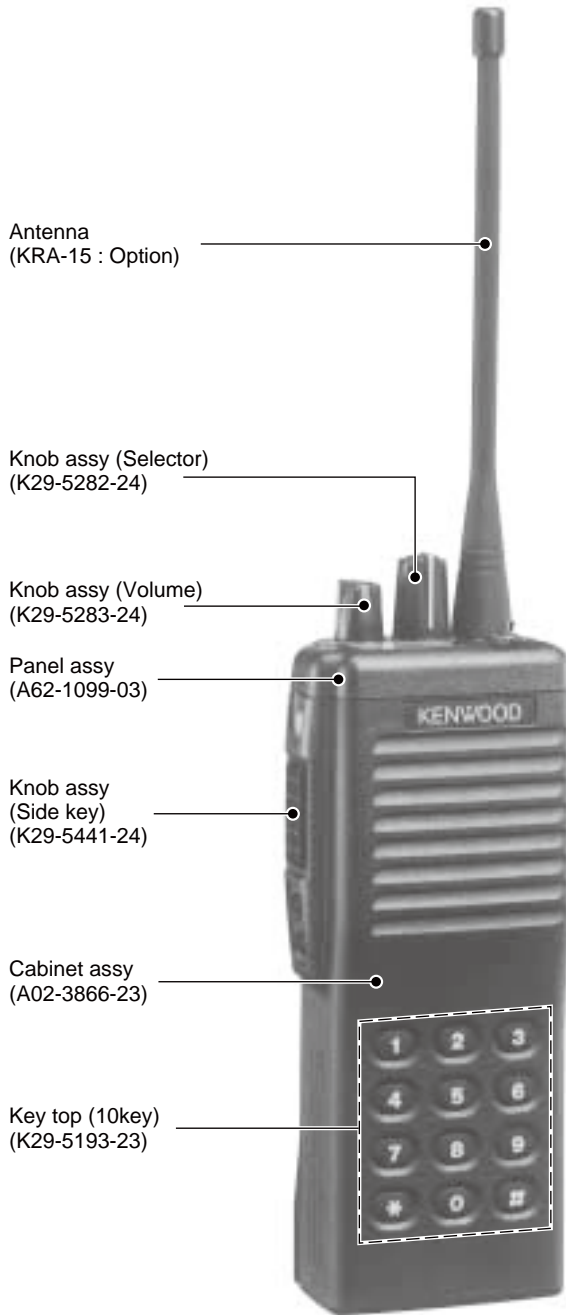


This service manual applied product with B1400001(TK-390(K,K4)) or subsequent serial numbers.



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**Photo is TK-390 K4 type.
Does not come with antenna.
Antenna is available as an option.**

TK-390

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DISASSEMBLY FOR REPAIR

Compatibility information

The PLL IC (IC5:SA7025DK) has been discontinued by the supplier, so New PLL IC(IC5:LMX2352TMX/NP) has been applied on to X57-5400-10 production.

TK-390 K,K4 (TX-RX Unit : X57-5400-10)				
Ref.	Part Name	OLD Part TK-390(K) : S/No. B1300268 and before TK-390(K4) : S/No. A9B00210 and before	NEW Part TK-390(K,K4) : S/No. B1400001 ~	Compatibility
IC5	PLL IC	SA7025DK	LMX2352TMX/NP	No
—	PC board (X57-5400-10)	J72-0542-xx	J79-0068-x9	No

PARTS LIST

*New Parts. Δ indicates safety critical components.

Parts without **Parts No.** are not supplied.

Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

L : Scandinavia

Y : PX (Far East, Hawaii)

C : China

K : USA

T : England

X : Australia

P : Canada

E : Europe

M : Other Areas

FINAL UNIT (X45-3590-11)

