

# KENWOOD

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VHF FM TRANSCEIVER

# TK-2140

## SERVICE MANUAL

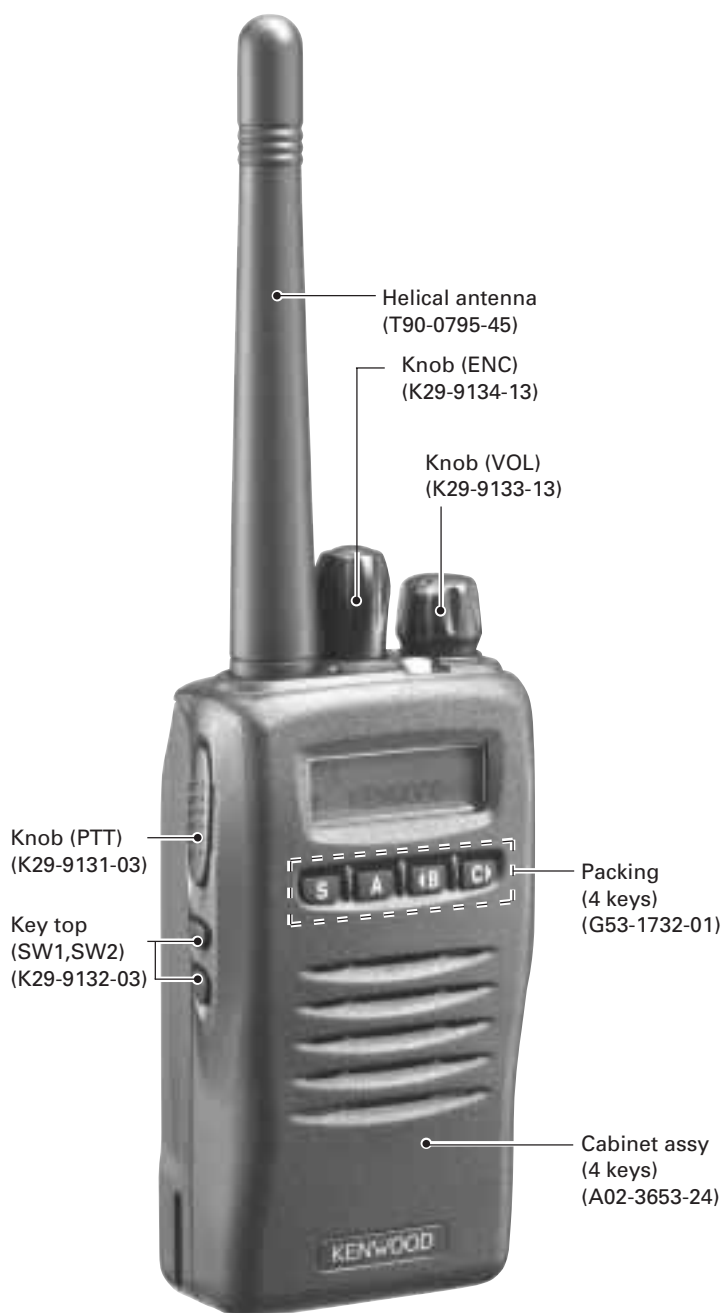
E version **SUPPLEMENT**

# KENWOOD

Kenwood Corporation

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B51-8774-00 (S) 243

This service manual (B51-8774-00) applies to products with serial numbers of 80300051 or subsequent serial numbers. Additionally, this TK-2140 has been prepared for RoHS.  
Refer to the TK-2140 service manual (B51-8630-00) for any information which has not been covered in this manual.



## CONTENTS

<b>PARTS LIST</b> .....	<b>2</b>
<b>PC BOARD</b>	
<b>TX-RX UNIT (X57-6402-71)</b> .....	<b>10</b>
<b>SCHEMATIC DIAGRAM</b> .....	<b>16</b>

This product complies with the **RoHS** directive for the European market.



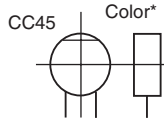
This product uses Lead Free solder.

## PARTS LIST

### CAPACITORS

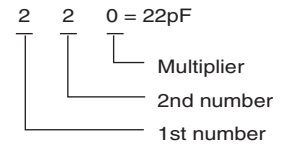
CC 45 TH 1H 220 J  
 1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc.
- 2 = Shape ... round, square, ect.
- 3 = Temp. coefficient
- 4 = Voltage rating
- 5 = Value
- 6 = Tolerance



#### Capacitor value

- 010 = 1pF
- 100 = 10pF
- 101 = 100pF
- 102 = 1000pF = 0.001μF
- 103 = 0.01μF



#### Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470 ± 60ppm/°C

#### Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40 -40	+80 -20	+100 -0	More than 10μF -10 ~ +50 Less than 4.7μF -10 ~ +75

#### (Less than 10pF)

Gode	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

#### Voltage rating

2nd word \ 1st word	A	B	C	D	E	F	G	H	J	K	V
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	-
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	-
3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	-

#### Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J  
 1 2 3 4 5 6 7  
 (Chip)(CH,RH,UJ,SL)

(EX) C K 7 3 F F 1 H 0 0 0 Z  
 1 2 3 4 5 6 7  
 (Chip)(B,F)

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

#### Dimension (Chip capacitors)

Dimension code	L	W	T
Empty	5.6 ± 0.5	5.0 ± 0.5	Less than 2.0
A	4.5 ± 0.5	3.2 ± 0.4	Less than 2.0
B	4.5 ± 0.5	2.0 ± 0.3	Less than 2.0
C	4.5 ± 0.5	1.25 ± 0.2	Less than 1.25
D	3.2 ± 0.4	2.5 ± 0.3	Less than 1.5
E	3.0 ± 0.2	1.6 ± 0.2	Less than 1.25
F	2.0 ± 0.3	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	0.8 ± 0.2	Less than 1.0
H	1.0 ± 0.05	0.5 ± 0.05	0.5 ± 0.05

### RESISTORS

#### Chip resistor (Carbon)

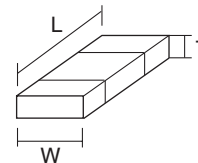
(EX) R D 7 3 E B 2 B 0 0 0 J  
 1 2 3 4 5 6 7  
 (Chip)(B,F)

#### Carbon resistor (Normal type)

(EX) R D 1 4 B B 2 C 0 0 0 J  
 1 2 3 4 5 6 7

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Rating wattage
- 6 = Value
- 7 = Tolerance

#### Dimension



#### Dimension (Chip resistor)

Dimension code	L	W	T
E	3.2 ± 0.2	1.6 ± 0.2	1.0
F	2.0 ± 0.3	1.25 ± 0.2	1.0
G	1.6 ± 0.2	0.8 ± 0.2	0.5 ± 0.1
H	1.0 ± 0.05	0.5 ± 0.05	0.35 ± 0.05

#### Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

## PARTS LIST

\* New Parts.  $\Delta$  indicates safety critical components.  
 Parts without **Parts No.** are not supplied.  
 Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.  
 Teile ohne **Parts No.** werden nicht geliefert.

L: Scandinavia      K: USA      P: Canada  
 Y: PX (Far East, Hawaii)      T: England      E: Europe  
 Y: AAFES (Europe)      X: Australia      M: Other Areas

### TK-2140 (Y50-5632-71) TX-RX UNIT (X57-6402-71)

Ref. No.	Address	New parts	Parts No.	Description	Destination
<b>TK-2140</b>					
1	1B	*	A02-3653-24	CABINET ASSY(4KEY)	
3	3A	*	A10-4063-11	CHASSIS	
6	3B		B01-0694-03	ESCUTCHEON(BELT HOOK)	
7	2C		B09-0625-03	CAP ACCESSORY	
8	2B	*	B10-2770-02	FRONT GLASS	
9	1A	*	B38-0890-15	LCD ASSY	
10	1C	*	B62-1479-20	INSTRUCTION MANUAL	
11	3A	*	B72-1961-14	MODEL NAME-PLATE	
15	3B	*	E04-0467-05	RF COAXIAL RECEPTACLE(SMA)	
16	3B		E23-1188-04	TERMINAL(ANT)	
17	3B	*	E23-1189-14	TERMINAL(BATT-)	
18	3A		E37-0978-05	LEAD WIRE WITH CONNECTOR(SW2,SP)	
19	3A	*	E37-1007-05	LEAD WIRE WITH CONNECTOR(SW1,PTT)	
20	3B	*	E58-0440-15	SQUARE SOCKET(SP/MIC)	
21	3B		E72-0413-03	TERMINAL BLOCK(BATT)	
25	2A	*	F10-2415-04	SHIELDING PLATE(CPU)	
26	1A	*	F10-2416-13	SHIELDING PLATE(LCD)	
27	2A	*	F10-2444-04	SHIELDING PLATE(SP)	
28	3A	*	F15-1006-04	SHIELDING PLATE(CHASSIS)	
29	1A		F20-1192-04	INSULATING SHEET(LCD)	
-		*	F20-3307-14	INSULATING SHEET(PTT-CHASSIS)	
30	1B	*	G10-1304-04	FIBROUS SHEET(CABINET)	
-		*	G10-1324-04	FIBROUS SHEET(LCD)	
31	3A	*	G11-4046-14	SHEET(PTT)	
32	2A		G11-4050-04	SHEET(TCXO)	
34	3A		G11-4090-04	SHEET(FINAL FET)	
35	1A	*	G11-4174-04	SHEET(LCD)	
38	1A,2A		G11-4188-04	SHEET(A/3PCB,SHIELDING PLATE)	
39	1B		G11-4189-04	SHEET(UPPER SIDE OF CABINET)	
40	1A		G11-4190-04	SHEET(LOWER SIDE OF CABINET)	
-		*	G11-4297-04	SHEET(CASE)	
33	1A	*	G11-4388-04	SHEET(LCD)	
41	3A	*	G13-1885-04	CUSHION(CHASSIS)	
-		*	G13-2010-04	CUSHION(ECM)	
43	3A	*	G53-1547-04	PACKING(TERMINAL BLOCK)	
-		*	G53-1620-04	PACKING(ANT)	
44	3B	*	G53-1710-02	PACKING(TOP)	
42	2B	*	G53-1732-01	PACKING(4 KEY)	
45	1D		H52-1811-02	ITEM CARTON CASE	
50	2A		J19-5430-03	HOLDER(VOL/ENC)	
52	2A		J21-8424-04	MOUNTING HARDWARE(CHASSIS)	
53	2C	*	J29-0701-15	BELT HOOK ACCESSORY	
54	1B		J30-1269-04	SPACER(VOL)	
55	2B		J82-0078-15	FPC(VOL/ENC)	
56	3B		J82-0079-05	FPC(UNIVERSAL)	
60	1B		K29-9131-03	KNOB(PTT)	
61	1A		K29-9132-03	KEY TOP(SW1,SW2)	
62	1B	*	K29-9133-13	KNOB(VOL)	
63	1B	*	K29-9134-13	KNOB(ENC)	
A	2C		N08-0548-24	DRESSED SCREW ACCESSORY	
B	3B	*	N14-0834-04	CIRCULAR NUT(VOL/ENC)	
C	3B		N30-2604-48	PAN HEAD MACHINE SCREW(ANT)	
D	3A	*	N30-2608-48	PAN HEAD MACHINE SCREW(CABINET)	
<b>TX-RX UNIT (X57-6402-71)</b>					
E	3B		N30-3006-43	PAN HEAD MACHINE SCREW(ESCUTCHEON)	
F	3B	*	N79-2035-48	PAN HEAD TAPTITE SCREW(TERMINAL)	
G	1A		N83-2005-48	PAN HEAD TAPTITE SCREW(UNIT)	
70	2B		R31-0617-05	VARIABLE RESISTOR(POWER SW/VOL)	
71	2B		S60-0415-05	ROTARY SWITCH(ENCODER)	
72	2B	*	T07-0732-25	SPEAKER	
73	2D	*	T90-0795-45	HELICAL ANTENNA	
74	2B		T91-0630-05	MIC ELEMENT	
D309			B30-2156-05	LED(RED)	
D310			B30-2157-05	LED(YELLOW)	
C1_2			CK73HB1H102K	CHIP C 1000PF K	
C4			CC73HCH1H100D	CHIP C 10PF D	
C5			CK73HB1H102K	CHIP C 1000PF K	
C9			CK73HB1H102K	CHIP C 1000PF K	
C10			CC73HCH1H100D	CHIP C 10PF D	
C29			CK73HB1C103K	CHIP C 0.010UF K	
C30			CK73HB1H102K	CHIP C 1000PF K	
C31			CC73HCH1H100D	CHIP C 10PF D	
C32			CC73HCH1H680J	CHIP C 68PF J	
C33			CC73HCH1H220J	CHIP C 22PF J	
C34			CC73HCH1H330J	CHIP C 33PF J	
C35			CC73HCH1H150J	CHIP C 15PF J	
C37			CC73GCH1H110G	CHIP C 11PF G	
C38			CC73GCH1H160G	CHIP C 16PF G	
C39			CC73GCH1H3R5B	CHIP C 3.5PF B	
C40			CC73GCH1H080B	CHIP C 8.0PF B	
C41			CC73GCH1H0R5B	CHIP C 0.5PF B	
C42_43			CK73GB1H103J	CHIP C 0.010UF J	
C44			CC73GCH1H0R5B	CHIP C 0.5PF B	
C45_46			CK73HB1H102K	CHIP C 1000PF K	
C47			CS77AAQJ220M	CHIP TINTL 22UF 6.3WV	
C48			CC73HCH1H330J	CHIP C 33PF J	
C49			CC73HCH1H150J	CHIP C 15PF J	
C50-52			CK73HB1H102K	CHIP C 1000PF K	
C53			CC73HCH1H100D	CHIP C 10PF D	
C54			CK73HB1H102K	CHIP C 1000PF K	
C56			CS77CPQJ4R7M	CHIP TAN 4.7UF 6.3WV	
C57			CC73GCH1H0R5B	CHIP C 0.5PF B	
C62			CS77CPQJ4R7M	CHIP TAN 4.7UF 6.3WV	
C100-102			CK73HB1H102K	CHIP C 1000PF K	
C103			CC73HCH1H390J	CHIP C 39PF J	
C104,105			CK73HB1H102K	CHIP C 1000PF K	
C106			CC73HCH1H390J	CHIP C 39PF J	
C108			CK73HB1A104K	CHIP C 0.10UF K	
C109			CK73HB1H102K	CHIP C 1000PF K	
C111			CK73HB1H102K	CHIP C 1000PF K	
C115			CK73HB1H102K	CHIP C 1000PF K	
C116			CC73HCH1H101J	CHIP C 100PF J	
C117			CC73GCH1H270J	CHIP C 27PF J	
C118			CK73HB1A104K	CHIP C 0.10UF K	
C119			CK73GB1H102K	CHIP C 1000PF K	
C123			CS77AA1A6R8M	CHIP TINTL 6.8UF 10WV	
C124			CK73GB0J105K	CHIP C 1.0UF K	

