT DESCRIPTTON

1) Receiver System

The receiver system is the double-conversion superheterodyne. ln L band the first IF is 38.9MHz and second IF is 455kHz, and in R band the first IF is 45.1MHz and second IF is 455kHz.

1 Front End

1-1 108.00MHz~ 173.995MHz (144M Band Main)

The receiving signal is passed through the low-pass filter (L90, L91 , L92, C220, C229, C230, C231, C235), and amplified in RF amplifier (Q77), then led to the resonant circuit (L85, L86, varicap D68, D69). The signal is amplified in RF amplifier Q75, and passed through the resonant circuit (L81 , L82 varicap D66 and D67), then converted into the frequency of 38.9MHz in the mixer Q79.

Two resonant circuits consisting of L85, L86, varicap D68, D69, L81 , L82, varicap D66, D67, are controlled by the trucking voltage to obtain the best condition to the receiving frequency.

The local signal from VVCO OUT is passed through the buffer Q79, and fed to the base of the mixer Q76. The sum of the displayed frequency and IF frequency is employed.

1-2 420.00MHz~51 1.995MHz: (430M Band Sub)

The receiving signal is passed through the band-pass filter (C59, C60, C61 , C66, C67, C68, L57, L58, L53, L54), RF amplifier (Q62, Q72), band switch (D63), and high-pass filter (C175, C176, C186, C187, L77, L78), and converted into the frequency of 38.9MHz in mixer (Q74).

The local signal is passed through the buffer (Q70), and the difference frequency between IF frequency and the displayed frequency is fed to the base of the mixer (Q74).

1-3 130.00MHz~173.995MHz (144M Band Sub)

The receiving signal is passed through the low-pass filter (L90, L91 , L92, C220, C229, C230, C231 and C235), and RF amplifier (Q68), low-pass fitter (C145, C146, C153 and C154), then converted into the frequency of 45.1MHz in the mixer (Q67).

The local signal is passed through the buffer (Q69), then the sum of displayed frequency and IF frequency is fed to the base of the mixer (Q67).

1-4 420.00MHz~51 1.995MHz (433M Band Main)

The receiving signal is passed through the band-pass filter (C59, C60, C61 , C66, C67, C68, L57, L58, L53, L54), RF amplifier (Q62, Q72) and the band-pass filter (FL51), and amplified in RF amplifier (Q63), then converted into the frequency of 45.1MHz.

The band-pass filter (FL51) is the helical filter to obtain the band width characteristics.

The local signal from UVCO OUT is passed through the diode switch (D58), buffer (Q64), then the difference frequency between the displayed and IF is fed to the base ofthe mixer (Q61).

2 IF

2-1 L Band

The sum/difference between the receiving signal and local signal is made in each mixer. The crystal filter (XF53) selects the difference of 38.9MHz and eliminates unwanted signal, then it is amplified in the first IF amplifier (Q78).

2-2 R Band

The sum/difference between the receiving signal and local signal is made in each mixer. The crystal filter (XF51) selects the difference of 45.l MHz and eliminates unwanted signal, then it is amplified in the first IF amplifier (Q60).

3 Demodulation

3-1 L Band

After amplified in the first IF amplifier (Q78), the signal is fed to the demodulation IC (IC302) Pin24. The first IF signal outputted to Pin24 (38.9MHz) is mixed in the mixer of IC302 with the local signal of 38.455MHz which is oscillated in the oscillation circuit of IC302 and the crystal oscillator (X303), then converted into the second IF signal of 455kHz. The second IF is supplied from the IC302 Pin3. After eliminating unwanted signal by the ceramic filter (FL302), the signal is applied to Pin5 and Pin7.

As for the FM demodulation, the second IF signal applied to Pin7 is demodulated in limiter amplifier and quadrature detection circuit of IC302 when IC302 Pinl4 is open, and it is outputted from Pinl2 as the audio signal.

As for the AM demodulation, the second IF signal applied to Pin5 is demodulated in AM amplifier and AM detection circuits of IC302 when the voltage of IC302 Pin14 is low, and it is outputted from Pinl3 as the audio signal.

3-2 R Band

After amplified in the first IF amplifier (Q60), the signal is applied to the demodulation IC301, Pinl6. It is mixed in the mixer of IC301 with the local signal of 45.555MHz which is oscillated in the oscillation circuit and the crystal oscillator (X301) of IC301, then converted into the second IF signal of 455kHz. The second IF is outputted from IC301 Pin3, and applied to Pin5 and Pin7 after eliminating unwanted signal by the ceramic filter (FL30l).

4 Audio Circuit

4-1 FM (L band

The audio signal supplied from IC302 is pre-emphasized white transmitting. So the audio frequency should be compensated in the de-emphasis circuit (R366, C363), then the signal is passed through FM/AM selection switch (IC303). The frequency of 300Hz or below is cut in the audio high-pass fitter circuit (Q313), and it is applied to the electronic volume (IC304) Pin1. The signal is passed through the buffer (IC306), and adjusted the volume, then led to the audio power amplifier (IC307) to drive the speaker.

4-2 AM (L band

When AM mode is selected, the switching transistor (Q312) is turned ON, and IC302 Pin14 becomes low, then AM demodulation circuit of IC302 is activated.

The audio signal provided from IC302 Pin14 is passed through the de-emphasis circuit (R362, C360), and FM/AM selection switch (IC303), then led to audio high-pass filter circuit (Q313), electronic volume (IC304), buffer (IC306) and the audio power amplifier (IC307) to drive the speaker.

Note:

The FM detection circuit in IC301 (TK10930) is operating even while AM receiving. (The squelch circuit is activated by FM detection output.) So the FM audio is not outputted by FM/AM selection switch (IC303).

4-3 FM (R band)

The audio signal supplied by IC301 Pin9 is compensated the audio frequency characteristics in de-emphasis circuit (R330, C327), and the signal is passed through the audio high-pass filter (Q306), then applied to the electronic volume (IC304) Pin20. It is passed through the buffer (IC305), and led to the audio power amplifier (IC307) to drive the speaker.

5 Squelch Circuit

5-1 L Band

A part of the audio signal of IC302 Pin12 is selected and amplified by the noise amplifiers in R351 , R352, R350, R353, C351, C352, C353, and IC302. Then it is supplied from IC302 Pin20 to be amplified again in the noise amplifier (Q309). The amplified noise factor is rectified in D302, adjusted the level in VR303, and applied to CPU (IC508) Pin96, then converted to the digital signal.

5-2 R Band

A part of the audio signal of IC301 Ping is selected and amplified by the noise amplifiers in R316, R317, R318, R319, C318, C319, C320, and IC301. Then it is supplied from IC301 Pin11 to be amplified again in the noise amplifier (Q303). The amplified noise factor is rectified in D301 , adjusted the level in VR30I , and applied to CPU (IC508) Pin97, then converted to the dligital signal.

6 Attenuator Circuit
6-1 VHF Band

When the ATT key is pressed, "L" is applied from shift resistor (IC52) Pin14, and D71 is turned ON, then the Attenuator circuit (Q56, R151, C194, R160) is activated.
The receiving signal passed through the low-pass filter is attenuated approximately 15dB by the attenuator to decrease the interference of the adjacent channel, etc.

6-2 UHF Band

When the ATT key is pressed, "L" is applied from shift resistor (IC52) Pin13, and D55 is turned ON, then the Attenuator circuit (Q56, R73, C90, R80) is activated.
The receiving signal passed through the low-pass filter is attenuated approximately 15dB by the attenuator to decrease the interference of the adjacent channel, etc.

2) Transmitter System
1 Demodulation Circuit

The voice is converted into the electric signal by the internal or external microphone, then it is applied to the mic amplifier (IC310). This IC310 has two operational amplifiers. The pre-emphasis and IDC consist of Pin1, 2 and 3, and the splutter filter consists of Pin5, 6 and 7.
The output from the microphone amplifier is passed through variable resistors VR305 and VR306 for maximum deviation adjustment to cathode of varicap diode of the VCO, controlling the VCO frequency and so producing a frequency-modulation.

2 Power Amplifier
2-1

The transmitting signal oscillated in VVCO is amplified in pre-drive amplifier (Q81) and drive amplifier (Q80), then fed to the power module (IC54). The transmitting signal amplified in IC54 is supplied to the antenna after attenuated the harmonics enough in the antenna switch (D72) and the Low-pass filter (L90, L91 , L92, C220, C229, C230,C231 , C235).

2-2

The transmitting signal oscillated in UVCO is amplified in pre-drive amplifier (Q54) and drive amplifier (Q53), then fed to the power module (IC51). The transmitting signal amplified in IC51 is supplied to the antenna after attenuated the harmonies enough in the antenna switch (D52), and the bandi)ass filter (L57, L58, L53, L54, C59, C60, C61, C66, C67, C68).

3 APC Circuit
3-1 VHF Band

A part of transmitting voltage from low-pass filter is detected by D74, and converted into the DC voltage. The converted detection voltage is differential amplified, and the output voltage controls the bias voltage of power module (IC54) Pin2 to fix the transmitting power.

3-2 UHF Band

A part of transmitting voltage from low-passS filter is detected by D56, and converted into the DC voltage. The converted detection voltage is differential amplified, and the output power controls the bias voltage of power module (IC51) Pin2 to fix the transmitting power.

3) PLL Synthesizer Circuit
1 PLL

> The data is sent to the PLL IC (IC53) Pin2 and the clock is sent to Pin3 from CPU (IC508), then the ratio of the division is decided each in L band and R band. Each VCO oscillating signal is amplified in the buffer (Q73: L band, Q66: R band), and the signal in L band is applied to Pin15, then the signal in R band is applied to Pin6. The programmable divider of IC53 is determined by frequency data, and it divides (1/N) input signal of IC53. Resulting signal will be 5kHz or 6.25kHz.

2 Reference frequency division

> The reference frequency of 5kHz or 6.25kHz according to the channel step is produced by dividing the reference oscillation 12.8MHz (X51) by 2560 or 2048, the data from CPU (IC508). The channel steps of 5kHz, 10kHz, 15kHz, 20kHz, 25kHz, 30kHz and 50kHz use the reference frequency of 5kHz, and the channel step of l2.5kHz uses the reference frequency of 6.25kHz.

3 Phase comparator

> The reference frequency of IC53 is 5kHz or 6.25kHz.
> The VCO output frequency divided by N is compared with 5kHz or 6.25kHz in the phase comparator.

4 PLL Loop Filter Circuit

> If the phase error should occur in PLL, the charge pump of IC53 Pin13 (L band) and Pin8 (R band) outputs the pulse. The signal is converted into the DC voltage in PLL loop filter, then inputted to the varicap of each VCO unit.

5 VVCO Circuit (VHF Band)

> Q705 is turned ON, and the desired frequency is oscillated in the Colpitts osclllator consisting of Q701. The frequency control voltage is apprled to the varicap (D702, D703), and the osciflating frequency is changed, then amplified in VCO buffer (Q703), and outputted from the VCO unit.

6 VVCO Circuit (UHF Band)

> Q704 is turned ON, and the desired frequency is oscillated in the Colpitts oscillator consisting of Q702. The frequency control voltage is applied to the varicap (D704, D705), and the oscillating frequency is changed, then amplified in VCO buffer (Q703), and outputted from the VCO unit.

7 UVCO Circuit (UHF Band)

> Q605 is turned ON, and the desired frequency is oscillated in the Colpitts oscillator consisting of Q601. The frequency control voltage is applied to the varicap (D602, D603), and the oscillating frequency is changed, then amplified in VCO buffer (Q603), and outputted from the VCO unit.

8 UVCO Circuit (VHF Band)

> Q604 is turned ON, and the desired frequency is oscillated in the Colpitts oscillator consisting of Q602. The frequency control voltage is applied to the varicap (D604, D605), and the oscillating frequency is changed, then amplified in VCO buffer (Q603), and outputted from the VCO unit.

4) CPU and Peripheral Circuit
1 LCD Display Circuit

> The strobe, serial data, and clock are sent to the LCD driver (IC503) Pin 75~77 from CPU (IC508), and the LCD is activated with 1/4 duty and l/3 bias. The frame frequency is 137Hz.

2 Display Lamp Circuit

The regulated power supply circuit consisting of Q505, Q507, R508, R509 supplies H from CPU (IC508) when LAMP key is pressed. Then it is applied to the base of Q507, and the voltage of 3.5V is outputted from the collector of Q505. It is fed to each LED (D503~D506, D509,D511 ,D513,D514).

3 Reset and Backup Circuit

When the voltage of approximately 3.0V or more is supplied from the external (DC jack, battery), the reset signal of "H" level is outputted from Reset IC (IC506), and it is fed to CPU (IC508) Ping, then the CPU is reset. Until the clock (X502) of CPU is stabilized, the reset signal is fed to CPU after it is delayed in C522 and R58l. When the voltage from external is decreased to approximately 3.3V or below, the voltage of Pin18 in CPU is changed from "H" level to "L" level, then the CPU enters into the backup mode.

4 S (signal) Meter Circuit
4-1 L Band

The DC voltage of IC302 Pin16 is low when the signal is weak and high when the signal is strong. This change of DC voltage is adjusted the level at the trim pot (VR304), and led to CPU (IC508) Pin98, then displayed on the LCD as S meter after A/D converting.

4-2 R Band

The DC voltage of IC301 Pin13 is adjusted the level at the trim pot (VR302), and led to CPU (IC508) Pin99, then displayed on the LCD as S meter after A/D converting.

5 Full-duplex Circuit

When the DUP key is pressed, in the receiving side Q317 is turned ON and the audio signal supplied to audio amplifier is decreased. In transmitting side Q510 is turned ON, and the modulation signaf is decreased to prevent the howling.

6 X-Band Repeater Circuit

In X-band repeater mode, Q323 is turned OFF, the audio Signal which is opened the squelch is passed through the audio high-pass filter (Q313: L band, Q306:R band), and the signal is applied to the other modulation circuit. Then the radio enters into the transmitting mode.

7 DTMF
7-1 Encoder

The DTMF encoder is built in the CPU (IC508). The DTMF signal output from Pin91 is adjusted its level at VR308, and amplified by the mic amplifier (IC310), then fed to the varicap for modulation of each VCO.
Simultaneously the monitor sound is passed through AF circuit, and it is supplied from the speaker.

7-2 Decoder

A part of the audio signal which is demodulated in IC301 , IC302 is fed to the DTMF switch (IC501), then only the selected band audio signal is fed to DTMF IC (IC502) Pin1. The supplied signal is judged whether valid or not by the signal judgement circuit in IC502, and converted into 4-bit code, then supplied to IC508 Pin85.

8 Tone Squelch
8-1 Encoder

The tone signal supplied from Tone IC (IC504) Pin21 (67.OHz~254.lHz) is adjusted the level at VR307, and amplified n the tone amplifier (Q322), then applied to the varicap for modulation of each VCO.

8-2 Decoder

A part of the audio signal which is demodulated in IC301, IC302 is fed to the tone switch (IC504), then only the selected band audio signal is fed to tone IC (IC504) Pin1.
When the signal is accord with the programmed tone frequency, "LO" is outputted from IC504 Pin14, and it is fed to CPU (IC508) Pin74, then the squelch is opened.

5) Terminal function of CPU

No.	Name	Pin Name	I/O	Description	H	L	HiZ
1	ANO	+BD	I	Power supply voltage detection	Analog IN		
2	AVSS	GND	/	Analogground			
3	TEST	GND	/	Connect to ground			
4	X2	OPEN		Open when not used			
5	X1	VDD	/	Power supply			
6	VSS	GND	/	Ground			
7	OSC1	OSC1	I	Internal oscillator input			
8	OSC2	OSC2	O	Internal oscillator output			
9	RES	REST	I	CPU reset	At work		
10	NMI	VDD	/				
11	P20	CLK	O	Clock input	Pulse	Normal	
12	P21	DATA	O	Data input	Pulse	Normal	
13	P22	STB1	O	RF4094 strobe	Pulse	Normal	
14	P23	STB2	O	IF4094 strobe	Pulse	Normal	
15	P24	STB3	O	Electronic volume strobe	Pulse	Normal	
16	P25	OPEN	/				
17	P26	+BDSW	O	+BD input ON/OFF	ON	OFF	
18	IRQO	BU	I	Backup signal input	Normal	Backup	
19	P17	RE1	I	Rotary encoder up input	OFF	ON	
20	P16	RE2	I	Rotary encoder down input	OFF	ON	
21	P15	PSW	I	Power switch input	OFF	ON	
22	P14	OPEN					
23	P13	OPEN					
24	TMOFH	BEEP	O	Beep sound output	Pulse	Pulse	Normal
25	TMOFL	1750	O	Tone burst output	Pulse	Pulse	Normal
26	P10	XBR	O	Cross band repeater ON/OFF	Normal	Repeater	
27	VSS	GND	/	Ground			
28	V3	OPEN					
29	V2	OPEN					
30	V1	OPEN					
31	VCC	VDD	/	Power supply terminal			
32	PA3	LBSY	I	LCD driver data input ON/OFF	Permitted	Inhibited	
33	PA2	LCLK	O	LCD driver clock	Normal	Pulse	
34	PA1	LDATA	O	LCD driver serial data	Normal	Pulse	
35	PA0	LSTB	O	LCD driver strobe	Inhibited	Permitted	
36	P50	PT5/PTT	I	PTT input	ON	OFF	
37	P51	MONt	I	Monitor key input	OFF	ON	
38	P52	TBST	I	TX(toneburst)input	OFF	ON	
39	P53	FUNC	I	Function key input	OFF	ON	
40	P54	BP3	I	Band plan (TX/RX expansion)	Expanded	Normal	
41	P55	UHF	I	UHF key input	OFF	ON	
42	P56	VOLU	I	VOL up key input	OFF	ON	
43	P57	SQLD	I	SQL down key input	OFF	ON	
44	P60	SQLU	I	SQL up key input	OFF	ON	
45	P6l	SRCH	I	Search key input	OFF	ON	
46	P62	VHF	I	VHF key input	OFF	ON	
47	P63	VOLD	I	VOL down key input	OFF	ON	
48	P64	KIN1	I	Key matrix input1	OFF	ON	
49	P65	KIN2	I	Key matrix input2	OFF	ON	
50	P66	KIN3	I	Key matrix input3	OFF	ON	

No.	Name	Pin Name	IIo	Description	H	L	HiZ
51	P67	KIN4	I	Key matrix input4	OFF	ON	
52	P70	KOT1	O	Key matrix output1	OFF	ON	
53	P71	KOT2	O	Key matrix output2	OFF	ON	
54	P72	KOT3	O	Key matrix output3	OFF	ON	
55	P73	KOT4	O	Key matrix output4	OFF	ON	
56	P74	PRST	O	PLL reset pulse input judgement	Normal	Pulse	
57	P75	SDA	I/O	EEPROM data	PL	SE	Normal
58	P76	SCL	O	EEPROM clock	PL	SE	Normal
59	P77	50SW	O	5V ON/OFF	ON	OFF	
60	P80	OPEN	/				
61	P81	TFD	O	Full duplex ON/OFF when transmittin	Full duplex	Normal	
62	P82	UTBST	O	Right side TX lamp ON/OFF	ON	OFF	
63	P83	VTBST	O	Left side TX lamp ON/OFF	ON	OFF	
64	P84	VTXCV	O	VHF TX circuit for power supply		ON	OFF
65	P85	UTXCV	O	UHF TX circuit for power supply		ON	OFF
66	P86	VBSY	O	VHF RX busy lamp ON/OFF		ON	OFF
67	P87	UBSY	O	UHF RX busy lamp ON/OFF		ON	OFF
68	P90	LAMPC	O	LAMP ON/OFF	ON	OFF	
69	P91	PCNT	O	Vcc ON/OFF	ON	OFF	
70	P92	MUTE	O	Microphone mute	Muted	Normal	
71	P93	RFD	O	Full duplex ON/OFF when receiving	Full duplex	Normal	
72	P94	DSW	O	DTMF band selection	VHF	UHF	
73	P95	TSW	O	Tone band selection	VHF	UHF	
74	P96	TSQD	I	Tone detection signal input	None	Tone	
75	P97	TSTB	O	Tone IC strobe	Pulse	Normal	
76	VCC	VDD	/	Power supply			
77	PD0	AM	O	AM circuit ON/OFF	AM	FM	
78	PD1	AFPC	O	Audio amplifier power supply ON/OFF	ON	OFF	
79	PD2	VAFS	O	VHF AF mute	Muted	ON	
80	PD3	UAFS	O	UHF AF mute	Muted	ON	
81	PD4	OPEN					
82	PD5	IFPC	O	IF power supply ON/OFF	ON	OFF	
83	PD6	VRXC	O	VHF IF circuit power supply	OFF	ON	
84	PD7	URXC	O	UHF IF circuit power supply	OFF	ON	
85	PE0	DSD	I	DTMF 4-bit data	Normal	Pulse	
86	PE1	ACK	O	DTMF clock	Pulse	Normal	
87	PE2	DSTD	I	DTMF detection signal	Signal	None	
88	PE3	DPD	O	DTMF operation ON/OFF	isstopped	Operation	
89	AVCC	AVCC	/	A/D converter power supply			
90	TONEM	TRAC	O	VHF trucking voltage output			
91	TONED	DTON	O	DTMF signal output			Normal
92	VTref	VDD	/	Power supply for DTMF reference level			
93	AVref	AVCC	/	Power suppTy for A/D reference level			
94	AN7	BP2	I	Band plan2			
95	AN6	BP1	I	Band plan1 (destination)			
96	AN5	VSD	I	VHF SD signal input	No signal	Analog in	
97	AN4	USD	I	UHF SD signal input	No slgnal	Analog in	
98	AN3	VSMT	I	VHF S meter signal input	Analog in		
99	AN2	USMT	I	UHF S meter signal input	Analog in		
100	AN1	MRC	I	Microphone remote control input	Analog in		

6) Terminal function of 4094

4094 po	Port Name	Function	Logic	Description	VHF 145 MHz	VHF 433 MHz	UHF 433 MHz	UHF 145 MHz	BS OFF TIME
Q11	UHI	UHF high power control	Active Low	Low power	H	H	H	H	H
Q12	UMID	UHF middle power control	Active Low	UHF middle=H	H	H	H	H	H
Q13	VHI	VHF high power control	Active Low	Low power	H	H	H	H	H
Q14	VMID	VHF middle power control	Active Low	VHF middle=H	H	H	H	H	H
Q15	VATTC	VHF RX attenuater control	Active Low	ATT ON	H/L	H/L	H/L	H/L	H
Q16	UATTC	UHF RX attenuater control	Active Low	ATT ON	H/L	H/L	H/L	H/L	H
Q17	VCO4SW	UHF VCO switch	Active Low		H/L	H/L	L	H	H
Q18	VCO1SW	VHF VCO switch	Active Low		L	H	H/L	H/L	H
Q21									
Q22	USUBC	UHF 145MHz power control	Active Low		H/L	H/L	H	L	H
Q23	UMAINC	UHF 435MHz power control	Active Low		H/L	H/L	L	H	H
Q24									
Q25	VSUBC	VHF 435MHz power control	Active Low		H	L	H/L	H/L	H
Q26	VMAINC	VHF 145MHz power control	Active Low		L	H	H/L	H/L	H
Q27	UPLLC	UHF VCO power control	Active Low		H/L	H/L	L	L	H
Q28	VPLLC	VHF VCO power control	Active Low		L	L	H/L	H/L	H

7) Frequency Table

Band	IF Frequency	Display frequency	UP/LOW	Oscillation frequency	Mode
VHF	38.9MHz	108.000~173.995MHz	UP	146.900~212.895MHz	FM/AM
		420.000~511.995MHz	Low	381.100~473.095MHz	FM/AM
UHF	45.IMHz	130.000~173.995MHz	UP	175.100~219.095MHz	FM
		420.000~511.995MHz	Low	374.900~466.895MHz	FM

SEMICONDUCTOR DATA

1) AK2341 (XA0239)
CTCSS Encoder/Decoder

Pin No.	Pin Name	I/O	Function
1	RXIN	I	RX Signal Input
2	RXINO	O	AMP2 Output
3	TXINO	O	AMP1 Output
4	TXIN	I	TX Audio Input
5	RXOUT	O	RX Audio Output
6	TXOUT	O	TX Audio Output
7	VDD	-	Power Supply (1.8 ~ 5.5V)
8	XIN	I	Crystal Terminal (3.6864MHz)
9	XOUT	O	Crystal Terminal (3.6864MHz)
10	STB	I	Strobe for Serial Data
11	SDATA	I	Serial Data
12	SCLK	I	Serial Clock
13	DCS	I	DCS Input
14	DETOUT	O	Tone Detection Output (Detect: Low)
15	VSS	-	Ground
16	DREF	I	Tone Detection Level Adjust Input
17	TLINP	I	RX Tone Signal Reference Input
18	TLINN	I	RX Tone Signal Input
19	TLINO	O	AMP3 Output
20	RXTONE	O	RX Tone Signal Output
21	TXTONE	O	TX Tone Signal Output
22	AGNDIN	I	Analog Ground Input
23	AGND	O	Analog Ground Output
24	BIAS	I	Bias Input

AK2341

Left Pin			Right Pin
RXIN	1	24	BIAS
RXINO	2	23	AGND
TXINO	3	22	AGNDIN
TXIN	4	21	TXTONE
RXOUT	5	20	RXTONE
TXOUT	6	19	TLINO
VDD	7	18	TLINN
XIN	8	17	TLINP
XOUT	9	16	DREF
STB	10	15	VSS
SDATA	11	14	DETOUT
SCLK	12	13	DCS

Block Diagram

14
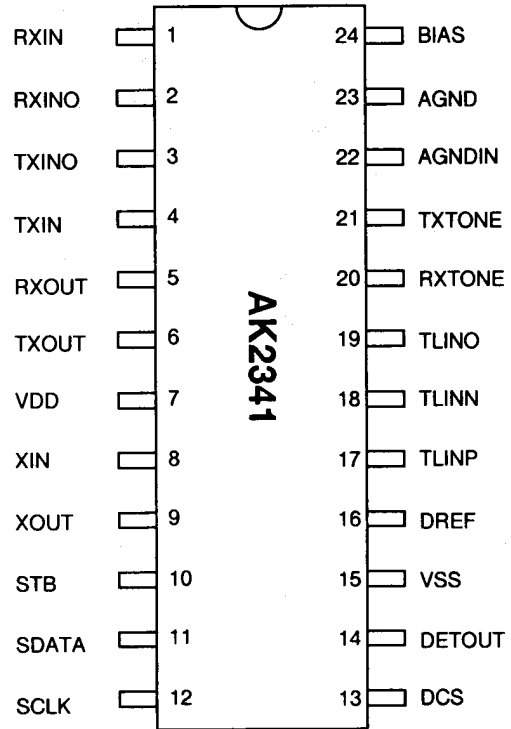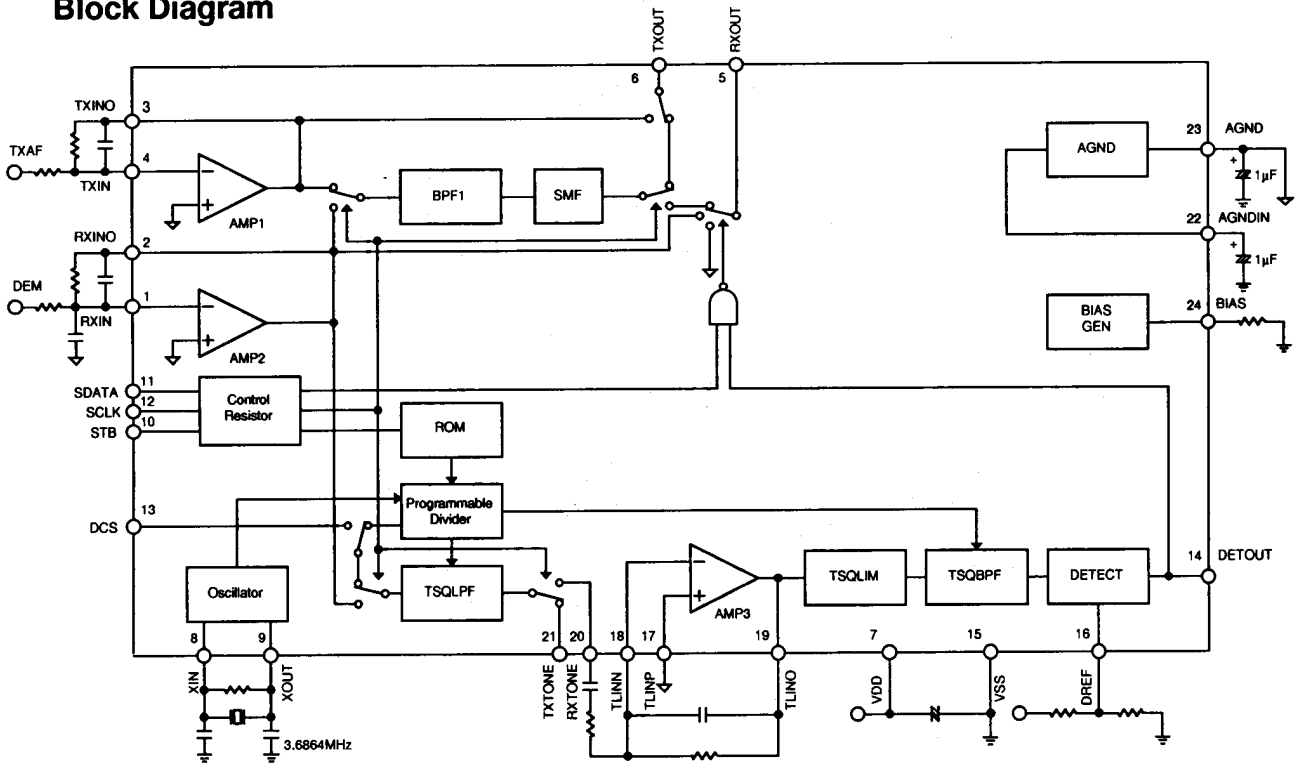
2) BU4094BF (XA0246)
8-Stage Shift Register