TX-RX UNIT (X57-5400-10)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
FINAL UNIT (X45-3590-11)						TX-RX UNIT (X57-5400-10)					
C801			CC73GCH1H010B	CHIP C 1.0PF B		C66,67			CK73GB1H471K	CHIP C 470PF K	
C802			CC73GCH1H020B	CHIP C 2.0PF B		C69			CC73GCH1H050C	CHIP C 5.0PF C	
C803			CC73GCH1H101J	CHIP C 100PF J		C70			CC73GCH1H101J	CHIP C 100PF J	
C804			CK73GB1C104K	CHIP C 0.10UF K		C71			CK73FB1C474K	CHIP C 0.47UF K	
C805			CC73GCH1H101J	CHIP C 100PF J		C73		*	CS77BA1A3R3M	CHIP TNTL 3.3UF 10WV	
C806			CK73GB1C104K	CHIP C 0.10UF K		C75			CC73GCH1H010B	CHIP C 1.0PF B	
L801			L34-4604-15	AIR-CORE COIL		C76			CC73GCH1H101J	CHIP C 100PF J	
TX-RX UNIT (X57-5400-10)						C78			CK73GB1H103K	CHIP C 0.010UF K	
C1			CK73FB0J106K	CHIP C 10UF K		C79			CK73FB1C474K	CHIP C 0.47UF K	
C2			CK73HB1A104K	CHIP C 0.10UF K		C80			CC73GCH1H020B	CHIP C 2.0PF B	
C5			CK73GB1H102K	CHIP C 1000PF K		C81			CK73GB1H102K	CHIP C 1000PF K	
C6			CS77BA0J100M	CHIP TNTL 10UF 6.3WV		C82			CC73GCH1H101J	CHIP C 100PF J	
C8			CK73GB1C273K	CHIP C 0.027UF K		C83			CC73GCH1H010B	CHIP C 1.0PF B	
C9			CK73GB1H102K	CHIP C 1000PF K		C84			CK73GB1H102K	CHIP C 1000PF K	
C10			CK73GB1H471K	CHIP C 470PF K		C85			CC73GCH1H060B	CHIP C 6.0PF B	
C11			C92-0588-05	CHIP TNTL 1.5UF 16WV		C87			CC73GCH1H101J	CHIP C 100PF J	
C13			CK73HB1H471K	CHIP C 470PF K		C88			CC73GCH1H070B	CHIP C 7.0PF B	
C14,15			C92-0588-05	CHIP TNTL 1.5UF 16WV		C89			CC73GCH1H020B	CHIP C 2.0PF B	
C16			CK73HB1A104K	CHIP C 0.10UF K		C90			CC73GCH1H100D	CHIP C 10PF D	
C17			CK73HB1H471K	CHIP C 470PF K		C91			CC73GCH1H1R5B	CHIP C 1.5PF B	
C18			C92-0588-05	CHIP TNTL 1.5UF 16WV		C92			CC73GCH1H050B	CHIP C 5.0PF B	
C19			CK73GB1C473K	CHIP C 0.047UF K		C93			CC73GCH1H151J	CHIP C 150PF J	
C20			CK73GB1C104K	CHIP C 0.10UF K		C94			CC73GCH1H0R5B	CHIP C 0.5PF B	
C22			CK73GB1H103K	CHIP C 0.010UF K		C95			CK73GB1H103K	CHIP C 0.010UF K	
C23			CC73GCH1H101J	CHIP C 100PF J		C96			CC73GCH1H151J	CHIP C 150PF J	
C24			CS77CA1VR22M	CHIP TNTL 0.22UF 35WV		C97			CK73GB1H102K	CHIP C 1000PF K	
C26			CK73GB1H471K	CHIP C 470PF K		C99			CK73GB1H102K	CHIP C 1000PF K	
C27			CK73GB1C104K	CHIP C 0.10UF K		C100			CS77BA0J100M	CHIP TNTL 10UF 6.3WV	
C28			CK73GB1E223K	CHIP C 0.022UF K		C101			CK73FB1C105K	CHIP C 1.0UF K	
C30			CC73GCH1H060D	CHIP C 6.0PF D		C102			CK73HB1H471K	CHIP C 470PF K	
C31			CK73GB1H471K	CHIP C 470PF K		C105			CK73HB1H471K	CHIP C 470PF K	
C32			CS77CA1VR22M	CHIP TNTL 0.22UF 35WV		C106			CK73HB1A104K	CHIP C 0.10UF K	
C33			CC73GCH1H060D	CHIP C 6.0PF D		C109			CK73HB1C103K	CHIP C 0.010UF K	
C34			CC73GCH1H331J	CHIP C 330PF J		C110,111			CK73HB1H471K	CHIP C 470PF K	
C36			CC73GCH1H040C	CHIP C 4.0PF C		C112			CK73HB1A104K	CHIP C 0.10UF K	
C37			CK73GB1H471K	CHIP C 470PF K		C113-115			CC73HCH1H101J	CHIP C 100PF J	
C38			CC73GCH1H010C	CHIP C 1.0PF C		C117-119			CK73HB1H471K	CHIP C 470PF K	
C39			CK73GB1H102K	CHIP C 1000PF K		C120			CK73HB1C103K	CHIP C 0.010UF K	
C40			CS77BA0J100M	CHIP TNTL 10UF 6.3WV		C200			CC73GCH1H2R5B	CHIP C 2.5PF B	
C41			CK73GB1H471K	CHIP C 470PF K		C202			CC73GCH1H030C	CHIP C 3.0PF C	
C42			CC73GCH1H060D	CHIP C 6.0PF D		C203			CK73GB1H471K	CHIP C 470PF K	
C43			CS77BA0J4R7M	CHIP TNTL 4.7UF 6.3WV		C206			CC73GCH1H040C	CHIP C 4.0PF C	
C45			CC73GCH1H060D	CHIP C 6.0PF D		C207			CK73GB1H471K	CHIP C 470PF K	
C46			CK73GB1H102K	CHIP C 1000PF K		C209,210			CC73GCH1H050C	CHIP C 5.0PF C	
C47			CK73GB1H471K	CHIP C 470PF K		C211			CK73GB1H102K	CHIP C 1000PF K	
C48			CK73GB1H102K	CHIP C 1000PF K		C212,213			CK73GB1H471K	CHIP C 470PF K	
C49			CK73GB1H471K	CHIP C 470PF K		C215			CC73GCH1H050C	CHIP C 5.0PF C	
C50			CK73HB1H471K	CHIP C 470PF K		C216			CC73GCH1H080D	CHIP C 8.0PF D	
C52			CK73HB1H102K	CHIP C 1000PF K		C218			CC73GCH1H040C	CHIP C 4.0PF C	
C53-57			CK73GB1H471K	CHIP C 470PF K		C219			CK73GB1H471K	CHIP C 470PF K	
C58			CC73GCH1H101J	CHIP C 100PF J		C222			CC73GCH1H050C	CHIP C 5.0PF C	
C59			CC73GCH1H100D	CHIP C 10PF D		C223			CK73GB1H471K	CHIP C 470PF K	
C60-64			CK73GB1H471K	CHIP C 470PF K		C225,226			CC73GCH1H050C	CHIP C 5.0PF C	
						C227,228			CK73GB1H471K	CHIP C 470PF K	
						C229			CC73GCH1H050C	CHIP C 5.0PF C	