## PARTS LIST

## TX-RX UNIT (X57-6402-71)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
C125-127			CK73HB1H102K	CHIP C 1000PF K		C236			CC73HCH1H020C	CHIP C 2.0PF C	
C128			CC73HCH1H101J	CHIP C 100PF J		C238			CC73HCH1H180J	CHIP C 18PF J	
C129			CK73HB1H102K	CHIP C 1000PF K		C239			CK73HB1H102K	CHIP C 1000PF K	
C130			CK73HB1C103K	CHIP C 0.010UF K		C240			CC73HCH1H1R5C	CHIP C 1.5PF C	
C131			CK73HB1H102K	CHIP C 1000PF K		C241			CC73HCH1H090D	CHIP C 9.0PF D	
C132			CC73GCH1H100D	CHIP C 10PF D		C242			CK73HB1A104K	CHIP C 0.10UF K	
C134			CK73HB1A104K	CHIP C 0.10UF K		C243			CK73HB1H561K	CHIP C 560PF K	
C135			CK73GB1A105K	CHIP C 1.0UF K		C244			CC73GCH1H050B	CHIP C 5.0PF B	
C136			CK73HB1H102K	CHIP C 1000PF K		C245			CK73HB1H102K	CHIP C 1000PF K	
C137			CK73HB1C103K	CHIP C 0.010UF K		C250			CK73HB1H102K	CHIP C 1000PF K	
C138			CC73GCH1H820J	CHIP C 82PF J		C251			CC73GCH1H060B	CHIP C 6.0PF B	
C139			CK73HB1H102K	CHIP C 1000PF K		C252			CC73HCH1H470J	CHIP C 47PF J	
C140			CC73HCH1H100D	CHIP C 10PF D		C253			CK73HB1A104K	CHIP C 0.10UF K	
C141			CC73GCH1H820J	CHIP C 82PF J		C255			CK73HB1A104K	CHIP C 0.10UF K	
C144			CK73HB1H102K	CHIP C 1000PF K		C256			CC73HCH1H470J	CHIP C 47PF J	
C145			CC73HCH1H270J	CHIP C 27PF J		C257-260			CK73HB1H102K	CHIP C 1000PF K	
C146			CK73HB1H102K	CHIP C 1000PF K		C261			CC73GCH1H4R5B	CHIP C 4.5PF B	
C147			CC73HCH1H060D	CHIP C 6.0PF D		C263			CC73HCH1H470J	CHIP C 47PF J	
C148			CC73HCH1H100D	CHIP C 10PF D		C264			CK73HB1H102K	CHIP C 1000PF K	
C149			CC73HCH1H240G	CHIP C 24PF G		C266			CK73HB1H102K	CHIP C 1000PF K	
C150			CC73HCH1H120J	CHIP C 12PF J		C267			CC73GCH1H020B	CHIP C 2.0PF B	
C151			CC73HCH1H330J	CHIP C 33PF J		C268			CC73HCH1H330J	CHIP C 33PF J	
C152			CC73HCH1H120J	CHIP C 12PF J		C269			CC73GCH1H090B	CHIP C 9.0PF B	
C153			CC73HCH1H070D	CHIP C 7.0PF D		C270			CC73HCH1H050C	CHIP C 5.0PF C	
C154			CC73HCH1H270G	CHIP C 27PF G		C271			CK73HB1A104K	CHIP C 0.10UF K	
C155			CC73GCH1H220J	CHIP C 22PF J		C272			CK73HB1C103K	CHIP C 0.010UF K	
C156			CK73HB1H102K	CHIP C 1000PF K		C275			CK73HB1E472K	CHIP C 4700PF K	
C161			CC73HCH1H220J	CHIP C 22PF J		C276			CK73HB1H102K	CHIP C 1000PF K	
C162			CC73HCH1H100D	CHIP C 10PF D		C279,280			CK73HB1A104K	CHIP C 0.10UF K	
C200			CK73GB1A224K	CHIP C 0.22UF K		C281,282			CK73HB1H102K	CHIP C 1000PF K	
C201			CK73HB1A104K	CHIP C 0.10UF K		C283,284			CK73HB1A104K	CHIP C 0.10UF K	
C202			CK73HB1H221K	CHIP C 220PF K		C286			CC73GCH1H010B	CHIP C 1.0PF B	
C203-205			CK73HB1A104K	CHIP C 0.10UF K		C287,288			CK73HB1H102K	CHIP C 1000PF K	
C206			CK73HB1C103K	CHIP C 0.010UF K		C289,290			CC73GCH1H1R5B	CHIP C 1.5PF B	
C207			CK73HB1H471K	CHIP C 470PF K		C291			CK73HB1H102K	CHIP C 1000PF K	
C208,209			CK73HB1H221K	CHIP C 220PF K		C294			CK73GB1H102K	CHIP C 1000PF K	
C210			CK73HB1A104K	CHIP C 0.10UF K		C295			CC73HCH1H150J	CHIP C 15PF J	
C211			CK73HB1H102K	CHIP C 1000PF K		C298			CK73HB1H102K	CHIP C 1000PF K	
C212			CC73HCH1H220J	CHIP C 22PF J		C300			CS77CP0J100M	CHIP-TAN 10UF 6.3WV	
C213			CC73HCH1H100D	CHIP C 10PF D		C301			CK73HB1H102K	CHIP C 1000PF K	
C214			CK73HB1A104K	CHIP C 0.10UF K		C304			CC73HCH1H220J	CHIP C 22PF J	
C215			C92-0773-05	CHIP-TAN 15UF 6.3WV		C310			CK73HB1C103K	CHIP C 0.010UF K	
C216			CK73HB1A104K	CHIP C 0.10UF K		C311			CC73HCH1H101J	CHIP C 100PF J	
C217			CK73HB1H221K	CHIP C 220PF K		C312			CS77CP0J100M	CHIP-TAN 10UF 6.3WV	
C218			CK73HB1A104K	CHIP C 0.10UF K		C313			CK73HB1A104K	CHIP C 0.10UF K	
C219			CK73HB1A333K	CHIP C 0.033UF K		C314			CK73HB1H102K	CHIP C 1000PF K	
C220			CK73HB1A104K	CHIP C 0.10UF K		C315			CS77CP0J100M	CHIP-TAN 10UF 6.3WV	
C221			CC73HCH1H680J	CHIP C 68PF J		C316			CK73HB1A333K	CHIP C 0.033UF K	
C222			CK73HB1A104K	CHIP C 0.10UF K		C318			CK73HB1H331K	CHIP C 330PF K	
C223			CK73HB1C103K	CHIP C 0.010UF K		C319			CC73HCH1H101J	CHIP C 100PF J	
C224			CS77CP0J100M	CHIP-TAN 10UF 6.3WV		C320			CK73HB1A104K	CHIP C 0.10UF K	
C225			CK73HB1C103K	CHIP C 0.010UF K		C321			CK73HB1H271K	CHIP C 270PF K	
C227			CK73HB1A104K	CHIP C 0.10UF K		C322			CK73HB1H152K	CHIP C 1500PF K	
C228,229			CK73HB1C103K	CHIP C 0.010UF K		C323			CK73HB1H222K	CHIP C 2200PF K	
C230			CC73HCH1H100C	CHIP C 10PF C		C325			CK73HB1C123K	CHIP C 0.012UF K	
C231			CK73HB1C103K	CHIP C 0.010UF K		C327			CK73HB1H681K	CHIP C 680PF K	
C232			CK73HB1H102K	CHIP C 1000PF K		C328			CK73GB1C683K	CHIP C 0.068UF K	
C233			CK73HB1C103K	CHIP C 0.010UF K		C329			CK73GB0J105K	CHIP C 1.0UF K	
C234			CK73HB1H102K	CHIP C 1000PF K		C330			CK73HB1A104K	CHIP C 0.10UF K	
C235			CC73HCH1H150J	CHIP C 15PF J		C331			CK73HB1E682K	CHIP C 6800PF K	