Pin			Pin	
$\overline{STROBE}$	1		16	V$_{DD}$
SERIAL IN	2		15	Output Enable
CLOCK	3		14	Q5
Q1	4		13	Q6
Q2	5		12	Q7
Q3	6		11	Q8
Q4	7		10	Q's
Vss	8		9	Qs

BU4094BF

Block Diagram

SERIAL IN — 2 — [8-STAGE SHIFT REGISTER] — 10 — Q's ⎫ SERIAL
CLOCK — 3 — ⎮ 9 — Qs ⎭ OUTPUT

$\overline{STROBE}$ — 1 — [8-BIT LATCHES]

OUTPUT ENABLE — 15 — [3-STAGE OUTPUTS]
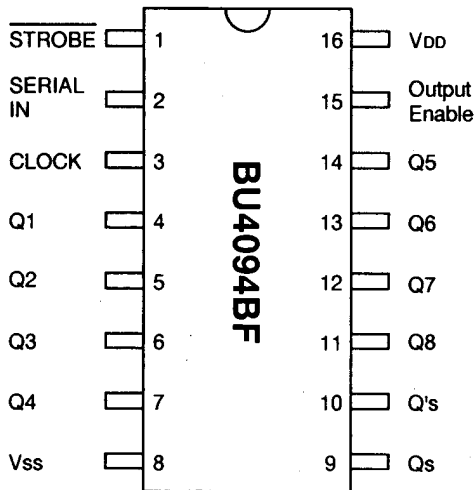
Q1 — PARALLEL OUTPUTS — Q8
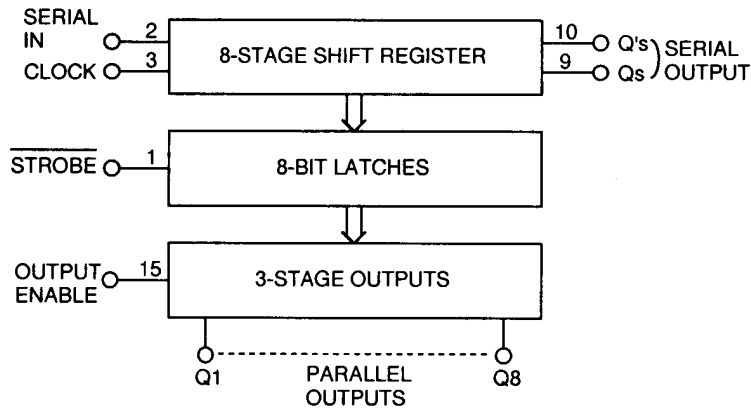
Truth Table

Clock	Output enable	Strobe	Data	Parallel outputs		Serial outputs	
				Q1	Qn	Qs	Q's
↑	L	X	X	Z	Z	Q7	No Chg.
↓	L	X	X	Z	Z	No Chg.	Qs
↑	H	L	X	No Chg.	No Chg.	Q7	No Chg.
↑	H	H	L	L	Qn-1	Q7	No Chg.
↑	H	H	H	H	Qn-1	Q7	No Chg.
↓	H	X	X	No Chg.	No Chg.	No Chg.	Qs

Z=High Impedance
X=Don't Care

15

3) HD6433877 (XA0505)
CPU

HD6433877

Pin	Left label		Pin	Right label

Left side pins:
- 1 PB0/AN0
- 2 AVss
- 3 TEST
- 4 X2
- 5 X1
- 6 Vss
- 7 OSC1
- 8 OSC2
- 9 RES
- 10 NMI
- 11 P20/IRQ4/ADTRG
- 12 P21/SCK1
- 13 P22/SI1
- 14 P23/SO1
- 15 P24/SCK3
- 16 P25/RXD
- 17 P26/TXD
- 18 P27/IRQ0
- 19 P17/IRQ3/TMIF
- 20 P16/IRQ2
- 21 P15/IRQ1
- 22 P14
- 23 P13/TMIG
- 24 P12/TMOFH
- 25 P11/TMOFL

Right side pins:
- 75 P97/SEG40
- 74 P96/SEG39
- 73 P95/SEG38
- 72 P94/SEG37
- 71 P93/SEG36
- 70 P92/SEG35
- 69 P91/SEG34
- 68 P90/SEG33
- 67 P87/SEG32
- 66 P86/SEG31
- 65 P85/SEG30
- 64 P84/SEG29
- 63 P83/SEG28
- 62 P82/SEG27
- 61 P81/SEG26
- 60 P80/SEG25
- 59 P77/SEG24
- 58 P76/SEG23
- 57 P75/SEG22
- 56 P74/SEG21
- 55 P73/SEG20
- 54 P72/SEG19
- 53 P71/SEG18
- 52 P70/SEG17
- 51 P67/SEG16

Top side pins (100–76):
- 100 PB0/AN1
- 99 PB2/AN2
- 98 PB3/AN3
- 97 PB4/AN4
- 96 PB5/AN5
- 95 PB6/AN6
- 94 PB7/AN7
- 93 AVREF
- 92 VTREF
- 91 TONED
- 90 TONEM
- 89 AVcc
- 88 PE3/SEG52/CL1
- 87 PE2/SEG51/CL2
- 86 PE1/SEG50/DO
- 85 PE0/SEG49/M
- 84 PD7/SEG48
- 83 PD6/SEG47
- 82 PD5/SEG46
- 81 PD4/SEG45
- 80 PD3/SEG44
- 79 PD2/SEG43
- 78 PD1/SEG42
- 77 PD0/SEG41
- 76 Vcc

Bottom side pins (26–50):
- 26 P10/TMOW
- 27 Vss
- 28 V3
- 29 V2
- 30 V1
- 31 Vcc
- 32 PA3/COM4
- 33 PA2/COM3
- 34 PA1/COM2
- 35 PA0/COM1
- 36 P50/WKP0/SEG1
- 37 P51/WKP1/SEG2
- 38 P52/WKP2/SEG3
- 39 P53/WKP3/SEG4
- 40 P54/WKP4/SEG5
- 41 P55/WKP5/SEG6
- 42 P56/WKP6/SEG7
- 43 P57/WKP7/SEG8
- 44 P60/SEG9
- 45 P61/SEG10
- 46 P62/SEG11
- 47 P63/SEG12
- 48 P64/SEG13
- 49 P65/SEG14
- 50 P66/SEG15

Block Diagram

16

4) LC75366M (XA0345)
Electric Volume

Equivalent Circuit
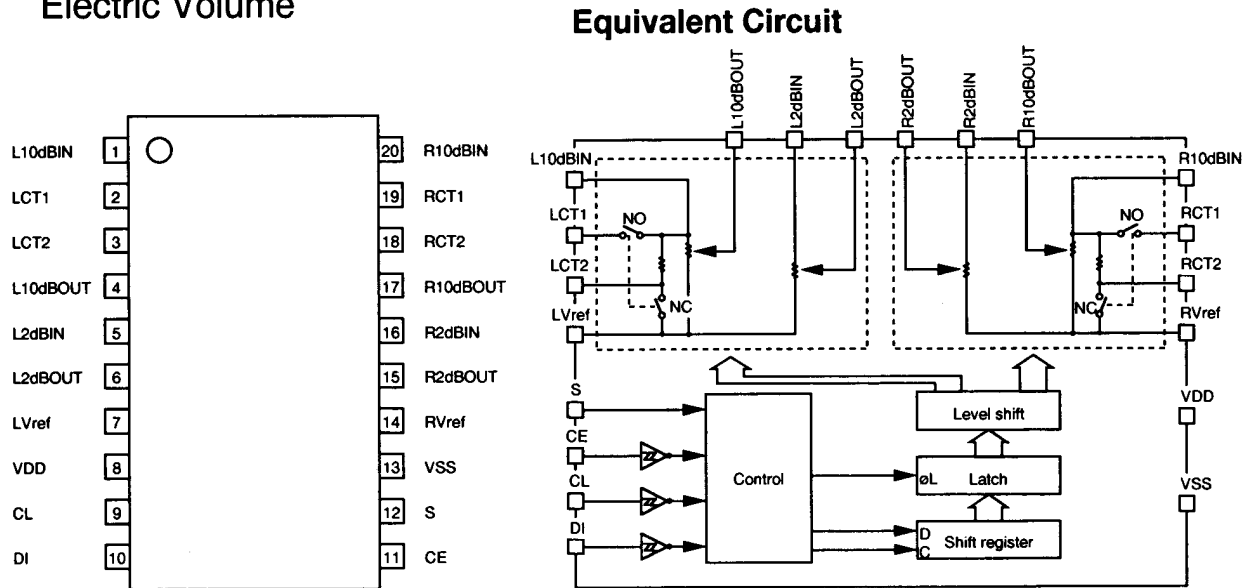
Ta=25°C, Vss=0V

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
THD	THD(1)	VIN=1Vrms, f=1kHz, flat over all, VDD=9V		0.006		%
	THD(2)	VIN=1Vrms, f=20kHz, flat over all, VDD=9V		0.015		%
Cross talk	CT	VIN=1Vrms, f=20kHz, flat over all, Rg=1kΩ		85		dB
Volume min. output	V0 min	VIN=1Vrms, f=20kHz, Volume-∞, L/R Vref~Vss: C=470µF		80		dB
All resistance value	RVOL(1)	10dB step	28.2	47	68.5	kΩ
	RVOL(2)	2B step	12	20	28	kΩ
Output off leak current	I off	L10dBIN, R10dBIN, LCT1 L2dBIN, R2dBIN, RCT1 L10dBOUT, R10dBOUT, LCT2 L2dBOUT, R2dBOUT, RCT2 LVREF, RVref	-10		+10	µA
Input "H" level current	I IH	VI=VDD (CL, CE, DI terminal)			+10	µA
Input "L" level current	I IL	VI=VSS (CL, CE, DI terminal)	-10			µA
Noise output voltage	VN	flat over all (IHF-A), VDD=9V, Rg=1kΩ		2	10	µA
Consumption current	IDD	VDD-VSS=11V			1	mA
Analog ON resistance	R ON	CT1	180	300	420	Ω
		CT2 between Vref	90	150	210	Ω
		0dB, -∞	0.6	1.0	1.4	kΩ
		Others	6.0	10.0	14.0	kΩ

5) LC73881M (XA0344)
DTMF Receiver
Frequency Table

FL	FH	Key	b3	b2	b1	b0
697	1209	1	L	L	L	H
697	1336	2	L	L	H	L
697	1477	3	L	L	H	H
770	1209	4	L	H	L	L
770	1336	5	L	H	L	H
770	1477	6	L	H	H	L
852	1209	7	L	H	H	H
852	1336	8	H	L	L	L
852	1477	9	H	L	L	H
941	1336	0	H	L	H	L
941	1209	*	H	L	H	H
941	1477	#	H	H	L	L
697	1633	A	H	H	L	H
770	1633	B	H	H	H	L
852	1633	C	H	H	H	H
941	1633	D	L	L	L	L
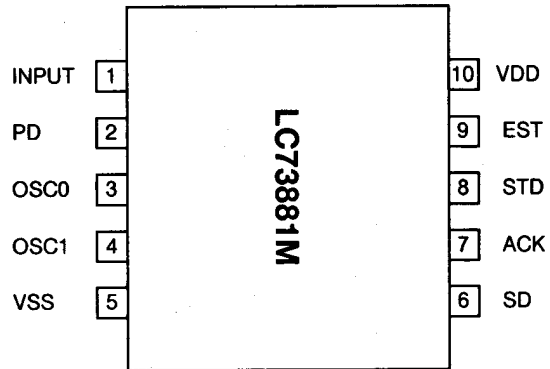
Function Table

No.	Name	I/O	Description
1	INPUT	I	Signal input terminal
2	PD	I	Set to "H" to enter into the standby mode.
3	OSC0	O	Crystal terminal (4.194304MHz)
4	OSC1	I	Crystal terminal (4.194304MHz)
5	VSS		Ground terminal: 0V
6	SD	O	Decoded serial 4-bit data output terminal LSB is supplied first.
7	ACK	I	Data shift terminal for SD
8	STD	O	DTMF signal is existed when STD is "H".
9	EST	O	DTMF signal is existed when EST is "H".
10	VDD		Power Supply: 2.7~5.5V

Block Diagram
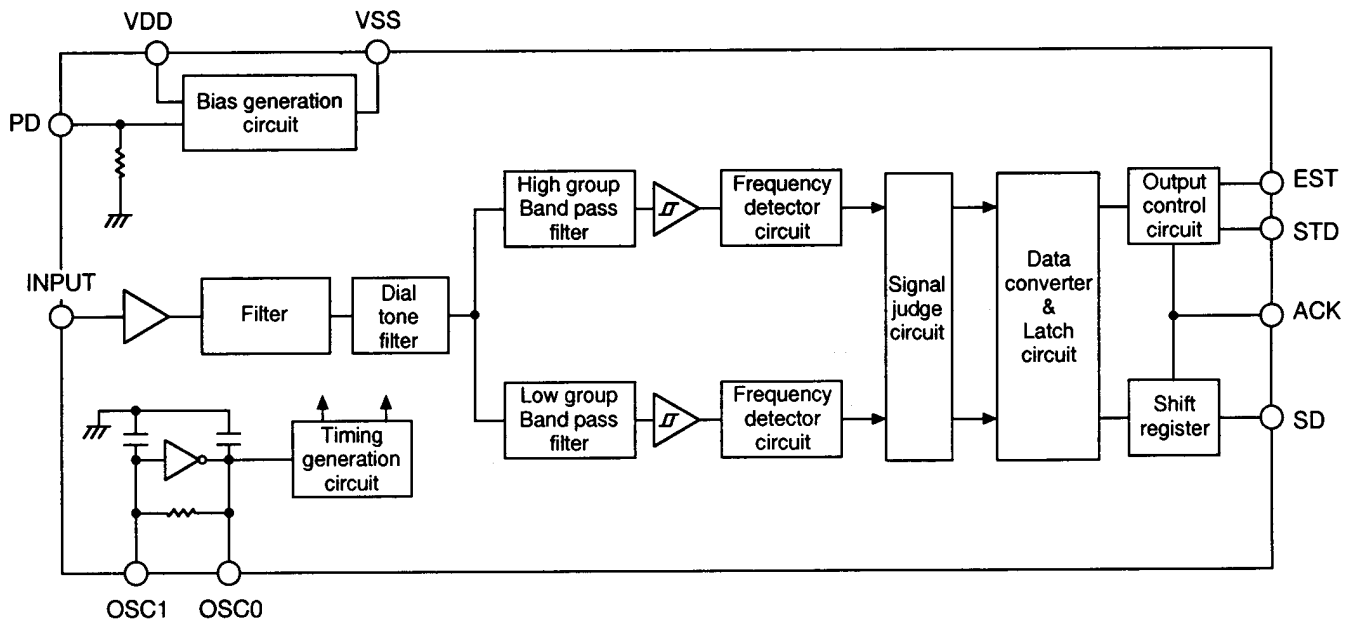
6) M64076GP (XA0352)
Dual PLL Synthesizer

XBo	1	20	GND
SI	2	19	Xin
$\overline{CPS}$	3	18	Xout
RST	4	17	OP2
Vcc	5	16	OP1
Fin1	6	15	Fin2
$\overline{Lock1}$	7	14	$\overline{Lock2}$
PD1	8	13	PD2
VT1	9	12	VT2
VF	10	11	GND

M64076GP
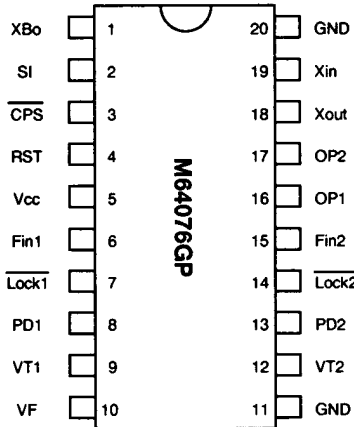
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Power supply voltage	Vcc	Fin=80~520MHz Vin=-10dBm	2.7	-	5.5	V
LPF supply voltage	VF		-	9	12	V
Local oscilltaor input level	Vin	Fin=80~520MHz Vcc=2.7~5.5V	-20	-	-4	dBm
Local oscilltaor input frequency	Fin	Vin=-20~-4dBm Vcc=2.7~5.5V	80	-	520	MHz
Xin input level	Vxin	Vcc=2.7~5.5V Fxin=10~25MHz Sine wave	0.4	-	1.4	Vp-p
Xin input frequency	Fxin	Vcc=2.7~5.5V Vxin=0.4~1.4Vp-p	10	-	25	MHz

Equivalent Circuit
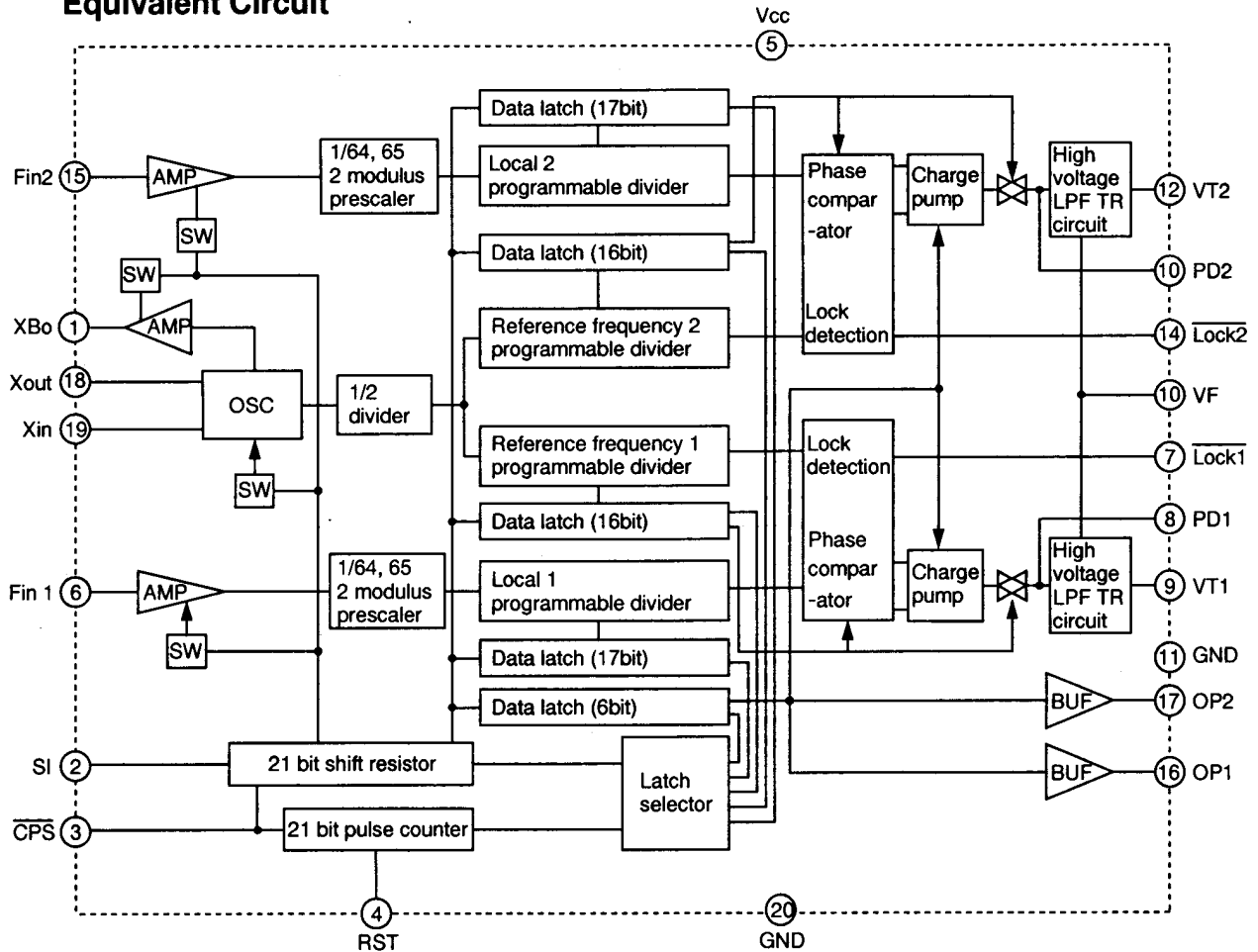
7) MC3372VM (XA0343)
Low Power FM IF

Equivalent Circuit

Crystal Osc.	1	16	Mixer Input
Crystal Osc.	2	15	GND
Mixer Output	3	14	Mute
Vcc	4	13	Meter drive
Limiter Input	5	12	Squelch Input
Decoupling	6	11	Filter Output
Limiter Output	7	10	Filter Input
Quad Input	8	9	Demodulator Output
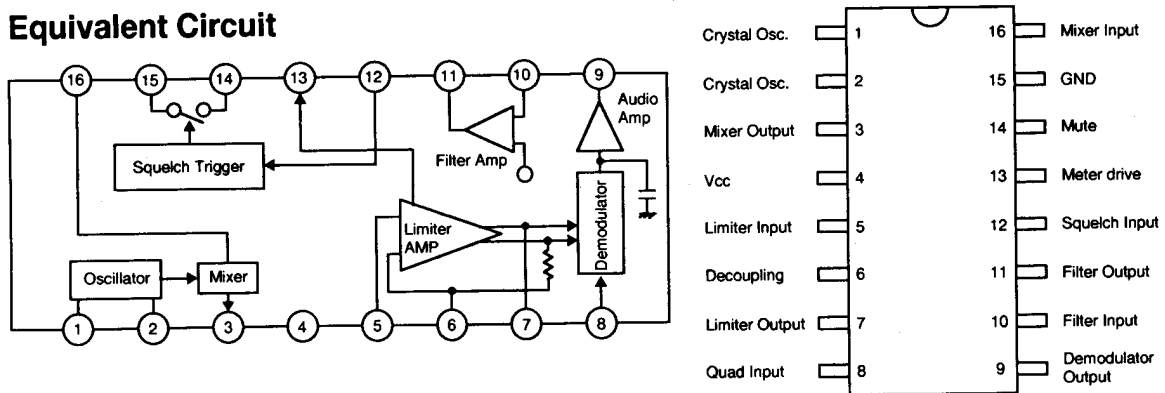
Ta=25°C

Parameter	Pin No.	Symbol	Ratings	Unit
Max. supply voltage	4	Vcc	2.4~9.0	Vdc
RF input voltage	16	Vrf	0.005~10	mVrms
RF input frequency	16	Frf	0.1~100	MHz
Oscilltor input voltage	1	Vlocal	80~400	mVrms
IF frequency	-	Fif	455	kHz
Limitter amplifier input voltage	5	Vif	0~400	mVrms
Filter amplifier input voltage	10	Vfa	0.1~300	mVrms
Squelch input voltage	12	Vsq	0 or 2	Vdc
Mute sink current	14	Isq	0.1~30	mA
Temperature range	-	TA	-30~+75	°C

8) NJM2100V (XA0342)
Dual Operational Amplifiers

A Output 1		8 V+
A -Input 2		7 B Output
A +Input 3		6 B - Input
V- 4		5 B +Input
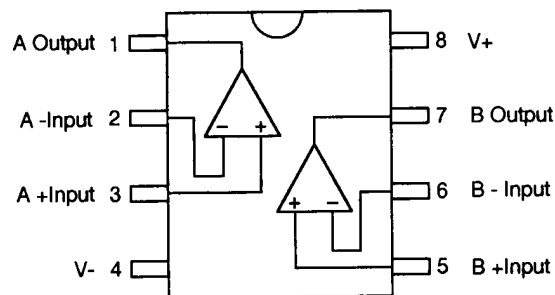
9) NJM2070M (XA0210)
Low Voltage Power Amplifier

Equivalent Circuit
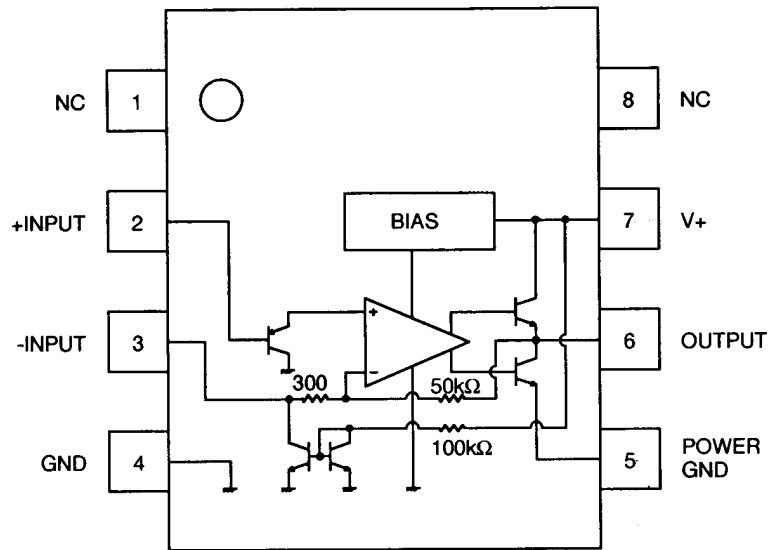
V+=6V, Ta=25+/-2°C

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=4Ω	Po	0.5	0.6	-	W
		V+=4.5V, RL=4Ω		-	0.32	-	W
		V+=3V, RL=4Ω		-	120	-	mW
		V+=2V, RL=4Ω		-	30	-	mW
	THD=1%, f=1kHz	V+=6V, RL=4Ω		-	500	-	mW
		V+=4.5V, RL=4Ω		-	250	-	mW
Distortion	Po=0.4W, RL=4Ω, f=1kHz		THD	-	0.25	-	%
Voltage gain	f=1kHz		Av	41	44	47	dB
Input impedance	f=1kHz		ZIN	100	-	-	kΩ
Equivalent input noise voltage	Rs=10kΩ	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=8Ω, Po=250mW		P.B	-	200	-	kHz

10) RH5RH501A (XA0219)

Vss=0V

Parameter	Symbol	Ratings	Unit
V out terminal voltage	Vout	12	V
Lx terminal voltage	VLx	12	V
Lx terminal current	ILx	250	mA
Power dissipasion	Pd	500	mW
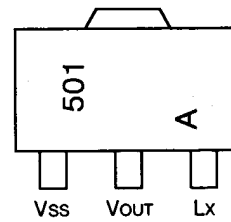
Equivalent Circuit
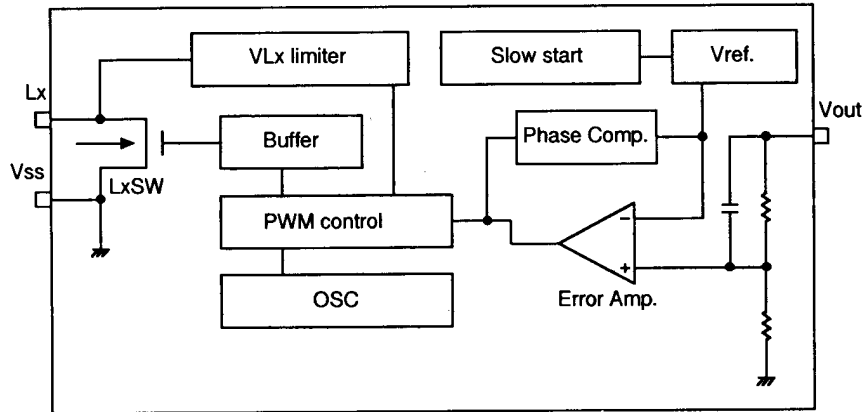
11) RH5RH651A (XA0341)

Vss=0V

Parameter	Symbol	Ratings	Unit
V out terminal voltage	Vout	12	V
Lx terminal voltage	VLx	12	V
Lx terminal current	ILx	250	mA
Power dissipasion	Pd	500	mW

Equivalent Circuit

22
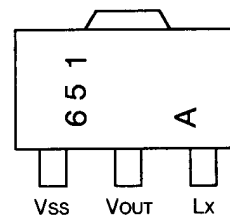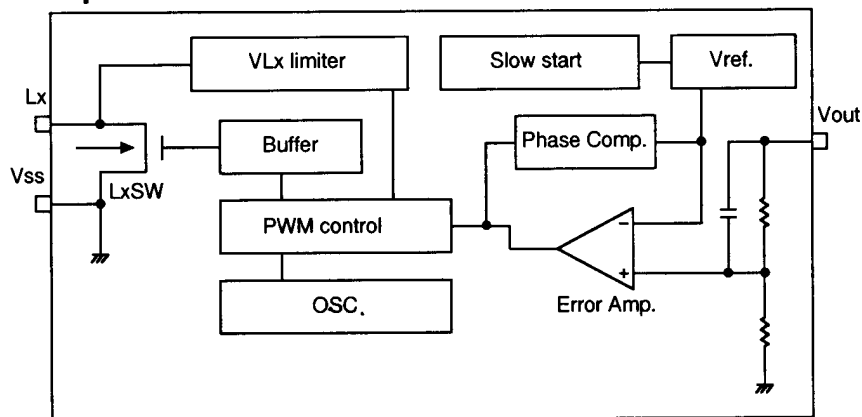
12) S-80730SL-AT (XA0356)
3.0V Voltage Detector