PARTS LIST

TX-RX UNIT (X57-5400-10)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
C230			CC73GCH1H030C	CHIP C 3.0PF C		C432			CK73FB1C105K	CHIP C 1.0UF K	
C231			CC73GCH1H120J	CHIP C 12PF J		C433		*	C92-0919-05	ELECTRO C 47UF 16WV	
C233			CC73GCH1H101J	CHIP C 100PF J		C434,435			CK73GB1H471K	CHIP C 470PF K	
C234			CC73GCH1H151J	CHIP C 150PF J		C436			CK73FB1C105K	CHIP C 1.0UF K	
C236			CC73GCH1H151J	CHIP C 150PF J		C437			CK73GB1H472K	CHIP C 4700PF K	
C237-239			CK73GB1H471K	CHIP C 470PF K		C438			CK73GB1H103K	CHIP C 0.010UF K	
C240			CC73GCH1H100D	CHIP C 10PF D		C439			CK73GB1E103K	CHIP C 0.010UF K	
C241,242			CK73GB1C104K	CHIP C 0.10UF K		C440			CK73GB1C273K	CHIP C 0.027UF K	
C244,245			CK73GB1H102K	CHIP C 1000PF K		C441,442			CK73GB1H102K	CHIP C 1000PF K	
C247,248			CK73GB1H471K	CHIP C 470PF K		C443			CK73GB1H222K	CHIP C 2200PF K	
C250			CC73GCH1H040C	CHIP C 4.0PF C		C444			CC73GCH1H070D	CHIP C 7.0PF D	
C251			CC73GCH1H030C	CHIP C 3.0PF C		C445,446			CK73GB1H222K	CHIP C 2200PF K	
C253			CK73GB1H102K	CHIP C 1000PF K		C447,448			CC73GCH1H180J	CHIP C 18PF J	
C255			CK73GB1H471K	CHIP C 470PF K		C449			CK73GB1H103K	CHIP C 0.010UF K	
C256,257			CK73GB1H102K	CHIP C 1000PF K		C450			CS77CP0J100M	CHIP TNTL 10UF 6.3WV	
C300			CK73GB1H472K	CHIP C 4700PF K		C451			CS77BA1A6R8M	CHIP TNTL 6.8UF 10WV	
C301,302			CC73GCH1H221J	CHIP C 220PF J		C454			CC73GCH1H101J	CHIP C 100PF J	
C303			CK73GB1C104K	CHIP C 0.10UF K		C456-474			CC73GCH1H101J	CHIP C 100PF J	
C304			CK73GB1H102K	CHIP C 1000PF K		C475-477			CC73HCH1H101J	CHIP C 100PF J	
C305			CK73GB1H103K	CHIP C 0.010UF K		C478			CK73GB1C104K	CHIP C 0.10UF K	
C306-308			CK73GB1H102K	CHIP C 1000PF K		C479			CC73GCH1H271J	CHIP C 270PF J	
C309			CS77BP1A010M	CHIP TNTL 1U 10WV		C480			CC73GCH1H221J	CHIP C 220PF J	
C310,311			CK73GB1C104K	CHIP C 0.10UF K		C481			CK73FB1C105K	CHIP C 1.0UF K	
C312			CK73GB1C333K	CHIP C 0.033UF K		C482			CK73GB1C104K	CHIP C 0.10UF K	
C313,314			CC73GCH1H220J	CHIP C 22PF J		C483			CK73GB1H102K	CHIP C 1000PF K	
C315			CK73GB1H102K	CHIP C 1000PF K		C484			CS77BA0J100M	CHIP TNTL 10UF 6.3WV	
C316			CC73GCH1H820J	CHIP C 82PF J		C485			CK73GB1H102K	CHIP C 1000PF K	
C317			CK73GB1H102K	CHIP C 1000PF K		C487			CK73GB1C104K	CHIP C 0.10UF K	
C318			CK73GB1C104K	CHIP C 0.10UF K		C488			CK73GB1H102K	CHIP C 1000PF K	
C319			CK73GB1H103K	CHIP C 0.010UF K		C489			CK73HB1H471K	CHIP C 470PF K	
C320			CS77BA0J100M	CHIP TNTL 10UF 6.3WV		C490			CK73GB1H102K	CHIP C 1000PF K	
C321			CK73GB1C104K	CHIP C 0.10UF K		C600			CK73GB1C473K	CHIP C 0.047UF K	
C323			CS77BA0J100M	CHIP TNTL 10UF 6.3WV		C601			CS77CA1ER47M	CHIP TNTL 0.47UF 25WV	
C327			CK73GB1H103K	CHIP C 0.010UF K		C602			CK73GB1C104K	CHIP C 0.10UF K	
C330-332			CK73GB1H103K	CHIP C 0.010UF K		C603			CK73GB1C683K	CHIP C 0.068UF K	
C333			CK73HB1H102K	CHIP C 1000PF K		C604			CK73GB1H103K	CHIP C 0.010UF K	
C334			CK73HB1A104K	CHIP C 0.10UF K		C606			CK73GB1H222K	CHIP C 2200PF K	
C335			CK73HB1H102K	CHIP C 1000PF K		C607			CC73GCH1H101J	CHIP C 100PF J	
C336			CK73GB1A224K	CHIP C 0.22UF K		C608			CK73GB1H103K	CHIP C 0.010UF K	
C337			CK73FB1C334K	CHIP C 0.33UF K		C609			CC73GCH1H121J	CHIP C 120PF J	
C338-341			CK73HB1A104K	CHIP C 0.10UF K		C610			CK73GB1H103K	CHIP C 0.010UF K	
C400,401			CC73GCH1H101J	CHIP C 100PF J		C611			CK73GB1E123K	CHIP C 0.012UF K	
C403-408			CC73GCH1H101J	CHIP C 100PF J		C612			CS77CP0J4R7M	CHIP TNTL 4.7UF 6.3WV	
C410			CC73GCH1H101J	CHIP C 100PF J		C613			CK73GB1H103K	CHIP C 0.010UF K	
C413			CK73GB1H471K	CHIP C 470PF K		C619			CC73GCH1H471J	CHIP C 470PF J	
C414			CK73GB1H103K	CHIP C 0.010UF K		C621			CK73GB1C104K	CHIP C 0.10UF K	
C415			CK73FB1C105K	CHIP C 1.0UF K		C623			CK73GB1E103K	CHIP C 0.010UF K	
C416,417			CK73GB1H471K	CHIP C 470PF K		C625,626			CK73GB1C104K	CHIP C 0.10UF K	
C419			CS77AB20J470M	CHIP TNTL 47UF 6.3WV		C627			CK73GB1H122J	CHIP C 1200PF J	
C420		*	C92-0917-05	ELECTRO C 47UF 6.3WV		C629,630			CK73GB1H103K	CHIP C 0.010UF K	
C421			CK73GB1H471K	CHIP C 470PF K		C631,632			CK73GB1C104K	CHIP C 0.10UF K	
C422			CK73FB1C105K	CHIP C 1.0UF K		C633			CK73GB1H103K	CHIP C 0.010UF K	
C423,424			CK73GB1H471K	CHIP C 470PF K		C634,635			CK73GB1H562J	CHIP C 5600PF J	
C425			CK73GB1H103K	CHIP C 0.010UF K		C636			CK73GB1C333K	CHIP C 0.033UF K	
C426			CK73GB1H471K	CHIP C 470PF K		C637			CK73GB1H562J	CHIP C 5600PF J	
C427			CK73GB1H103K	CHIP C 0.010UF K		C638			CK73GB1H272J	CHIP C 2700PF J	
C428			CS77BA1C010M	CHIP TNTL 1.0UF 16WV		C639			CC73GCH1H090D	CHIP C 9.0PF D	
C429			CK73GB1H102K	CHIP C 1000PF K		C640,641			CK73GB1H272J	CHIP C 2700PF J	
C430			CK73FB1C105K	CHIP C 1.0UF K		C642			CC73HCH1H151J	CHIP C 150PF J	
C431			CK73GB1H471K	CHIP C 470PF K		C643			CK73GB1H122K	CHIP C 1200PF K	