## PARTS LIST

TX-RX UNIT (X57-6402-71)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
C332			CK73HB1C103K	CHIP C 0.010UF K		C512			CK73HB1A473K	CHIP C 0.047UF K	
C333			CK73HB1H332K	CHIP C 3300PF K		C513,514			CK73HB1A104K	CHIP C 0.10UF K	
C334,335			CK73HB1C103K	CHIP C 0.010UF K		C515			CK73GB1H122K	CHIP C 1200PF K	
C336,337			CC73HCH1H330J	CHIP C 33PF J		C516			CS77CP0J4R7M	CHIP-TAN 4.7UF 6.3WV	
C338			CC73HCH1H150J	CHIP C 15PF J		C517			CK73HB1A104K	CHIP C 0.10UF K	
C339-342			CK73HB1C103K	CHIP C 0.010UF K		C518,519			CS77CP0J4R7M	CHIP-TAN 4.7UF 6.3WV	
C344			CS77CP0J100M	CHIP-TAN 10UF 6.3WV		C520			CC73HCH1H120J	CHIP C 12PF J	
C345			CK73GB1A474K	CHIP C 0.47UF K		C522			CK73HB1A104K	CHIP C 0.10UF K	
C346,347			CC73HCH1H470J	CHIP C 47PF J		C523			CK73HB1H271K	CHIP C 270PF K	
C348			CK73GB1A474K	CHIP C 0.47UF K		C524			CC73HCH1E181J	CHIP C 180PF J	
C349			CK73HB1C153K	CHIP C 0.015UF K		C525			CK73HB1H102K	CHIP C 1000PF K	
C350		*	CS77CP0G3R3M	CHIP-TAN 3.3UF 4WV		C526			CK73HB1C103K	CHIP C 0.010UF K	
C351			CC73HCH1H470J	CHIP C 47PF J		C527			CK73HB1A104K	CHIP C 0.10UF K	
C352-354			CK73HB1A104K	CHIP C 0.10UF K		C531			CC73HCH1H120J	CHIP C 12PF J	
C355			CS77AA1A100M	CHIP TNL 10UF 10WV		C537			CK73HB1A104K	CHIP C 0.10UF K	
C356			CC73HCH1H470J	CHIP C 47PF J		C539,540			CS77AP1C1R5M	CHIP-TAN 1.5UF 16WV	
C357,358			CS77AAQJ220M	CHIP TNL 22UF 6.3WV		C541			CK73HB1A104K	CHIP C 0.10UF K	
C359			CC73HCH1H470J	CHIP C 47PF J		C542,543			CK73HB1H102K	CHIP C 1000PF K	
C362			CC73HCH1H470J	CHIP C 47PF J		C544,545			CK73HB1A104K	CHIP C 0.10UF K	
C364			CC73HCH1H470J	CHIP C 47PF J		C546			CC73HCH1H101J	CHIP C 100PF J	
C369			CC73HCH1H101J	CHIP C 100PF J		C720			CS77CP0J4R7M	CHIP-TAN 4.7UF 6.3WV	
C371			CC73HCH1H470J	CHIP C 47PF J		C730		*	CS77BJ0J2R2M	CHIP-TAN 2.2UF 6.3WV	
C375			CC73HCH1H470J	CHIP C 47PF J		C801-803			CC73HCH1H101J	CHIP C 100PF J	
C382			CK73HB1A104K	CHIP C 0.10UF K		C805			CK73GB1C104K	CHIP C 0.10UF K	
C383,384			CC73HCH1H470J	CHIP C 47PF J		C806			CK73HB1A104K	CHIP C 0.10UF K	
C386			CC73HCH1H470J	CHIP C 47PF J		C807			C92-0773-05	CHIP-TAN 15UF 6.3WV	
C388			CK73HB1H102K	CHIP C 1000PF K		C809			CK73HB1H102K	CHIP C 1000PF K	
C389			CC73HCH1H470J	CHIP C 47PF J		C811			CS77CA1V0R1M	CHIP TNL 0.1UF 35WV	
C390			CK73HB1A104K	CHIP C 0.10UF K		C812			CS77AP1C1R5M	CHIP-TAN 1.5UF 16WV	
C391,392			CK73HB1C103K	CHIP C 0.010UF K		C813		*	CS77BP1DR22M	CHIP-TAN 0.22UF 20WV	
C394,395			CK73HB1A104K	CHIP C 0.10UF K		C815			CC73HCH1H101J	CHIP C 100PF J	
C396			CK73HB1C103K	CHIP C 0.010UF K		C818			CC73HCH1H220J	CHIP C 22PF J	
C397,398			CK73HB1A104K	CHIP C 0.10UF K		C819			CC73HCH1H100D	CHIP C 10PF D	
C399			CK73HB1E562K	CHIP C 5600PF K		C823			CC73HCH1H100D	CHIP C 10PF D	
C400			CK73HB1H102K	CHIP C 1000PF K		C824			CC73HCH1H220J	CHIP C 22PF J	
C402-405			CK73HB1H102K	CHIP C 1000PF K		C825			CC73HCH1H100D	CHIP C 10PF D	
C408			CK73HB1H102K	CHIP C 1000PF K		C826			CC73HCH1H220J	CHIP C 22PF J	
C410			CK73FB1A475K	CHIP C 4.7UF K		C827			CC73HCH1H100D	CHIP C 10PF D	
C411			CK73GB1A105K	CHIP C 1.0UF K		C831			CC73HCH1H150J	CHIP C 15PF J	
C413			CS77CP0J100M	CHIP-TAN 10UF 6.3WV		C832			CC73HCH1H240J	CHIP C 24PF J	
C415			CC73HCH1H101J	CHIP C 100PF J		C833			CC73HCH1H300J	CHIP C 30PF J	
C416			CS77CP0J100M	CHIP-TAN 10UF 6.3WV		C834			CC73HCH1H220J	CHIP C 22PF J	
C417			CK73GB0J105K	CHIP C 1.0UF K		C838			CK73HB1H102K	CHIP C 1000PF K	
C419			CK73HB1H102K	CHIP C 1000PF K		C839			CC73HCH1H120J	CHIP C 12PF J	
C420			CC73HCH1H101J	CHIP C 100PF J		C840			CC73HCH1H100D	CHIP C 10PF D	
C421			CK73GB1A105K	CHIP C 1.0UF K		C841			CK73GB1C104K	CHIP C 0.10UF K	
C422			CK73GB0J105K	CHIP C 1.0UF K		C842			CC73GCH1H471J	CHIP C 470PF J	
C423			C92-0773-05	CHIP-TAN 15UF 6.3WV		C843-846			CK73HB1H471K	CHIP C 470PF K	
C424			CC73HCH1H101J	CHIP C 100PF J		C849			CC73HCH1H101J	CHIP C 100PF J	
C425			CK73HB1A104K	CHIP C 0.10UF K		C850			CK73HB1H102K	CHIP C 1000PF K	
C426			CC73HCH1H101J	CHIP C 100PF J		C851			CK73HB1C103K	CHIP C 0.010UF K	
C431			CC73HCH1H101J	CHIP C 100PF J		C901			CK73HB1A104K	CHIP C 0.10UF K	
C500-503			CK73HB1A104K	CHIP C 0.10UF K		C902			CK73GB1A474K	CHIP C 0.47UF K	
C504			CK73GB1C104K	CHIP C 0.10UF K		C908,909			CK73HB1H102K	CHIP C 1000PF K	
C506			CC73HCH1H220J	CHIP C 22PF J		TC1,2			C05-0384-05	CERAMIC TRIMMER CAPACITOR(10P)	
C507			CK73HB1A104K	CHIP C 0.10UF K		CN300		*	E40-6256-15	PIN ASSY SCOKET	
C508			CK73HB1H821K	CHIP C 820PF K		CN301,302			E40-6453-05	FLAT CABLE CONNECTOR	
C509			CC73HCH1H220J	CHIP C 22PF J		CN303-306			E40-6092-05	PIN ASSY	
C510			CC73HCH1H820J	CHIP C 82PF J		CN400			E40-6453-05	FLAT CABLE CONNECTOR	
C511			CC73HCH1H680J	CHIP C 68PF J							

## PARTS LIST

### TX-RX UNIT (X57-6402-71)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
CN500		*	E40-6257-15	PIN ASSY		X1			L77-1869-05	TCXO (16.8MHz)	
-			F20-1190-04	INSULATING SHEET		X200			L77-1760-15	CRYSTAL RESONATOR(44.395MHz)	
F400			F53-0324-05	FUSE(2.5A/32V)		X300			L77-1810-05	CRYSTAL RESONATOR(9.8304MHz)	
CD200			L79-1834-05	TUNING COIL		X500			L77-1517-05	CRYSTAL RESONATOR(3.6864MHz)	
CF200			L72-0962-05	CERAMIC FILTER		X501			L78-0479-05	RESONATOR (3.58MHz)	
CF201			L72-0934-05	CERAMIC FILTER		XF202			L71-0530-05	MCF (44.85MHz)	
L1			L41-4795-39	SMALL FIXED INDUCTOR(4.7UH)		CP2			RK75HA1J102J	CHIP-COM 1.0K J 1/16W	
L8 ,9			L40-1001-86	SMALL FIXED INDUCTOR(10UH)		CP300-313			RK75HA1J102J	CHIP-COM 1.0K J 1/16W	
L13 ,14			L40-1001-86	SMALL FIXED INDUCTOR(10UH)		CP314			RK75HA1J473J	CHIP-COM 47K J 1/16W	
L15 ,16			L40-2778-67	SMALL FIXED INDUCTOR(27NH)		CP315			RK75HA1J102J	CHIP-COM 1.0K J 1/16W	
L17 ,18			L40-1001-86	SMALL FIXED INDUCTOR(10UH)		CP316			RK75HA1J473J	CHIP-COM 47K J 1/16W	
L21			L40-1085-92	SMALL FIXED INDUCTOR(100NH)		CP317-320			RK75HA1J102J	CHIP-COM 1.0K J 1/16W	
L22			L92-0163-05	BEADS CORE		CP322			RK75HA1J102J	CHIP-COM 1.0K J 1/16W	
L23			L40-1085-92	SMALL FIXED INDUCTOR(100NH)		CP323,324			RK75HA1J473J	CHIP-COM 47K J 1/16W	
L100			L40-8275-92	SMALL FIXED INDUCTOR(82NH)		CP326,327			RK75HA1J473J	CHIP-COM 47K J 1/16W	
L101			L40-1085-92	SMALL FIXED INDUCTOR(100NH)		CP400,401			RK75HA1J473J	CHIP-COM 47K J 1/16W	
L102			L92-0140-05	CHIP FERRITE		R2			RK73HB1J101J	CHIP R 100 J 1/16W	
L103			L41-1585-43	SMALL FIXED INDUCTOR(150NH)		R16 ,17			RK73HB1J271J	CHIP R 270 J 1/16W	
L104			L92-0149-05	CHIP FERRITE		R18 ,19			RK73HB1J220J	CHIP R 22 J 1/16W	
L105			L40-2775-57	SMALL FIXED INDUCTOR(27NH/5%)		R20			RK73HB1J104J	CHIP R 100K J 1/16W	
L106			L41-2775-43	SMALL FIXED INDUCTOR(27NH)		R21			RK73HB1J154J	CHIP R 150K J 1/16W	
L107			L92-0149-05	CHIP FERRITE		R22			RK73HB1J472J	CHIP R 4.7K J 1/16W	
L108			L34-4577-05	AIR-CORE COIL		R23			RK73HB1J101J	CHIP R 100 J 1/16W	
L109			L34-4563-05	AIR-CORE COIL		R24			RK73HB1J102J	CHIP R 1.0K J 1/16W	
L110			L34-4573-05	AIR-CORE COIL		R25			RK73HB1J332J	CHIP R 3.3K J 1/16W	
L111			L41-2295-39	SMALL FIXED INDUCTOR(2.2UH)		R26			RK73HB1J103J	CHIP R 10K J 1/16W	
L112			L34-4576-05	AIR-CORE COIL		R27			RK73HB1J331J	CHIP R 330 J 1/16W	
L113			L34-4575-05	AIR-CORE COIL		R28			RK73HH1J333D	CHIP R 33K D 1/16W	
L114			L34-4567-05	AIR-CORE COIL		R29			RK73HH1J104D	CHIP R 100K D 1/16W	
L115			L34-4566-05	AIR-CORE COIL		R31			RK73HB1J470J	CHIP R 47 J 1/16W	
L116			L41-1092-44	SMALL FIXED INDUCTOR(1UH)		R33			RK73HB1J473J	CHIP R 47K J 1/16W	
L120			L40-5675-92	SMALL FIXED INDUCTOR(56NH)		R34			RK73HB1J274J	CHIP R 270K J 1/16W	
L201			L40-1091-86	SMALL FIXED INDUCTOR(1.0UH)		R36			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
L202			L40-5681-86	SMALL FIXED INDUCTOR(0.56UH)		R37			RK73HB1J223J	CHIP R 22K J 1/16W	
L203			L92-0163-05	BEADS CORE		R100,101			RK73HB1J472J	CHIP R 4.7K J 1/16W	
L204			L41-5685-39	SMALL FIXED INDUCTOR(0.56UH)		R102			RK73HB1J563J	CHIP R 56K J 1/16W	
L205,206			L40-3975-57	SMALL FIXED INDUCTOR(39.0NH5%)		R103			RK73HB1J331J	CHIP R 330 J 1/16W	
L207			L40-1285-92	SMALL FIXED INDUCTOR(120NH)		R104			RK73HB1J220J	CHIP R 22 J 1/16W	
L210			L41-6878-14	SMALL FIXED INDUCTOR(68NH)		R105			RK73HB1J561J	CHIP R 560 J 1/16W	
L212			L92-0163-05	BEADS CORE		R106			RK73HB1J152J	CHIP R 1.5K J 1/16W	
L213			L41-6878-14	SMALL FIXED INDUCTOR(68NH)		R107			RK73HB1J150J	CHIP R 15 J 1/16W	
L215			L41-6878-14	SMALL FIXED INDUCTOR(68NH)		R108,109			RK73HB1J331J	CHIP R 330 J 1/16W	
L217			L41-5678-14	SMALL FIXED INDUCTOR(56NH)		R111			RK73HB1J180J	CHIP R 18 J 1/16W	
L220			L40-1885-92	SMALL FIXED INDUCTOR(180NH)		R112			RK73HB1J331J	CHIP R 330 J 1/16W	
L223			L40-2785-92	SMALL FIXED INDUCTOR(270NH)		R113			RK73GB2A000JX	CHIP R 0 OHM J 1/10W	
L300-313			L92-0163-05	BEADS CORE		R114			RK73HB1J683J	CHIP R 68K J 1/16W	
L314-317			L92-0408-05	CHIP FERRITE		R115			RK73HB1J473J	CHIP R 47K J 1/16W	
L320			L92-0163-05	BEADS CORE		R116			RK73HB1J150J	CHIP R 15 J 1/16W	
L400			L92-0149-05	CHIP FERRITE		R118			RK73HB1J331J	CHIP R 330 J 1/16W	
L710			L34-4563-05	AIR-CORE COIL		R119,120			RK73EB2ER39K	CHIP R 0.39 K 1/4W	
L801			L92-0163-05	BEADS CORE		R122			RK73HB1J123J	CHIP R 12K J 1/16W	
L802			L92-0470-05	CHIP FERRITE		R123			RK73GB2A820J	CHIP R 82 J 1/10W	
L805			L40-6875-92	SMALL FIXED INDUCTOR(68NH)		R124			RK73HB1J473J	CHIP R 47K J 1/16W	
L807,808			L40-2775-57	SMALL FIXED INDUCTOR(27.0NH5%)		R125			RK73EB2ER39K	CHIP R 0.39 K 1/4W	
L810,811			L40-1001-86	SMALL FIXED INDUCTOR(10UH)		R126			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
L905			L40-1091-86	SMALL FIXED INDUCTOR(1.0UH)		R127-129			RK73HH1J154D	CHIP R 150K D 1/1	
						R131-133			RK73HH1J154D	CHIP R 150K D 1/1	
						R134			RK73HB1J103J	CHIP R 10K J 1/16W	
						R135			RK73HB1J473J	CHIP R 47K J 1/16W	