NC   **NC**

OUT **V**DD **V**SS

Equivalent Circuit

VDD

VSS
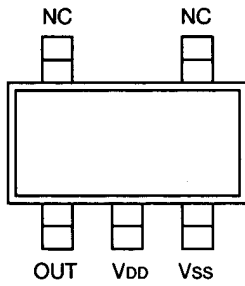
OUT
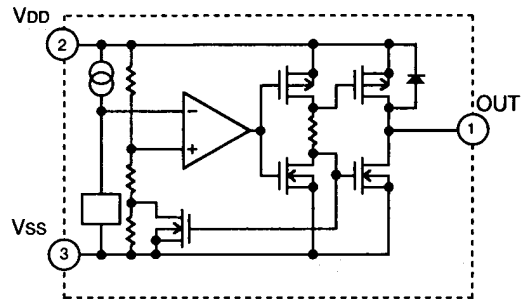
Parameter	Symbol	Condition		Min.	Typ.	Max.	Unit
Detection voltage	-VDET			2.928	3.000	3.072	V
Hysteresis width	VHYS			VDET x0.02	VDET x0.05	VDET x0.08	V
Comsumption current	ISS	VDD=4.5V		-	1.0	3.0	μA
Operation voltage	VDD			1.0	-	15.0	V
Output current	IOUT	Nch VDS=0.5V	VDD=1.2V	0.23	0.50	-	mA
			VDD=2.4V	1.60	3.70	-	
		Pch VDS=0.5V	VDD=4.8V	0.36	0.62	-	
Temperature factor of detection output voltage	Δ-VDET / ΔTa	Ta=-30°C~80°C		-	+/-0.38	-	mV/°C

13) S-AV28 (XA0381)
VHF Band FM Power Module

Parameter	Symbol	Ratings	Unit
Max. supply voltage	VDD	17	V
Control voltage	VGG	6	V
RF input power	Pi	50	mW
RF output power	Po	12	W
Total current	I_T	3	A
Operating case temperature	Tc(opr)	-30~+100	°C
Storage temperature	Tstg	-40~+110	°C
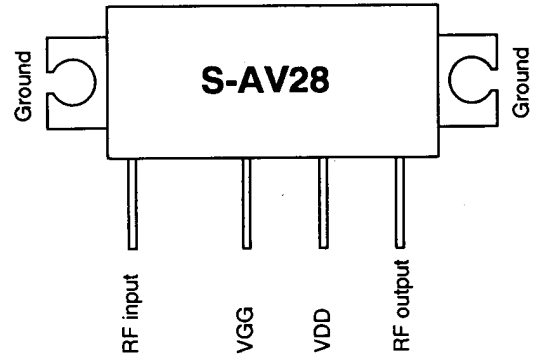
Tc=25°C

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Frequency range	Frange		144	-	148	MHz
Output power	Po	VDD=9.6V	7	-	-	W
Power gain	Gp	VGG=4V	25.4	-	-	dB
Total efficiency	ηT	Pi=20mW	50	-	-	%
Input VSWR	VSWRin	ZG=ZL=50Ω	-	-	2.5	-
Harmonics	HRM		--	-	-15	dB
Load mismatch	-	VDD=15V, VGG=Adjustment Pi=20mW, Po=7W VSWR load 20:1 all phase	No trouble			-
Stability	-	VDD=7.5~11.5V VGG=0~4V Pi=20mW VSWR load 6:1 all phase	No trouble			-

14) S-AU57 (XA0382)
UHF Band FM Power Module

Parameter	Symbol	Ratings	Unit
Max. supply voltage	VDD	17	V
Control voltage	VGG	6	V
RF input power	Pi	50	mW
RF output power	Po	12	W
Total current	I_T	3	A
Operating case temperature	Tc(opr)	-30~+100	°C
Storage temperature	Tstg	-40~+110	°C
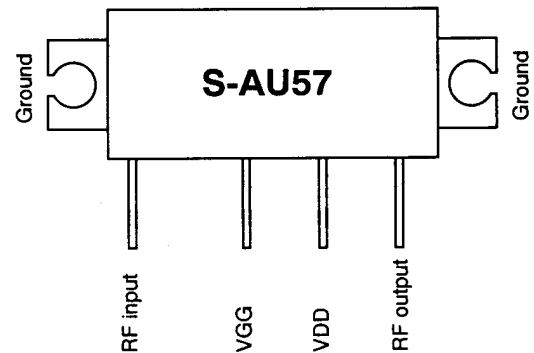
Tc=25°C

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Frequency range	Frange		430	-	450	MHz
Output power	Po	VDD=9.6V	7	-	-	W
Power gain	Gp	VGG=4V	25.4	-	-	dB
Total efficiency	ηT	Pi=20mW	40	-	-	%
Input VSWR	VSWRin	ZG=ZL=50Ω	-	-	2.5	-
Harmonics	HRM		--	-	-25	dBc
Load mismatch	-	VDD=15V, VGG=Adjustment Pi=20mW, Po=7W VSWR load 20:1 all phase	No trouble			-
Stability	-	VDD=7.5~11.5V VGG=0~4V Pi=20mW VSWR load 3:1 all phase	No trouble			-

15) S-81237SG-QE (XA0358)
Voltage Regurator

Equivalent Circuit
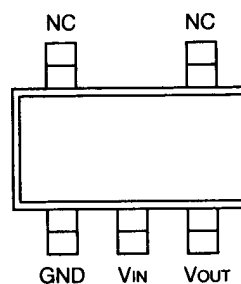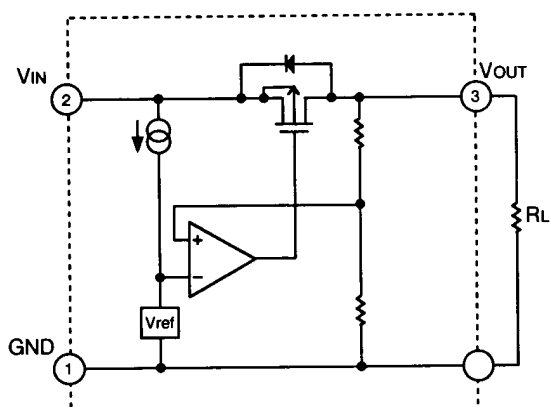
Ta=25°C

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Output voltage	VOUT	VIN=5.7V, IOUT=10mA	3.626	3.700	3.774	V
Input/output voltage difference	Vdif	IOUT=10mA	-	0.31	0.78	V
Input stability 1	△VOUT1	VIN=4.6~16V, IOUT=1mA	-	46	92	mV
Input stability 2	△VOUT2	VIN=4.6~16V, IOUT=1μA	-	46	259	mV
Load stability	△VOUT3	VIN=5.7V, IOUT=1μA~30mA	-	60	100	mV
Comsumption current	Iss	VIN=5.7V, No Load	-	1.2	2.5	μA
Input voltage	VIN		-	-	16	V
Temperature factor of output voltage	$\frac{△VOUT}{△Ta}$	VIN=5.7V, IOUT=10mA Ta=-40°C~85°C	-	+/- 0.463	-	mV/°C

16) TA75S01F (XA0332)
Single Operational Amplifiers
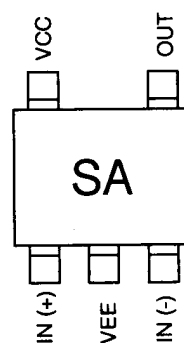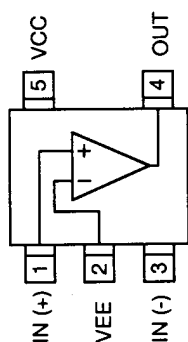
17) TA75W01FU (XA0349)
Dual Operational Amplifiers

OUT 1	8 VCC
IN (-) 2	7 OUT
IN (+) 3	6 IN (-)
VEE 4	5 IN (+)
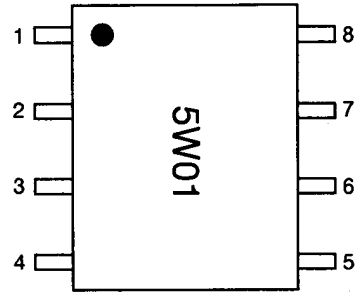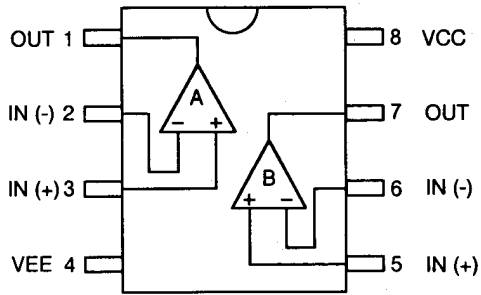
18) TC4W53F (XA0348)
2-Channel Multiplexer/Demultiplexer

Function Table

Control input		ON channel
INH	A	
L	L	ch 0
L	H	ch 1
H	*	NONE

* Don't Care

COMMON 1	8 VDD
INH 2	7 ch0
VEE 3	6 ch1
VSS 4	5 A
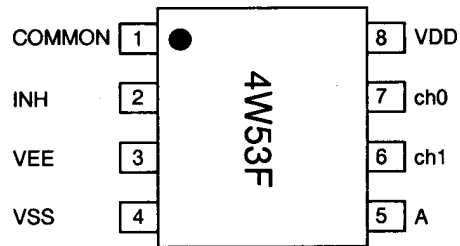
Block Diagram
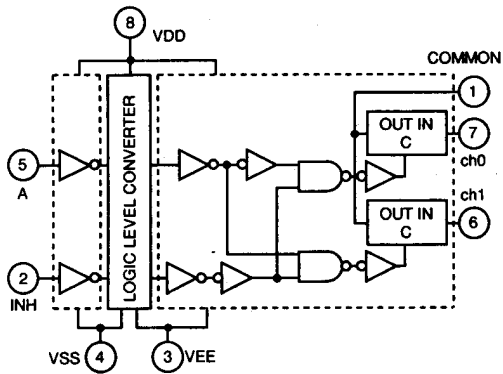
19) TK10930VTL (XA0223)
Narrow Band FM IF IC
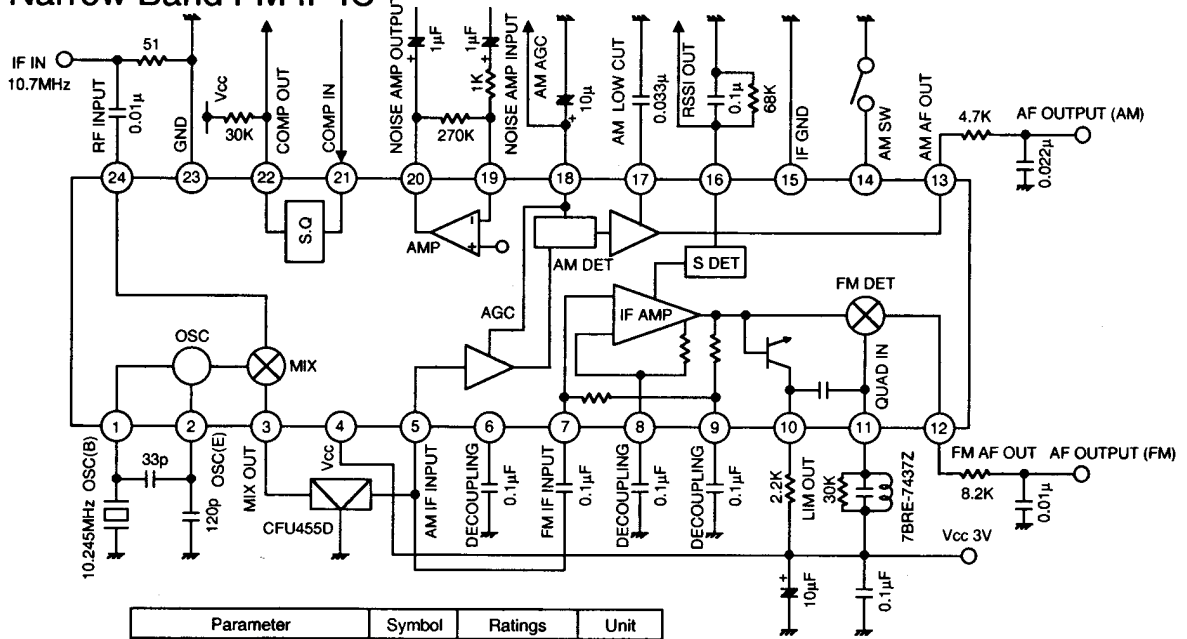
Parameter	Symbol	Ratings	Unit
Supply voltage	Vcc max	10.0	V
Power dissipation	Pd	400	mW
Storage temperature	Tstg	-55~+150	°C
Operating temperature	Top	-30~+75	°C
Operating voltage	Vop	2.5~8.5	V
Operating frequency	fop	~60	MHz

Ta=25°C Vcc=3V

Parameter	Symbol	Min	Typical	Max	Unit	Condition
Supply Current 1	Icc1		6.8	8.9	mA	No signal, AM ON
Supply Current 2	Icc2		3.9	5.3	mA	No signal, AM OFF
Mixer Conversion Gain	Mg		20		dB	
Mixer Input Impedance	Mz		3.6		KΩ	DC Test
FM						
Limiting Sensitivity	Limit		2.0	8.0	µV	-3.0dB
Output Voltage	Vo1	85	150	230	mVrms	10mVin +/-3kHz DEV
Distortion	THD1		1.0	2.0	%	10mVin +/-3kHz DEV
Output Impedance	Zo		800		Ω	10mVin
Filter Gain	Gf	30	38		dB	Fin=30kHz, Vo=100mV
Scan Control Hi Voltage	SH	2.3			V	Squelch input=2.5V
Scan Control Low Voltage	SL			0.3	V	Squelch input=0V
Squelch Hysteresis	Hys		30		mV	
S meter Output Voltage	S0		0.05	0.5	V	Vin=0mV, RS=68kΩ
S meter Output Voltage	S1	0.05	0.5	0.9	V	Vin=0.01mV, RS=68kΩ
S meter Output Voltage	S2	0.7	1.2	1.7	V	Vin=0.1mV, RS=68kΩ
S meter Output Voltage	S3	1.2	1.8	2.5	V	Vin=1mV, RS=68kΩ
S meter Output Voltage	S4	1.6	2.3	2.9	V	Vin=10mV, RS=68kΩ
S meter Output Voltage	S5	1.8	2.4	2.9	V	Vin=100mV, RS=68kΩ
AM						
Sensitivity	US	20	15		µV	required input level to get 20mV rms output
Output Voltage	Vo2	60	120	160	mVrms	1kHz, 30%, Vin=1mV
Distortion-1	THD2		1.0	2.0	%	1kHz, 30%, Vin=1mV
Distortion-2	THD3		2.0	4.0	%	1kHz, 30%, Vin=1mV
S/N	S/N	40	48		dB	1kHz, 30%, Vin=1mV
AM OFF	Vo	-0.3		0.3	%	

20) μPD16430AGF-3B9 (XA0355)
LCD Driver

Block Diagram

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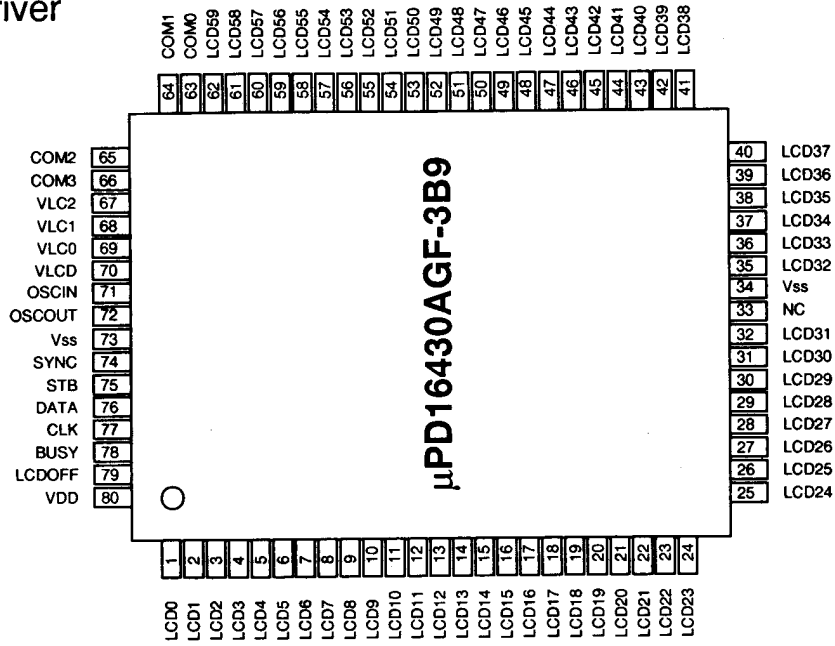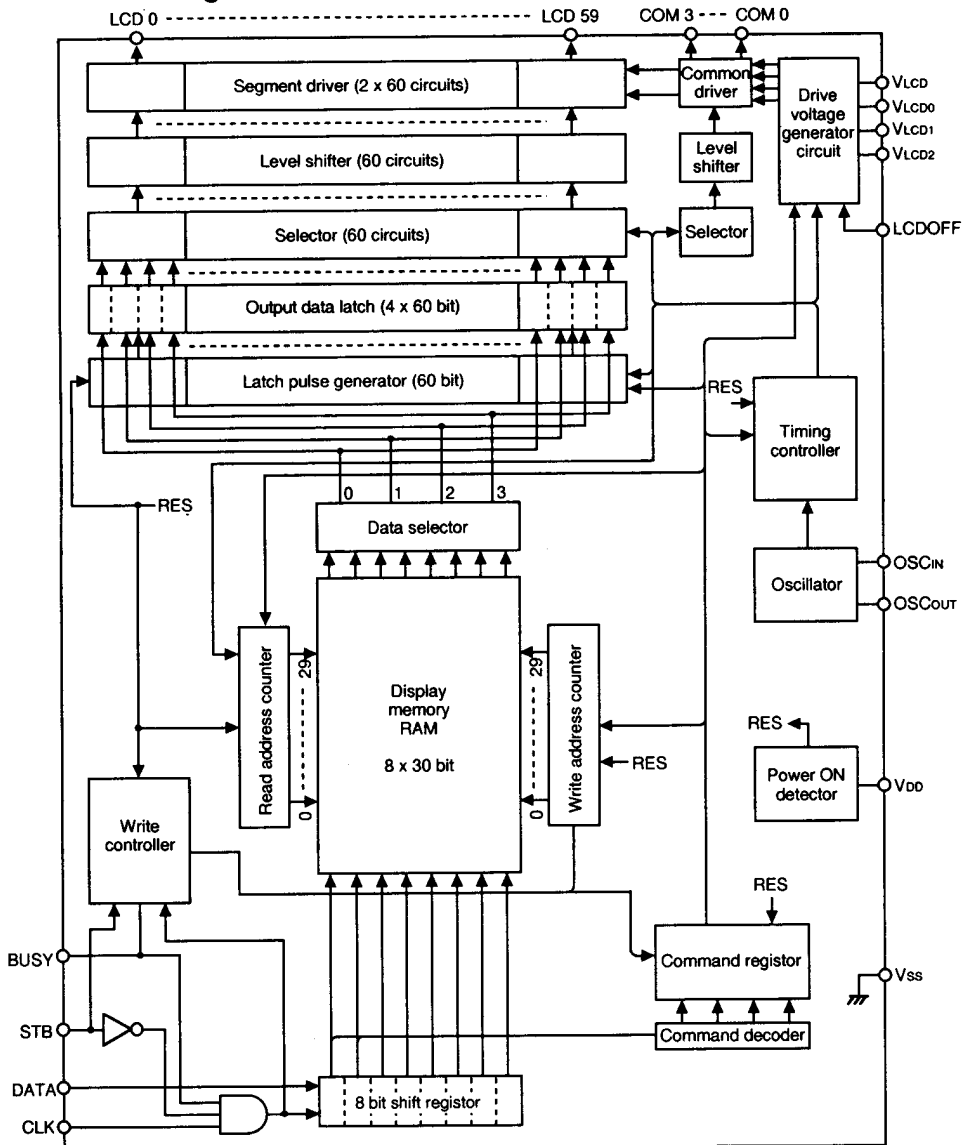
21) 24LC16B (XA0351)
16K bits CMOS Serial EEPROM

Block Diagram
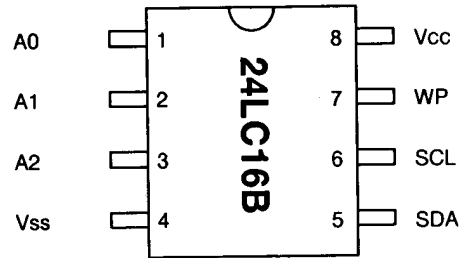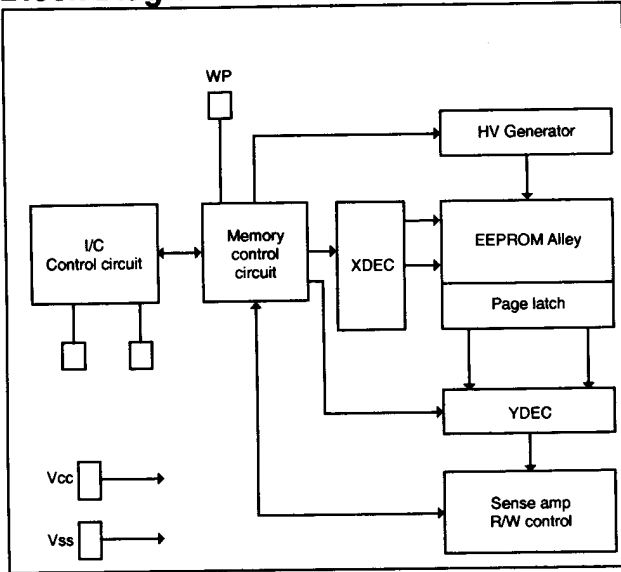
Pin Name	Description
Vss	GND terminal
SDA	Serial address/data I/O
SCL	Serial clock
WP	Write protect
Vcc	+2.5V~5.5V power supply
A0, A1, A2	No connection

22) Transistor, Diode and LED Outline Drawings

Top View

1SS356	1SV217	1SV255	1SV257	DA204U	DA227	DAN235U	DTZ3.6B
XD0272	XD0233	XD0292	XD0293	XD0130	XD0238	XD0246	XD0156
				K	N20	M	
DTZ5.1B	MA111	MA142WA	MA729	MA741WA	MA742	RLS135	RN711H
XD0165	XD0290	XD0239	XD0291	XD0251	XD0250	XD0066	XD0257
		MO		M2P	M1U		
U2FWJ44N	BRPG1201W	SML-310MT	PG1101F				
XD0294	XL0028	XL0036	XL0045				
2SA1213	2SA1774	2SB1181	2SC3356	2SC4649	2SC5065	2SC5066	2SD2216
XT0088	XT0139	XT0140	XT0030	XT0108	XT0137	XT0138	XT0135
C NY B C E	C FR B E	B1181 B C E	C R24 B E	C JN B E	C MAO B E	C M1 B E	C YR B E
2SJ144	UN9111	UN9211	UN9216				
XE0019	XU0062	XU0063	XU0099				
G VY S D	C 6A B E	C 8A B E	C 8F B E				

UMC3		XP1111		XP1501		XP1216	
XU0047		XU0171		XU0172		XU0177	
C1/B2 C2 C3 E1 B1 E2		C1 C2 9S B1 E B2		C1 C2 5R B1 E B2		C1 C2 9N B1 E B2	

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23) LCD Unit

Common

Segment
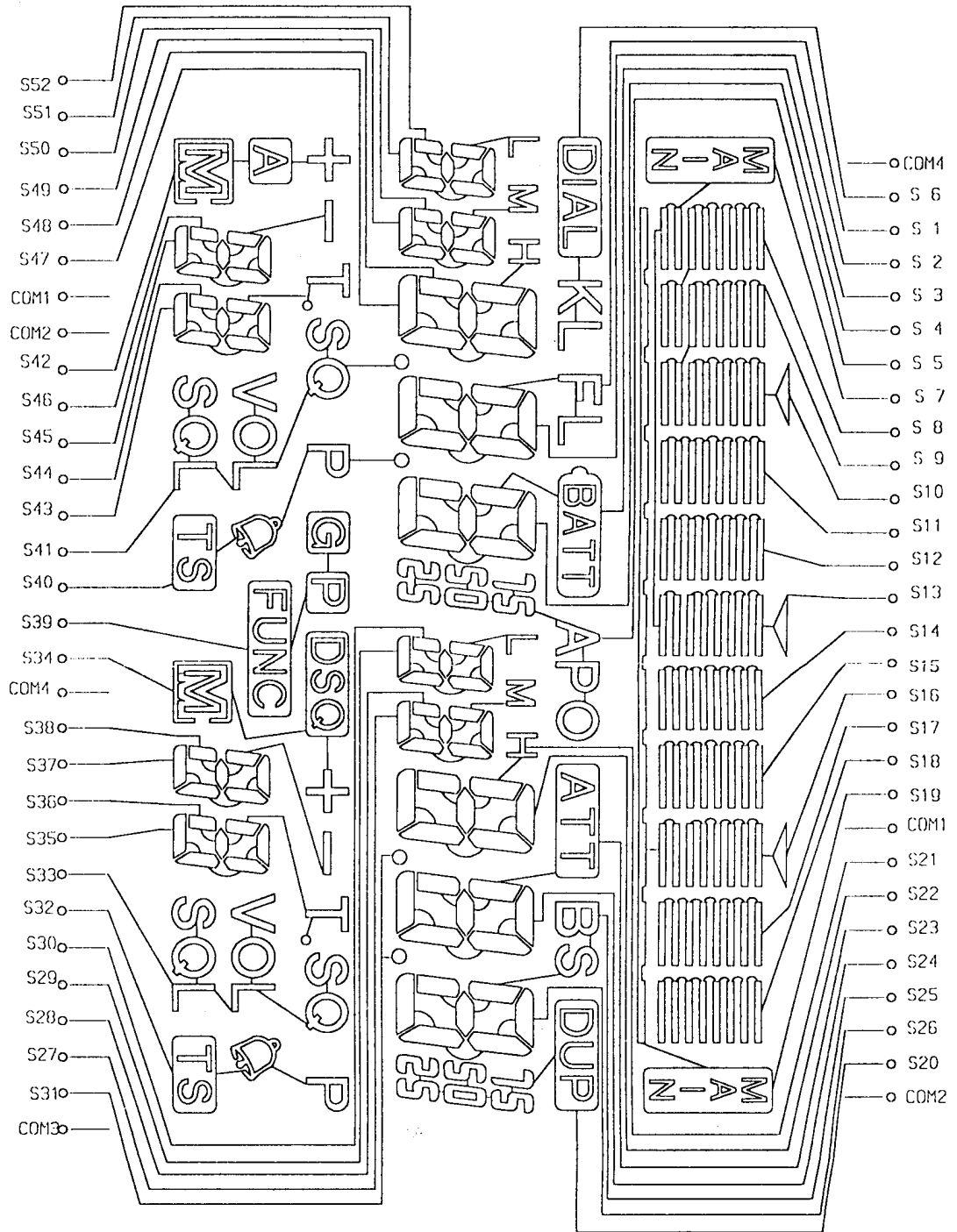
EXPLODED VIEW

1) Charge Unit
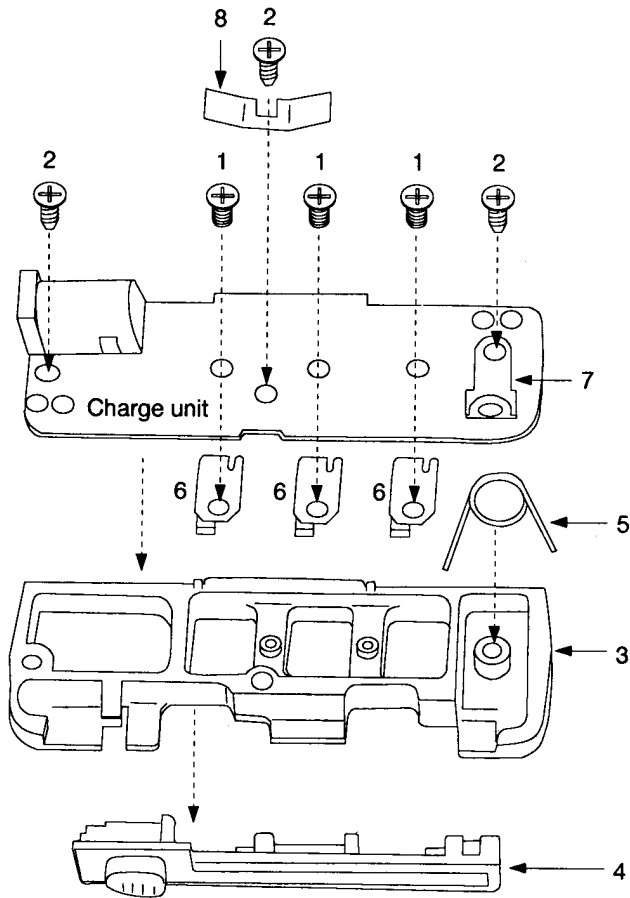
	Parts No.	Parts Name
1	AF0020	02+3Fe Ni 1
2	AX0001	OP2+4 Fe BC1
3	FP0093A	Terminal frame DJG5
4	FP0094	Release knob DJG5
5	SC0008A	Release spring DJG5
6	SD0045	Battery terminal DJF5
7	TS0100	Earth metal fittings DJG5
8	TS0109	VCO earth DJG5