PARTS LIST

TX-RX UNIT (X57-5400-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
C644			CK73HB1H102K	CHIP C 1000PF K		L208		*	L40-2775-72	SMALL FIXED INDUCTOR(27NH)	
C645			CC73GCH1H090D	CHIP C 9.0PF D		L209		*	L40-2275-72	SMALL FIXED INDUCTOR(22NH)	
C646			CS77CP0J100M	CHIP TNTL 10UF 6.3WV		L210		*	L79-1885-05	HELICAL BLOCK(450MHZ)	
C647			CK73HB1A104K	CHIP C 0.10UF K		L212		*	L40-8275-72	SMALL FIXED INDUCTOR(82NH)	
C648			CC73HCH1H101J	CHIP C 100PF J		L214		*	L40-8275-72	SMALL FIXED INDUCTOR(82NH)	
C649-651			CK73HB1A104K	CHIP C 0.10UF K		L215,216			L39-1498-05	TOROIDAL COIL	
C652			CS77CP0J4R7M	CHIP TNTL 4.7UF 6.3WV		L217			L92-0140-05	CHIP FERRITE	
C653,654			CK73HB1E472K	CHIP C 4700PF K		L218			L39-1498-05	TOROIDAL COIL	
C655			CC73HCH1H101J	CHIP C 100PF J		L220		*	L40-1575-72	SMALL FIXED INDUCTOR(15NH)	
C656			CK73FB1H563K	CHIP C 0.056UF K		L221,222			L92-0176-05	CHIP FERRITE	
C657			CS77CP0J4R7M	CHIP TNTL 4.7UF 6.3WV		L223,224			L40-8281-37	SMALL FIXED INDUCTOR(0.82UH)	
C659			CK73GB1C104K	CHIP C 0.10UF K		L300			L41-1095-33	SMALL FIXED INDUCTOR(1.0UH)	
C660			CS77BA0J100M	CHIP TNTL 10UF 6.3WV		L301			L40-3391-37	SMALL FIXED INDUCTOR(3.3UH)	
C661			CK73GB1C104K	CHIP C 0.10UF K		L400			L92-0136-05	CHIP FERRITE	
C663			CC73HCH1H101J	CHIP C 100PF J		L401			L92-0138-05	CHIP FERRITE	
C664			CK73HB1A104K	CHIP C 0.10UF K		L404			L40-1001-37	SMALL FIXED INDUCTOR(10UH)	
C665			CK73GB1C333K	CHIP C 0.033UF K		L405			L92-0138-05	CHIP FERRITE	
C666			CK73GB1E153K	CHIP C 0.015UF K		L800		*	L78-0488-15	VCO	
C668			CK73GB1H102K	CHIP C 1000PF K		L905			L92-0138-05	CHIP FERRITE	
C669			CC73GCH1H101J	CHIP C 100PF J		X1			L77-3028-05	TCXO(16.8MHZ)	
C676,677			CK73GB1H471K	CHIP C 470PF K		X300		*	L77-1741-05	CRYSTAL RESONATOR(44.395MHZ)	
C681			CK73GB1E103K	CHIP C 0.010UF K		X400		*	L77-1863-05	CRYSTAL RESONATOR(12.0MHZ)	
CN400			E40-5563-05	FLAT CABLE CONNECTOR		X600			L77-1708-15	CRYSTAL RESONATOR(3.579545MHZ)	
CN401			E40-6674-05	FLAT CABLE CONNECTOR		XF301			L71-0588-05	MCF(44.85MHZ)	
CN403			E40-5856-05	FLAT CABLE CONNECTOR		CP1-7			R90-0741-05	MULTIPLE RESISTOR	
CN404,405			E23-1293-05	TEST TERMINAL		CP11-13			R90-0741-05	MULTIPLE RESISTOR	
F400			F53-0325-15	FUSE(3A)		CP14			R90-0740-05	MULTIPLE RESISTOR	
CD300			L79-1834-05	TUNING COIL(455KHZ)		CP15,16			R90-0741-05	MULTIPLE RESISTOR	
CF300,301			L72-0916-05	CERAMIC FILTER(455KHZ/WID)		CP18-22			R90-0741-05	MULTIPLE RESISTOR	