## PARTS LIST

TX-RX UNIT (X57-6402-71)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
R137			RK73HH1J105D	CHIP R 1.0M D 1/16W		R268			RK73HB1J221J	CHIP R 220 J 1/16W	
R138			RK73HB1J561J	CHIP R 560 J 1/16W		R269,270			RK73FB2B000JX	CHIP R 0 OHM J 1/8W	
R139			RK73HB1J222J	CHIP R 2.2K J 1/16W		R272-276			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R141,142			RK73HB1J104J	CHIP R 100K J 1/16W		R300,301			RK73HB1J104J	CHIP R 100K J 1/16W	
R143,144			RK73HB1J271J	CHIP R 270 J 1/16W		R302			RK73HB1J393J	CHIP R 39K J 1/16W	
R145			RK73GB2A000JX	CHIP R 0 OHM J 1/10W		R303			RK73HB1J684J	CHIP R 680K J 1/16W	
R147			RK73HB1J100J	CHIP R 10 J 1/16W		R304			RK73HB1J394J	CHIP R 390K J 1/16W	
R148			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R308			RK73HB1J332J	CHIP R 3.3K J 1/16W	
R200			RK73HB1J224J	CHIP R 220K J 1/16W		R309			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R201			RK73HB1J104J	CHIP R 100K J 1/16W		R310			RK73HB1J473J	CHIP R 47K J 1/16W	
R202			RK73HB1J123J	CHIP R 12K J 1/16W		R311			RK73HB1J104J	CHIP R 100K J 1/16W	
R203			RK73HH1J683D	CHIP R 68K D 1/16W		R312			RK73HB1J224J	CHIP R 220K J 1/16W	
R204			RK73HH1J824D	CHIP R 820K D 1/16W		R313			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R205			RK73HB1J334J	CHIP R 330K J 1/16W		R314			RK73HB1J101J	CHIP R 100 J 1/16W	
R206			RK73HB1J333J	CHIP R 33K J 1/16W		R315			RK73HH1J105D	CHIP R 1.0M D 1/16W	
R207			RK73HB1J154J	CHIP R 150K J 1/16W		R316			RK73HB1J104J	CHIP R 100K J 1/16W	
R208			RK73HB1J472J	CHIP R 4.7K J 1/16W		R317			RK73HB1J184J	CHIP R 180K J 1/16W	
R209			RK73HB1J103J	CHIP R 10K J 1/16W		R318,319			RK73HB1J683J	CHIP R 68K J 1/16W	
R210			RK73HB1J183J	CHIP R 18K J 1/16W		R320			RK73HB1J123J	CHIP R 12K J 1/16W	
R211			RK73HB1J223J	CHIP R 22K J 1/16W		R321			RK73HB1J104J	CHIP R 100K J 1/16W	
R212			RK73HB1J472J	CHIP R 4.7K J 1/16W		R322			RK73HB1J154J	CHIP R 150K J 1/16W	
R213			RK73HB1J183J	CHIP R 18K J 1/16W		R323			RK73HB1J823J	CHIP R 82K J 1/16W	
R215			RK73HB1J332J	CHIP R 3.3K J 1/16W		R324			RK73HB1J474J	CHIP R 470K J 1/16W	
R216			RK73HB1J472J	CHIP R 4.7K J 1/16W		R325			RK73HB1J364J	CHIP R 360K J 1/16W	
R217			RK73HB1J334J	CHIP R 330K J 1/16W		R326			RK73HB1J223J	CHIP R 22K J 1/16W	
R218			RK73HB1J123J	CHIP R 12K J 1/16W		R327			RK73HB1J473J	CHIP R 47K J 1/16W	
R219			RK73HB1J224J	CHIP R 220K J 1/16W		R330			RK73HB1J184J	CHIP R 180K J 1/16W	
R220			RK73HB1J332J	CHIP R 3.3K J 1/16W		R333			RK73HB1J473J	CHIP R 47K J 1/16W	
R221			RK73HH1J332D	CHIP R 3.3K D 1/16W		R334			RK73HB1J184J	CHIP R 180K J 1/16W	
R222			RK73HB1J220J	CHIP R 22 J 1/16W		R336			RK73HB1J223J	CHIP R 22K J 1/16W	
R223			RK73HB1J184J	CHIP R 180K J 1/16W		R337,338			RK73HB1J473J	CHIP R 47K J 1/16W	
R226			RK73HB1J221J	CHIP R 220 J 1/16W		R339-341			RK73HB1J103J	CHIP R 10K J 1/16W	
R227			RK73HB1J391J	CHIP R 390 J 1/16W		R342			RK73HB1J223J	CHIP R 22K J 1/16W	
R228			RK73HB1J331J	CHIP R 330 J 1/16W		R343			RK73HB1J103J	CHIP R 10K J 1/16W	
R229			RK73HB1J472J	CHIP R 4.7K J 1/16W		R344,345			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R230			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R346			RK73HB1J473J	CHIP R 47K J 1/16W	
R232			RK73HB1J561J	CHIP R 560 J 1/16W		R347			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R233			RK73HB1J221J	CHIP R 220 J 1/16W		R348			RK73HB1J472J	CHIP R 4.7K J 1/16W	
R234-237			RK73HB1J823J	CHIP R 82K J 1/16W		R349,350			RK73HB1J473J	CHIP R 47K J 1/16W	
R238			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R351			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R240,241			RK73HB1J105J	CHIP R 1.0M J 1/16W		R352,353			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R242			RK73HB1J471J	CHIP R 470 J 1/16W		R354,355			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R243			RK73HB1J221J	CHIP R 220 J 1/16W		R356			RK73HB1J473J	CHIP R 47K J 1/16W	
R244			RK73HB1J102J	CHIP R 1.0K J 1/16W		R357			RK73HB1J471J	CHIP R 470 J 1/16W	
R245			RK73HB1J104J	CHIP R 100K J 1/16W		R358			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R246			RK73HB1J184J	CHIP R 180K J 1/16W		R359			RK73HB1J153J	CHIP R 15K J 1/16W	
R247			RK73HB1J104J	CHIP R 100K J 1/16W		R360			RK73HB1J182J	CHIP R 1.8K J 1/16W	
R248,249			RK73HB1J105J	CHIP R 1.0M J 1/16W		R361			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R250			RK73HB1J102J	CHIP R 1.0K J 1/16W		R362			RK73HB1J473J	CHIP R 47K J 1/16W	
R252			RK73HB1J470J	CHIP R 47 J 1/16W		R363			RK73HB1J124J	CHIP R 120K J 1/16W	
R254			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R364			RK73HB1J104J	CHIP R 100K J 1/16W	
R255			RK73HH1J272D	CHIP R 2.7K D 1/16W		R365			RK73HB1J473J	CHIP R 47K J 1/16W	
R256			RK73HB1J473J	CHIP R 47K J 1/16W		R366			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R259			RK73HB1J684J	CHIP R 680K J 1/16W		R367			RK73HB1J103J	CHIP R 10K J 1/16W	
R260			RK73HB1J184J	CHIP R 180K J 1/16W		R368			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R264			RK73HB1J181J	CHIP R 180 J 1/16W		R369			RK73HB1J563J	CHIP R 56K J 1/16W	
R265			RK73HB1J334J	CHIP R 330K J 1/16W		R370			RK73HB1J104J	CHIP R 100K J 1/16W	
R266			RK73HB1J272J	CHIP R 2.7K J 1/16W		R371			RK73HB1J272J	CHIP R 2.7K J 1/16W	
R267			RK73HB1J334J	CHIP R 330K J 1/16W		R372			RK73HB1J000J	CHIP R 0 OHM J 1/16W	



## PARTS LIST

### TX-RX UNIT (X57-6402-71)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
R373			RK73HB1J124J	CHIP R 120K J 1/16W		R540			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R374			RK73HB1J104J	CHIP R 100K J 1/16W		R541			RK73HB1J114J	CHIP R 110K J 1/16W	
R376			RK73HB1J103J	CHIP R 10K J 1/16W		R542			RK73HB1J123J	CHIP R 12K J 1/16W	
R377			RK73HB1J104J	CHIP R 100K J 1/16W		R543,544			RK73HB1J472J	CHIP R 4.7K J 1/16W	
						R545-547			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R378			RK73HB1J101J	CHIP R 100 J 1/16W		R548			RK73HB1J184J	CHIP R 180K J 1/16W	
R379			RK73HB1J821J	CHIP R 820 J 1/16W		R549			RK73HB1J472J	CHIP R 4.7K J 1/16W	
R380,381			RK73HB1J101J	CHIP R 100 J 1/16W		R550			RK73HB1J153J	CHIP R 15K J 1/16W	
R382			RK73HB1J103J	CHIP R 10K J 1/16W		R603-611			RK73HB1J471J	CHIP R 470 J 1/16W	
R383			RK73HB1J101J	CHIP R 100 J 1/16W		R612,613			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R384			RK73HB1J331J	CHIP R 330 J 1/16W		R614,615			RK73HB1J473J	CHIP R 47K J 1/16W	
R385			RK73HB1J470J	CHIP R 47 J 1/16W		R617,618			RK73HB1J473J	CHIP R 47K J 1/16W	
R386			RK73HB1J331J	CHIP R 330 J 1/16W		R619			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R388			RK73HB1J474J	CHIP R 470K J 1/16W		R620			RK73HB1J473J	CHIP R 47K J 1/16W	
R389			RK73HB1J472J	CHIP R 4.7K J 1/16W		R621			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R390			RK73HB1J821J	CHIP R 820 J 1/16W		R623			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R391,392			RK73HB1J331J	CHIP R 330 J 1/16W		R624			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R397,398			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R720			RK73HB1J470J	CHIP R 47 J 1/16W	
R400			RK73HB1J103J	CHIP R 10K J 1/16W		R740			RK73HB1J473J	CHIP R 47K J 1/16W	
R401,402			RK73HB1J474D	CHIP R 470K D 1/16W		R801			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R403			RK73HB1J334J	CHIP R 330K J 1/16W		R806			RK73HB1J124J	CHIP R 120K J 1/16W	
R404			RK73HB1J105J	CHIP R 1.0M J 1/16W		R807			RK73HB1J100J	CHIP R 10 J 1/16W	
R405			RK73GB2A000JX	CHIP R 0 OHM J 1/10W		R809			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R406			RK73HB1J103J	CHIP R 10K J 1/16W		R811			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R407			RK73HB1J224J	CHIP R 220K J 1/16W		R812,813			RK73HB1J222J	CHIP R 2.2K J 1/16W	
R408			RK73HB1J102J	CHIP R 1.0K J 1/16W		R814			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R410			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R815			RK73HB1J103J	CHIP R 10K J 1/16W	
R411			RK73HB1J471J	CHIP R 470 J 1/16W		R817			RK73HB1J101J	CHIP R 100 J 1/16W	
R413			RK73HB1J105J	CHIP R 1.0M J 1/16W		R818			RK73HB1J224J	CHIP R 220K J 1/16W	
R414			RK73HB1J103J	CHIP R 10K J 1/16W		R819			RK73HB1J473J	CHIP R 47K J 1/16W	
R500			RK73HH1J105D	CHIP R 1.0M D 1/16W		R820			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R501			RK73HB1J333J	CHIP R 33K J 1/16W		R824,825			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R502			RK73HB1J334J	CHIP R 330K J 1/16W		R826,827			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R503			RK73HB1J154J	CHIP R 150K J 1/16W		R829			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R504			RK73HB1J184J	CHIP R 180K J 1/16W		R901			RK73HB1J103J	CHIP R 10K J 1/16W	
R505			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R902,903			RK73HB1J473J	CHIP R 47K J 1/16W	
R506			RK73HH1J105D	CHIP R 1.0M D 1/16W		R906-908			RK73HB1J472J	CHIP R 4.7K J 1/16W	
R507			RK73HB1J124J	CHIP R 120K J 1/16W		R909			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R508			RK73HB1J224J	CHIP R 220K J 1/16W		R910,911			RK73HB1J103J	CHIP R 10K J 1/16W	
R509			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R912			RK73HB1J332J	CHIP R 3.3K J 1/16W	
R510			RK73HH1J105D	CHIP R 1.0M D 1/16W		R913			RK73HB1J103J	CHIP R 10K J 1/16W	
R511			RK73HB1J153J	CHIP R 15K J 1/16W		R914			RK73HB1J393J	CHIP R 39K J 1/16W	
R512			RK73HB1J124J	CHIP R 120K J 1/16W		R915			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R513			RK73HB1J153J	CHIP R 15K J 1/16W		R916			RK73HB1J184J	CHIP R 180K J 1/16W	
R514			RK73HB1J000J	CHIP R 0 OHM J 1/16W		R917			RK73HB1J000J	CHIP R 0 OHM J 1/16W	
R515,516			RK73HB1J124J	CHIP R 120K J 1/16W		R918-920			RK73HB1J103J	CHIP R 10K J 1/16W	
R517			RK73HB1J273J	CHIP R 27K J 1/16W		R921			RK73GB2A122J	CHIP R 1.2K J 1/10W	
R518			RK73HB1J114J	CHIP R 110K J 1/16W		S600-602			S70-0457-05	TACT SWITCH(PTT,SW1,SW2)	
R519			RK73HB1J472J	CHIP R 4.7K J 1/16W		D1			HVC376B	VARIABLE CAPACITANCE DIODE	
R520,521			RK73HB1J394J	CHIP R 390K J 1/16W		D2	*		HVC375B-E	VARIABLE CAPACITANCE DIODE	
R522			RK73HB1J473J	CHIP R 47K J 1/16W		D3			HVC376B	VARIABLE CAPACITANCE DIODE	
R523			RK73HB1J684J	CHIP R 680K J 1/16W		D4	*		HVC375B-E	VARIABLE CAPACITANCE DIODE	
R524			RK73HB1J154J	CHIP R 150K J 1/16W		D5			1SV278F	VARIABLE CAPACITANCE DIODE	
R527			RK73HB1J474J	CHIP R 470K J 1/16W		D6			MA2S111-F	DIODE	
R528-534			RK73HB1J472J	CHIP R 4.7K J 1/16W		D7 ,8			HVC376B	VARIABLE CAPACITANCE DIODE	
R535			RK73HH1J105D	CHIP R 1.0M D 1/16W		D9 ,10	*		HVC375B-E	VARIABLE CAPACITANCE DIODE	
R536			RK73HB1J104J	CHIP R 100K J 1/16W		D100,101			HSC277	DIODE	
R537			RK73HB1J103J	CHIP R 10K J 1/16W		D102-105			HVC131	DIODE	
R538			RK73HB1J272J	CHIP R 2.7K J 1/16W							
R539			RK73HB1J102J	CHIP R 1.0K J 1/16W							