2) RF Unit
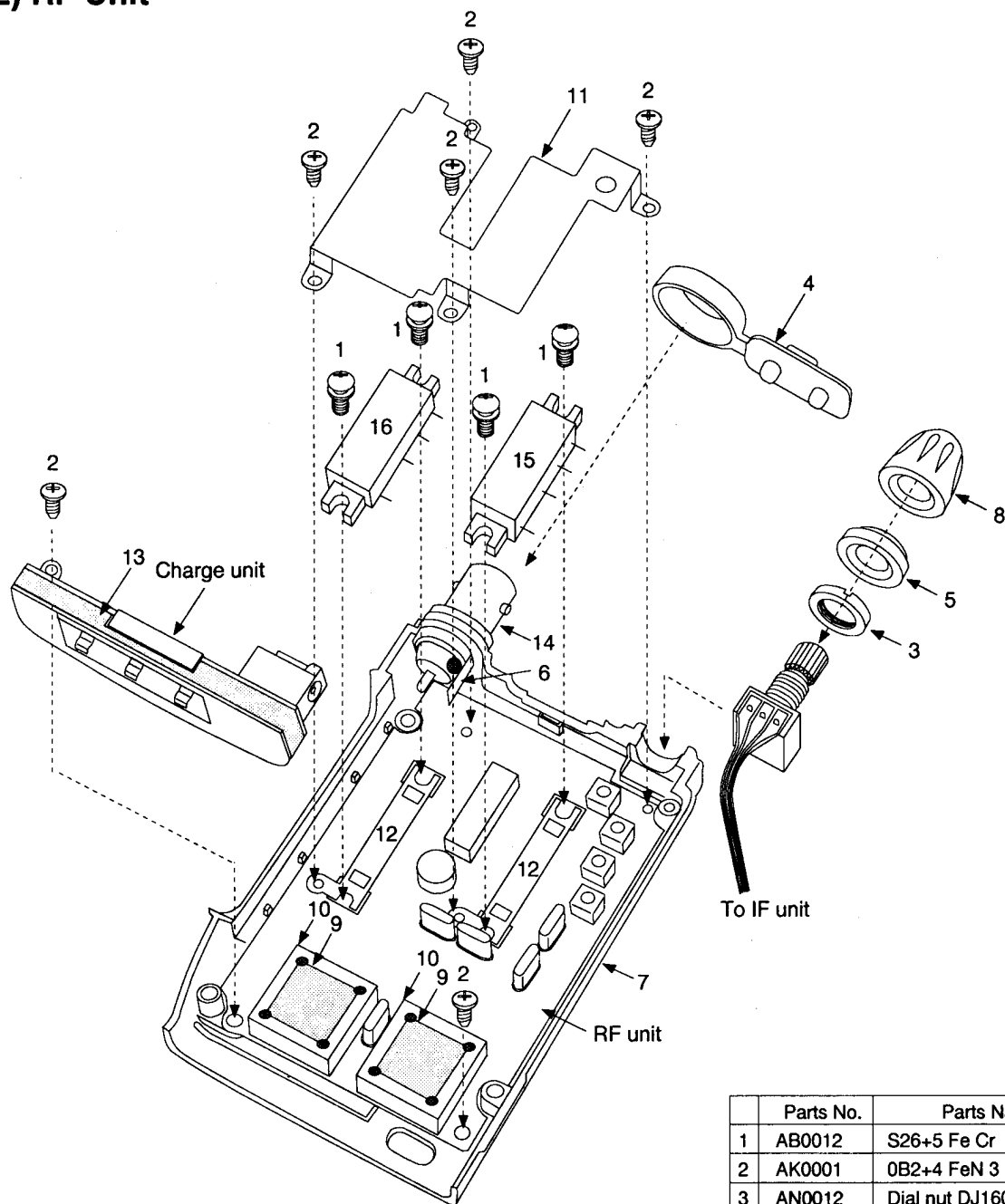
	Parts No.	Parts Name
1	AB0012	S26+5 Fe Cr
2	AK0001	0B2+4 FeN 3
3	AN0012	Dial nut DJ160
4	FG0179Z	Jack cap
5	FG0181Z	Dial cap
6	FM0112	BNC earth DJG5
7	KB0058	Rear case DJG5
8	NK0042	Dial knob DJG5
9	TN0002	VCO shield
10	TS0097	VCO case
11	TS0098	RF shield DJG5
12	TS0101	Module earth
13	TS0110	Charge earth
14	UE0193	BNC antenna connector
15	XA0381	S-AV28
16	XA0382	S-AU57

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3) IF Unit/CPU Unit
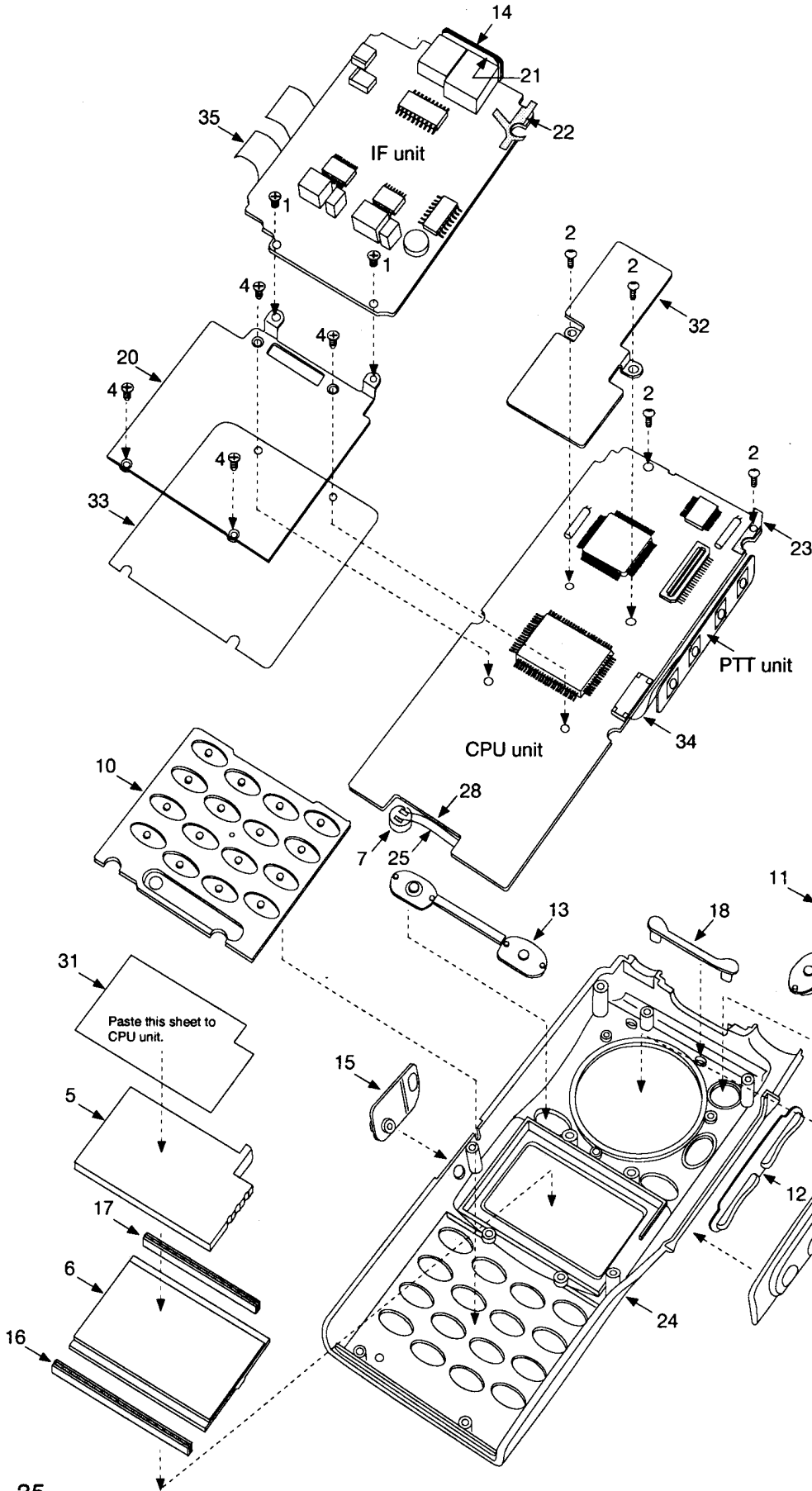
	Parts No.	Parts Name
1	AF0020	02+3Fe Ni 1
2	AP0004	P2+5Fe Cr
3	AX0001	OP2+4 Fe BC1
4	AX0002	OP2+5 FeN 1
5	DG0021	LCD light DJG5
6	EL0028	XH606
7	EY0014	Mic
8	ES0011	SU-36W0824
9	FG0173	PTT rubber DJG5
10	FG0174	16 key rubber DJG5
11	FG0175	Power key DJG5
12	FG0176	VOL rubber DJG5
13	FG0177	V/U key DJG5
14	FG0178Z	Jack rubber DJG5
15	FG0180Z	DC cap DJG5
16	FG0182	LCD rubber A DJG5
17	FG0183	LCD rubber B JDG5
18	FG0184	ON AIR rubber DJG5
19	FG0218	Cushion G5
20	FM0098	Rear panel DJG5
21	FM0100	Jack metal fixture DJG5
22	FM0111A	IF earth
23	FM0113	CPU earth DJG5
24	KM0191	Front case DJG5
25	MBCL02AA	#30B02-020-02
26	MKCLH2AA	#30K02-025-02
27	MNCL03AA	#30N02-030-02
28	MRCL02AA	#30R02-020-02
29	ST0052	SP metal fittings DJG5
30	TG0023	SP Cloth DJG5
31	TL0016	Sheet DJG5
32	TS0099	CPU Shield DJG5
33	TZ0064	Panel sheet DJG5
34	uP0281	CPU-PTT Flexible P.C.B.
35	uP0282	IF-RF Flexible P.C.B.

IF unit

CPU unit

PTT unit

Paste this sheet to CPU unit.
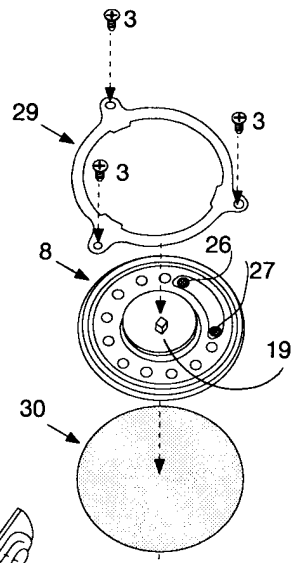
4) Front/Rear View
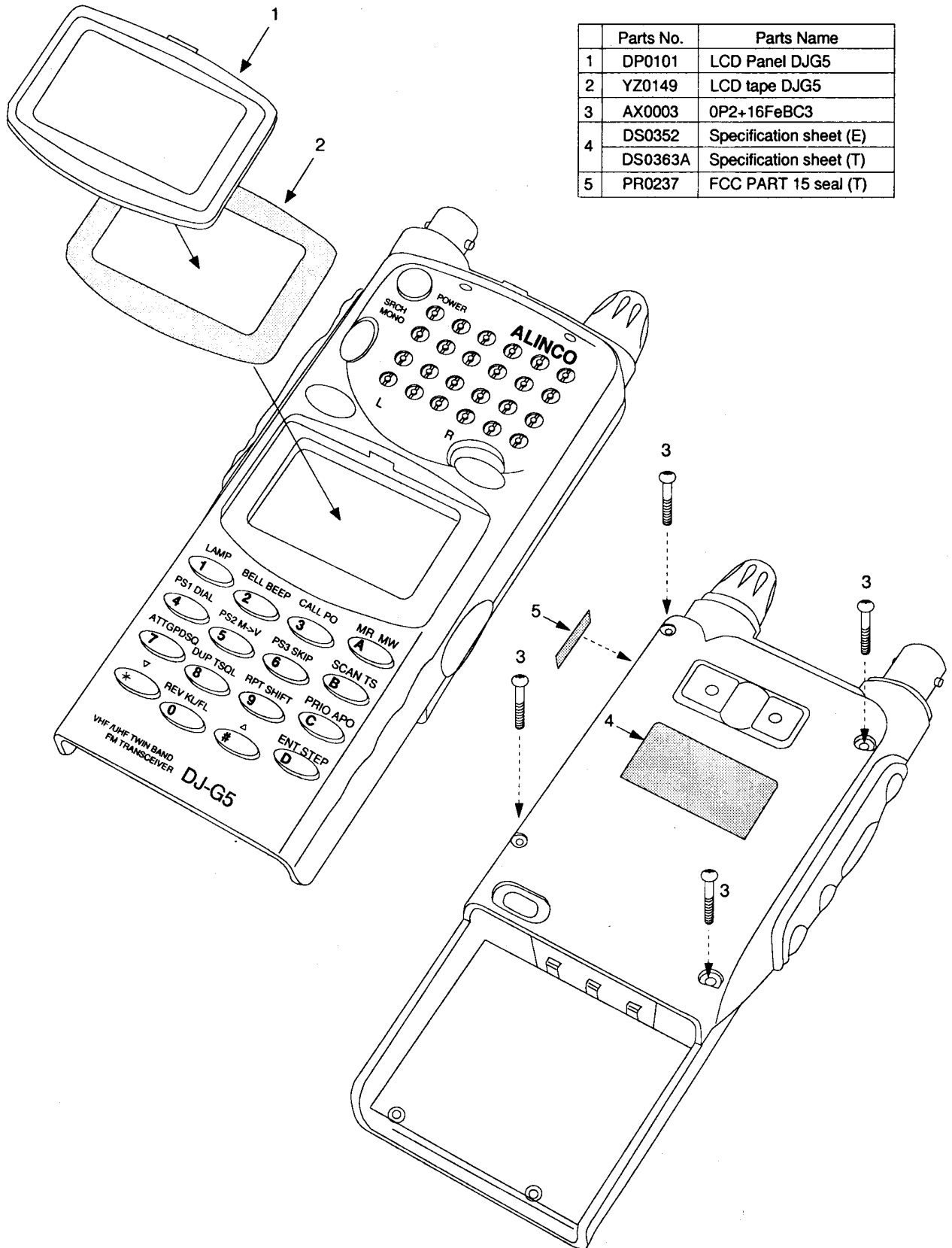
	Parts No.	Parts Name
1	DP0101	LCD Panel DJG5
2	YZ0149	LCD tape DJG5
3	AX0003	0P2+16FeBC3
4	DS0352	Specification sheet (E)
	DS0363A	Specification sheet (T)
5	PR0237	FCC PART 15 seal (T)

PARTS L1ST
RF Unit

RF unit

Ref N	Parts No.	Description	Parts Name	Ver.
		RF Unit		
C51	CU3031	Chip C.	C1608JB1H471KTA	
C52	CE0373	Electrolytic C.	16MV100UW	
C53	CU3031	Chip C.	C1608JB1H471KTA	
C56	CU3031	Chip C.	C1608JB1H471KTA	
C57	CS0210	Chip Tantal	TMCMB0J156MTR	
C58	CU3031	Chip C.	C1608JB1H471KTA	
C59	CU3007	Chip C.	C1608CH1H060CTA	
C60	CU3006	Chip C.	C1608CH1H050CTA	
C61	CU3012	Chip C.	C1608CH1H120JTA	
C62	CU3011	Chip C.	C1608CH1H100CTA	
C63	CU3005	Chip C.	C1608CH1H040CTA	
C64	CU3010	Chip C.	C1608CH1H090CTA	
C66	CU3006	Chip C.	C1608CH1H050CTA	
C67	CU3010	Chip C.	C1608CH1H090CTA	
C68	CU3004	Chip C.	C1608CH1H030CTA	
C69	CU3031	Chip C.	C1608JB1H471KTA	
C70	CS0208	Chip Tantal	TMCMA0J475MTR	
C71	CU3002	Chip C.	C1608CH1H010CTA	
C72	CU3008	Chip C.	C1608CH1H070CTA	
C73	CU3002	Chip C.	C1608CH1H010CTA	
C74	CS0049	Chip Tantal	TMCSA1C105MTR	
C75	CU3031	Chip C.	C1608JB1H471KTA	
C76	CU3031	Chip C.	C1608JB1H471KTA	
C81	CU3031	Chip C.	C1608JB1H471KTA	
C83	CU3001	Chip C.	C1608CH1H0R5CTA	
C84	CU3002	Chip C.	C1608CH1H010CTA	
C85	CU3031	Chip C.	C1608JB1H471KTA	
C86	CU3047	Chip C.	C1608JB1H103KTA	
C87	CU3031	Chip C.	C1608JB1H471KTA	
C88	CU3001	Chip C.	C1608CH1H0R5CTA	
C89	CU3002	Chip C.	C1608CH1H010CTA	
C90	CU3031	Chip C.	C1608JB1H471KTA	
C91	CU3031	Chip C.	C1608JB1H471KTA	
C92	CU3031	Chip C.	C1608JB1H471KTA	
C93	CS0049	Chip Tantal	TMCSA1C105MTR	
C95	CU3031	Chip C.	C1608JB1H471KTA	
C96	CU3031	Chip C.	C1608JB1H471KTA	
C97	CU3031	Chip C.	C1608JB1H471KTA	
C99	CU3007	Chip C.	C1608CH1H060CTA	
C101	CU3009	Chip C.	C1608CH1H080CTA	
C102	CU3031	Chip C.	C1608JB1H471KTA	
C103	CU3003	Chip C.	C1608CH1H020CTA	
C104	CU3031	Chip C.	C1608JB1H471KTA	
C105	CU3031	Chip C.	C1608JB1H471KTA	
C106	CU3012	Chip C.	C1608CH1H120JTA	
C107	CU3011	Chip C.	C1608CH1H100CTA	
C108	CU3047	Chip C.	C1608JB1H103KTA	
C109	CU3007	Chip C.	C1608CH1H060CTA	
C111	CU3031	Chip C.	C1608JB1H471KTA	
C112	CU3006	Chip C.	C1608CH1H050CTA	
C113	CU3001	Chip C.	C1608CH1H0R5CTA	
C115	CU3007	Chip C.	C1608CH1H060CTA	
C116	CU3047	Chip C.	C1608JB1H103KTA	

RF unit

Ref No	Parts No.	Description	Parts Name	Ver.
C117	CS0376	Chip Tantal	TMCMA0G226MTR	
C120	CU3031	Chip C.	C1608JB1H471KTA	
C121	CS0213	Chip Tantal	TMCMA1A225MTR	
C122	CS0213	Chip Tantal	TMCMA1A225MTR	
C123	CU3051	Chip C.	C1608JB1E223KTA	
C125	CU3002	Chip C.	C1608CH1H010CTA	
C126	CU3003	Chip C.	C1608CH1H020CTA	
C127	CU3003	Chip C.	C1608CH1H020CTA	
C129	CS0063	Chip Tantal	TMCSA1V104MTR	
C130	CU3019	Chip C.	C1608CH1H470JTA	
C131	CU3031	Chip C.	C1608JB1H471KTA	
C132	CU3031	Chip C.	C1608JB1H471KTA	
C133	CS0377	Chip Tantal	TMCMB0G476MTR	
C138	CU3035	Chip C.	C1608JB1H102KTA	
C139	CU3031	Chip C.	C1608JB1H471KTA	
C140	CU3003	Chip C.	C1608CH1H020CTA	
C141	CU3035	Chip C.	C1608JB1H102KTA	
C142	CU3035	Chip C.	C1608JB1H102KTA	
C143	CU3047	Chip C.	C1608JB1H103KTA	
C144	CS0049	Chip Tantal	TMCSA1C105MTR	
C145	CU3013	Chip C.	C1608CH1H150JTA	
C146	CU3013	Chip C.	C1608CH1H150JTA	
C147	CU3035	Chip C.	C1608JB1H102KTA	
C149	CU3023	Chip C.	C1608CH1H101JTA	
C150	CU3031	Chip C.	C1608JB1H471KTA	
C152	CU3011	Chip C.	C1608CH1H100CTA	
C153	CU3019	Chip C.	C1608CH1H470JTA	
C154	CU3013	Chip C.	C1608CH1H150JTA	
C156	CU3019	Chip C.	C1608CH1H470JTA	
C158	CU3021	Chip C.	C1608CH1H680JTA	
C159	CS0213	Chip Tantal	TMCMA1A225MTR	
C160	CS0213	Chip Tantal	TMCMA1A225MTR	
C161	CU3051	Chip C.	C1608JB1E223KTA	
C163	CU3002	Chip C.	C1608CH1H010CTA	
C165	CU3031	Chip C.	C1608JB1H471KTA	
C166	CU3018	Chip C.	C1608CH1H390JTA	
C167	CU3017	Chip C.	C1608CH1H330JTA	
C168	CS0063	Chip Tantal	TMCSA1V104MTR	
C169	CU3031	Chip C.	C1608JB1H471KTA	
C170	CU3031	Chip C.	C1608JB1H471KTA	
C171	CU3031	Chip C.	C1608JB1H471KTA	
C173	CU3031	Chip C.	C1608JB1H471KTA	
C174	CU3035	Chip C.	C1608JB1H102KTA	
C175	CU3006	Chip C.	C1608CH1H050CTA	
C176	CU3004	Chip C.	C1608CH1H030CTA	
C178	CU3031	Chip C.	C1608JB1H471KTA	
C179	CU3035	Chip C.	C1608JB1H102KTA	
C180	CS0377	Chip Tantal	TMCMB0G476MTR	
C183	CU3004	Chip C.	C1608CH1H030CTA	
C184	CU3003	Chip C.	C1608CH1H020CTA	
C185	CU3031	Chip C.	C1608JB1H471KTA	
C186	CU3006	Chip C.	C1608CH1H050CTA	
C187	CU3006	Chip C.	C1608CH1H050CTA	
C188	CU3019	Chip C.	C1608CH1H470JTA	
C189	CU3035	Chip C.	C1608JB1H102KTA	
C190	CU3003	Chip C.	C1608CH1H020CTA	

Ref No	Parts No.	Description	Parts Name	Ver.
C192	CU3035	Chip C.	C1608JB1H102KTA	
C193	CU3001	Chip C.	C1608CH1H0R5CTA	
C194	CU3035	Chip C.	C1608JB1H102KTA	
C195	CU3035	Chip C.	C1608JB1H102KTA	
C196	CU3001	Chip C.	C1608CH1H0R5CTA	
C197	CU3014	Chip C.	C1608CH1H180JTA	
C198	CU3017	Chip C.	C1608CH1H330JTA	
C199	CU3016	Chip C.	C1608CH1H270JTA	
C201	CU3011	Chip C.	C1608CH1H100CTA	
C202	CU3035	Chip C.	C1608JB1H102KTA	
C203	CU3020	Chip C.	C1608CH1H560JTA	
C204	CU3013	Chip C.	C1608CH1H150JTA	
C205	CU3035	Chip C.	C1608JB1H102KTA	
C206	CS0366	Chip Tantal	TMCMA0G106MTR	
C207	CU3047	Chip C.	C1608JB1H103KTA	
C208	CU3022	Chip C.	C1608CH1H820JTA	
C209	CU3022	Chip C.	C1608CH1H820JTA	
C210	CU3019	Chip C.	C1608CH1H470JTA	
C211	CU3003	Chip C.	C1608CH1H020CTA	
C212	CU3035	Chip C.	C1608JB1H102KTA	
C213	CU3011	Chip C.	C1608CH1H100CTA	
C214	CU3017	Chip C.	C1608CH1H330JTA	
C215	CU3024	Chip C.	C1608CH1H121JTA	
C216	CU3024	Chip C.	C1608CH1H121JTA	
C217	CU3035	Chip C.	C1608JB1H102KTA	
C218	CU3035	Chip C.	C1608JB1H102KTA	
C219	CU3035	Chip C.	C1608JB1H102KTA	
C220	CU3007	Chip C.	C1608CH1H060CTA	
C221	CU3005	Chip C.	C1608CH1H040CTA	
C222	CU3015	Chip C.	C1608CH1H220JTA	
C223	CU3035	Chip C.	C1608JB1H102KTA	
C224	CU3035	Chip C.	C1608JB1H102KTA	
C225	CU3020	Chip C.	C1608CH1H560JTA	
C226	CU3015	Chip C.	C1608CH1H220JTA	
C227	CU3004	Chip C.	C1608CH1H030CTA	
C228	CU3011	Chip C.	C1608CH1H100CTA	
C229	CU3016	Chip C.	C1608CH1H270JTA	
C230	CU3018	Chip C.	C1608CH1H390JTA	
C231	CU3018	Chip C.	C1608CH1H390JTA	
C232	CU3035	Chip C.	C1608JB1H102KTA	
C233	CU3035	Chip C.	C1608JB1H102KTA	
C234	CS0049	Chip Tantal	TMCSA1C105MTR	
C235	CU3007	Chip C.	C1608CH1H060CTA	
C236	CU3002	Chip C.	C1608CH1H010CTA	
C237	CU3035	Chip C.	C1608JB1H102KTA	
C238	CU3035	Chip C.	C1608JB1H102KTA	
C239	CU3035	Chip C.	C1608JB1H102KTA	
C240	CS0210	Chip Tantal	TMCMB0J156MTR	
C241	CU3005	Chip C.	C1608CH1H040CTA	
C242	CU3002	Chip C.	C1608CH1H010CTA	
C243	CU3035	Chip C.	C1608JB1H102KTA	
C244	CU3035	Chip C.	C1608JB1H102KTA	
C245	CS0049	Chip Tantal	TMCSA1C105MTR	
C246	CU3035	Chip C.	C1608JB1H102KTA	

RF unit

Ref N	Parts No.	Description	Parts Name	Ver.
C247	CS0049	Chip Tantal	TMCSA1C105MTR	
C248	CU3035	Chip C.	C1608JB1H102KTA	
C249	CU3035	Chip C.	C1608JB1H102KTA	
C250	CU3031	Chip C.	C1608JB1H471KTA	
C251	CU3035	Chip C.	C1608JB1H102KTA	
C252	CS0366	Chip Tantal	TMCMA0G106MTR	
D51	XD0251	Diode	MA741WATX	
D52	XD0066	Diode	RLS135TE11	
D53	XD0251	Diode	MA741WATX	
D55	XD0066	Diode	RLS135TE11	
D56	XD0251	Diode	MA741WATX	
D57	XD0246	Diode	DAN235UT106	
D58	XD0272	Diode	1SS356TW11	
D59	XD0246	Diode	DAN235UT106	
D60	XD0272	Diode	1SS356TW11	
D61	XD0246	Diode	DAN235UT106	
D62	XD0272	Diode	1SS356TW11	
D63	XD0246	Diode	DAN235UT106	
D64	XD0246	Diode	DAN235UT106	
D65	XD0272	Diode	1SS356TW11	
D66	XD0233	Diode	1SV217TPH4	
D67	XD0233	Diode	1SV217TPH4	
D68	XD0233	Diode	1SV217TPH4	
D69	XD0233	Diode	1SV217TPH4	
D70	XD0272	Diode	1SS356TW11	
D71	XD0066	Diode	RLS135TE11	
D72	XD0066	Diode	RLS135TE11	
D74	XD0251	Diode	MA741WATX	
D75	XD0272	Diode	1SS356TW11	
D76	XD0272	Diode	1SS356TW11	
D77	XD0272	Diode	1SS356TW11	
FL51	QA0083	Helical Filte	QA0083	E
FL51	QA0099	Helical Filte	QA0099	T
IC51	XA0382	IC	S-AU57	
IC52	XA0246	IC	BU4094BFT1	
IC53	XA0352	IC	M64076GP	
IC54	XA0381	IC	S-AV28	
L51	QC0288	Chip L.	NL252018T1R0J	
L52	QC0423	Chip L.	LL1608-F27NK	
L53	QKA35A	Coil	MR1.5 3.5T 0.4	
L54	QKA45A	Coil	MR1.5 4.5T 0.4	
L55	QKA45A	Coil	MR1.5 4.5T 0.4	
L56	QC0423	Chip L.	LL1608-F27NK	
L57	QKA35A	Coil	MR1.5 3.5T 0.4	
L58	QKA35A	Coil	MR1.5 3.5T 0.4	
L59	QKA45A	Coil	MR1.5 4.5T 0.4	
L60	QC0421	Chip L.	LL1608-F18NK	
L61	QC0288	Chip L.	NL252018T1R0J	
L62	QC0424	Chip L.	LL1608-F33NK	
L63	QC0422	Chip L.	LL1608-F22NK	
L64	QC0422	Chip L.	LL1608-F22NK	
L65	QC0430	Chip L.	MLF1608DR10KTA00	
L66	QC0424	Chip L.	LL1608-F33NK	
L67	QC0422	Chip L.	LL1608-F22NK	
L68	QC0395	Chip L.	LQN1A33NJ04	

RF unit

Ref N	Parts No.	Description	Parts Name	Ver.
L70	QKA25A	Coil	MR1.5 2.5T 0.4	
L72	QC0426	Chip L.	LL1608-F47NK	
L73	QC0395	Chip L.	LQN1A33NJ04	
L74	QC0395	Chip L.	LQN1A33NJ04	
L75	QC0422	Chip L.	LL1608-F22NK	
L77	QC0395	Chip L.	LQN1A33NJ04	
L78	QC0395	Chip L.	LQN1A33NJ04	
L79	QC0292	Coil	NL252018T-2R2J	
L81	QA0071	Coil	LQA0071-T	
L82	QA0071	Coil	LQA0071-T	
L83	QC0430	Chip L.	MLF1608DR10KTA00	
L85	QA0071	Coil	LQA0071-T	
L86	QA0071	Coil	LQA0071-T	
L87	QC0292	Coil	NL252018T-2R2J	
L88	QKA75A	Coil	QKA75A	
L89	QC0427	Chip L.	LL1608-F56NK.	
L90	QKA75A	Coil	QKA75A	
L91	QKA75A	Coil	QKA75A	
L92	QKA75A	Coil	QKA75A	
L94	QC0426	Chip L.	LL1608-F47NK	
L95	QC0430	Chip L.	MLF1608DR10KTA00	
L97	QC0430	Chip L.	MLF1608DR10KTA00	
Q51	XT0088	Transistor	2SA1213YTE12L	
Q52	XU0172	Transistor	XP1501-TX	
Q53	XT0119	Transistor	2SC3356-T1BR24	
Q54	XT0138	Transistor	2SC5066-0(TE85L)	
Q55	XU0063	Transistor	UN9211TX	
Q56	XU0171	Transistor	XP1111-TX	
Q58	XU0171	Transistor	XP1111-TX	
Q59	XU0172	Transistor	XP1501-TX	
Q60	XT0108	Transistor	2SC4649-TL	
Q61	XT0138	Transistor	2SC5066-0(TE85L)	
Q62	XT0138	Transistor	2SC5066-0(TE85L)	
Q63	XT0138	Transistor	2SC5066-0(TE85L)	
Q64	XT0138	Transistor	2SC5066-0(TE85L)	
Q65	XT0135	Transistor	2SD2216R-TX	
Q66	XT0138	Transistor	2SC5066-0(TE85L)	
Q67	XT0138	Transistor	2SC5066-0(TE85L)	
Q68	XT0138	Transistor	2SC5066-0(TE85L)	
Q69	XT0138	Transistor	2SC5066-0(TE85L)	
Q70	XT0138	Transistor	2SC5066-0(TE85L)	
Q72	XT0138	Transistor	2SC5066-0(TE85L)	
Q73	XT0138	Transistor	2SC5066-0(TE85L)	
Q74	XT0138	Transistor	2SC5066-0(TE85L)	
Q75	XT0138	Transistor	2SC5066-0(TE85L)	
Q76	XT0138	Transistor	2SC5066-0(TE85L)	
Q77	XT0138	Transistor	2SC5066-0(TE85L)	
Q78	XT0108	Transistor	2SC4649-TL	
Q79	XT0138	Transistor	2SC5066-0(TE85L)	
Q80	XT0119	Transistor	2SC3356-T1BR24	
Q81	XT0088	Transistor	2SA1213YTE12L	
Q82	XT0088	Transistor	2SA1213YTE12L	
Q83	XU0172	Transistor	XP1501-TX	
Q84	XU0172	Transistor	XP1501-TX	