CF302,303			L72-0939-05	CERAMIC FILTER(455KHZ/NAR)		R4			RK73GB2A000J	CHIP R 0.0 J 1/10W	
L1			L92-0138-05	CHIP FERRITE		R5			RK73GB2A104J	CHIP R 100K J 1/10W	
L5			L40-3981-37	SMALL FIXED INDUCTOR(0.39UH)		R6			RK73GB2A473J	CHIP R 47K J 1/10W	
L7	*		L40-2275-72	SMALL FIXED INDUCTOR(22NH)		R7			RK73GB2A104J	CHIP R 100K J 1/10W	
L8			L40-1275-72	SMALL FIXED INDUCTOR(12NH)		R8			RK73GB2A682J	CHIP R 6.8K J 1/10W	
L9	*		L40-1575-72	SMALL FIXED INDUCTOR(15NH)		R9			RK73HB1J221J	CHIP R 220 J 1/16W	
L10,11			L92-0149-05	CHIP FERRITE		R10			RK73HB1J100J	CHIP R 10 J 1/16W	
L12			L34-4604-15	AIR-CORE COIL		R11			RK73HB1J220J	CHIP R 22 J 1/16W	
L13			L41-1095-33	SMALL FIXED INDUCTOR(1.0UH)		R12			RK73HB1J103J	CHIP R 10K J 1/16W	
L14			L34-4608-15	AIR-CORE COIL		R13			RK73GB2A104J	CHIP R 100K J 1/10W	
L15,16			L34-4605-15	AIR-CORE COIL		R14			RK73GB2A184J	CHIP R 180K J 1/10W	
L17			L41-1092-44	SMALL FIXED INDUCTOR(1UH)		R15			RK73GB2A682J	CHIP R 6.8K J 1/10W	
L18			L40-1091-86	SMALL FIXED INDUCTOR(1.0UH)		R16			RK73GB2A151J	CHIP R 150 J 1/10W	
L19	*		L40-2775-72	SMALL FIXED INDUCTOR(27NH)		R17			RK73GB2A394J	CHIP R 390K J 1/10W	
L20			L92-0140-05	CHIP FERRITE		R18			RK73GB2A102J	CHIP R 1.0K J 1/10W	
L150			L34-4604-15	AIR-CORE COIL		R19			RK73GB2A100J	CHIP R 10 J 1/10W	
L152	*		L40-1075-72	SMALL FIXED INDUCTOR(10NH)		R24			RK73GB2A102J	CHIP R 1.0K J 1/10W	
L153	*		L40-3975-72	SMALL FIXED INDUCTOR(39NH)		R25			RK73GB2A224J	CHIP R 220K J 1/10W	
L200			L41-4775-33	SMALL FIXED INDUCTOR(0.047UH)		R26			RK73HB1J221J	CHIP R 220 J 1/16W	
L201	*		L40-1875-72	SMALL FIXED INDUCTOR(18NH)		R27			RK73GB2A472J	CHIP R 4.7K J 1/10W	
L202	*		L40-2275-72	SMALL FIXED INDUCTOR(22NH)		R28			RK73GB2A223J	CHIP R 22K J 1/10W	
L203	*		L40-2775-72	SMALL FIXED INDUCTOR(27NH)		R29			RK73GB2A184J	CHIP R 180K J 1/10W	
L204	*		L40-2275-72	SMALL FIXED INDUCTOR(22NH)		R30			RK73HB1J220J	CHIP R 22 J 1/16W	
L205	*		L79-1885-05	HELICAL BLOCK(450MHZ)		R31			RK73GB2A101J	CHIP R 100 J 1/10W	
L206	*		L40-1875-72	SMALL FIXED INDUCTOR(18NH)		R32,33			RK73GB2A272J	CHIP R 2.7K J 1/10W	
L207	*		L40-2275-72	SMALL FIXED INDUCTOR(22NH)		R34			RK73HB1J272J	CHIP R 2.7K J 1/16W	
						R35			RK73EB2ER39K	CHIP R 0.39 K 1/4W	
						R37			RK73EB2ER39K	CHIP R 0.39 K 1/4W	
						R38			RK73GB2A682J	CHIP R 6.8K J 1/10W	
						R39			RK73EB2ER39K	CHIP R 0.39 K 1/4W	