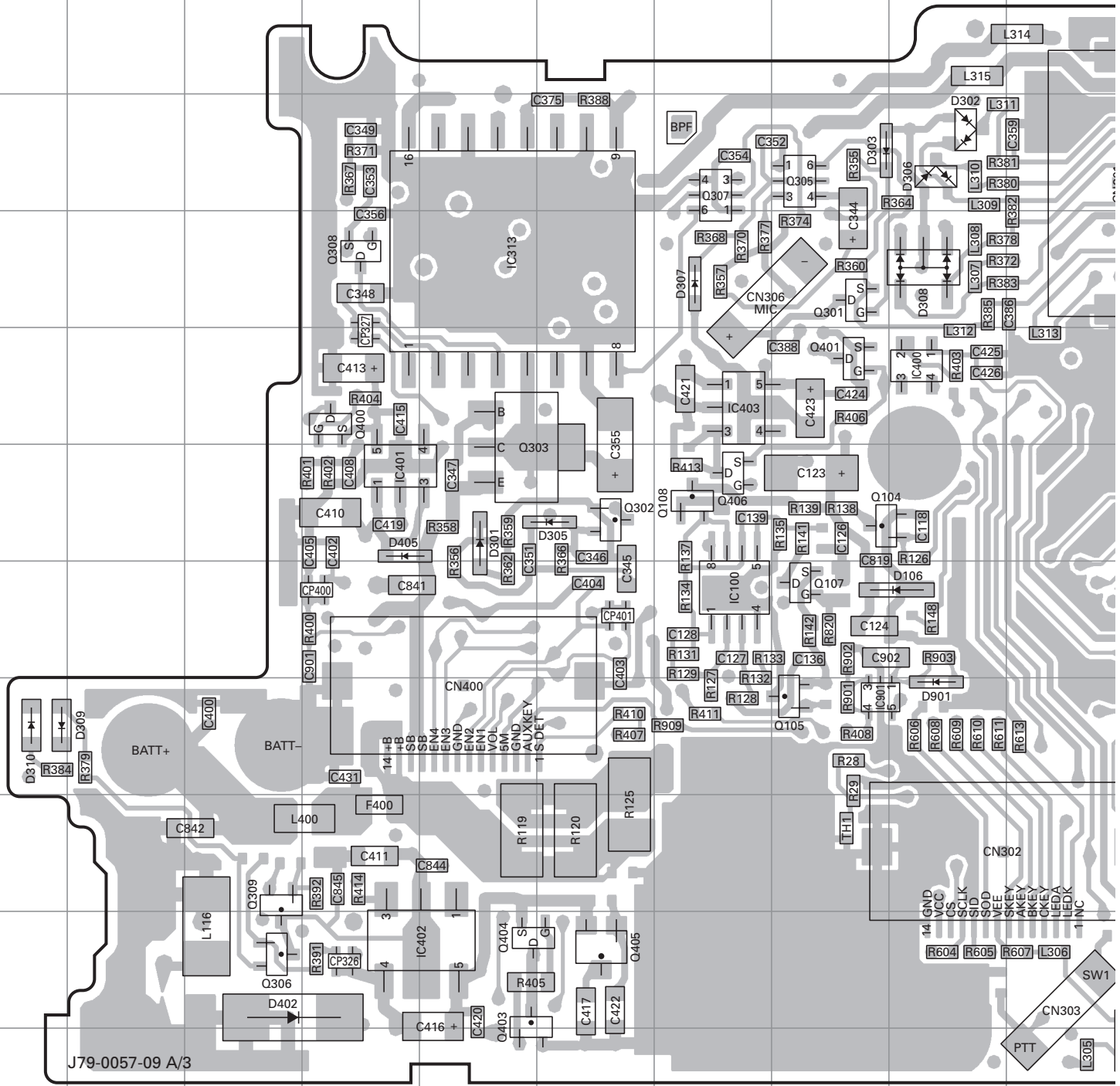
## PARTS LIST

TX-RX UNIT (X57-6402-71)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
D106			HZU5CLL	ZENER DIODE		Q203			2SK1824-A	FET	
D200			HVC131	DIODE		Q204			2SK1830F	FET	
D201			RB706F-40	DIODE		Q205			2SC5108(Y)F	TRANSISTOR	
D202,203			DAN235E	DIODE		Q206,207			3SK318	FET	
D205-208			1SV305F	VARIABLE CAPACITANCE DIODE		Q208			2SC4617(S)	TRANSISTOR	
D209			MA2S111-F	DIODE		Q300			2SC4649(N,P)	TRANSISTOR	
D300			RB706F-40	DIODE		Q301			2SJ347F	FET	
D301			1SS373F	DIODE		Q302			2SC4617(S)	TRANSISTOR	
D302			DA221	DIODE		Q303			2SB1132(Q,R)	TRANSISTOR	
D303,304			015AZ6.8F	ZENER DIODE		Q304			2SC4617(S)	TRANSISTOR	
D305			015AZ2.4(X)F	ZENER DIODE		Q305			UPA672T-A	FET	
D306			DA221	DIODE		Q306			2SC4617(S)	TRANSISTOR	
D307			015AZ6.8F	ZENER DIODE		Q307			UPA672T-A	FET	
D308			NNCD6.8G-A	ZENER DIODE		Q308			2SK1824-A	FET	
D402			1SR154-400	DIODE		Q309,310			2SC4617(S)	TRANSISTOR	
D403			MA2S111-F	DIODE		Q311			2SA1362-F(Y)	TRANSISTOR	
D405			RB521S-30	DIODE		Q400			2SJ347F	FET	
D500,501			HSM88AS-E	DIODE		Q401			2SK1830F	FET	
D801			MA2S111-F	DIODE		Q403			DTC144EE	DIGITAL TRANSISTOR	
D804			HVC376B	VARIABLE CAPACITANCE DIODE		Q404			2SJ347F	FET	
D805		*	HVC375B-E	VARIABLE CAPACITANCE DIODE		Q405			KTA2015(Y)	TRANSISTOR	
D901			MA2S111-F	DIODE		Q406			2SJ347F	FET	
D902,903			DAN235E	DIODE		Q500,501			2SJ243-A	FET	
IC100			TA75W01FUJ	MOS-IC		Q502			2SC4116(Y)F	TRANSISTOR	
IC200			TA31136FNG	MOS-IC		Q503			RN47A4-F	TRANSISTOR	
IC201			TC75W51FUJ	MOS-IC		Q504			2SA1586(Y,GR)F	TRANSISTOR	
IC302-304			TC75W51FUJ	MOS-IC		Q505			DTA114EE	DIGITAL TRANSISTOR	
IC305			TC75W51FK(F)	MOS-IC		Q506			2SK1824-A	FET	
IC306			TC75W51FUJ	MOS-IC		Q507			2SJ243-A	FET	
IC307			M62364FP-F	MOS-IC		Q803		*	2SC5010-T1-A	TRANSISTOR	
IC308			AT29C02090TU	ROM IC		Q903			DTC144EE	DIGITAL TRANSISTOR	
IC309		*	30620M8A2W6GPU	MPU		TH1			ERTJ0EV104H	THERMISTOR	
IC310			AT24C16A10SU18	ROM IC		TH200			ERTJ0EV104H	THERMISTOR	
IC311,312			BU4094BCFV	MOS-IC		TH300			TN10-3S154JT	THERMISTOR	
IC313			TDA7053AT	BI-POLAR IC							
IC400			XC61CN4202NR	MOS-IC							
IC401			XC6204B502MR	MOS-IC							
IC402			XC62GR5012PR	MOS-IC							
IC403			XC6204B502MR	MOS-IC							
IC404			XC61CN5002NR	MOS-IC							
IC500			LC73872M	MOS-IC							
IC501			AK2346	MOS-IC							
IC502			TC75S51F-F	MOS-IC							
IC801			LMX2316TMX	MOS-IC							
IC901			TC75S51FE(F)	MOS-IC							
Q2 ,3			2SK508NV(K52)	FET							
Q4			2SJ347F	FET							
Q5			2SC5108(Y)F	TRANSISTOR							
Q6			RN47A4-F	TRANSISTOR							
Q7			2SC4617(S)	TRANSISTOR							
Q8			2SC5108(Y)F	TRANSISTOR							
Q100			2SC5108(Y)F	TRANSISTOR							
Q101			2SC5192-A	TRANSISTOR							
Q103			2SK2596	FET							
Q104,105			DTC114EE	DIGITAL TRANSISTOR							
Q106			2SK2595-E	FET							
Q107			2SK1824-A	FET							
Q108			DTA144EE	DIGITAL TRANSISTOR							
Q201			DTC144EE	DIGITAL TRANSISTOR							