RF unit

Ref No	Parts No.	Description	Parts Name	Ver.
Q85	XU0063	Transistor	UN9211TX	
Q86	XU0063	Transistor	UN9211TX	
R51	RK3026	Chip R.	ERJ3GSYJ101V	
R52	RK3026	Chip R.	ERJ3GSYJ101V	
R53	RK3026	Chip R.	ERJ3GSYJ101V	
R54	RK3051	Chip R.	ERJ3GSYJ123V	
R55	RK3074	Chip R.	ERJ3GSYJ105V	
R57	RK3050	Chip R.	ERJ3GSYJ103V	
R58	RK3050	Chip R.	ERJ3GSYJ103V	
R59	RK3040	Chip R.	ERJ3GSYJ152V	
R60	RK3056	Chip R.	ERJ3GSYJ333V	
R62	RK3050	Chip R.	ERJ3GSYJ103V	
R63	RK3049	Chip R.	ERJ3GSYJ822V	
R64	RK3034	Chip R.	ERJ3GSYJ471V	
R65	RK3049	Chip R.	ERJ3GSYJ822V	
R66	RK3066	Chip R.	ERJ3GSYJ224V	
R67	RK3050	Chip R.	ERJ3GSYJ103V	
R68	RK3038	Chip R.	ERJ3GSYJ102V	
R69	RK3026	Chip R.	ERJ3GSYJ101V	
R70	RK3026	Chip R.	ERJ3GSYJ101V	
R71	RK3026	Chip R.	ERJ3GSYJ101V	
R72	RK3046	Chip R.	ERJ3GSYJ472V	
R73	RK3061	Chip R.	ERJ3GSYJ823V	
R74	RK3058	Chip R.	ERJ3GSYJ473V	
R75	RK3050	Chip R.	ERJ3GSYJ103V	
R76	RK3026	Chip R.	ERJ3GSYJ101V	
R77	RK3034	Chip R.	ERJ3GSYJ471V	
R78	RK3040	Chip R.	ERJ3GSYJ152V	
R79	RK3043	Chip R.	ERJ3GSYJ272V	
R80	RK3026	Chip R.	ERJ3GSYJ101V	
R81	RK3058	Chip R.	ERJ3GSYJ473V	
R82	RK3026	Chip R.	ERJ3GSYJ101V	
R83	RK3026	Chip R.	ERJ3GSYJ101V	
R84	RK3026	Chip R.	ERJ3GSYJ101V	
R85	RK3058	Chip R.	ERJ3GSYJ473V	
R86	RK3033	Chip R.	ERJ3GSYJ391V	
R87	RK3058	Chip R.	ERJ3GSYJ473V	
R88	RK3035	Chip R.	ERJ3GSYJ561V	
R89	RK3020	Chip R.	ERJ3GSYJ330V	
R90	RK3061	Chip R.	ERJ3GSYJ823V	
R91	RK3060	Chip R.	ERJ3GSYJ683V	
R92	RK3062	Chip R.	ERJ3GSYJ104V	
R93	RK3026	Chip R.	ERJ3GSYJ101V	
R94	RK3050	Chip R.	ERJ3GSYJ103V	
R95	RK3042	Chip R.	ERJ3GSYJ222V	
R96	RK3050	Chip R.	ERJ3GSYJ103V	
R97	RK3050	Chip R.	ERJ3GSYJ103V	
R98	RK3064	Chip R.	ERJ3GSYJ154V	
R99	RK3036	Chip R.	ERJ3GSYJ681V	
R100	RK3047	Chip R.	ERJ3GSYJ562V	
R101	RK3062	Chip R.	ERJ3GSYJ104V	
R102	RK3050	Chip R.	ERJ3GSYJ103V	
R103	RK3053	Chip R.	ERJ3GSYJ183V	
R104	RK3050	Chip R.	ERJ3GSYJ103V	

RF unit

Ref No	Parts No.	Description	Parts Name	Ver.
R105	RK3050	Chip R.	ERJ3GSYJ103V	
R106	RK3026	Chip R.	ERJ3GSYJ101V	
R107	RK3034	Chip R.	ERJ3GSYJ471V	
R108	RK3026	Chip R.	ERJ3GSYJ101V	
R109	RK3050	Chip R.	ERJ3GSYJ103V	
R110	RK3061	Chip R.	ERJ3GSYJ823V	
R111	RK3026	Chip R.	ERJ3GSYJ101V	
R112	RK3022	Chip R.	ERJ3GSYJ470V	
R113	RK3022	Chip R.	ERJ3GSYJ470V	
R114	RK3026	Chip R.	ERJ3GSYJ101V	
R115	RK3026	Chip R.	ERJ3GSYJ101V	
R116	RK3034	Chip R.	ERJ3GSYJ471V	
R117	RK3042	Chip R.	ERJ3GSYJ222V	
R118	RK3061	Chip R.	ERJ3GSYJ823V	
R119	RK3061	Chip R.	ERJ3GSYJ823V	
R120	RK3030	Chip R.	ERJ3GSYJ221V	
R121	RK3036	Chip R.	ERJ3GSYJ681V	
R122	RK3066	Chip R.	ERJ3GSYJ224V	
R123	RK3050	Chip R.	ERJ3GSYJ103V	
R124	RK3050	Chip R.	ERJ3GSYJ103V	
R125	RK3050	Chip R.	ERJ3GSYJ103V	
R126	RK3050	Chip R.	ERJ3GSYJ103V	
R127	RK3053	Chip R.	ERJ3GSYJ183V	
R128	RK3047	Chip R.	ERJ3GSYJ562V	
R129	RK3057	Chip R.	ERJ3GSYJ393V	
R130	RK3026	Chip R.	ERJ3GSYJ101V	
R131	RK3026	Chip R.	ERJ3GSYJ101V	
R132	RK3026	Chip R.	ERJ3GSYJ101V	
R133	RK3026	Chip R.	ERJ3GSYJ101V	
R135	RK3026	Chip R.	ERJ3GSYJ101V	
R136	RK3036	Chip R.	ERJ3GSYJ681V	
R137	RK3050	Chip R.	ERJ3GSYJ103V	
R138	RK3035	Chip R.	ERJ3GSYJ561V	
R139	RK3036	Chip R.	ERJ3GSYJ681V	
R140	RK3061	Chip R.	ERJ3GSYJ823V	
R141	RK3060	Chip R.	ERJ3GSYJ683V	
R143	RK3024	Chip R.	ERJ3GSYJ680V	
R146	RK3062	Chip R.	ERJ3GSYJ104V	
R147	RK3034	Chip R.	ERJ3GSYJ471V	
R148	RK3061	Chip R.	ERJ3GSYJ823V	
R149	RK3022	Chip R.	ERJ3GSYJ470V	
R150	RK3022	Chip R.	ERJ3GSYJ470V	
R151	RK3026	Chip R.	ERJ3GSYJ101V	
R152	RK3042	Chip R.	ERJ3GSYJ222V	
R153	RK3042	Chip R.	ERJ3GSYJ222V	
R154	RK3026	Chip R.	ERJ3GSYJ101V	
R155	RK3026	Chip R.	ERJ3GSYJ101V	
R156	RK3001	Chip R.	ERJ3GSY0R00V	
R157	RK3033	Chip R.	ERJ3GSYJ391V	
R158	RK3058	Chip R.	ERJ3GSYJ473V	
R159	RK3034	Chip R.	ERJ3GSYJ471V	
R160	RK3053	Chip R.	ERJ3GSYJ183V	
R161	RK3061	Chip R.	ERJ3GSYJ823V	
R162	RK3018	Chip R.	ERJ3GSYJ220V	

RF unit

Ref N	Parts No.	Description	Parts Name	Ver.
R163	RK3060	Chip R.	ERJ3GSYJ683V	
R164	RK3026	Chip R.	ERJ3GSYJ101V	
R166	RK3065	Chip R.	ERJ3GSYJ184V	
R167	RK3042	Chip R.	ERJ3GSYJ222V	
R168	RK3030	Chip R.	ERJ3GSYJ221V	
R169	RK3036	Chip R.	ERJ3GSYJ681V	
R170	RK3065	Chip R.	ERJ3GSYJ184V	
R171	RK3026	Chip R.	ERJ3GSYJ101V	
R172	RK3062	Chip R.	ERJ3GSYJ470V	
R173	RK3062	Chip R.	ERJ3GSYJ104V	
R174	RK3062	Chip R.	ERJ3GSYJ104V	
R175	RK3062	Chip R.	ERJ3GSYJ104V	
R176	RK3050	Chip R.	ERJ3GSYJ103V	
R177	RK3026	Chip R.	ERJ3GSYJ101V	
R178	RK3026	Chip R.	ERJ3GSYJ101V	
R179	RK3026	Chip R.	ERJ3GSYJ101V	
R181	RK3040	Chip R.	ERJ3GSYJ152V	
R182	RK3062	Chip R.	ERJ3GSYJ224V	
R184	RK3026	Chip R.	ERJ3GSYJ104V	
R185	RK3038	Chip R.	ERJ3GSYJ102V	
R186	RK3026	Chip R.	ERJ3GSYJ101V	
R187	RK3026	Chip R.	ERJ3GSYJ101V	
R188	RK3058	Chip R.	ERJ3GSYJ473V	
R189	RK3046	Chip R.	ERJ3GSYJ472V	
R190	RK3050	Chip R.	ERJ3GSYJ103V	
R191	RK3051	Chip R.	ERJ3GSYJ123V	
R192	RK3050	Chip R.	ERJ3GSYJ103V	
R193	RK3058	Chip R.	ERJ3GSYJ473V	
R194	RK3026	Chip R.	ERJ3GSYJ471V	
R195	RK3043	Chip R.	ERJ3GSYJ272V	
R196	RK3049	Chip R.	ERJ3GSYJ822V	
R197	RK3034	Chip R.	ERJ3GSYJ471V	
R198	RK3049	Chip R.	ERJ3GSYJ822V	
R199	RK3026	Chip R.	ERJ3GSYJ101V	
R200	RK3032	Chip R.	ERJ3GSYJ331V	
R201	RK3030	Chip R.	ERJ3GSYJ221V	
R202	RK3034	Chip R.	ERJ3GSYJ471V	
R203	RK3058	Chip R.	ERJ3GSYJ473V	
R204	RK3019	Chip R.	ERJ3GSYJ270V	
VC51	CT0012	Trimmer	CTZ10AW	
VR51	RH0140	Trim.pot	MVR22HXBRN472	
VR52	RH0146	Trim.pot	MVR22HXBRN473	
VR53	RH0140	Trim.pot	MVR22HXBRN472	
VR54	RH0144	Trim.pot	MVR22HXBRN223	
W51	MYCKH4GI	Wire	#28YH1-045-H1	
X51	XQ0060	Crystal	UM-1/12.8MHZ	
XF51	XF0019	Filter	45.1MHz45M15BE	
XF53	XF0020	Filter	38.9MHz38M15B	
			Coil shield	
	TN0004		Module earth DJG5	
	TS0101		Silicon dumper UM1	
	TZ0049		JPW01R-01	
	RD0108	Resistor		

IF unit

Ref No	Parts No.	Description	Parts Name	Ver.
		IF Unit		
C301	CU3047	Chip C.	C1608JB1H103KTA	
C302	OE0374	Electrolytic C.	16CV100BS	
C303	CU3035	Chip C.	C1608JB1H102KTA	
C304	CU3059	Chip C.	C1608JF1E104ZTA	
C305	CS0378	Chip Tantal	TMCMC0G107MTR	
C306	CU3035	Chip C.	C1608JB1H102KTA	
C307	CU3047	Chip C.	C1608JB1H103KTA	
C308	CU3047	Chip C.	C1608JB1H103KTA	
C309	CU3047	Chip C.	C1608JB1H103KTA	
C310	CS0376	Chip Tantal	TMCMA0G226MTR	
C311	CU3006	Chip C.	C1608CH1H050CTA	
C312	CU3008	Chip C.	C1608CH1H070CTA	
C313	CU3059	Chip C.	C1608JF1E104ZTA	
C314	CU3059	Chip C.	C1608JF1E104ZTA	
C315	CU3021	Chip C.	C1608CH1H680JTA	
C316	CU3051	Chip C.	C1608JB1E223KTA	
C317	CU3047	Chip C.	C1608JB1H103KTA	
C318	CU3035	Chip C.	C1608JB1H102KTA	
C319	CU3023	Chip C.	C1608CH1H101JTA	
C320	CU3023	Chip C.	C1608CH1H101JTA	
C321	CU3035	Chip C.	C1608JB1H102KTA	
C322	CU3059	Chip C.	C1608JF1E104ZTA	
C323	CU8042	Chip C.	C2012JB1C104KTA	
C324	CS0060	Chip Tantal	TMCSA1E474MTR	
C325	CU3047	Chip C.	C1608JB1H103KTA	
C326	CU3035	Chip C.	C1608JB1H102KTA	
				E/EH
C327	CS0063	Chip Tantal	TMCSA1V104MTR	
C328	CU3047	Chip C.	C1608JB1H103KTA	
C329	CU3047	Chip C.	C1608JB1H103KTA	
C330	CU3047	Chip C.	C1608JB1H103KTA	
C331	CU8042	Chip C.	C2012JB1C104KTA	
C332	CU3047	Chip C.	C1608JB1H103KTA	
C333	CU3035	Chip C.	C1608JB1H102KTA	
C334	CS0366	Chip Tantal	TMCMA0G106MTR	
C335	CU3047	Chip C.	C1608JB1H103KTA	
C336	CS0366	Chip Tantal	TMCMA0G106MTR	
C337	CU3047	Chip C.	C1608JB1H103KTA	
C338	CU3047	Chip C.	C1608JB1H103KTA	
C339	CU3047	Chip C.	C1608JB1H103KTA	
C340	CS0376	Chip Tantal	TMCMA0G226MTR	
C341	CU3007	Chip C.	C1608CH1H060CTA	
C342	CU3012	Chip C.	C1608CH1H120JTA	
C343	CU3059	Chip C.	C1608JF1E104ZTA	
C344	CU3059	Chip C.	C1608JF1E104ZTA	
C345	CU3059	Chip C.	C1608JF1E104ZTA	
C346	CU3059	Chip C.	C1608JF1E104ZTA	
C347	CU3021	Chip C.	C1608CH1H680JTA	
C348	CU3053	Chip C.	C1608JF1E333ZTA	
C349	CU3051	Chip C.	C1608JB1E223KTA	
C350	CU3047	Chip C.	C1608JB1H103KTA	
C351	CU3035	Chip C.	C1608JB1H102KTA	
C352	CU3023	Chip C.	C1608CH1H101JTA	
C353	CU3023	Chip C.	C1608CH1H101JTA	

IF unit

Ref No	Parts No.	Description	Parts Name	Ver.
C354	CU3035	Chip C.	C1608JB1H102KTA	
C355	CU3059	Chip C.	C1608JF1E104ZTA	
C356	CU8042	Chip C.	C2012JB1C104KTA	
C357	CS0060	Chip Tantal	TMCSA1E474MTR	
C358	CU3047	Chip C.	C1608JF1E104ZTA	
C359	CS0366	Chip Tantal	TMCMC0G107MTR	
C360	CU3051	Chip C.	C1608JB1H102KTA	
C362	CU3035	Chip C.	C1608JB1H103KTA	
C363	CS0063	Chip Tantal	TMCSA1V104MTR	
C364	CU3047	Chip C.	C1608JB1H103KTA	
C365	CU3047	Chip C.	C1608JB1H103KTA	
C366	CU3047	Chip C.	C1608CH1H050CTA	
C367	CU3047	Chip C.	C1608CH1H070CTA	
C368	CU8042	Chip C.	C2012JB1C104KTA	
C369	CU3047	Chip C.	C1608JF1E104ZTA	
C370	CU3051	Chip C.	C1608JB1E223KTA	
C371	CS0376	Chip Tantal	TMCMA0G226MTR	
C372	CS0376	Chip Tantal	TMCMA0G226MTR	
C373	CU3047	Chip C.	C1608JB1H103KTA	
C374	CS0216	Chip Tantal	TMCMB1A106MTR	
C375	CS0377	Chip Tantal	TMCMB0G476MTR	
C376	CS0376	Chip Tantal	TMCMA0G226MTR	
C377	CS0049	Chip Tantal	TMCSA1C105MTR	
C378	CS0376	Chip Tantal	TMCMA0G226MTR	
C379	CS0376	Chip Tantal	TMCMA0G226MTR	
C380	CS0049	Chip Tantal	TMCSA1C105MTR	
C381	CS0376	Chip Tantal	TMCMA0G226MTR	
C382	CU3035	Chip C.	C1608JB1H102KTA	
C383	CU3023	Chip C.	C1608CH1H101JTA	
C384	CU3023	Chip C.	C1608CH1H101JTA	
C385	CS0049	Chip C.	TMCSA1C105MTR	
C386	CS0049	Chip C.	TMCSA1C105MTR	
C387	CU3035	Chip C.	C1608JB1H102KTA	
C388	CS0049	Chip C.	TMCSA1C105MTR	
C389	CU3035	Chip C.	C1608JB1H102KTA	
C390	CU3059	Chip C.	C1608JF1E104ZTA	
C391	CS0049	Chip C.	TMCSA1C105MTR	
C392	CU3035	Chip C.	C1608JB1H102KTA	
C393	CS0366	Chip C.	TMCMA0G106MTR	
C394	CU8042	Chip C.	C2012JB1C104KTA	
C395	CS0369	Chip Tantal	TMCMD0J107MTR	
C396	CU3035	Chip C.	C1608JB1H102KTA	
C397	CS0376	Chip Tantal	TMCMA0G226MTR	
C398	CU3047	Chip C.	C1608JB1H103KTA	
C399	CS0379	Chip Tantal	TMCMC1A476MTR	
C400	CU3047	Chip C.	C1608JB1H103KTA	
C401	CU3035	Chip C.	C1608JB1H102KTA	
C402	CU3047	Chip C.	C1608JB1H103KTA	
C403	CU3047	Chip C.	C1608JB1H103KTA	
C404	CU3047	Chip C.	C1608JB1H103KTA	
C405	CU3035	Chip C.	C1608JB1H102KTA	
C406	CU3047	Chip C.	C1608JB1H103KTA	
C407	CU3035	Chip C.	C1608JB1H102KTA	
C408	CU3023	Chip C.	C1608JB1H102KTA	

IF unit

Ref No	Parts No.	Description	Parts Name	Ver.
C409	CS0366	Chip Tantal	TMCMA0G106MTR	
C410	CU8042	Chip C.	C2012JB1C104KTA	
C411	CU3051	Chip C.	C1608JB1E223KTA	
C412	CU3035	Chip C.	C1608JB1H102KTA	
C413	CU3027	Chip C.	C1608JB1H221JTA	
C414	CU3039	Chip C.	C1608JB1H222KTA	
C415	CU8042	Chip C.	C2012JB1C104KTA	
C416	CU3021	Chip C.	C1608CH1H680JTA	
C417	CS0063	Chip Tantal	TMCSA1V104MTR	
C418	CU3047	Chip C.	C1608JB1H103KTA	
C419	CS0366	Chip Tantal	TMCMA0G106MTR	
C420	CU3035	Chip C.	C1608JB1H102KTA	
C421	CS0049	Chip Tantal	TMCSA1C105MTR	
C422	CU3059	Chip C.	C1608JF1E104ZTA	
C423	CU3051	Chip C.	C1608JB1E223KTA	
C424	CU3051	Chip C.	C1608JB1E223KTA	
C425	CU3051	Chip C.	C1608JB1E223KTA	
C426	CU3051	Chip C.	C1608JB1E223KTA	
C427	CU3047	Chip C.	C1608JB1H103KTA	
C428	CU3031	Chip C.	C1608B1H471KTA	E/EX
C430	CU3031	Chip C.	C1608B1H471KTA	
C431	CU3035	Chip C.	C1608JB1H102KTA	
C432	CU3031	Chip C.	C1608B1H471KTA	
C433	CU3031	Chip C.	C1608B1H471KTA	
C434	CU3035	Chip C.	C1608B1H102KTA	
C435	CU3031	Chip C.	C1608B1H471KTA	
C436	CU3035	Chip C.	C1608JB1H102KTA	
C437	CU3035	Chip C.	C1608JB1H102KTA	
C438	CU3047	Chip C.	C1608JB1H103KTA	
C439	CU3035	Chip C.	C1608B1H102KTA	
C440	CU3023	Chip C.	C1608CH1H101JTA	
C441	CU3023	Chip C.	C1608CH1H101JTA	
C442	CU3035	Chip C.	C1608JB1H102KTA	
C443	CU3051	Chip C.	C1608JB1E223KTA	
C444	CS0366	Chip Tantal	TMCMA0G106MTR	
C446	CS0049	Chip Tantal	TMCSA1C105MTR	
CN301	UE0240	Connector	AXN440C530P	
CN302	UP0282	Connector	DJG5IF-RF Flex.	
D301	XD0250	Diode	MA742TX	
D302	XD0250	Diode	MA742TX	
D303	XD0290	Diode	MA111-TX	
D304	XD0291	Diode	MA729-TX	
D305	XL0036	Diode	SML-310MTT86	
D306	XD0290	Diode	MA111-TX	
D308	XD0291	Diode	MA729-TX	
D310	XD0239	Diode	MA142WATX	
FL301	XC0010	Filter	CFUM455F	
FL302	XC0010	Filter	CFUM455F	
IC301	XA0343	IC	MC3372VM-EL	
IC302	XA0223	IC	TK10930VTL	
IC303	XA0348	IC	TC4W53FU(TE12)	
IC304	XA0345	IC	LC75366M-TLM	
IC305	XA0349	IC	TA75W01FU(TE12L)	
IC306	XA0349	IC	TA75W01FU(TE12L)	
IC307	XA0210	IC	NJM2070MT1	

IF unit

Ref N	Parts No.	Description	Parts Name	Ver.
IC308	XA0341	IC	RH5RH651A-T1	
IC309	XA0332	IC	TA75S01F(TE85L)	
IC310	XA0342	IC	NJM2100V-TE1	
IC311	XA0246	IC	BU4094BFT1	
JK301	UJ0022	Jack	HSJ1102-01-540	
JK301	UJ0019	Jack	HSJ1493-01-010	
L301	QC0086	Coil	NL322522T101J	
Q301	XT0088	Transistor	2SA1213YTE12L	
Q302	XU0172	Transistor	XP1501-TX	
Q303	XT0135	Transistor	2SD2216R-TX	
Q304	XU0062	Transistor	UN9111TX	
Q306	XT0135	Transistor	2SD2216R-TX	
Q307	XE0019	Transistor	2SJ144YTE85R	
Q308	XU0062	Transistor	UN9111TX	
Q309	XT0135	Transistor	2SD2216R-TX	
Q310	XU0062	Transistor	UN9111TX	
Q312	XU0063	Transistor	UN9211TX	
Q313	XT0135	Transistor	2SD2216R-TX	
Q315	XT0135	Transistor	2SD2216R-TX	
Q316	XU0062	Transistor	UN9111TX	
Q317	XT0135	Transistor	2SD2216R-TX	
Q318	XT0088	Transistor	2SA1213YTE12L	
Q319	XU0172	Transistor	XP1501-TX	
Q320	XU0063	Transistor	UN9211TX	
Q321	XU0063	Transistor	UN9211TX	
Q322	XT0135	Transistor	2SD2216R-TX	
Q323	XU0099	Transistor	UN9216-R-TX	
Q423	XU0062	Transistor	UN9111TX	E/EH
Q326	XU0171	Transistor	XP1111-TX	
Q327	XU0062	Transistor	UN9111TX	
Q328	XU0171	Transistor	XP1111-TX	
Q329	XU0171	Transistor	XP1111-TX	
R301	RK0114	Chip R.	ERJ6GEYJ010V	
R302	RK3058	Chip R.	ERJ3GSYJ473V	
R303	RK3040	Chip R.	ERJ3GSYJ152V	
R304	RK3055	Chip R.	ERJ3GSYJ273V	
R305	RK3042	Chip R.	ERJ3GSYJ222V	
R306	RK3055	Chip R.	ERJ3GSYJ273V	
R307	RK3047	Chip R.	ERJ3GSYJ562V	
R308	RK3038	Chip R.	ERJ3GSYJ102V	
R309	RK3026	Chip R.	ERJ3GSYJ101V	
R310	RK3050	Chip R.	ERJ3GSYJ103V	
R311	RK3041	Chip R.	ERJ3GSYJ182V	
R312	RK3058	Chip R.	ERJ3GSYJ473V	
R313	RK3042	Chip R.	ERJ3GSYJ222V	
R314	RK3062	Chip R.	ERJ3GSYJ104V	
R315	RK3038	Chip R.	ERJ3GSYJ102V	
R316	RK3066	Chip R.	ERJ3GSYJ224V	
R317	RK3046	Chip R.	ERJ3GSYJ472V	
R318	RK3038	Chip R.	ERJ3GSYJ102V	
R319	RK3050	Chip R.	ERJ3GSYJ103V	
R320	RK3050	Chip R.	ERJ3GSYJ103V	
R321	RK3056	Chip R.	ERJ3GSYJ333V	
R322	RK3042	Chip R.	ERJ3GSYJ222V	
R323	RK3038	Chip R.	ERJ3GSYJ102V	

IF unit

Ref N	Parts No.	Description	Parts Name	Ver.
R324	RK3040	Chip R.	ERJ3GSYJ152V	
R326	RK3061	Chip R.	ERJ3GSYJ823V	
R328	RK3050	Chip R.	ERJ3GSYJ103V	
R329	RK3042	Chip R.	ERJ3GSYJ222V	
R330	RK3046	Chip R.	ERJ3GSYJ472V	
R331	RK3046	Chip R.	ERJ3GSYJ472V	
R332	RK3067	Chip R.	ERJ3GSYJ274V	
R333	RK3051	Chip R.	ERJ3GSYJ123V	
R334	RK3066	Chip R.	ERJ3GSYJ224V	
R335	RK3042	Chip R.	ERJ3GSYJ222V	
R336	RK3060	Chip R.	ERJ3GSYJ683V	
R338	RK3050	Chip R.	ERJ3GSYJ103V	
R339	RK3038	Chip R.	ERJ3GSYJ102V	
R340	RK3062	Chip R.	ERJ3GSYJ104V	
R341	RK3074	Chip R.	ERJ3GSYJ105V	
R342	RK3042	Chip R.	ERJ3GSYJ222V	
R343	RK3038	Chip R.	ERJ3GSYJ102V	
R344	RK3026	Chip R.	ERJ3GSYJ101V	
R345	RK3050	Chip R.	ERJ3GSYJ103V	
R346	RK3042	Chip R.	ERJ3GSYJ222V	
R347	RK3045	Chip R.	ERJ3GSYJ392V	
R348	RK3072	Chip R.	ERJ3GSYJ684V	
R349	RK3066	Chip R.	ERJ3GSYJ224V	
R350	RK3066	Chip R.	ERJ3GSYJ224V	
R351	RK3046	Chip R.	ERJ3GSYJ472V	
R352	RK3038	Chip R.	ERJ3GSYJ102V	
R353	RK3050	Chip R.	ERJ3GSYJ103V	
R354	RK3050	Chip R.	ERJ3GSYJ103V	
R355	RK3056	Chip R.	ERJ3GSYJ333V	
R356	RK3042	Chip R.	ERJ3GSYJ222V	
R357	RK3038	Chip R.	ERJ3GSYJ102V	
R358	RK3040	Chip R.	ERJ3GSYJ152V	
R360	RK3042	Chip R.	ERJ3GSYJ222V	
R362	RK3049	Chip R.	ERJ3GSYJ822V	
R364	RK3067	Chip R.	ERJ3GSYJ274V	
R365	RK3042	Chip R.	ERJ3GSYJ222V	
R366	RK3046	Chip R.	ERJ3GSYJ472V	
R367	RK3050	Chip R.	ERJ3GSYJ103V	
R368	RK3046	Chip R.	ERJ3GSYJ472V	
R369	RK3067	Chip R.	ERJ3GSYJ274V	
R370	RK3051	Chip R.	ERJ3GSYJ123V	
R371	RK3066	Chip R.	ERJ3GSYJ224V	
R372	RK3042	Chip R.	ERJ3GSYJ222V	
R373	RK3060	Chip R.	ERJ3GSYJ683V	
R375	RK3062	Chip R.	ERJ3GSYJ104V	
R376	RK3038	Chip R.	ERJ3GSYJ102V	
R377	RK3062	Chip R.	ERJ3GSYJ104V	
R378	RK3066	Chip R.	ERJ3GSYJ224V	
R379	RK3066	Chip R.	ERJ3GSYJ224V	
R380	RK3058	Chip R.	ERJ3GSYJ473V	
R381	RK3058	Chip R.	ERJ3GSYJ473V	
R382	RK3074	Chip R.	ERJ3GSYJ105V	
R383	RK3050	Chip R.	ERJ3GSYJ103V	
R384	RK3074	Chip R.	ERJ3GSYJ473V	