PARTS LIST

TX-RX UNIT (X57-5400-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
R40			RK73GB2A123J	CHIP R 12K J 1/10W		R233			RK73GB2A220J	CHIP R 22 J 1/10W	
R41 ,42			RN73GH1J154D	CHIP R 150K D 1/16W		R300			RK73GB2A220J	CHIP R 22 J 1/10W	
R43			RK73GB2A470J	CHIP R 47 J 1/10W		R301			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R44 ,45			RN73GH1J154D	CHIP R 150K D 1/16W		R303			RK73GB2A274J	CHIP R 270K J 1/10W	
R46			RK73GB2A152J	CHIP R 1.5K J 1/10W		R304			RK73HB1J182J	CHIP R 1.8K J 1/16W	
R47 ,48			RN73GH1J154D	CHIP R 150K D 1/16W		R305			RK73GB2A183J	CHIP R 18K J 1/10W	
R49			RK73GB2A101J	CHIP R 100 J 1/10W		R307			RK73GB2A223J	CHIP R 22K J 1/10W	
R50			RK73GB2A471J	CHIP R 470 J 1/10W		R313			RK73GB2A331J	CHIP R 330 J 1/10W	
R51			RK73GB2A221J	CHIP R 220 J 1/10W		R315			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R52			RK73GB2A103J	CHIP R 10K J 1/10W		R317,318			RK73GB2A223J	CHIP R 22K J 1/10W	
R53			RK73GB2A270J	CHIP R 27 J 1/10W		R319			RK73GB2A123J	CHIP R 12K J 1/10W	
R54			RK73GB2A122J	CHIP R 1.2K J 1/10W		R320			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R55			RK73GB2A100J	CHIP R 10 J 1/10W		R321			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R56			RK73GB2A473J	CHIP R 47K J 1/10W		R323			RK73HB1J471J	CHIP R 470 J 1/16W	
R57			RK73GB2A104J	CHIP R 100K J 1/10W		R324,325			RK73GB2A223J	CHIP R 22K J 1/10W	
R58			RK73GB2A105J	CHIP R 1.0M J 1/10W		R328			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R59			RK73GB2A104J	CHIP R 100K J 1/10W		R329			RK73GB2A104J	CHIP R 100K J 1/10W	
R60			RK73GB2A222J	CHIP R 2.2K J 1/10W		R330			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R61			RK73GB2A000J	CHIP R 0.0 J 1/10W		R331			RK73GB2A104J	CHIP R 100K J 1/10W	
R62			RK73GB2A821J	CHIP R 820 J 1/10W		R332			RK73GB2A224J	CHIP R 220K J 1/10W	
R63			RK73GB2A5R6J	CHIP R 5.6 J 1/10W		R333			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R64			RK73GB2A821J	CHIP R 820 J 1/10W		R334			RK73GB2A100J	CHIP R 10 J 1/10W	
R65			RK73GB2A222J	CHIP R 2.2K J 1/10W		R335			RK73GB2A681J	CHIP R 680 J 1/10W	
R66			RK73HB1J101J	CHIP R 100 J 1/16W		R336			RK73HB1J224J	CHIP R 220K J 1/16W	
R67			RK73GB2A000J	CHIP R 0.0 J 1/10W		R337			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R68			RK73HB1J101J	CHIP R 100 J 1/16W		R339			RK73GB2A823J	CHIP R 82K J 1/10W	
R69 -71			RK73GB2A391J	CHIP R 390 J 1/10W		R340			RK73GB2A224J	CHIP R 220K J 1/10W	
R73			RK73GB2A223J	CHIP R 22K J 1/10W		R341			RK73GB2A153J	CHIP R 15K J 1/10W	
R75			RK73GB2A102J	CHIP R 1.0K J 1/10W		R343			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R76			RK73GB2A101J	CHIP R 100 J 1/10W		R400			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R77			RK73HB1J000J	CHIP R 0.0 J 1/16W		R401			RK73GB2A272J	CHIP R 2.7K J 1/10W	
R78			RK73HB1J101J	CHIP R 100 J 1/16W		R402			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R79			RK73GB2A104J	CHIP R 100K J 1/10W		R403			RK73GB2A473J	CHIP R 47K J 1/10W	
R80			RK73GB2A560J	CHIP R 56 J 1/10W		R404			RK73GB2A182J	CHIP R 1.8K J 1/10W	
R82 ,83			RK73GB2A000J	CHIP R 0.0 J 1/10W		R405			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R86			RK73HB1J000J	CHIP R 0.0 J 1/16W		R406			RK73GB2A100J	CHIP R 10 J 1/10W	
R89			RK73GB2A270J	CHIP R 27 J 1/10W		R407			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R90 -92			RK73GB2A000J	CHIP R 0.0 J 1/10W		R408			RK73GB2A104J	CHIP R 100K J 1/10W	
R94			RK73GB2A823J	CHIP R 82K J 1/10W		R409			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R201			RK73GB2A104J	CHIP R 100K J 1/10W		R410			RK73GB2A272J	CHIP R 2.7K J 1/10W	
R202			RK73GB2A000J	CHIP R 0.0 J 1/10W		R411			RK73GB2A821J	CHIP R 820 J 1/10W	
R203			RK73GB2A561J	CHIP R 560 J 1/10W		R412			RK73GB2A182J	CHIP R 1.8K J 1/10W	
R205,206			RK73GB2A104J	CHIP R 100K J 1/10W		R413			RK73GB2A473J	CHIP R 47K J 1/10W	
R208			RK73GB2A104J	CHIP R 100K J 1/10W		R414			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R209			RK73GB2A000J	CHIP R 0.0 J 1/10W		R415			RK73GB2A471J	CHIP R 470 J 1/10W	
R210			RK73GB2A471J	CHIP R 470 J 1/10W		R416			RK73GB2A104J	CHIP R 100K J 1/10W	
R212,213			RK73GB2A104J	CHIP R 100K J 1/10W		R418,419			RK73GB2A104J	CHIP R 100K J 1/10W	
R215			RK73GB2A222J	CHIP R 2.2K J 1/10W		R420			RK73GB2A103J	CHIP R 10K J 1/10W	
R216			RK73GB2A271J	CHIP R 270 J 1/10W		R421			RK73GB2A223J	CHIP R 22K J 1/10W	
R217			RK73GB2A101J	CHIP R 100 J 1/10W		R422			RK73GB2A103J	CHIP R 10K J 1/10W	
R218			RK73GB2A100J	CHIP R 10 J 1/10W		R423			RK73GB2A473J	CHIP R 47K J 1/10W	
R219			RK73GB2A000J	CHIP R 0.0 J 1/10W		R424			RK73GB2A103J	CHIP R 10K J 1/10W	
R220			RK73GB2A563J	CHIP R 56K J 1/10W		R425			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R221			RK73GB2A184J	CHIP R 180K J 1/10W		R426,427			RK73GB2A103J	CHIP R 10K J 1/10W	
R222			RK73GB2A563J	CHIP R 56K J 1/10W		R428			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R223			RK73GB2A184J	CHIP R 180K J 1/10W		R429			RK73GB2A103J	CHIP R 10K J 1/10W	
R224,225			RK73GB2A471J	CHIP R 470 J 1/10W		R430			RK73GB2A473J	CHIP R 47K J 1/10W	
R228			RK73GB2A000J	CHIP R 0.0 J 1/10W		R431			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R230,231			RK73GB2A221J	CHIP R 220 J 1/10W		R432,433			RK73GB2A473J	CHIP R 47K J 1/10W	
R232			RK73GB2A332J	CHIP R 3.3K J 1/10W		R434			RK73GB2A103J	CHIP R 10K J 1/10W	