# TK-2140 PC BOARD

## TX-RX UNIT (X57-6402-71) (A/3) Component side view (J79-0057-09 A/3)

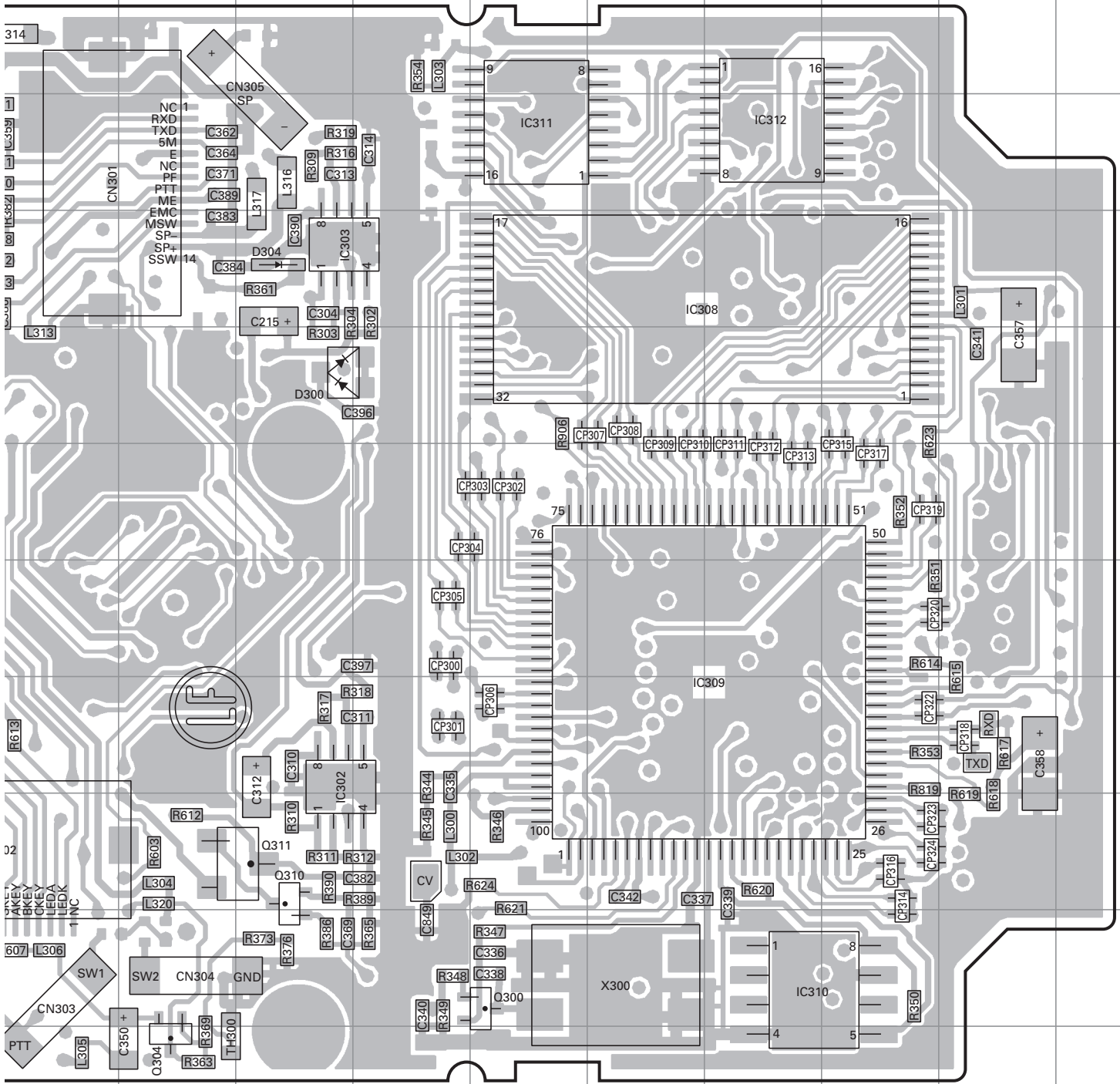


J79-0057-09 A/3

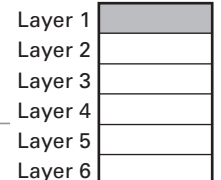
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IC100	7G	IC400	5I	Q300	10N	Q309	9C	D106	7I	D308	4I
IC302	8I	IC401	6D	Q301	4H	Q310	9L	D300	5L	D309	8A
IC303	4I	IC402	10E	Q302	6F	Q311	9L	D301	6E	D310	8A
IC308	4O	IC403	5G	Q303	6E	Q400	5D	D302	3I	D402	10C
IC309	8P	IC901	8H	Q304	11K	Q401	5H	D303	3H	D405	6D
IC310	10P	Q104	6H	Q305	3H	Q403	10E	D304	4L	D901	8I
IC311	3N	Q105	8H	Q306	10C	Q404	10E	D305	6F		
IC312	3P	Q107	7H	Q307	3G	Q405	10F	D306	3I		
IC313	4E	Q108	6G	Q308	4D	Q406	6G	D307	4G		

# PC BOARD TK-2140

## TX-RX UNIT (X57-6402-71) (A/3) Component side view (J79-0057-09 A/3)



Component side



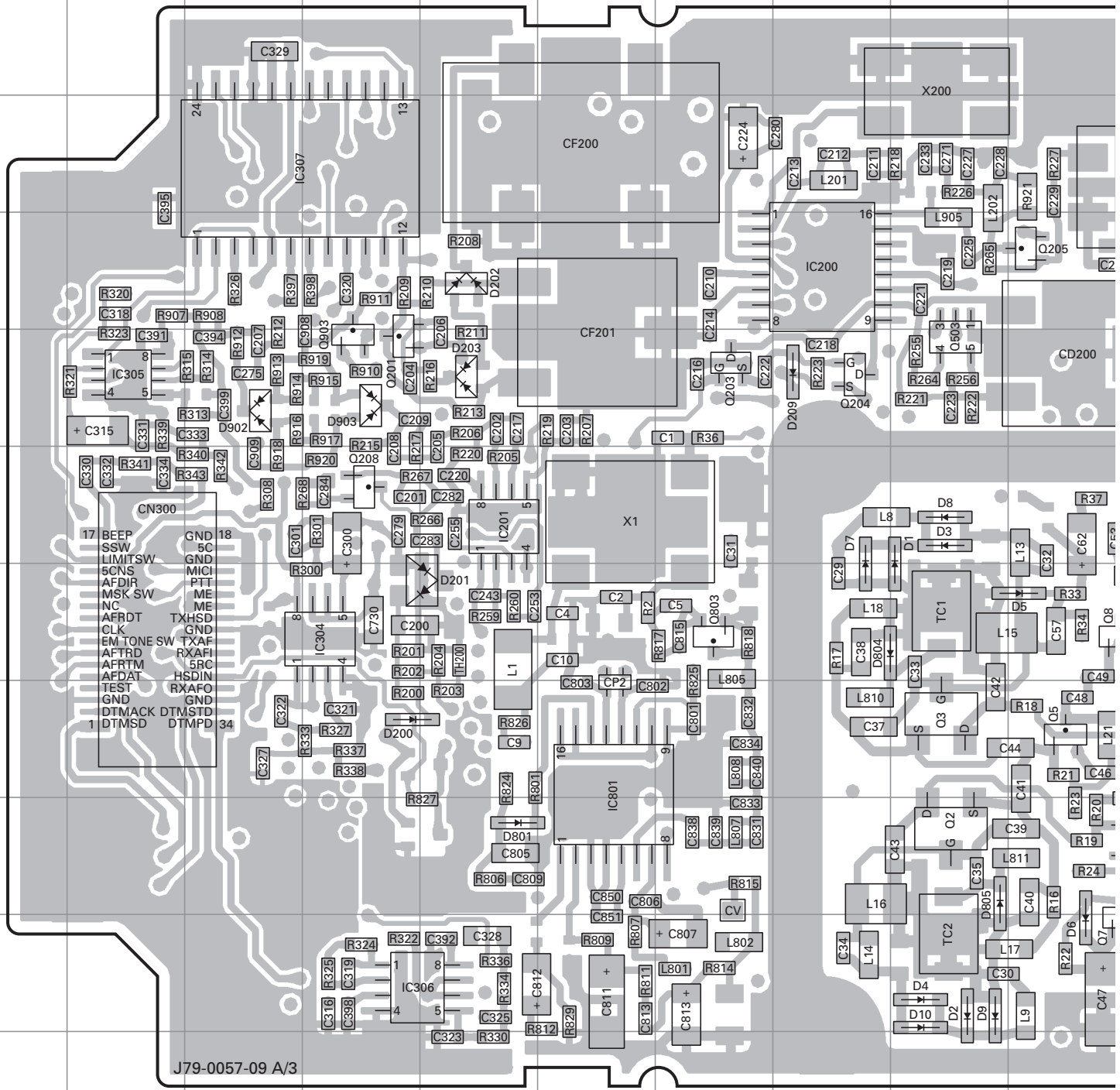
Foil side





# TK-2140 PC BOARD

TX-RX UNIT (X57-6402-71) (A/3) Foil side view (J79-0057-09 A/3)

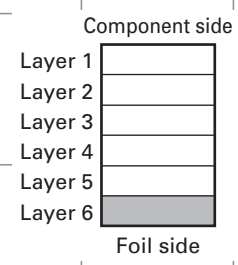
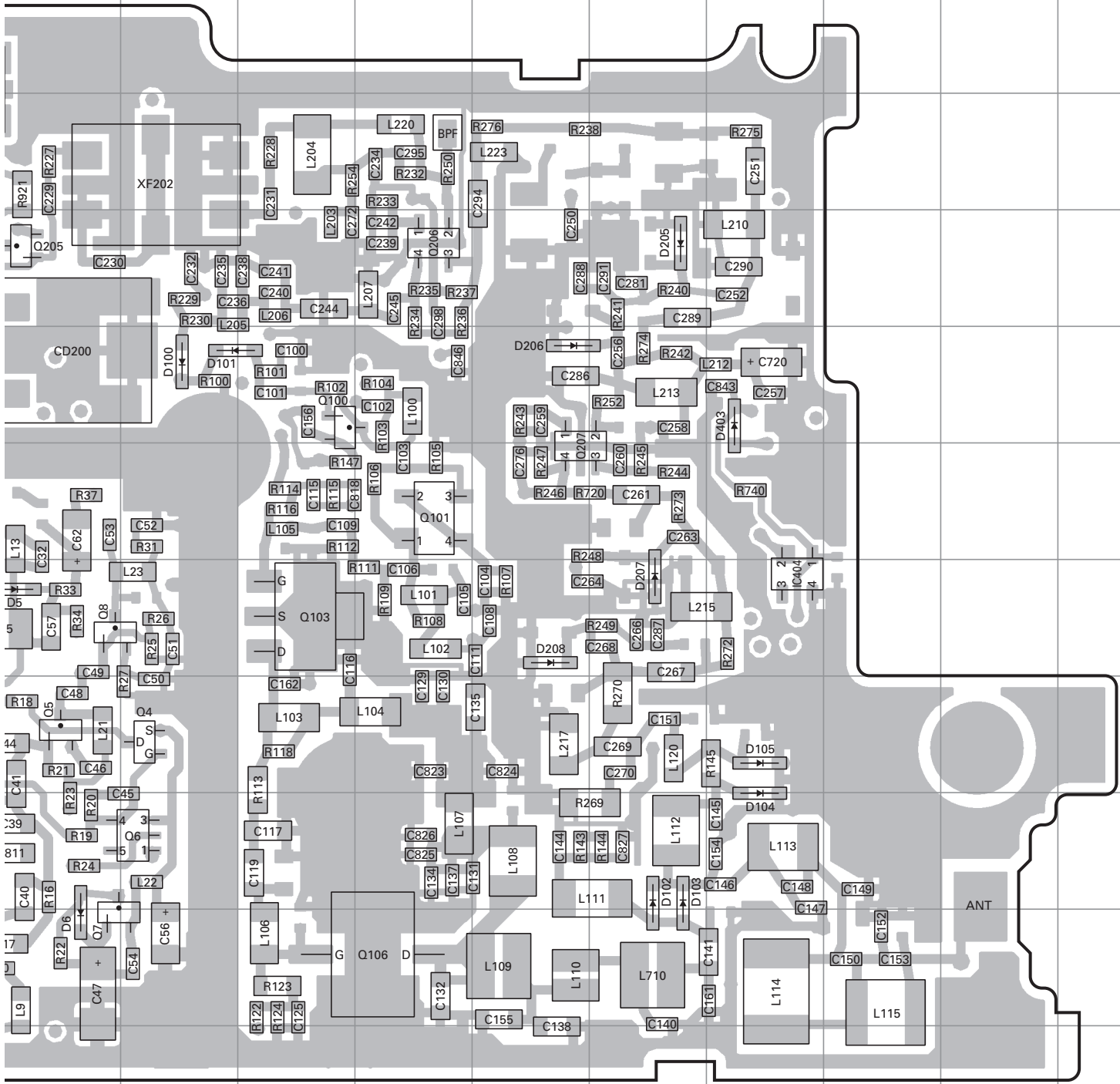


J79-0057-09 A/3

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC200	4H	Q3	8I	Q106	10M	Q803	7G	D8	6I	D200	8D	D403	5P
IC201	6E	Q4	8K	Q201	5D	Q903	5D	D9	10I	D201	7E	D801	9E
IC304	7D	Q5	8J	Q203	5G	D1	6I	D10	10I	D202	4E	D804	7H
IC305	5B	Q6	9K	Q204	5H	D2	10I	D100	5K	D203	5E	D805	9I
IC306	10D	Q7	10J	Q205	4J	D3	6I	D101	5K	D205	4O	D902	5C
IC307	3C	Q8	7J	Q206	4M	D4	10I	D102	9O	D206	5N	D903	5D
IC404	7P	Q100	5L	Q207	6N	D5	7J	D103	9O	D207	7O		
IC801	8F	Q101	6M	Q208	6D	D6	10J	D104	9P	D208	7N		
Q2	9I	Q103	7L	Q503	5I	D7	6H	D105	8P	D209	5H		