IF unit

Ref No	Parts No.	Description	Parts Name	Ver.
R385	RK3074	Chip R.	ERJ3GSYJ105V	
R386	RK3050	Chip R.	ERJ3GSYJ103V	
R387	RK3050	Chip R.	ERJ3GSYJ103V	
R388	RK3042	Chip R.	ERJ3GSYJ222V	
R389	RK3058	Chip R.	ERJ3GSYJ473V	
R390	RK3046	Chip R.	ERJ3GSYJ472V	
R391	RK3030	Chip R.	ERJ3GSYJ221V	
R392	RK0114	Chip R.	ERJ6GEYJ010V	
R393	RK3058	Chip R.	ERJ3GSYJ473V	
R394	RK3058	Chip R.	ERJ3GSYJ473V	
R395	RK3056	Chip R.	ERJ3GSYJ333V	
R396	RK3052	Chip R.	ERJ3GSYJ153V	
R397	RK3043	Chip R.	ERJ3GSYJ272V	
R398	RK3050	Chip R.	ERJ3GSYJ103V	
R399	RK3050	Chip R.	ERJ3GSYJ103V	
R400	RK3014	Chip R.	ERJ3GSYJ100V	
R401	RK3052	Chip R.	ERJ3GSYJ153V	
R402	RK3051	Chip R.	ERJ3GSYJ123V	
R403	RK1018	Chip R.	ERJ8GEYJ101V	
R404	RK3050	Chip R.	ERJ3GSYJ103V	
R405	RK3058	Chip R.	ERJ3GSYJ473V	
R406	RK3058	Chip R.	ERJ3GSYJ473V	
R407	RK3060	Chip R.	ERJ3GSYJ683V	
R408	RK3023	Chip R.	ERJ3GSYJ560V	
R409	RK3041	Chip R.	ERJ3GSYJ182V	
R410	RK3066	Chip R.	ERJ3GSYJ224V	
R411	RK3030	Chip R.	ERJ3GSYJ221V	
R412	RK3046	Chip R.	ERJ3GSYJ472V	
R413	RK3046	Chip R.	ERJ3GSYJ472V	
R414	RK3063	Chip R.	ERJ3GSYJ124V	
R415	RK3056	Chip R.	ERJ3GSYJ333V	
R416	RK3061	Chip R.	ERJ3GSYJ823V	
R417	RK3069	Chip R.	ERJ3GSYJ394V	
R418	RK3034	Chip R.	ERJ3GSYJ471V	
R419	RK3056	Chip R.	ERJ3GSYJ333V	
R420	RK3056	Chip R.	ERJ3GSYJ333V	
R421	RK3058	Chip R.	ERJ3GSYJ473V	
R422	RK3050	Chip R.	ERJ3GSYJ103V	
R423	RK3066	Chip R.	ERJ3GSYJ224V	
R424	RK3066	Chip R.	ERJ3GSYJ224V	
R425	RK3056	Chip R.	ERJ3GSYJ333V	
R426	RK3056	Chip R.	ERJ3GSYJ333V	
R427	RK3056	Chip R.	ERJ3GSYJ333V	
R428	RK3038	Chip R.	ERJ3GSYJ333V	
R429	RK3056	Chip R.	ERJ3GSYJ333V	
R430	RK3059	Chip R.	ERJ3GSYJ563V	
R431	RK3058	Chip R.	ERJ3GSYJ473V	
R433	RK3058	Chip R.	ERJ3GSYJ473V	
R434	RK3057	Chip R.	ERJ3GSYJ393V	
R435	RK3059	Chip R.	ERJ3GSYJ563V	
R437	RK3074	Chip R.	ERJ3GSYJ105V	
R438	RK3050	Chip R.	ERJ3GSYJ103V	
R439	RK3050	Chip R.	ERJ3GSYJ103V	
R440	RK3058	Chip R.	ERJ3GSYJ473V	

IF unit

Ref No	Parts No.	Description	Parts Name	Ver.
RE301	UR0012	Encoder	EC09P20-89	
VR301	RH0142	Trim.pot	MVR22HXBRN103	
VR302	RH0148	Trim.pot	MVR22HXBRN104	
VR303	RH0142	Trim.pot	MVR22HXBRN103	
VR304	RH0148	Trim.pot	MVR22HXBRN104	
VR305	RH0142	Trim.pot	MVR22HXBRN103	
VR306	RH0142	Trim.pot	MVR22HXBRN103	
VR307	RH0146	Trim.pot	MVR22HXBRN473	
VR308	RH0146	Trim.pot	MVR22HXBRN473	
VR309	RH0146	Trim.pot	MVR22HXBRN473	
W301	MPCK06GC	Wire	#28PH1-060-H1	
W302	MACK02GC	Wire	#28AH1-020-H1	
X301	XQ0069	Crystal	UM545.555MHZ	
X302	XK0002	Discriminator	CDBM455C7	
X303	XQ0073	Crystal	UM538.445MHZ	
X304	XK0002	Discriminator	CDBM455C7	
	TZ0049		Silicon dumper UM1	
	FM0111		IF earth DJG5	

CPU unit

Ref N	Parts No.	Description	Parts Name	Ver.
		CPU Unit		
C501	CU3047	Chip C.	C1608JB1H103KTA	
C502	CU3047	Chip C.	C1608JB1H103KTA	
C503	CU3047	Chip C.	C1608JB1H103KTA	
C504	CU3035	Chip C.	C1608JB1H102KTA	
C505	CU3035	Chip C.	C1608JB1H102KTA	
C506	CU3047	Chip C.	C1608JB1H103KTA	
C508	CU3023	Chip C.	C1608CH1H101JTA	
C509	CU3047	Chip C.	C1608JB1H103KTA	
C510	CU3047	Chip C.	C1608JB1H103KTA	
C511	CS0208	Chip Tantal	TMCMA0J475MTR	
C512	CU3035	Chip C.	C1608JB1H102KTA	
C513	CS0208	Chip Tantal	TMCMA0J475MTR	
C514	CU3101	Chip C.	C1608JB1C473KTA	
C515	CS0049	Chip Tantal	TMCSA1C105MTR	
C516	CU3035	Chip C.	C1608JB1H102KTA	
C517	CU3023	Chip C.	C1608CH1H101JTA	
C518	CU3019	Chip C.	C1608CH1H470JTA	
C519	CU3047	Chip C.	C1608JB1H103KTA	
C520	CU3018	Chip C.	C1608CH1H390JTA	
C521	CU3085	Chip C.	C1608CH1H300JT-A	
C522	CS0064	Chip Tantal	TMCSA1A155MTR	
C523	CU3014	Chip C.	C1608CH1H180JTA	
C524	CU3014	Chip C.	C1608CH1H180JTA	
C525	CU3085	Chip C.	C1608CH1H300JT-A	
C526	CU3018	Chip C.	C1608CH1H390JTA	
C527	CU3035	Chip C.	C1608JB1H102KTA	
C528	CS0380	Chip Tantal	TMCMD0G157MTR	
C529	CU3047	Chip C.	C1608JB1H103KTA	
C530	CU3035	Chip C.	C1608JB1H102KTA	
C532	CU3051	Chip C.	C1608JB1E223KTA	
C533	CS0049	Chip Tantal	TMCSA1C105MTR	
C534	CS0060	Chip Tantal	TMCSA1E474MTR	
C535	CU3035	Chip C.	C1608JB1H102KTA	
C536	CS0381	Chip Tantal	TMCMB0J336MTR	
C537	CS0378	Chip Tantal	TMCMC0G107MTR	
C538	CU3059	Chip C.	C1608JF1E104ZTA	
C539	CU3035	Chip C.	C1608JB1H102KTA	
C540	CU3031	Chip C.	C1608JB1H471KTA	
C541	CU3035	Chip C.	C1608JB1H102KTA	
CN50	UE0256	Connector	CFP0508-0201	
CN50	UE0241	Connector	AXN340C038P	
D501	XL0028	LED	BRPG1201W	
D502	XL0028	LED	BRPG1201W	
D503	XL0045	LED	PG1101F-TR	
D504	XL0045	LED	PG1101F-TR	
D505	XL0045	LED	PG1101F-TR	
D506	XL0045	LED	PG1101F-TR	
D507	XD0290	Diode	MA111-TX	
D508	XD0291	Diode	MA729-TX	
D509	XL0036	LED	SML-310MTT86	
D510	XD0238	Diode	DA227TL	
D511	XL0036	LED	SML-310MTT86	
D512	XD0238	Diode	DA227TL	

CPU unit

Ref No	Parts No	Description	Parts Name	Ver.
D513	XL0036	LED	SML-310MTT86	
D514	XL0036	LED	SML-310MTT86	
D515	XD0156	Diode	DTZ3.6BTT11	
D516	XD0251	Diode	MA741WATX	
D517	XD0291	Diode	MA729-TX	
D518	XD0165	Diode	DTZ5.1BTT11	
IC501	XA0348	IC	TC4W53FU(TE12)	
IC502	XA0344	IC	LC73881M-TLM	
IC503	XA0355	IC	UPD16430AGF-3B9	
IC504	XA0239	IC	AK2341	
IC505	XA0348	IC	TC4W53FU(TE12)	T
IC506	XA0356	IC	S-80730SL-AT-T2	
IC507	XA0358	IC	S-81237SG-QE-T2	
IC508	XA0161	IC	HD6433877A35H	
IC509	XA0219	IC	RH5RH501AT1	
IC510	XA0356	IC	S-80730SL-AT-T2	E
L501	QC0049	Coil	NL322522T221J	T
Q501	XU0171	Transistor	XP1111-TX	
Q502	XU0171	Transistor	XP1111-TX	
Q503	XU0063	Transistor	UN9211TX	
Q504	XU0063	Transistor	UN9211TX	
Q505	XT0140	Transistor	2SB1181-TLQ	
Q506	XT0139	Transistor	2SA1774TLR	
Q507	XT0135	Transistor	2SD2216R-TX	
Q508	XT0088	Transistor	2SA1213YTE12L	
Q509	XU0172	Transistor	XP1501-TX	
Q510	XU0177	Transistor	XP1216-TX	
Q511	XU0047	Transistor	UMC3TR	
Q512	XU0047	Transistor	UMC3TR	
R501	RA0009	Chip R.	EXBV8V102JV	
R502	RK3038	Chip R.	ERJ3GSYJ102V	
R503	RK3038	Chip R.	ERJ3GSYJ102V	
R504	RK3062	Chip R.	ERJ3GSYJ104V	
R505	RK3046	Chip R.	ERJ3GSYJ103V	
R506	RK3062	Chip R.	ERJ3GSYJ104V	
R507	RK3046	Chip R.	ERJ3GSYJ472V	
R508	RK3050	Chip R.	ERJ3GSYJ103V	
R509	RK3030	Chip R.	ERJ3GSYJ221V	
R510	RK3054	Chip R.	ERJ3GSYJ222V	
R511	RK3042	Chip R.	ERJ3GSYJ222V	
R512	RK3062	Chip R.	ERJ3GSYJ104V	
R513	RK3050	Chip R.	ERJ3GSYJ103V	
R514	RK3032	Chip R.	ERJ3GSYJ331V	
R515	RK3031	Chip R.	ERJ3GSYJ271V	
R516	RK3031	Chip R.	ERJ3GSYJ271V	
R517	RK3032	Chip R.	ERJ3GSYJ331V	
R518	RK3058	Chip R.	ERJ3GSYJ473V	
R519	RA0008	Chip R.	EXBV4V102JV	
R520	RK3050	Chip R.	ERJ3GSYJ103V	
R521	RK3067	Chip R.	ERJ3GSYJ274V	
R522	RK3089	Chip R.	ERJ3GSYJ912V	
R523	RK3051	Chip R.	ERJ3GSYJ123V	
R524	RK3047	Chip R.	ERJ3GSY562V	
R525	RK3048	Chip R.	ERJ3GSYJ682V	
R526	RK3066	Chip R.	ERJ3GSYJ224V	
R527	RK3027	Chip R.	ERJ3GSYJ121V	
R528	RK3050	Chip R.	ERJ3GSYJ103V	
R529	RK3066	Chip R.	ERJ3GSYJ224V	
R530	RK3027	Chip R.	ERJ3GSYJ121V	
R531	RA0008	Chip R.	EXBV4V102JV	
R532	RA0009	Chip R.	EXBV8V102JV	
R533	RA0009	Chip R.	EXBV8V102JV	
R534	RK3054	Chip R.	ERJ3GSYJ223V	
R535	RK3027	Chip R.	ERJ3GSYJ121V	
R536,	RK3061	Chip R.	ERJ3GSYJ823V	
R537	RK3055	Chip R.	ERJ3GSYJ273V	
R538	RK3092	Chip R.	ERJ3EKF7502V	
R540	RA0008	Chip R.	EXBV4V102JV	
R541	RK3058	Chip R.	ERJ3GSYJ473V	E
R541	RK3061	Chip R.	ERJ3GSYJ823V	T
R542	RK3091	Chip R.	ERJ3EKF3902V	
R543	RK3054	Chip R.	ERJ3GSYJ223V	
R544	RK3074	Chip R.	ERJ3GSYJ273V	
R545	RK3027	Chip R.	ERJ3GSYJ121V	
R546	RA0009	Chip R.	EXBV8V102JV	
R547	RK3074	Chip R.	ERJ3GSYJ105V	
R548	RK3038	Chip R.	ERJ3GSYJ102V	
R549	RK3031	Chip R.	ERJ3GSYJ102V	
R550	RA0009	Chip R.	EXBV8V102JV	
R551	RA0008	Chip R.	EXBV4V102JV	
R552	RA0009	Chip R.	EXBV8V102JV	
R553	RA0009	Chip R.	EXBV8V102JV	
R554	RK3055	Chip R.	ERJ3GSYJ273V	
R555	RA0008	Chip R.	EXBV4V102JV	
R556	RK3031	Chip R.	ERJ3GSYJ271V	
R557	RK3052	Chip R.	ERJ3GSYJ153V	
R558	RK3052	Chip R.	ERJ3GSYJ153V	
R559	RK3031	Chip R.	ERJ3GSYJ271V	
R560	RA0009	Chip R.	EXBV8V102JV	
R561	RK3038	Chip R.	ERJ3GSYJ102V	
R562	RK3052	Chip R.	ERJ3GSYJ153V	
R563	RK3031	Chip R.	ERJ3GSYJ271V	
R564	RK3031	Chip R.	ERJ3GSYJ271V	
R565	RA0009	Chip R.	EXBV8V102JV	
R566	RA0010	Chip R.	EXBV8V472JV	
R567	RK3038	Chip R.	ERJ3GSYJ102V	
R568	RK3050	Chip R.	ERJ3GSYJ103V	
R569	RK3089	Chip R.	ERJ3GSYJ912V	
R570	RK3058	Chip R.	ERJ3GSYJ473V	
R571	RK3061	Chip R.	ERJ3GSYJ823V	
R572	RK3058	Chip R.	ERJ3GSYJ473V	
R573	RK3038	Chip R.	ERJ3GSYJ102V	
R574	RK3055	Chip R.	ERJ3GSYJ273V	
R575	RK3001	Chip R.	ERJ3GSYJ0R00V	
R576	RK3038	Chip R.	ERJ3GSYJ102V	
R577	RK3038	Chip R.	ERJ3GSYJ102V	
R578	RK3038	Chip R.	ERJ3GSYJ102V	

CPU unit/SW unit

Ref No	Parts No	Description	Parts Name	Ver.
R579	RK3038	Chip R.	ERJ3GSYJ102V	
R580	RA0009	Chip R.	EXBV8V102JV	
R581	RK3062	Chip R.	ERJ3GSYJ104V	
R582	RK3062	Chip R.	ERJ3GSYJ104V	
R583	RK3024	Chip R.	ERJ3GSYJ680V	
R584	RK3024	Chip R.	ERJ3GSYJ680V	
R585	RK3024	Chip R.	ERJ3GSYJ680V	
R586	RK3024	Chip R.	ERJ3GSYJ680V	
SW501	UU0019	Switch	SKQLLC	
SW502	UU0019	Switch	SKQLLC	
SW503	UU0019	Switch	SKQLLC	
SW504	UU0019	Switch	SKQLLC	
SW505	UU0018	Switch	S0P-112HST	
SW506	UU0018	Switch	S0P-112HST	
SW507	UU0018	Switch	S0P-112HST	
SW508	UU0018	Switch	S0P-112HST	
SW509	UU0018	Switch	S0P-112HST	
SW510	UU0018	Switch	S0P-112HST	
SW511	UU0018	Switch	S0P-112HST	
SW512	UU0018	Switch	S0P-112HST	
SW513	UU0018	Switch	S0P-112HST	
SW514	UU0018	Switch	S0P-112HST	
SW515	UU0018	Switch	S0P-112HST	
SW516	UU0018	Switch	S0P-112HST	
SW517	UU0018	Switch	S0P-112HST	
SW518	UU0018	Switch	S0P-112HST	
SW519	UU0018	Switch	S0P-112HST	
SW520	UU0018	Switch	S0P-112HST	
SW521	UU0018	Switch	S0P-112HST	
SW522	UU0018	Switch	S0P-112HST	
	UP0280	P.C.B.	DJG5P.C.B.	
X501	XB0020	Ceralock	CSAC4.19MGC-TC	
X502	XQ0072	Ceralock	38C4.0000MHZ	
X503	XQ0077	Ceralock	38C3.686400MHZ	
MIC50	EY0014	Mic	EM-123A	
W503	MRCL02A	Wire	#30R02-20-02	
W504	MBCL02A	Wire	#30B02-20-02	
	TL0016		SheetDJG5	
	TN0003		Front shield DJG5	
	YX0004		Tape DJG5	
	YX0004		Tape DJG5	
R587	RK3062	Chip R.	ERJ3GSYJ104V	
	UP0280D		SW Unit	
SW591	UU0018	Switch	S0P-112HST	
SW592	UU0018	Switch	S0P-112HST	
CN501	UE0255	Connector	6027B-03Z003	

UVCO unit

Ref No	Parts No	Description	Parts Name	Ver.
		U VCO Unit		
C601	CU3031	Chip C.	C1608JB1H471KTA	
C602	CU3001	Chip C.	C1608CH1H0R5CTA	
C603	CU3010	Chip C.	C1608CH1H090CTA	
C604	CU3010	Chip C.	C1608CH1H090CTA	
C605	CU3031	Chip C.	C1608JB1H471KTA	
C606	CU3005	Chip C.	C1608CH1H040CTA	
C607	CU3029	Chip C.	C1608JB1H331KTA	
C608	CU3004	Chip C.	C1608CH1H030CTA	
C609	CU3031	Chip C.	C1608JB1H471KTA	
C610	CU3031	Chip C.	C1608JB1H471KTA	
C611	CU3011	Chip C.	C1608CH1H100CTA	
C612	CU3004	Chip C.	C1608CH1H030CTA	
C613	CU3031	Chip C.	C1608JB1H471KTA	
D601	XD0293	Vari Cap	1SV257(TPH3)	
D602	XD0293	Vari Cap	1SV257(TPH3)	
D603	XD0293	Vari Cap	1SV257(TPH3)	
D604	XD0292	Vari Cap	1SV255(TPH4)	
D605	XD0293	Vari Cap	1SV257(TPH3)	
L601	QKA25A	Coil	MR1.5 2.5T 0.4	
L602	QA0120	Coil	657BN-1126GHR=P3	
Q601	XT0137	Transistor	2SC5065-0(TE85L)	
Q602	XT0137	Transistor	2SC5065-0(TE85L)	
Q603	XT0138	Transistor	2SC5066-0(TE85L)	
Q604	XU0063	Transistor	UN9211TX	
Q605	XU0063	Transistor	UN9211TX	
R601	RK3062	Chip R.	ERJ3GSYJ104V	
R602	RK3050	Chip R.	ERJ3GSYJ103V	
R603	RK3050	Chip R.	ERJ3GSYJ103V	
R604	RK3050	Chip R.	ERJ3GSYJ103V	
R605	RK3037	Chip R.	ERJ3GSYJ821V	
R606	RK3030	Chip R.	ERJ3GSYJ221V	
R607	RK3042	Chip R.	ERJ3GSYJ222V	
R608	RK3042	Chip R.	ERJ3GSYJ103V	
R609	RK3042	Chip R.	ERJ3GSYJ222V	
R610	RK3061	Chip R.	ERJ3GSYJ823V	
R611	RK3050	Chip R.	ERJ3GSYJ103V	
R612	RK3037	Chip R.	ERJ3GSYJ821V	
	UT0030		0.6 pin	
	TS0097		VCO Case DJG5	
	TN0002		VCO Shield	

VVCO unit

Ref N Parts No.	Parts No.	Description	Parts Name	Ver.
		V VCO Unit		
C701	CU3031	Chip C.	C1608JB1H471KTA	
C702	CU3001	Chip C.	C1608CH1H0R5CTA	
C703	CU3031	Chip C.	C1608JB1H471KTA	
C704	CU3031	Chip C.	C1608JB1H471KTA	
C705	CU3026	Chip C.	C1608CH1H181JTA	
C706	CU3004	Chip C.	C1608CH1H030CTA	
C707	CU3031	Chip C.	C1608JB1H471KTA	
C708	CU3031	Chip C.	C1608JB1H471KTA	
C709	CU3010	Chip C.	C1608CH1H090CTA	
C710	CU3011	Chip C.	C1608CH1H100CTA	
C711	CU3003	Chip C.	C1608CH1H020CTA	
C712	CU3010	Chip C.	C1608CH1H090CTA	
C713	CU3005	Chip C.	C1608CH1H040CTA	
D701	XD0293	Vari Cap.	1SV257(TPH3)	
D702	XD0292	Vari Cap.	1SV255(TPH4)	
D703	XD0292	Vari Cap.	1SV255(TPH4)	
D704	XD0293	Vari Cap.	1SV257(TPH3)	
D705	XD0293	Vari Cap.	1SV257(TPH3)	
L701	QA0120	Coil	657BN-1126GHR=P3	
L702	QK425A	Coil	MR1.5 2.5T 0.4	
Q701	XT0137	Transistor	2SC5065-0(TE85L)	
Q702	XT0137	Transistor	2SC5065-0(TE85L)	
Q703	XT0138	Transistor	2SC5066-0(TE85L)	
Q704	XU0063	Transistor	UN9211TX	
Q705	XU0063	Transistor	UN9211TX	
R701	RK3062	Chip R.	ERJ3GSYJ104V	
R702	RK3050	Chip R.	ERJ3GSYJ103V	
R703	RK3050	Chip R.	ERJ3GSYJ103V	
R704	RK3050	Chip R.	ERJ3GSYJ103V	
R705	RK3030	Chip R.	ERJ3GSYJ221V	
R706	RK3042	Chip R.	ERJ3GSYJ222V	
R707	RK3050	Chip R.	ERJ3GSYJ103V	
R708	RK3037	Chip R.	ERJ3GSYJ823V	
R709	RK3061	Chip R.	ERJ3GSYJ823V	
R710	RK3042	Chip R.	ERJ3GSYJ222V	
R711	RK3050	Chip R.	ERJ3GSYJ103V	
R712	RK3037	Chip R.	ERJ3GSYJ821V	
UT0030			0.6 pin	
TS0097			VCO Case DJG5	
TN0002			VCO Shield	

CHARGE unit/ PTT unit

Ref No	Parts No.	Description	Parts Name	Ver.
		CHARGE Unit		
C801	CU3031	Chip C.	C1608JB1H471KTA	
D801	XD0294	Diode	U2FWJ44N(TE12R)	
D802	XD0294	Diode	U2FWJ44N(TE12R)	
D803	XD0290	Diode	MA111-TX	
D804	XD0294	Diode	U2FWJ44N(TE12R)	
D805	XD0130	Diode	DA204UT106	
JK801	UJ0015	Jack	HEC2781-010020	
Q801	XT0088	Transistor	2SA1213Y-TE12L	
R801	RK0004	Chip R.	ERJ6GEYJ180V	
R802	RK3038	Chip R.	ERJ3GSYJ102V	
W801	MKCKH4G	Wire	#28KH1-045-H1	
W802	MBCKO4G	Wire	#28BH1-040-H1	
W803	MRCK09G	Wire	#28RH1-090-H1	
W804	MBCKH9G	Wire	#28BH1-095-H1	
		PTT Unit		
IC841	XA0351	IC	24LC16BT-1/SN	
R841	RK3062	Chip R.	ERJ3GSYJ104V	
R842	RK3062	Chip R.	ERJ3GSYJ104V	
SW841	UU0018	Switch	S0P-112HST	
SW842	UU0026	Switch		
SW843	UU0026	Switch		
SW844	UU0018	Switch	S0P-112HST	
CN841	UP0281		DJG5 CPU-PTT Flex.	

Mechanical Parts

Ref No	Parts No.	Description	Parts Name	Ver.
		Mechanical Parts		
		Finished		
	DS0352		Specification Sheet (A)	E
	DS0363		Specification Sheet DJG5T	
	EA41	EA0041	Antenna EA41	
	EBP33N	EG0024		
	EDC63	EW0011		T
	EDC64	EW0012		E
	EDC62	EW0013		
	PR0237		FCC PART15 Seal	T
		Body		
	AF0020		02+3FeNi1	
	AV0003		P2+16FeBC	
	DP0101		LCD Panel DJG5	
	FG0178		Jack rubber DJG5	
	FG0179		Jack cap DJG5	
	FG0180		DC cap DJG5	
	FG0181		Dial cap DJG5	
	FM0100		Jack metal fixture DJG5	
	NK0042		Dial knob DJG5	
		Battery case		
	FG0203		Battery rubber DJG5	
	KD0031		Battery case DJG5	
	KF0030		Battery lid DJG5	
	PR0282		Caution label DJG5	
	SD0046		Battery spring A DJG5	
	SD0047		Battery spring B DJG5	
	SD0048		Battery spring C DJG5	
	SD0049		Battery spring D DJG5	
		Packing		
	HK0		Carton DJG5	
	HM0153A		Carton .10 sets DR610	
	HP0028		Protection bag 5X165X280	
	HP0031		Protection bag 5X100X200	
	HU0097		Fixture 5sets DR610	
	PF0031		Quick manual DJG5	
	PH0009A		Registration DJG5T	T
	PK0059		DJG5T Schematic diagram	
	PS0226		Instruction card DJG5T	
	PT0004A		Lot number seal for box	
	HU0094			
	HU0096			
	HU0095			T

Front / Rear / Charge Unit

Ref N	Parts No.	Description	Parts Name	Ver.
		Front Unit		
	AP0004		P2+5FeCr	
	AX0001		OP2+4FeBC1	
	AX0002		OP2+5FeN1	
	DG0021		LCD light DJG5	
	EL0028		XH606	
	ES0011BZ		SU-36WO824	
	FG0173		PTT rubber DJG5	
	FG0174		I6 key rubber DJG5	
	FG0175		Power key DJG5	
	FG0176		VOL rubber DJG5	
	FG0177		V/U key DJG5	
	FG0182		LCD rubber A DJG5	
	FG0183		LCD rubber B DJG5	
	FG0184		ON AIR rubber DJG5	
	FG0218		Cushion G5	
	FM0098		Rear panel DJG5	
	FM0113		CPU earth DJG5	
	KZ0068Y		Front case DJG5	
W501	MKCLH2A	Wire	#30K02-025-02	
W502	MNCL03A	Wire	#30N02-030-02	
	ST0052		SP metal fittings DJG5	
		Rear Unit		
	TS0099		CPU Shield DJG5	
	TZ0064		Panel sheet DJG5	
	AB0012		S26+5FeCr	
	AK0001		OB2+4FeN3	
	AN0012		Dial nut DJI60	
	FM0112		BNC earth DJG5	
	KB0058		Rear case DJG5	
	TS0098		RF shield DJG5	
	UE0193		BNC antenna connector	
	FP0069		BNC antenna connector	
		ChargeUnit		
	AF0020		02+3FeNil	
	AX0001		OP2+4FeBC1	
	FP0093		Terminal frame DJG5	
	FP0094		Release knob DJG5	
	SC0008		Release spring DJG5	
	SD0045		Battery terminal DJF5	
	TS0100		Earth metal fittings DJG5	
	TS0109A		VCO earth DJG5	
	TS0110		Charge earth DJG5	

ADJUSTMENT

1) Required Test Equipment
1. Regulated Power Supply
 Supply voltage: DC 13.8V
 Current: 3A or more

2. Digital Multimeter
 Voltage range: FS =20V or so
 Input resistance: High Impedance

3. Oscilloscope
 Measurable frequenc Audio Frequency
4. Audio Dummy Load
 Impedance: 8 ohm
 Dissipation: 1W or more
 Jack: 3.5 mm

5. SSG
 Output frequency: 1GHz or more
 Output level: -20dB/0.1 uV to 120dB/1V
 Moduration: AM/FM

6. Spectrum Analyzer
 Measuring range: Up to 2GHz or more

7. Power Meter
 Measurable frequenc Up to 500MHz
 Impedance: 50 ohm, unbalanced
 Measuring range: -10W

8. Audio Voltmeter
 Measurable frequenc ~100kHz
 Sensitivity: 1mV~10V

9. Audio Generator
 Output frequency: 67Hz~10kHz
 Output impedance: 600 ohm , unbalanced

10. Distortion Meter/SINAD Meter
 Measurable frequency: 1kHz
 Input level: Up to 40dB
 Distortion level: 1 % ~1 00%

11. Frequency Counter
 Measurable frequency: Up to 500MHz
 Measurements stability: +/-0.1 ppm or so

12. Linear Detector
 Measurable frequency: Up to 500MHz
 Characteristics: Flat
 CN: 60dB or more

Note
1. Standard Modulation: 1kHz +/- 3.5kHz/DEV
2. Reference Sensitivity: 12dB SINAD
3. Attach the fuse to the RF test equipment.
4. All SSG output is indicated by EMF.