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TX-RX UNIT (X57-5400-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
R435,436			RK73GB2A102J	CHIP R 1.0K J 1/10W		R628			RK73GB2A334J	CHIP R 330K J 1/10W	
R437			RK73GB2A473J	CHIP R 47K J 1/10W		R629			RK73GB2A223J	CHIP R 22K J 1/10W	
R438-441			RK73GB2A102J	CHIP R 1.0K J 1/10W		R636,637			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R442			RK73GB2A152J	CHIP R 1.5K J 1/10W		R638			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R443			RK73GB2A821J	CHIP R 820 J 1/10W		R639			RN73GH1J913D	CHIP R 91K D 1/16W	
R444			RK73FB2B000J	CHIP R 0.0 J 1/8W		R640			RN73GH1J683D	CHIP R 68K D 1/16W	
R445			RK73HB1J000J	CHIP R 0.0 J 1/16W		R641			RN73GH1J913D	CHIP R 91K D 1/16W	
R446			RK73HB1J472J	CHIP R 4.7K J 1/16W		R642			RN73GH1J333D	CHIP R 33K D 1/16W	
R447			RK73HB1J473J	CHIP R 47K J 1/16W		R643			RK73GB2A564J	CHIP R 560K J 1/10W	
R448			RK73HB1J102J	CHIP R 1.0K J 1/16W		R644			RK73GB2A474J	CHIP R 470K J 1/10W	
R449-451			RK73GB2A473J	CHIP R 47K J 1/10W		R645			RN73GH1J274D	CHIP R 270K D 1/16W	
R452-455			RK73GB2A104J	CHIP R 100K J 1/10W		R646			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R456-458			RK73HB1J473J	CHIP R 47K J 1/16W		R647			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R459			RK73GB2A473J	CHIP R 47K J 1/10W		R648			RN73GH1J913D	CHIP R 91K D 1/16W	
R460-462			RK73GB2A000J	CHIP R 0.0 J 1/10W		R649			RN73HH1J682D	CHIP R 6.8K D 1/16W	
R464			RK73GB2A473J	CHIP R 47K J 1/10W		R650			RK73GB2A103J	CHIP R 10K J 1/10W	
R466			RK73GB2A000J	CHIP R 0.0 J 1/10W		R651			RK73GB2A155J	CHIP R 1.5M J 1/10W	
R467,468			RK73GB2A473J	CHIP R 47K J 1/10W		R652			RK73HB1J473J	CHIP R 47K J 1/16W	
R469			RK73GB2A102J	CHIP R 1.0K J 1/10W		R653			RK73HB1J184J	CHIP R 180K J 1/16W	
R470-472			RK73GB2A000J	CHIP R 0.0 J 1/10W		R654			RN73HH1J683D	CHIP R 68K D 1/16W	
R474			RK73HB1J103J	CHIP R 10K J 1/16W		R655			RK73HB1J474J	CHIP R 470K J 1/16W	
R475-477			RK73GB2A101J	CHIP R 100 J 1/10W		R656			RN73HH1J682D	CHIP R 6.8K D 1/16W	
R478			RK73GB2A471J	CHIP R 470 J 1/10W		R657			RK73GB2A101J	CHIP R 100 J 1/10W	
R479			RK73GB2A473J	CHIP R 47K J 1/10W		R658			RK73HB1J224J	CHIP R 220K J 1/16W	
R480			RK73GB2A472J	CHIP R 4.7K J 1/10W		R659			RK73HB1J103J	CHIP R 10K J 1/16W	
R481			RK73GB2A000J	CHIP R 0.0 J 1/10W		R660			RK73HB1J223J	CHIP R 22K J 1/16W	
R482			RK73GB2A102J	CHIP R 1.0K J 1/10W		R661			RK73HB1J394J	CHIP R 390K J 1/16W	
R483			RK73GB2A473J	CHIP R 47K J 1/10W		R662			RK73HB1J470J	CHIP R 47 J 1/16W	
R484			RK73GB2A102J	CHIP R 1.0K J 1/10W		R663			RK73HB1J220J	CHIP R 22 J 1/16W	
R486			RK73GB2A473J	CHIP R 47K J 1/10W		R664			RK73GB2A333J	CHIP R 33K J 1/10W	
R487			RK73GB2A102J	CHIP R 1.0K J 1/10W		R665,666			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R488			RK73HB1J000J	CHIP R 0.0 J 1/16W		R668			RK73GB2A334J	CHIP R 330K J 1/10W	
R489			RK73GB2A103J	CHIP R 10K J 1/10W		R669			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R490			RK73GB2A104J	CHIP R 100K J 1/10W		R670-673			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R491			RK73GB2A000J	CHIP R 0.0 J 1/10W		R674,675			RK73HB1J473J	CHIP R 47K J 1/16W	
R493			RK73GB2A100J	CHIP R 10 J 1/10W		R677			RK73GB2A333J	CHIP R 33K J 1/10W	
R494			RK73GB2A473J	CHIP R 47K J 1/10W		R679			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R495			RK73GB2A471J	CHIP R 470 J 1/10W		R680			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R496			RK73GB2A000J	CHIP R 0.0 J 1/10W		R688			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R500			RK73HB1J000J	CHIP R 0.0 J 1/16W		R742			RK73GB2A272J	CHIP R 2.7K J 1/10W	
R601			RK73GB2A153J	CHIP R 15K J 1/10W		R743			RK73GB2A473J	CHIP R 47K J 1/10W	
R602			RK73GB2A223J	CHIP R 22K J 1/10W		R922			RK73GB2A103J	CHIP R 10K J 1/10W	
R603			RK73GB2A000J	CHIP R 0.0 J 1/10W		R923,924			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R605			RK73GB2A000J	CHIP R 0.0 J 1/10W		D3			HSC277	DIODE	
R607			RK73GB2A153J	CHIP R 15K J 1/10W		D4			MA2S077G	DIODE	
R608			RK73GB2A103J	CHIP R 10K J 1/10W		D5			1SS360-F	DIODE	
R609			RK73GB2A154J	CHIP R 150K J 1/10W		D6			MA2S111-F	DIODE	
R610			RK73GB2A563J	CHIP R 56K J 1/10W		D7			HSC277	DIODE	
R611			RK73GB2A184J	CHIP R 180K J 1/10W		D8			DA221	DIODE	
R612			RK73GB2A334J	CHIP R 330K J 1/10W		D9		*	HZU4CLL	ZENER DIODE	
R614			RK73GB2A184J	CHIP R 180K J 1/10W		D10			HVC131	DIODE	
R615,616			RK73GB2A103J	CHIP R 10K J 1/10W		D11			MA2S077G	DIODE	
R617			RK73GB2A000J	CHIP R 0.0 J 1/10W		D12			HVC131	DIODE	
R618			RK73GB2A683J	CHIP R 68K J 1/10W		D13			1SS388F	DIODE	
R619			RK73GB2A101J	CHIP R 100 J 1/10W		D200			HSM88AS-E	DIODE	
R621			RK73GB2A103J	CHIP R 10K J 1/10W		D201-204			1SV281-F	VARIABLE CAPACITANCE DIODE	
R622			RK73GB2A223J	CHIP R 22K J 1/10W		D300			MA3J742	DIODE	
R623			RK73GB2A334J	CHIP R 330K J 1/10W		D301			MA2S111-F	DIODE	
R624			RK73GB2A104J	CHIP R 100K J 1/10W							
R626			RK73GB2A104J	CHIP R 100K J 1/10W							