# PC BOARD TK-2140

TX-RX UNIT (X57-6402-71) (A/3) Foil side view (J79-0057-09 A/3)

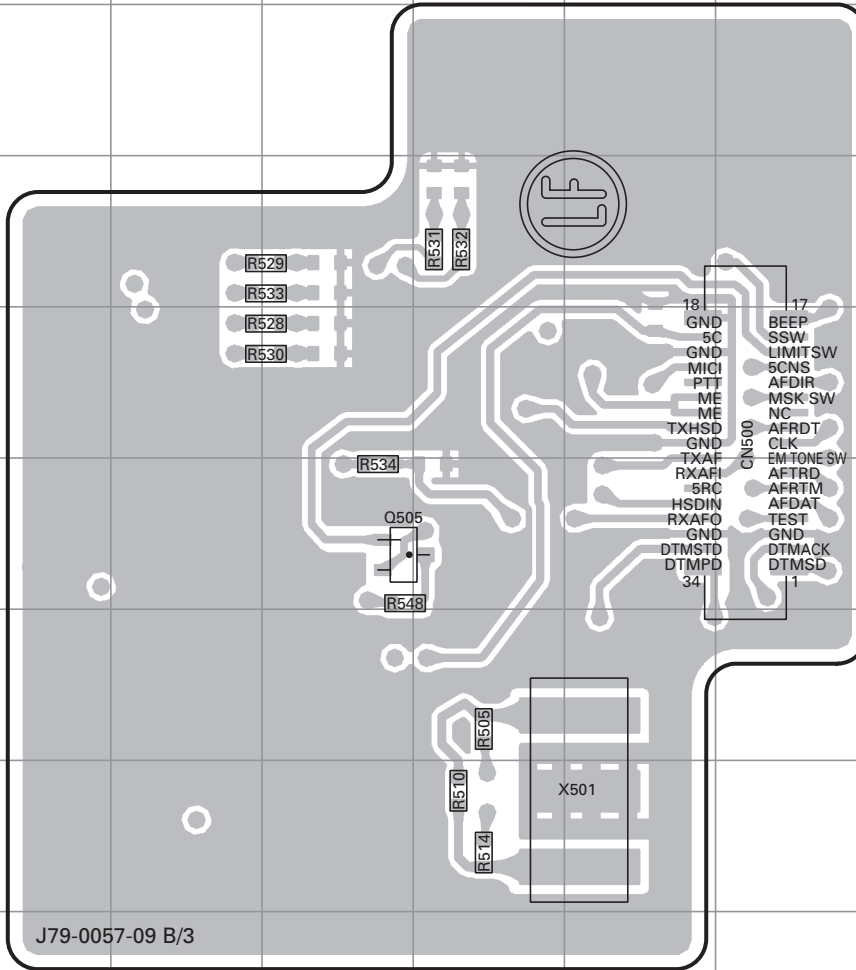






# TK-2140 PC BOARD

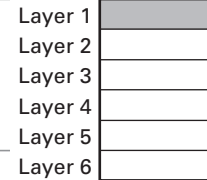
**TX-RX UNIT (X57-6402-71) (B/3) Component side view (J79-0057-09 B/3)**



Ref. No.	Address
Q505	6D

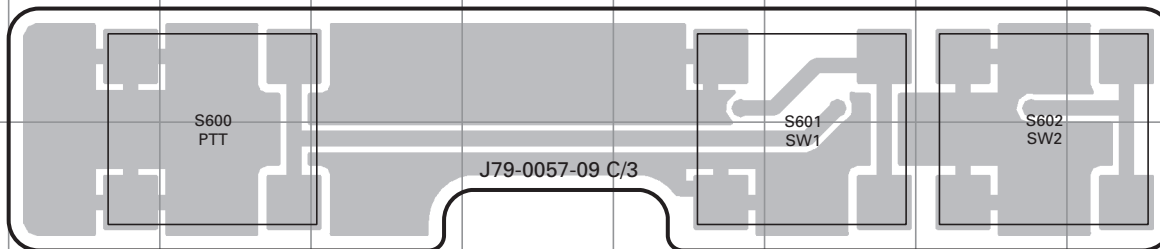
- 18 GND
- 5C
- GND
- MIC1
- PTT
- ME
- ME
- TXHSD
- GND
- TXAF
- RXAFL
- 5RC
- HSDIN
- RXAFO
- GND
- DTMSTD
- DTMPD
- 34
- 17 BEEP
- SSW
- LIMITSW
- 5CNS
- AFDIR
- MSK SW
- NC
- AFRDT
- CLK
- EM TONE SW
- AFRTM
- AFDAT
- TEST
- GND
- DTMACK
- DTMSD
- 1

Component side



Foil side

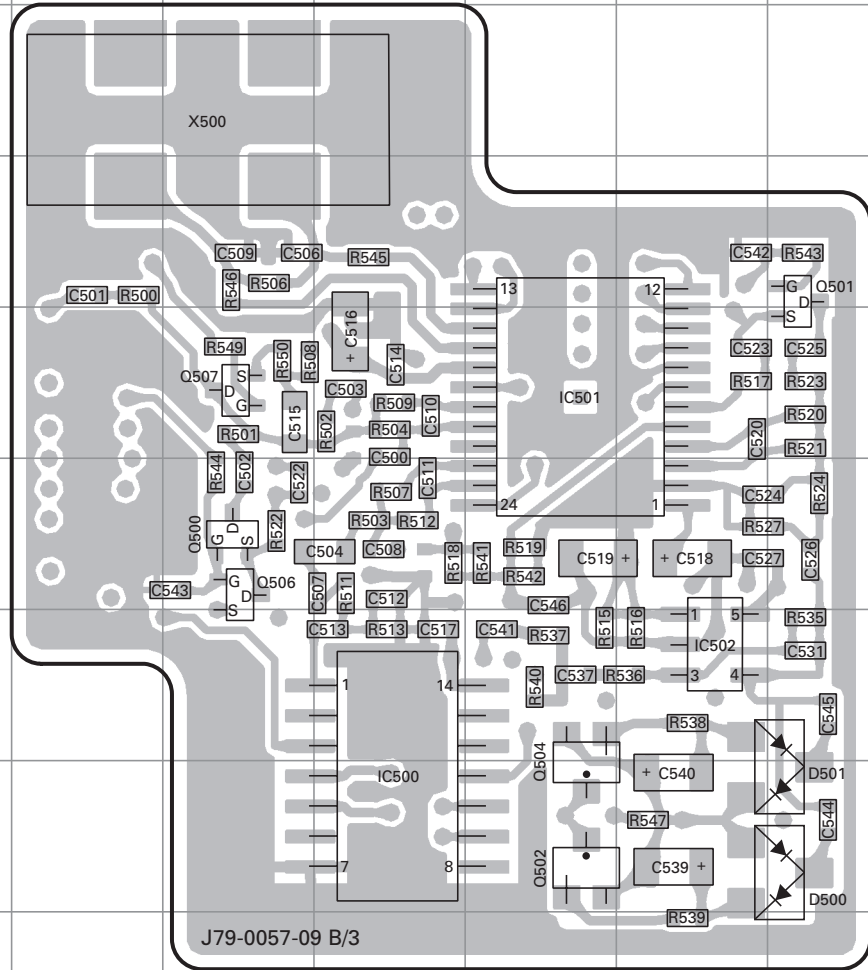
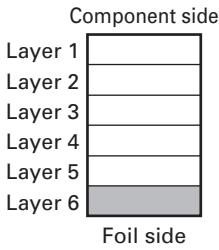
**TX-RX UNIT (X57-6402-71) (C/3) Component side view (J79-0057-09 C/3)**



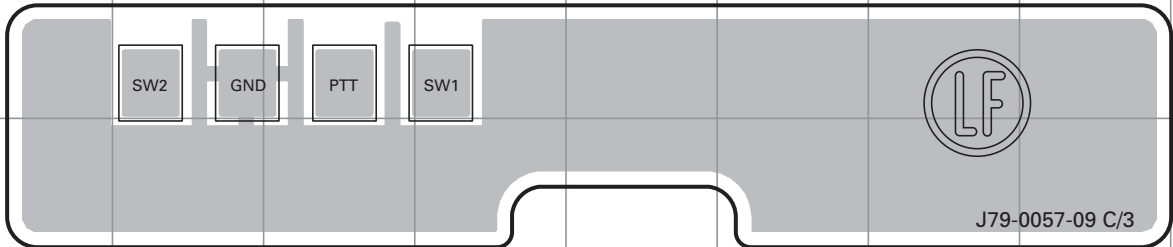
# PC BOARD TK-2140

**TX-RX UNIT (X57-6402-71) (B/3) Foil side view (J79-0057-09 B/3)**

Ref. No.	Address
IC500	8F
IC501	5G
IC502	7H
Q500	6E
Q501	4I
Q502	8G
Q504	8G
Q506	6E
Q507	5E
D500	8I
D501	8I