2) Adjustment for DJ-G5TIE

Item	Condition	TX/RX	Measurement Equipment	Unit	Adjustment Unit	Pans	Method	Specifications
Reference Voltage	L band f=l45.05MHz	RX	Digital Multimeter	V-VCO P/D	V-VCO	L701	3.7V	3.7V+/-0.1V
	R band f=435.05MHz	RX	Digital Multimeter	U-VCO P/D	U-VCO	L601	1.2V	1.2V+/-0.1V
Reference Frequency	R band f=435.05MHz (E) f=445.05MHz (T)	TX Low	Freq. Counter Power Meter		RF	VC51	435.05MHz (E) 445.05MHz (T)	+/-50Hz
Sensitivity	L band f=144.95MHzSSG out: -10dBu	RX	SSG Dist. Meter		RF	L81L82	Turn the coils to the max.	SINAD is12dBor more
S Meter	L band f=144.95MHz Mod: 3.5kHz/dev SSG out: 3dBu	RX	SSG	S Meter	IF	VR304	3digits should be turned ON.	
	R band f=434.95MHz Mod: 3.5kHz/dev SSG out: 3dBu					VR302	3digits should be turned ON.	
HiPower 13.8VDC	f=435.05MHz (E) f=445.05MHz (T)	TX High	Power Meter		RF	VR51	5.0W	5.OW+/-0.IW
Mid Power		TX Mid				VR52	1.0W	1.0W+/-0.1W
Low Power		TX Low					Check	100-400mW
High Power 13.8VDC	f=145.05MHz	TX High	Power Meter		RF	VR53	5.0W	5.0W+/-0.1W
Mid Power		TX Mid				VR54	1.0W	1.0W+/-0.IW
Low Power		TX Low					Check	100-400mW
Deviation	f=435.05MHz (E) f=445.05MHz (T) Mod: 1kHz,50mV	TX Low	Linear Det Oscilloscope Power Meter		IF	VR306	4.5kHz/DEV	4.5kHz+/-0.1kHz/DEV
	f=l45.05MHz Mod: 1kHz,50mV					VR305	4.5kHz/DEV	4.5kHz+/-0.1kHz/DEV
DTMF	f=l45.05MHz Push1"key"					VR308	3.1kHz/DEV	3.1kHz+/-0.1kHz/DEV
Subaudible Tone	f=145.05MHz 88.5Hz					VR307	800Hz/DEV	800Hz+/-50Hz/DEV
Tone Burst	f=145.05MHz PushPTT2"key"					VR309	3.0kHz/DEV	3.OkHz+/-0.1kHz/DEV

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3) Adjustment Points

IF Unit

VR303 (VHF SQL)
VR301 (UHF SQL)
VR304 (VHF SMT)
VR302 (UHF SMT)

VR307 (CTCSS)
VR305 (VHF MOD)
VR306 (UHF MOD)

VR308 (DTMF)
VR309 (1750Hz)

RF Unit

FL51 (UHF SINAD)

L85
L86
L81
L82

VHF SINAD

VR51 (UHF Hi)
VR52 (UHF Mid)
VR53 (VHF Hi)
VR54 (VHF Mid)

VCO (UHF)
VCO (VHF)

VC51 (Freq)
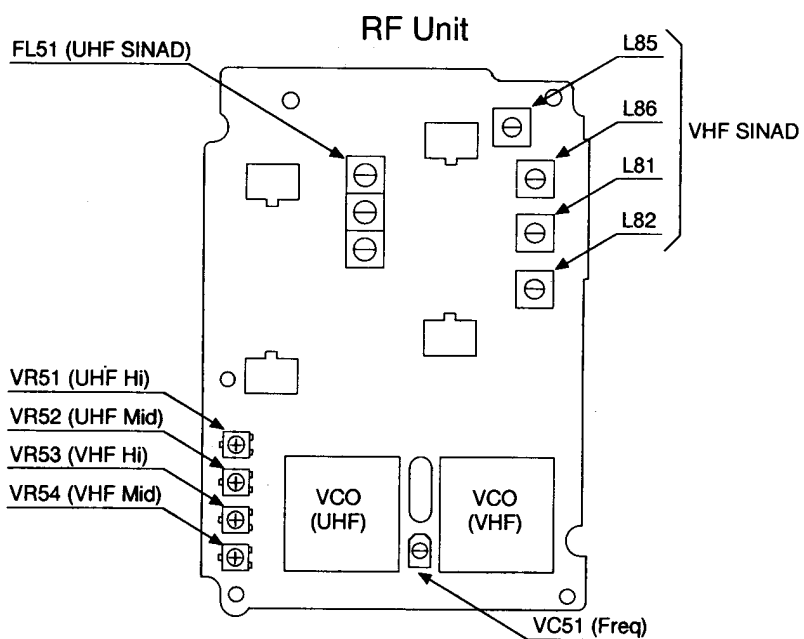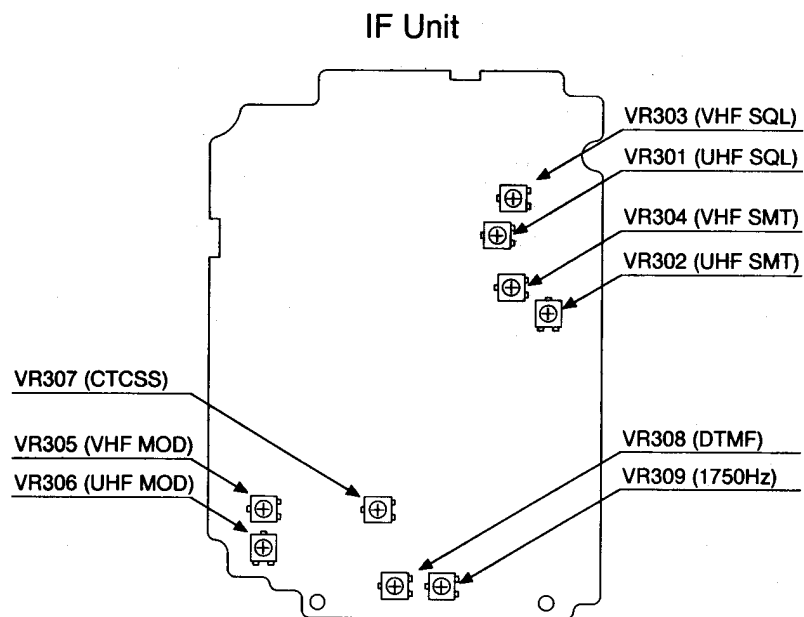
PC BOARD VIEW

1) RF Unit Side A
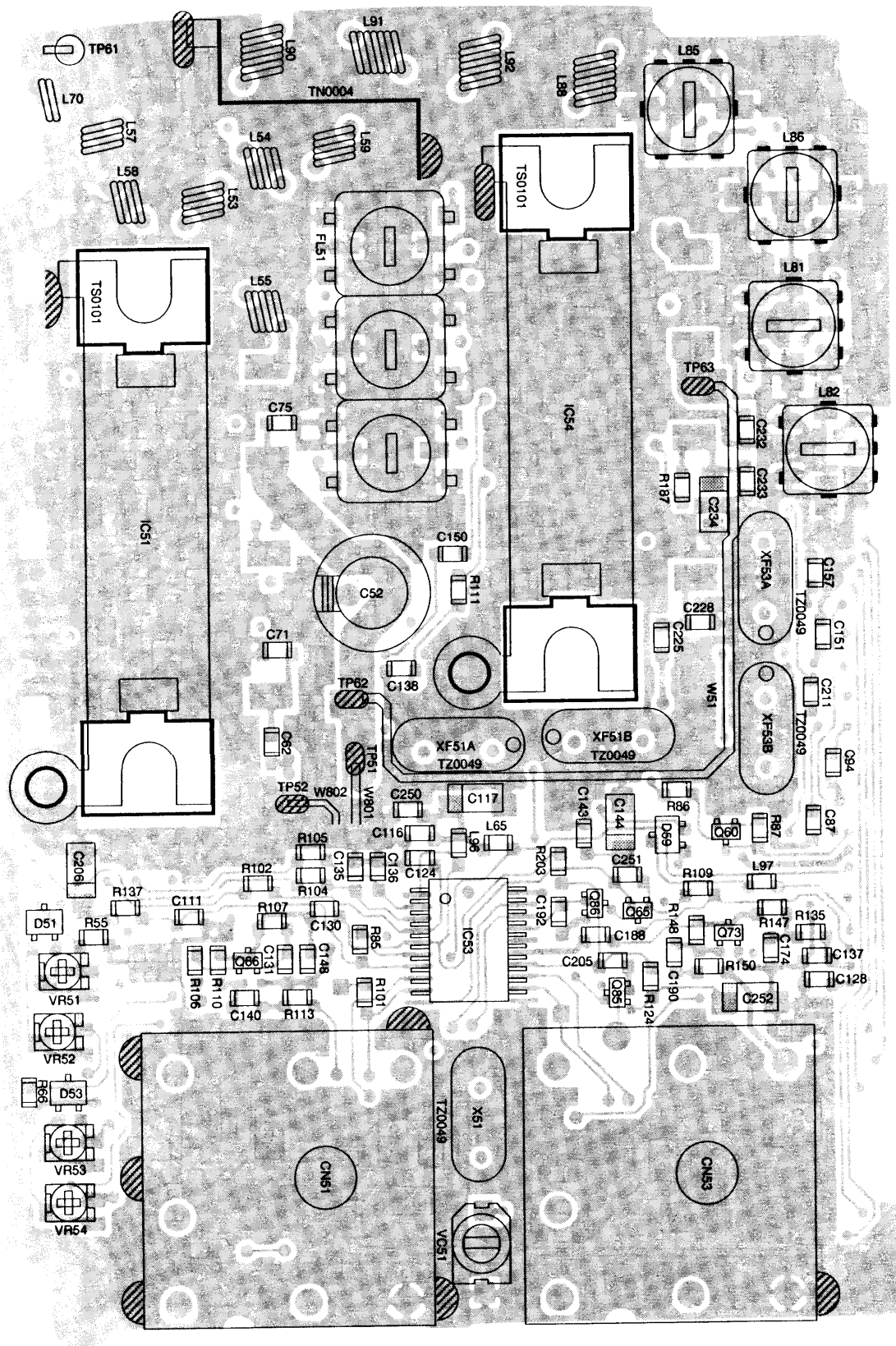
2) RF Unit Side B
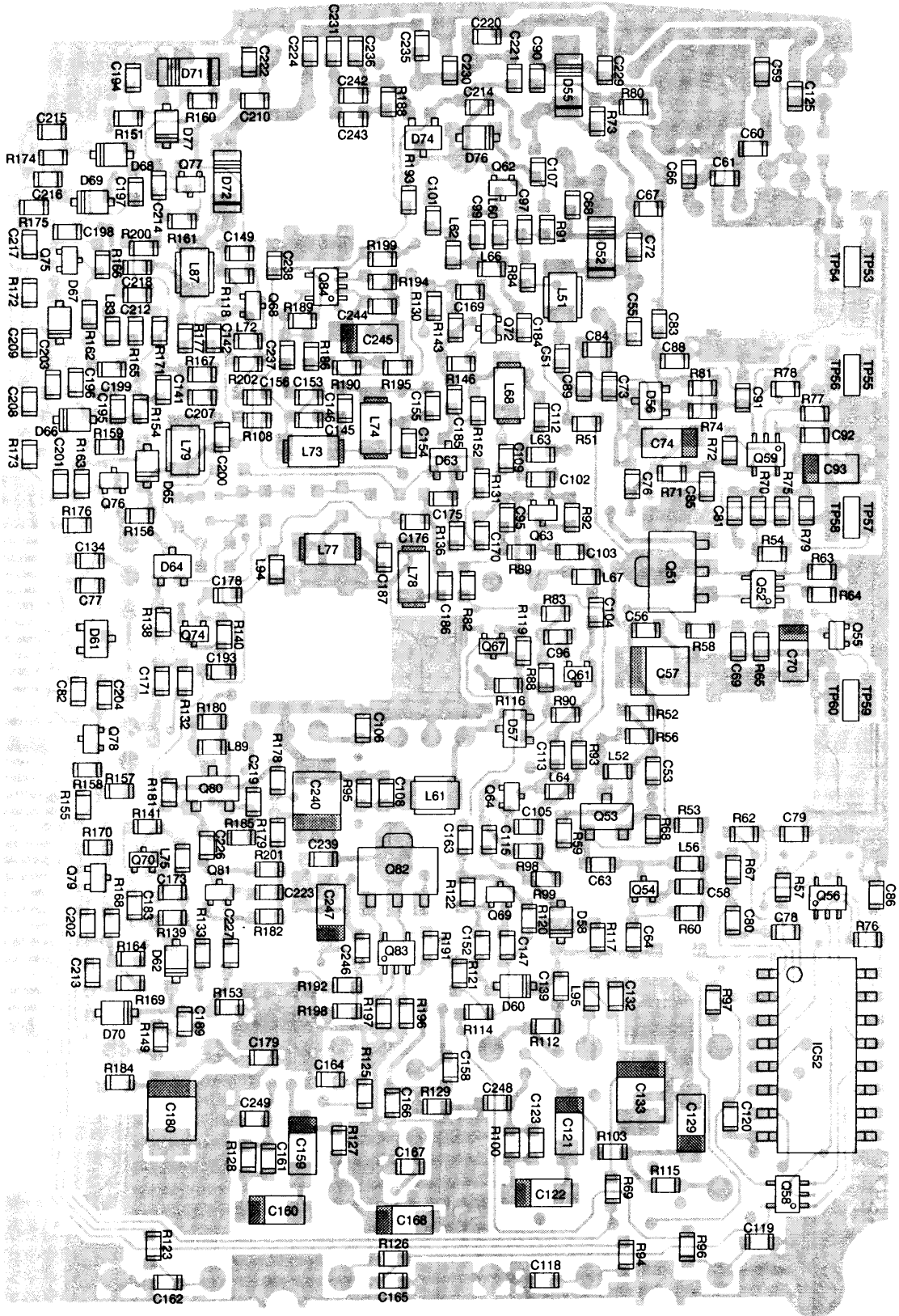
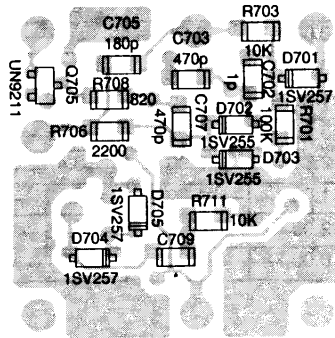## 3) IF Unit Side A
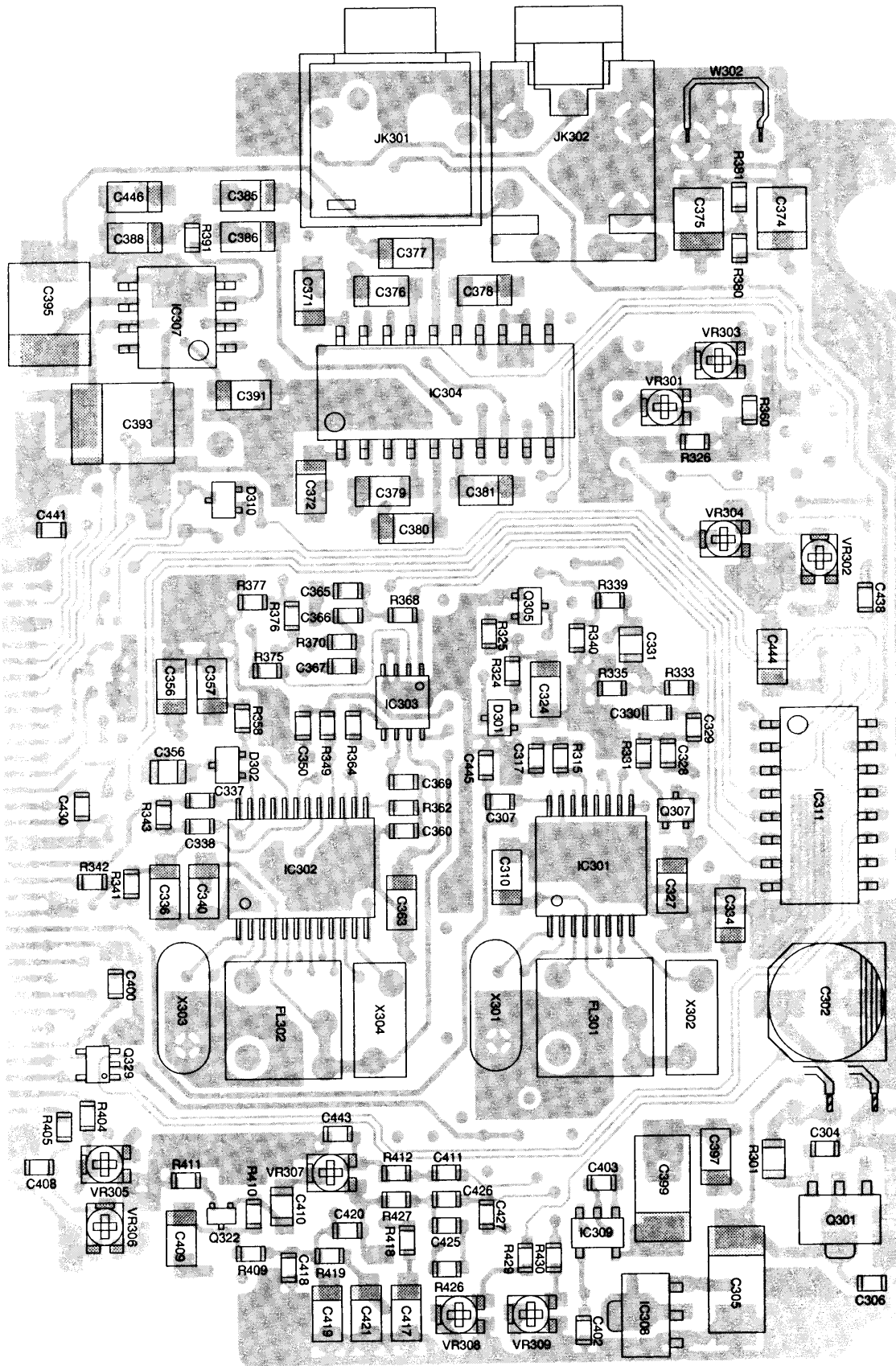
4) IF Unit Side B
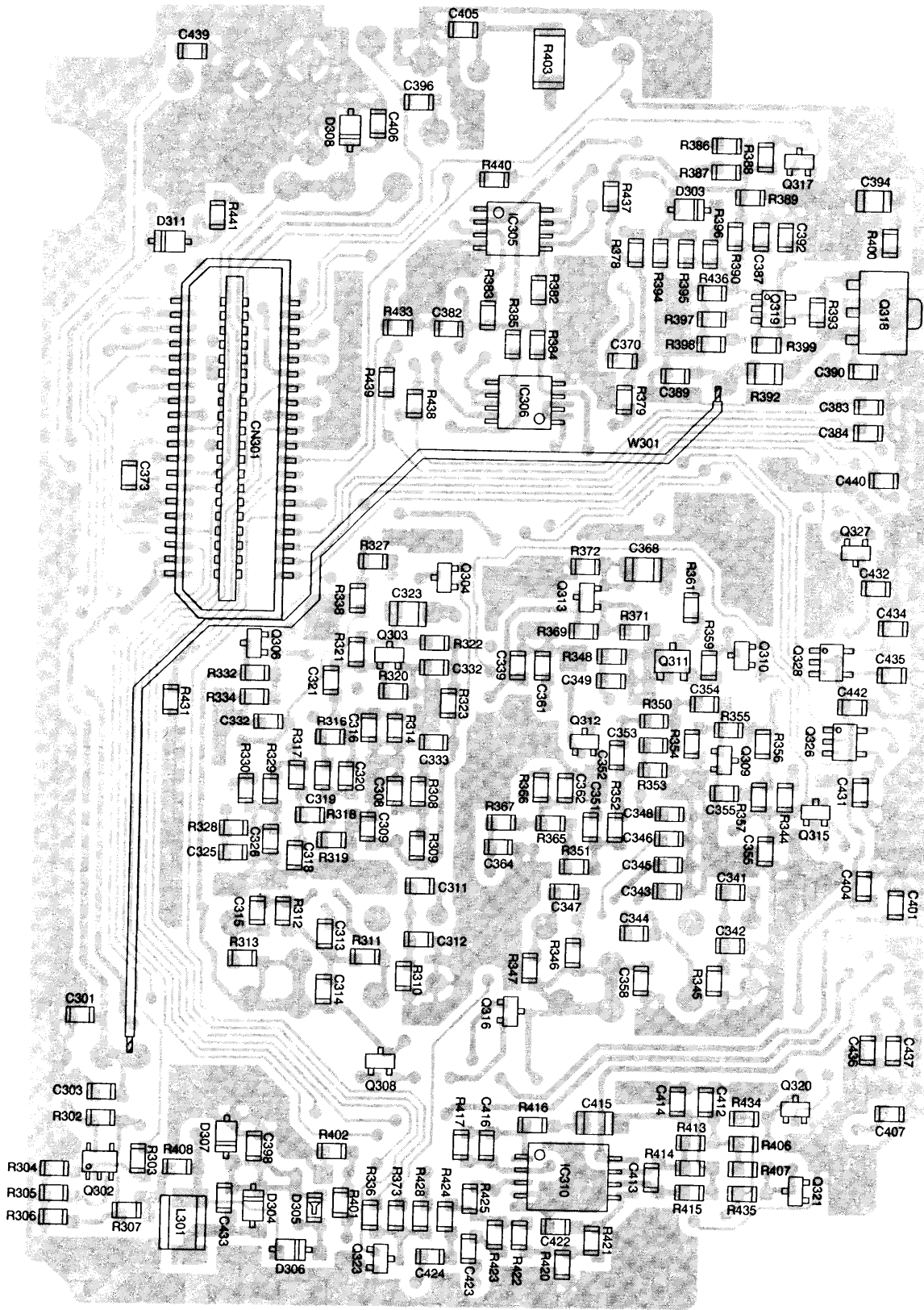
5) CPU Unit Side A
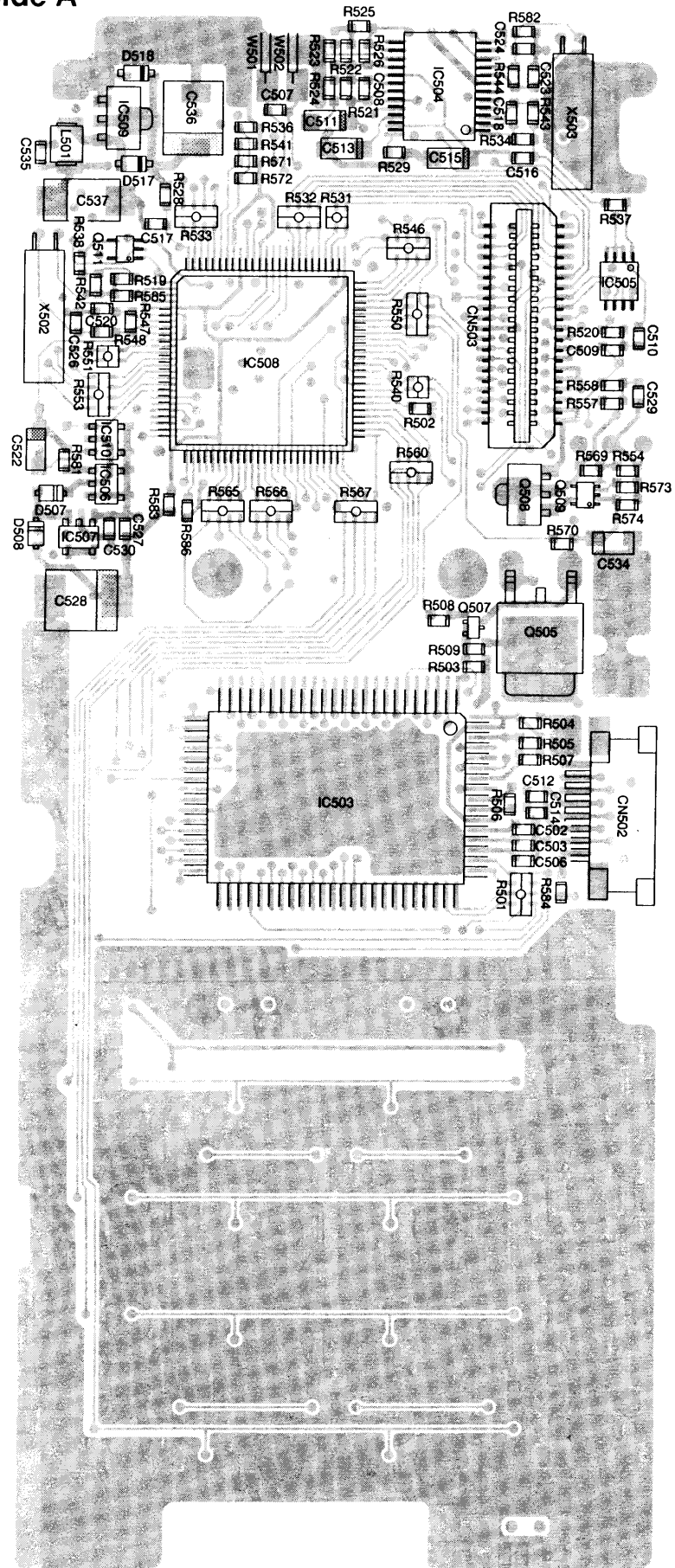
6) CPU Unit Side B
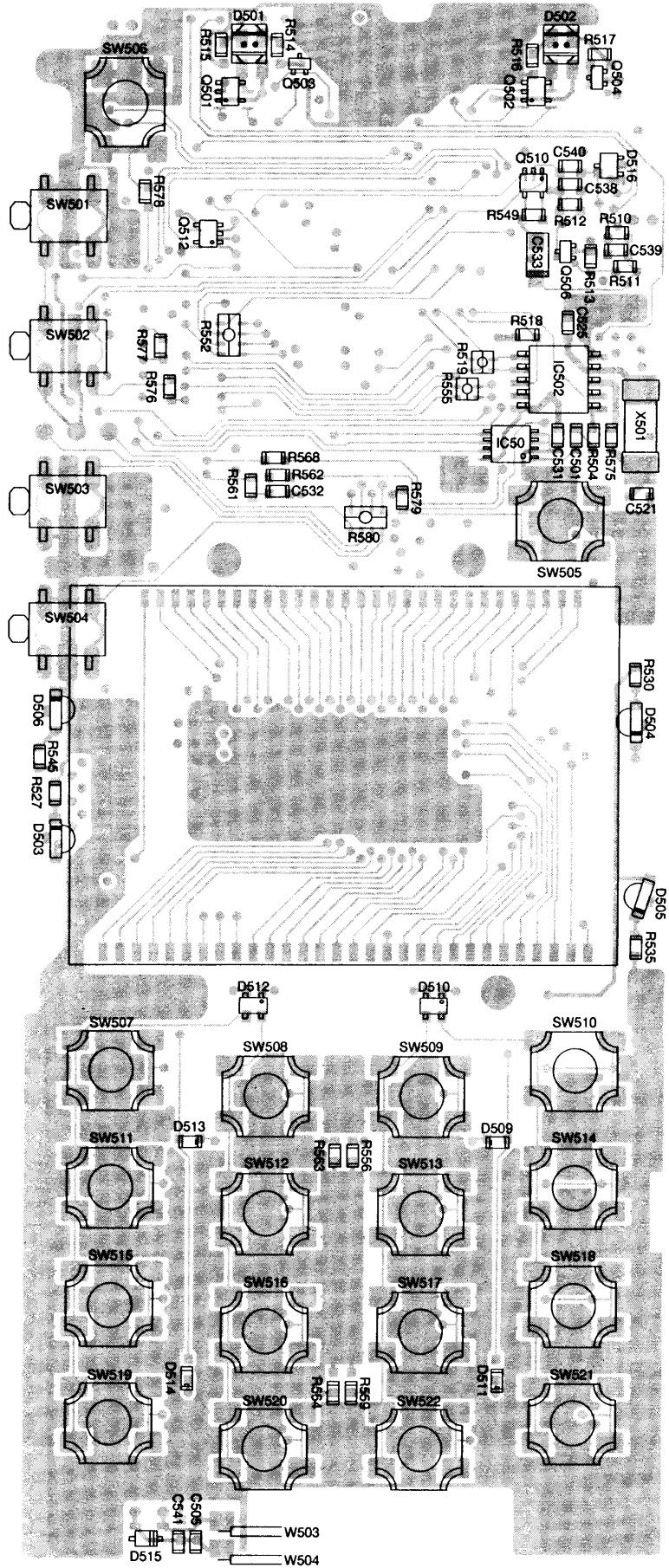
7) UVCO Unit
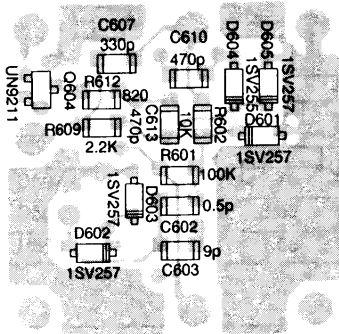
8) VVCO Unit
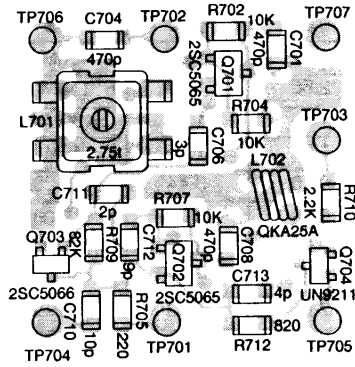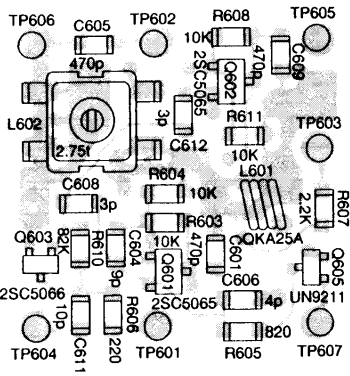
9) PTT Unit Side A
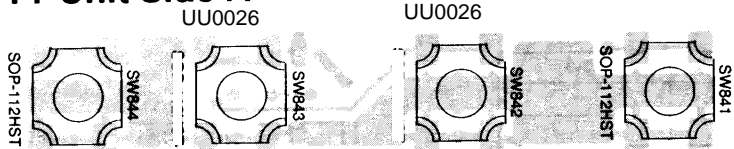
10) PTT Unit Side B
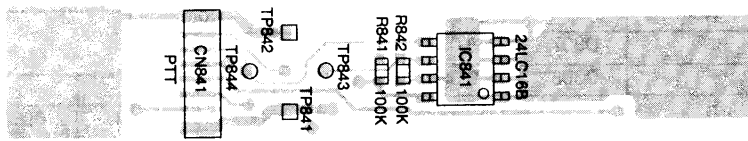
11) CHARGE Unit

12) SW Unit Side A
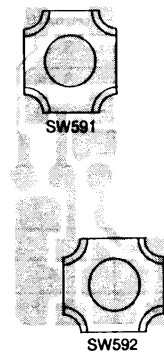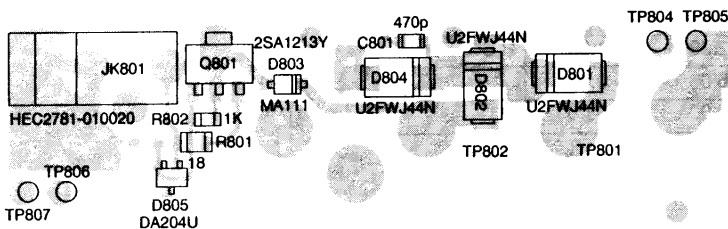
VOLTAGE TABLE

1) Diode

	1	2	3	Note
D51	0	3.57	3.57	UHF LOW TX
D53	0	3.57	3.57	VHF LOW TX
D56	0	0.03	0.03	UHF LOW TX
D57	1.21	1.85	0	R:433.00MHz
D59	3.36	0	4.14	VHF TX
D61	2.66	0	3.47	L:433.00MHz
D64	1.04	1.86	0	L:433.00MHz
D63	2	0	2.76	L:144,00MHz
D74	0	0.91	0.91	VHF LOW TX
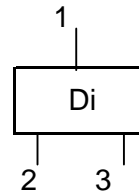
	Anode	Cathode	Note
D52	1.69	0.84	UHF TX
D55	0.84	0	UHF TX
D58	2.57	1.82	R:430M RX
D60	2.65	1.9	R:140M RX
D62	1.89	1.15	L:430M RX
D65	1.84	1.1	L:140M RX
D66	0	3.44	L: 145.00MHz when receiving
D67	0	3.41	L: 145.00MHz when receiving
D68	0	3.43	L: 145.00MHz when receiving
D69	0	3.43	L: 145.00MHz when receiving
D70	2.65	1.89	L:140M RX
D71	0	0.85	VHF TX
D72	1.7	0.85	VHF TX
D76	0	0.76	R:140M RX
D77	0	0.75	L:140M RX

	1	2	3	Note
D301	1.98	0	2.14	
D302	1.95	0	2.18	
D310	0.76	0.2	0.2	L:UHF,R:UHF
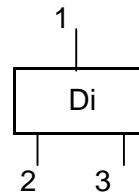
	Anode	Cathode	Note		Anode	Cathode	Note
D303	3.44	3.42		D307	8.03	3.18	
D304	3.19	8.03		D308	0	0	
D305	8.03	6.44					
D306	3.24	6.44					

	1	2	3	4	Note
D501	3.45	3.39	2.23	1.41	L SQL:OFF
D502	3.46	3.38	2.29	1.39	R SQL:OFF
D510	0	0	0	0	
D512	0	0	0	0	
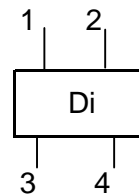
	Anode	Cathode	Note		Anode	Cathode	Note
D503	3.54	I.51	LAMP:ON	D51I	3.54	I.54	LAMP:ON
D504	3.54	2.07	LAMP:ON	D513	3.54	1.53	LAMP:ON
D505	3.54	1.5	LAMP:ON	D514	3.54	I.53	LAMP:ON
D506	3.54	2.06	LAMP:ON	D515	0.24	2.27	TX:ON
D507	3.76	3.73		D517	3.46	5.03	
D508	3.76	3.53		D518	0	5.03	
D509	3.54	1.58	LAMP:ON				

	1	2	3	Note
D516	0.24	0	3.46	PTT:ON
D516				
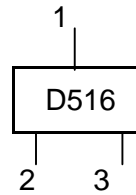
	Anode	Cathode	Note
D601	0	1.25	
D602	0	1.68	
D603	0	1.68	
D604	0	3.11	R:SUB
D605	0	3.11	R:SUB

	Anode	Cathode	Note
D701	0	1.22	
D702	0	4.34	
D703	0	4.34	
D704	0	2.2	L:SUB
D705	0	2.2	L:SUB

	Anode	Cathode
D801	13.57	13.57
D802	13.57	13.56
D803	13.56	13.55
D804	13.56	13.56
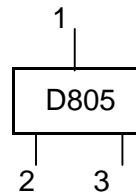
	1	2	3	Note
D805	13.38	13.26	13.56	PTT:ON

2)IC

IC301

PinNo.	Voltage	PinNo.	Voltage
1	3.31	9	1.13
2	2.64	10	0.63
3	2.58	11	1.29
4	3.47	12	0.00
5	2.48	13	0.18
6	2.47	14	0.00
7	2.53	15	0.00
8	3.46	16	1.70

IC305

PinNo.	Voltage	PinNo.	Voltage
1	2.47	5	2.48
2	2.48	6	2.49
3	2.45	7	2.51
4	0.00	8	5.00

IC302

PnNo.	Voltage	Note	PinNo.	Voltage	Note
1	3.26		13	1.57	AM
2	2.70		14	0.00	AM
3	2.80		15	0.00	
4	3.47		16	0.37	
5	1.21	AM	17	0.69	
6	1.20	AM	18	0.52	
7	1.22		19	1.60	
8	1.26		20	1.55	
9	1.26		21	0.00	
10	3.39		22	0.00	
11	3.45		23	0.00	
12	0.87		24	1.36	

IC303

PinNo.	Voltage	Note	PinNo.	Voltage	Note
1	0.86		5	3.39	AM
2	0.01		6	0.00	
3	0.00		7	0.86	
4	0.00		8	3.56	

IC304

PinNo.	Voltage	PinNo.	Voltage
1	2.50	11	2.51
2	0.00	12	0.00
3	2.50	13	2.48
4	2.50	14	2.50
5	2.50	15	2.40
6	2.50	16	2.36
7	2.45	17	2.49
8	5.00	18	0.00
9	0.00	19	0.00
10	0.00	20	0.00

IC306

PinNo.	Voltage	PinNo.	Voltage
1	2.52	5	2.48
2	2.51	6	2.50
3	2.36	7	2.50
4	0.00	8	5.00

IC307 When receiving

PinNo.	Voltage	PinNo.	Voltage
1	0.0	5	0.0
2	0.0	6	2.7
3	0.6	7	6.2
4	0.0	8	0.0

IC309

Pin No.	Voltage
1	8.03
2	3.48
3	1.57
4	0
5	1.54

```
  1     2
  |     |
 ┌───────────┐
 │  IC309    │
 └───────────┘
  |   |   |
  3   4   5
```
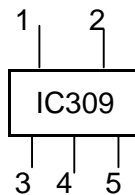
IC503

PinNo.	Voltage	PinNo.	Voltage
67	0	74	3.52
68	1.22	75	3.53
69	2.38	76	3.52
70	3.45	77	3.52
71	1.9	78	3.46
72	2.34	79	3.46
73	0	80	3.45

IC310

PinNo.	Voltage	PinNo.	Voltage
1	1.62	5	1.71
2	1.7	6	1.71
3	1.69	7	1.68
4	0	8	3.34

IC311

PtnNo.	Voltage	Note	PinNo.	Voltage	Note
1	0		9	0	
2	0		10	0	
3	0		11	0.11	R:ON
4	0.11		12	0.1	L:ON
5	0.l1	USUB:ON	13	0.1	VMAIN:ON
6	0.11	UMAIN:O	14	0.1	VSUB:ON
7			15	3.57	
8	0		16	3.57	

IC501

PinNo.	Voltage	PinNo.	Voltage
1	0.95	5	3.45
2	0	5	1.16
3	0	7	0.98
4	0	8	3.53

IC502 DSQ:ON

PinNo.	Voltage	Pin No.	Voltage
1	1.71	6	3.5
2	0	7	0
3	1.72	8	0
4	1.33	9	0
5	0	10	3.51

IC504 TSQ..ON

PinNo.	Voltage	Pin No.	Voltage
1	1.72	13	1.48
2	2.16	14	3.4
3	3.41	15	0
4	1.25	16	1.88
5	1.72	17	1.72
6	1.72	18	1.72
7	3.45	19	1.72
8	1.68	20	2.22
9	1.73	21	1.72
10	0	22	1.72
11	0	23	1.72
12	0	24	2.33

IC505

PinNo.	Voltage	Pin No.	Voltage
1	1.17	5	3.45
2	0	5	1.16
3	0	7	0.98
4	0	8	3.53

IC506, IC507, IC510

	1	2	3	4	5
IC506	0	0	3.73	3.73	0
IC507	0	0	0	13.54	3.76
IC510	0	0	3.73	3.73	0

IC508 (CPU. PCB)   DC IN: l3.8V

PinNo.	Voltage	PinNo.	Voltage	PinNo.	Voltage	PinNo.	Voltage	PinNo.	Voltage
1	4.2	21	3.52	41	3.52	61	0.01	81	3.53
2	0	22	3.52	42	3.52	62	0.01	82	3.52
3	0	23	3.52	43	3.52	63	0.01	83	0.05
4		24	0	44	3.52	64	3.52	84	0.05
5	3.52	25	0	45	3.52	65	3.52	85	0
6	0	26	3.45	46	3.52	66	0.05	86	0
7	1.66	27	0	47	3.52	67	0.05	87	0
8	1.68	28	0.01	48	3.52	68	0	88	3.53
9	3.68	29	0.01	49	3.52	69	3.51	89	5.03
10	0	30	0.11	50	3.52	70	0	90	1.55
11	0	31	3.53	51	3.52	71	0	91	0
12	0	32	3.53	52	0	72	3.53	92	3.52
13	0	33	3.53	53	0	73	0.01	93	5.03
14	0	34	3.53	54	0	74	0.03	94	0
15	0	35	3.52	55	0	75	0.05	95	0
16	3.52	36	0	56	3.52	76	3.52	96	2
17	3.23	37	3.52	57	3.48	77	0	97	1.975
18	3.73	38	3.52	58	0	78	3.52	98	0.17
19	3.52	39	3.52	59	3.5	79	0	99	0.4
20	3.52	40	0	60	3.53	80	0	100	0

VOL: l (V/U), SQL: OPEN (V/U), BS: OFF

IC509

PinNo.	1	2	3
Voltage	5.04	0	3.39
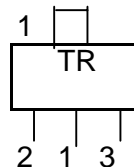
IC52

PinNo.	Voltage	PinNo.	Voltage
1	0	9	0
2	0	10	0
3	0	11	0.09
4	3.57	12	0.09
5	3.57	13	3.57
6	3.57	14	3.57
7	3.57	I5	3.57
8	0	16	3.57

IC841

PinNo.	Voltage	PinNo.	Voltage
1	0	5	3.49
2	0	6	0
3	0	7	0
4	0	8	3.52

L: 145.00MHz LOW POWER
R: 433.00MHz LOW POWER

IC53

PinNo.	Voltage	PinNo.	Voltage	PinNo.	Voltage	PinNo.	Voltage
1	3.56	6	1.65	11	0	16	1.72
2	0	7	0	12	3.53	17	0
3	0	8	2.05	13	3.53	18	2
4	3.52	9	1.24	14	0	19	3.79
5	3.56	10	7.35	15	0	20	0

3) Transistor

	Emitter	Base	Collector	Note		Emitter	Base	Collector	Note
Q51	13.57	13.05	4.02	UHF:TX	Q72	0.00	0.75	2.56	R:144
Q53	0.00	0.76	2.08	UHF:TX	Q73	0.00	0.72	2.17	L:RX
Q54	0.00	0.77	3.04	UHF:TX	Q74	0.00	0.73	1.85	L:430M
Q55	0.00	0.00	0.00	When locke	Q75	0.00	0.74	3.22	L:144M
Q60	0.00	0.72	1.60	R: RX	Q76	0.00	0.74	1.84	L:144M
Q61	0.00	0.71	1.84	R:430M	Q77	0.00	0.75	2.47	L:144M
Q62	0.00	0.76	2.98	R:430M	Q78	0.00	0.73	1.58	L:RX
Q63	0.00	0.75	3.01	R:430M	Q79	0.00	0.67	2.92	L:144M
Q64	0.00	0.72	3.14	R:430M	Q80	0.00	0.73	1.97	VHF:TX
Q65	7.35	7.97	8.03		Q81	0.00	0.74	2.72	VHF:TX
Q66	0.00	0.74	2.17	R:RX	Q82	13.57	13.07	4.12	VHF:TX
Q67	0.00	0.73	1.95	R:144M	Q85	0.00	0.00	0.00	When locked
Q68	0.00	0.76	3.04	R:144M	Q86	0.00	0.00	7.97	
Q69	0.00	0.69	2.91	R:144M					
Q70	0.00	0.75	2.28	R:144M					

	1	2	3	4	5	Note
Q52	13.05	4.11	1.53	1.01	1.60	UHF TX
Q56	3.56	3.56	0.09	3.57	0.09	ATT ON
Q58	3.57	3.57	0.09	3.57	0.09	L:VHF ,R:UHF
Q59	4.00	4.18	0.83	0.25	0.03	UHF TX
Q83	13.07	4.14	1.55	1.01	1.62	VHF TX
Q84	4.05	4.17	0.86	0.26	0.02	VHF TX

```
 1     2
  |    |
 +--------+
 |   TR   |
 +--------+
  |  |  |
  3  4  5
```
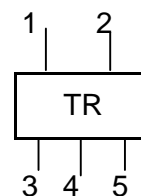
	Emitter	Base	Collector	Note		Emitter	Base	Collector	Note
Q301	13.51	12.97	3.57		Q316	3.58	0.53	3.47	L:RX
Q303	0.00	0.52	2.33	R:RX	Q317	0.00	0.59	0.00	FD
Q304	3.58	3.47	0.00	R:RX	Q318	13.58	13.00	6.23	AFPC:ON
Q306	0.80	1.38	3.47	R:RX	Q320	0.00	3.46	0.00	TX
Q308	3.58	0.53	3.47	R:RX	Q32I	0.00	3.46	0.00	TX
Q309	0.00	0.53	2.33	L:RX	Q322	0.21	0.82	1.62	TX
Q310	3.57	3.47	3.47	L:RX	Q323	0.00	2.93	0.00	XBR
Q312	0.00	3.44	0.00	AM	Q327	3.58	0.00	3.47	UPRI:ON
Q313	0.80	1.38	3.47	L:RX					
Q315	1.20	0.73	3.45	L:RX					

	1.00	2	3.00	4	5	Note
Q302	12.98	13.53	3.24	2.70	3.25	
Q319	13.01	13.58	3.39	2.91	3.52	When receiving
Q326	3.46	0.00	0.20	3.57	3.58	L:VHF,R:UHF
Q328	3.47	0.00	0.10	3.57	3.58	L:VHF,R:UHF
Q329	3.50	3.50	0.00	3.57	0.00	

1 2

TR

3 4 5
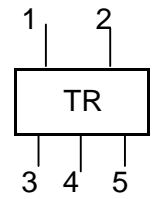
	Drain	Gate	Source
Q307	1.03	3.52	0.02

G

Q307

S D
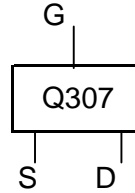
	1	2	3	4	5	Note
Q501	3.45	0	0.28	3.46	3.46	VHF SQL:OFF
Q502	3.38	0	0.31	3.46	3.45	UHF SQL:OFF
Q509	13.01	3.52	1.66	1.12	1.74	
Q510	0	0	2.54	0	0	F.D:ON
Q511	0	13.54	0	3.24	13.47	
Q512	0	5.01	0	3.5	5.04	

1 2

TR

3 4 5
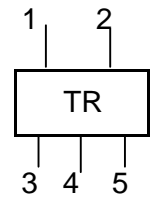
	Emitter	Base	Collector	Note		Emitter	Base	Collector	Note
Q503	0	3.48	0.05	VHF TX:(	Q506	3.51	2.83	3.44	TX:ON
Q504	0	3.48	0.05	UHF TX:(	Q507	2.96	3.52	12.92	LAMP:ON
Q505	13.55	12.88	3.51	LAMP:ON	Q508	13.61	13.01	3.52	

	Emitter	Base	Collector	Note
Q601	1.49	0.76	3.09	
Q602	1.48	0.86	3.06	R:SUB
Q603	0	0.74	2.48	
Q604	0	1.95	0.3	R:SUB
Q605	0	2.06	0.03	

	Emitter	Base	Collector	Note
Q701	1.48	0.97	3.04	
Q702	1.48	0.77	3.08	L:SUB
Q703	0	0.67	2.44	
Q704	0	1.62	0.04	L:SUB
Q705	0	2.56	0.03	

	Emitter	Base	Collector
Q801	13.76	13.38	13.36

BLOCK DIAGRAM

VUL UUL

RIPPLE FILTER
Q65 2SD2216R

75V

BOOSTER
IC308,D305
RH5RH651A
SML-310

35V

L C D

MIC SW
Q506 2SA1774

MIC

PTT

PT5

C35

IC503
uPD16430A

C35

ROT

X502
4MHz

Q65 SW
Q56

PLL IC
IC53
M64076GP

35V

LOOP FILTER

X51
12.8M

RESET

IC507
S-81237SG

+B

D507

D508

VPP

VPP

IC506
S-80730SL

IC510
S-80730SL
BACK UP

EEPROM
IC841
24LC16BTB

VDD

VDD

IC508

H8/3877

+BD +BDSW

Q511
UMC3
BATT SW

VDD V50

+B

BUFFER
Q66 2SC5066

LOOP FILTER

UPLL

UHF VCO
Q601 (UHF)
2SC5065
Q602 (VHF)
2SC5065

D602
D603

D601

Q604   Q605

VCO3 (U145) VCO4

MOD MUTE
Q321 UN9211

URX

UMOD

MIC

TFD   MUTE

Q510
XP1216
MIC MUTE

TONE AMP
Q322 2SD2216R

TONE SQL
IC504
AK2341

TSQD

X503
3.6864M

VUTX

TONE SW
IC505
TC4W53F

C35

DSTD

URAF

VRAF

VRAF

DTMF SQL
IC502
LC73881M

IC501
TC4W53F
DTMF SW

TONE SW

URAF

Q603 2SC5066
VCO BUFFER

BUFFER
Q73 2SC5066

VPLL

VHF VCO
Q702 (UHF)
2SC5065
Q701 (VHF)
2SC5065

D702
D703

D701

Q704   Q705

VCO2 (V430) VCO1

MIC FILTER
IC310
NJM2100V (1/2)

MIC AMP
IC310
NJM2100V (1/2)

VUTX

XBR
Q323 UN9216

AF   XBR

BEEP   1750

D59

VTX UTX

VTXC

VUL (PLL)

Q85

VHF TX SW
Q82,Q83
2SA1213Y
XP1501

+B

UHF TX SW
Q51,Q52
2SA1213Y
XP1501

UTXC

VTX

UTX

UUL (PLL)

Q55

Q703 2SC5066
VCO BUFFER

MOD MUTE
Q320 UN9211

VMOD

VRX

35V

35C

Q301,Q302
2SA1213Y
XP1501
REGULATOR

+B

35V

UMAIN U145 VMAIN V430 UPLL VPLL

Q326   Q328   Q329

NOISE AMP
Q303 2SD2216R

NOISE DET
D301 MA742

USD

UAFS

SHIFT REGISTER
IC311
BU4094BF

MCF 45.1MHz
XF51

1st IF AMP
Q60 2SC4649

URX

URAF

IC301 MC3372VM
2nd IF MIXER
SQL S-METER

AF SW
Q307 2SJ144Y

LAMP
Q505,Q507
2SB1181F5
2SD2216R
(16KEY) (LCD)

LAMPC

+B

UPRI

Q327

35V

X301
45.555M

FL301
455KHz
BPF

USMT

Q306
2SD2216R
AF ACTIVE HPF

URX

AF

X4   X4
D509   D503
D511   D504
D513   D505
D514   D506

D51

UAPC   UHI
UMID

UATT VCO4 VCO1

VATT

VAPC   VHI
VMID

D53

Q56   Q58

DUP MUTE
Q317 UN9216

RFD

BUFFER
IC305
TA75W01FU

50V

UHF RX SW
Q308 UN9111

URX

VHF RX SW
Q316 UN9111

VRX

35V

SHIFT REGISTER
IC52
BU4094BF

35V

SPEAKER JACK

SP

AF AMP
IC307
NJM2070M

IC304
LC75366M

EL VR

BEEP

URXC

VRXC

50V V50

Q512
UMC3

BOOSTER
IC509
RH5RH501

50SW

C35

REGULATOR
Q508,Q509
2SA1213Y
XP1501

P.CNT

Q318,Q319
2SA1213Y
XP1501
+B

IC306
TA75W01FU
BUFFER

50V

VRX

VSD

NOISE AMP
Q309 2SD2216R

NOISE DET
D302 MA742

AF ACTIVE HPF
Q313 2SD2216R

VRX

+B

Q501,Q503
XP1111
UN9211

VRX

VTX

D501

Q502,Q504
XP1111
UN9211

URX

UTX

D502

V.VOL UP V.VOL DOWN U.VOL UP U.VOL DOWN UHF VHF

AFPC

BEEP

MCF 38.9MHz
XF53

1st IF AMP
Q78 2SC4649

VRX

IC302 TK10930V
2nd IF MIXER
SQL S-METER

VRX

VRAF

FM/AM SW
IC303
TC4W53FU

35V

VAFS

AM

POWER SEARCH MONI PTT PTT FUNC

75V

IC309
TA75S01F

X303
38.445M

AGC
Q315 2SD2216R

VRX

FL302
455KHz
BPF

VSMT

AM SW
Q312 UN9211

TRAC

SCHEMATIC DIAGRAM

1) RF UNIT

69

3) CPU UNIT

SW.PB

SW501 SKOLLC VOLU
SW502 SKOLLC VOLD
SW503 SKOLLC SQLU
SW504 SKOLLC SQLD
SRCH
VHF
UHF

SW591 SOP-112HST
SW592 SOP-112HST
CN501 6027B-03Z003-T
SW505 SOP-112HST

Q501 XP1111
Q502 XP1111

VTXCC
VBSY
UBSY
UTXCC

C35

Q501 BRPG1201W
Q502 BRPG1201W

R514 330
R515 270
R516 270
R517 330

VTBSY
UTBSY

Q503 UN9211
Q504 UN9211

R504 100K
X501 CSAC4.19MOC
C525 30P
C501 0.01
R575 0
C521 30P
TC4W53F IC501
C35
C531 OPEN
R519 1K x2
IC502 LC73881M
R51B 47K

W501 MKCLH2AA
C507 OPEN
SP501 SU-36W0824
W502 MNCL03AA

SPG SP VTXC UTXC

DSW VRW VRAF OSD ACK DSTD DPO

C509 0.01
R520 10K
C510 0.01

R528 10K

USMT VSMT VSD BP1 BP2 DTON TRAC

DPO DSTD ACK

MRC

AXN340C035P CN503

AM 40 1 DATA
AFPC CLK
VAFS URXC
UAFS +B VRXC
USD 5 35C
VSD 35 VTXC
TRAC UTXC
VSMT URAF
USMT VRAF
TON 10 MRC
GND 30 50V
RFD BP3
1750 SP
XBR SPG
STB1 15 GND
STB2 25 GND
STB3 MIC
RE1 BEEP
RE2 +B
PRST 20 +B

VPP
IC506 S-80730SL-AT
R581 100K
C522 1.5/18V

Q511 R583 76K
R542 39K
UMC3
C519 0.01
+BD
38C 4.00MHz
C526 39p X502
C520 39p R548 1k R547 1M
RESET

CLK R551 1K x2
DATA
STB1 R553 1K x4
STB2
STB3
+BDSW

BU
RE1 R555
RE2 1K x2
P.SW

IC510 S-80730SL-AT

SW506 SOP-112HST
PSW

R578 1K

IC50 HD6433 18H

BEEP

R558 15K
R557 15K
C529 0.01
R561 1K
R562 15K
R555 68
R556 68
R565 1K x4
R568 4.7K x4

1750
XBR
50V

C533 1/16V
R549 1K

TFD
Q510 XP1216 MUTE

Q512 UMC3

R571
R572 47K
R541
R536

50SW
BP1 BP2

Q506 2SA1774
C35
PTS

MIC501 EM-123A
W503 MRCL02AA
W504 MBCL02AA

C505 0.001
D515 DT23.6B
R510 22K
C539 0.001
C541 0.001
C540 47P

R511 2.2K
R513 10K
R512 100K
C536 0.1

PTT

D516 MA741WA-TX

LBSY LCLK LDATA LSTB PT5 MONI TSTB FUNC BP3

SEG24 SEG23 SEG22 SEG21 SEG20 SEG19
SEG25 25
SEG26 26
SEG27 27
SEG28 28
SEG29 29
SEG30 30
SEG31 31
SEG32 32
SEG33
SEG34
SEG35
SEG36
SEG37
SEG38

SEG39 SEG40 SEG41 SEG42 SEG43 SEG44

LCD

IC503
uPD16430AGF

IC508
HD6433877A 18H

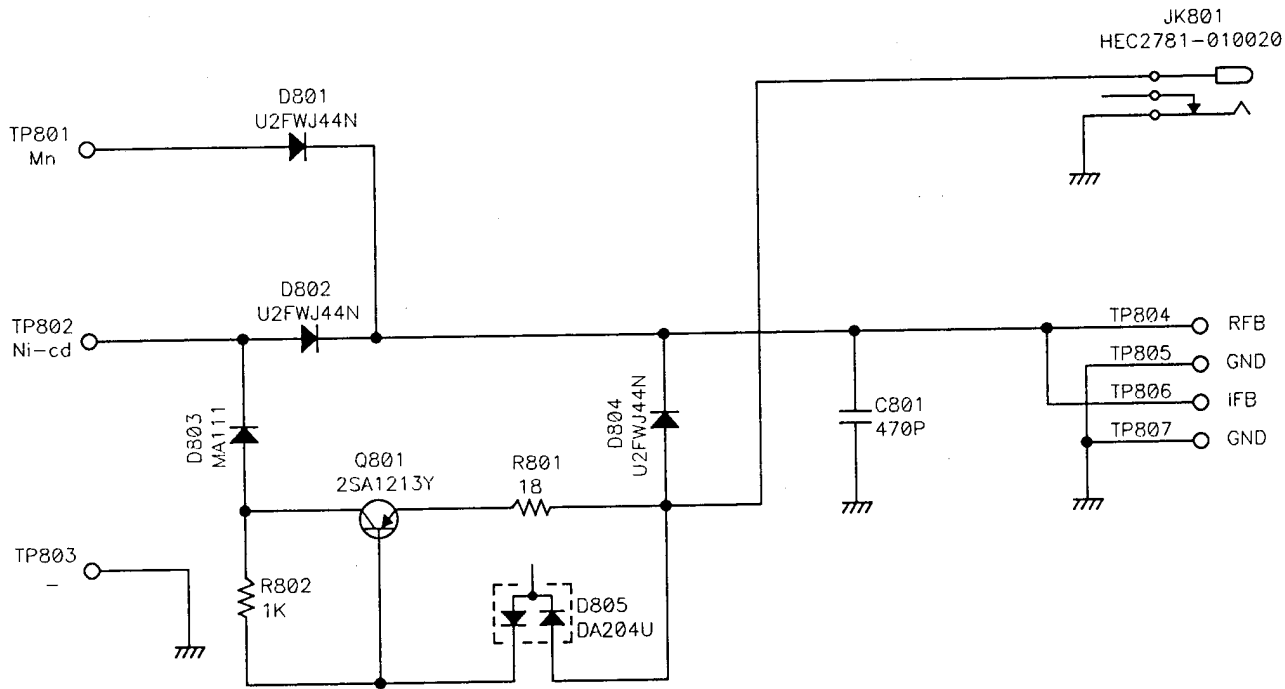| <>	R536	R541	R571
G5T	82K	82K	47K
G5E	—	47K	82K

4) UVCO UNIT

5) VVCO UNIT

6) CHARGE UNIT

7) PTT UNIT