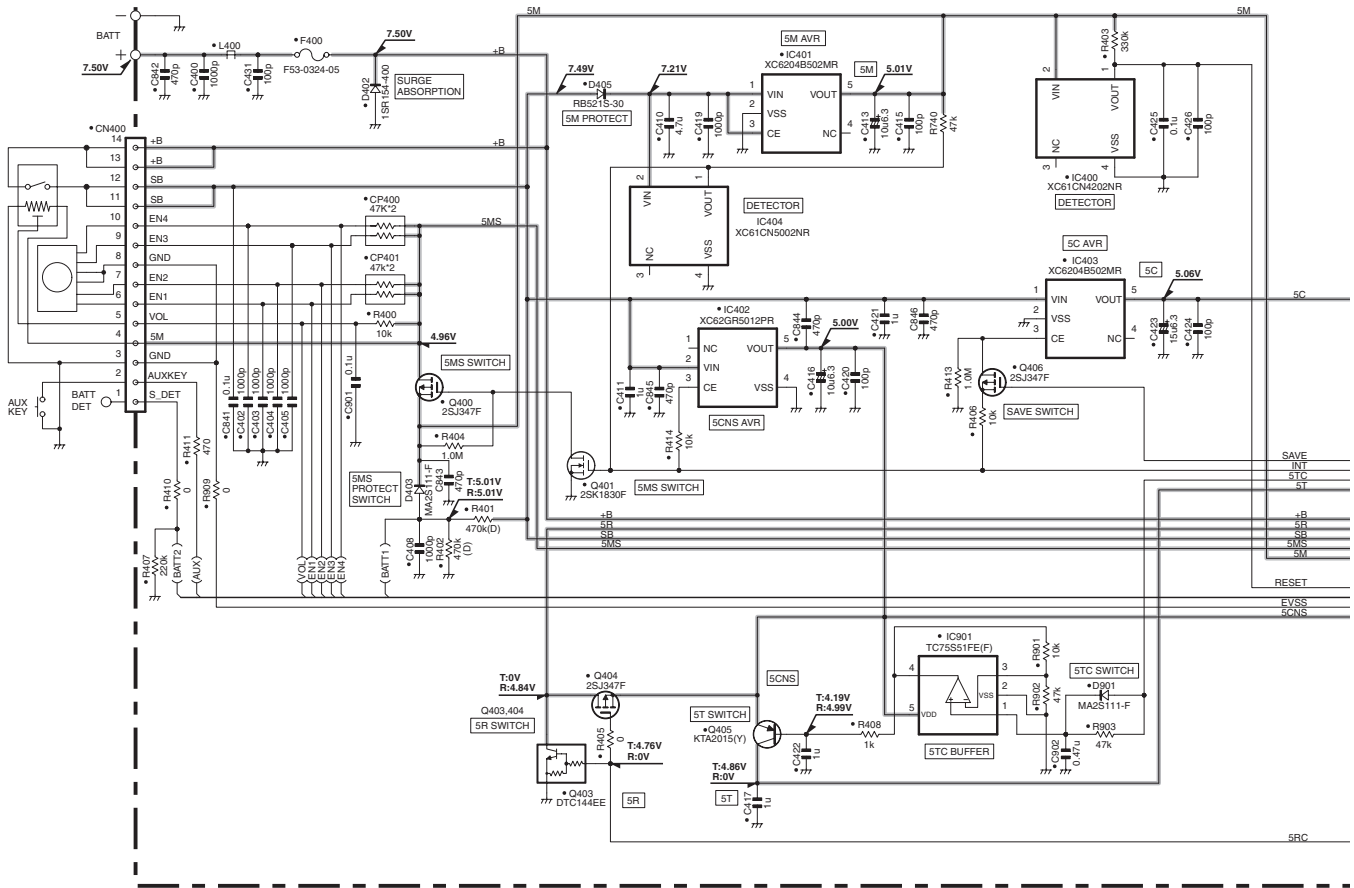


**TX-RX UNIT (X57-6402-71) (C/3) Foil side view (J79-0057-09 C/3)**

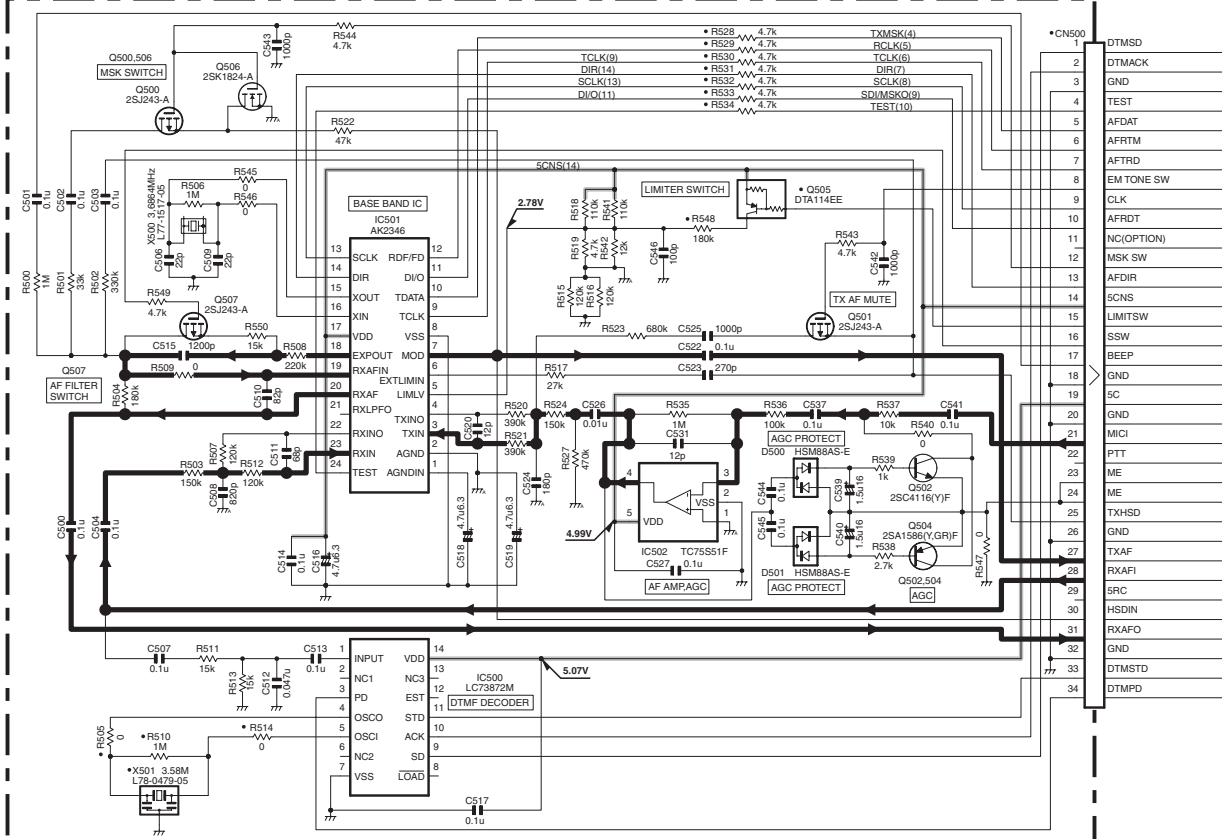


# TK-2140 SCHEMATIC DIAGRAM

TX-RX UNIT(X57-6402-71)(A/3)



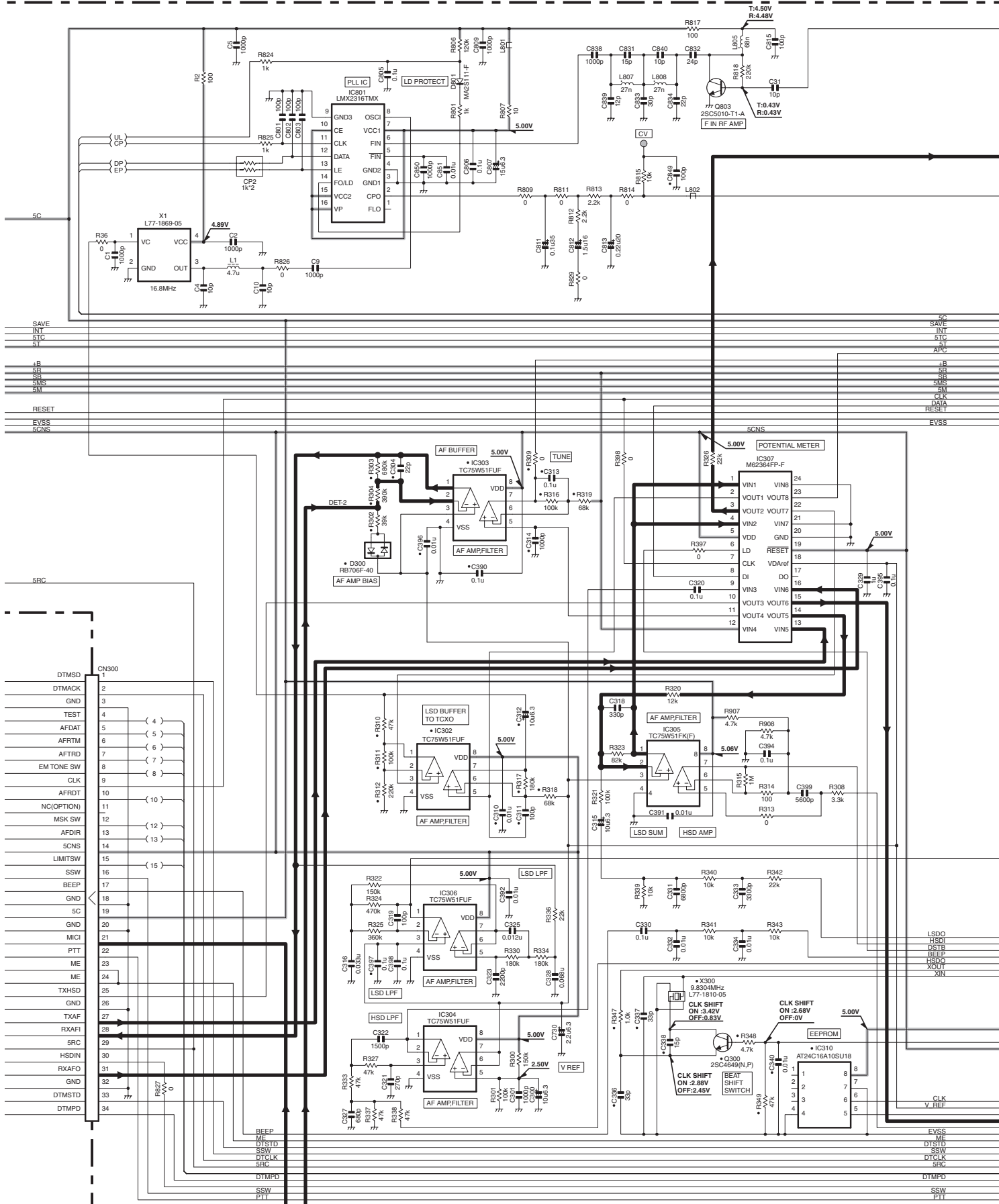
TX-RX UNIT(X57-6402-71)(B/3)



1	DTMSD
2	DTMACK
3	GND
4	TEST
5	AFDAT
6	AFRTM
7	AFTRD
8	EM TONE SW
9	CLK
10	AFRDT
11	NQ(OPTION)
12	MSK SW
13	AFDIR
14	SCNS
15	LIMITSW
16	SSW
17	BEEP
18	GND
19	5C
20	GND
21	MICI
22	PTT
23	ME
24	ME
25	TXHSD
26	GND
27	TXAF
28	RXAFI
29	5RC
30	HSDIN
31	RXAF0
32	GND
33	DTMSTD
34	DTMPD

# SCHEMATIC DIAGRAM TK-2140

TX-RX UNIT (X57-6402-71)



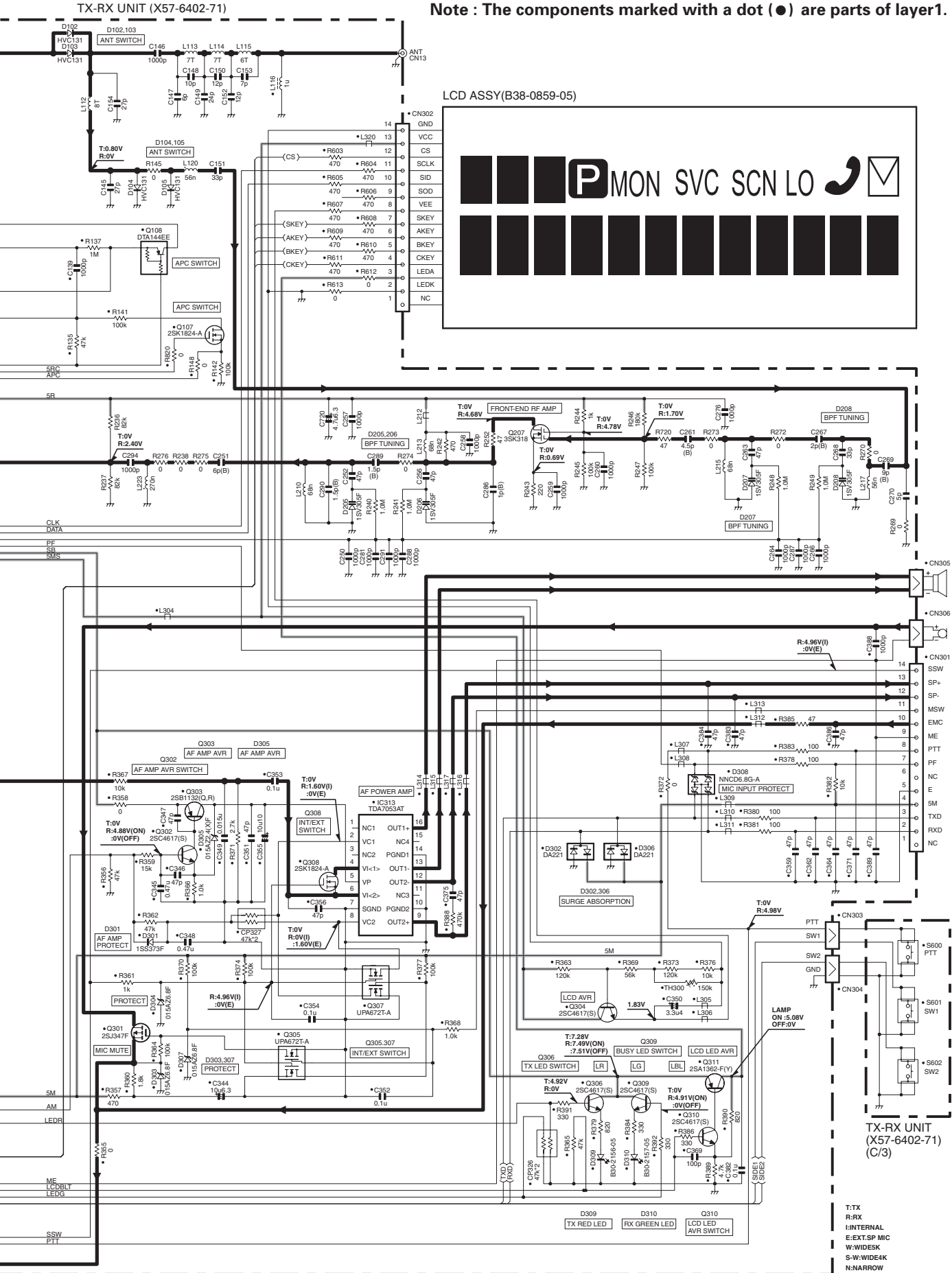






# TK-2140 SCHEMATIC DIAGRAM

Note : The components marked with a dot (●) are parts of layer1.



1  
2  
3  
4  
5  
6  
7

T:TX  
R:RX  
INTERNAL  
E:EXT.SP MIC  
W:WIDE SK  
S-W:WIDE 4K  
N:NARROW





# TK-2140

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