PARTS LIST

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Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
D302,303			DAN235E	DIODE		Q411			2SB1132(Q,R)	TRANSISTOR	
D400			GN1G	DIODE		Q412			2SK1824-A	FET	
D401			MA2S111-F	DIODE		Q413			HN1L02FU(F)	FET	
D402,403			NNCD6.8G-A	ZENER DIODE		Q414			2SK1824-A	FET	
D404			1SS301F	DIODE		Q415			2SJ517-E	FET	
D408			1SS301F	DIODE		Q601,602			2SK1824-A	FET	
D409			MA2S111-F	DIODE		TH301			157-104-65001	THERMISTOR(100k)	
D601			MA3J742	DIODE							
IC2			LMC7101BIM5	MOS-IC							
IC3			M62354GPDF0J	MOS-IC							
IC4		*	MAX865EUA+T	MOS-IC							
IC5			LMX2352TMX/NP	ANALOGUE IC							
IC6			LMC7101BIM5	MOS-IC							
IC7			NJM2904RB1-ZB	BI-POLAR IC							
IC200		*	SMA5101	MOS-IC							
IC300			TA31136FNG	MOS-IC							
IC301			TC7S66FUF	MOS-IC							
IC400			BU4094BCFV	MOS-IC							
IC401,402			TK11250CMCL-G	BI-POLAR IC							
IC403-405			BU4094BCFV	MOS-IC							
IC406			784214AGC150A	MCU							
IC409			PST9132NR	MOS-IC							
IC412			AT24C08BN-SH	ROM IC							
IC413			TC75W51FUF	MOS-IC							
IC414			AT29C02090TU	ROM IC							
IC415		*	TC7S02F-F	MOS-IC							
IC600			LC73872M	MOS-IC							
IC601			TC75W51FUF	MOS-IC							
IC602			TA75W01FUF	MOS-IC							
IC603			M62364FP-F	MOS-IC							
IC604			TC75W51FUF	MOS-IC							
IC605,606			TC75S51FE(F)	MOS-IC							
IC607			TC35453FG6	MOS-IC							
Q2		*	2SJ144-GR(F)	FET							
Q3			2SC5066-F(O)	TRANSISTOR							
Q4			2SC4617(S)	TRANSISTOR							
Q5			2SC5108(Y)F	TRANSISTOR							
Q6			2SC5110-F(O)	TRANSISTOR							
Q7			RT1N141U-T111	TRANSISTOR							
Q8			2SC4988-E	TRANSISTOR							
Q9			RT1P441U-T111	TRANSISTOR							
Q10			RT1N441U-T111	TRANSISTOR							
Q13			2SK1824-A	FET							
Q200,201			3SK293-F	FET							
Q301			2SC4617(S)	TRANSISTOR							
Q302			2SK1215-E(E)	FET							
Q303			RT1P441U-T111	TRANSISTOR							
Q304			RT1N441U-T111	TRANSISTOR							
Q305			UMC4N	TRANSISTOR							
Q400			UMG3N	TRANSISTOR							
Q401			UPA572T-A	FET							
Q402			FP210	TRANSISTOR							
Q403			2SJ243-A	FET							
Q404			RT1N441U-T111	TRANSISTOR							
Q405			UMG3N	TRANSISTOR							
Q406			RT1P237U-T111	TRANSISTOR							
Q407			2SC4215-F(Y)	TRANSISTOR							
Q408-410			2SC4617(S)	TRANSISTOR							

ADJUSTMENT

Common Section

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. VCO negative voltage Mid	1) Set panel tuning mode Push Side2 to select VSWM **	DVM	TX-RX	TP2	Panel	Top1/ Top2	-3V	±0.1V
High	2) Push Side2 to select VSWH ***						-6V	±0.1V
2. Voltage change frequency Low-Mid RX	1) Set panel tuning mode Push Side2 to select ***.*** r1			TP1			4.15V	±0.05V
TX	2) Push Side2 to select ***.*** t1						4.15V	±0.05V
Mid-Hi RX	3) Push Side2 to select ***.*** r2	4.15V	±0.05V					
TX	4) Push Side2 to select ***.*** t2	4.15V	±0.05V					

Caution : When adjusting transmit power and sensitivity, connect the cable to the SMA antenna connector on the top panel. At this time, use the antenna-less type jig connector (E30-3287-08) in the universal connector.

Transmitter Section

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Frequency adjustment	1) Set panel test mode Select FRQ *** in panel tuning mode PTT : ON	Power meter f. counter	Panel	ANT	Panel	Top1/ Top2	470.000MHz	±100Hz
		When the TCXO (X1) is replaced, perform the frequency tune in PC tuning mode from the FPU menu.						
2. Maximum power check	1) Set panel test mode BATT terminal voltage : 7.5V Select POW 255 in panel tuning mode PTT : ON	Power meter Ammeter	Panel	ANT			Check	4.5W or more
3. TX high power adjustment	1) Set panel test mode Select POW *** in tuning mode Push Orange to 3 point adjustment mode Select POW *** L PTT : ON				Panel	Top1/ Top2	3.8W	±0.3W 2.3A or less
	2) Push Side2 to select POW *** M PTT : ON							
	3) Push Side2 to select POW *** H PTT : ON							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
4. TX high power check	1) Set panel test mode CH No. : 1 Signalling No. : 1 PTT : ON	Power meter Ammeter	Panel	ANT			Check	3.5W~4.1W 2.3A or less
	2) CH No. : 2 Signalling No. : 1 PTT : ON							
	3) CH No. : 3 Signalling No. : 1 PTT : ON							
5. TX low power adjustment	1) Set panel test mode Select POW *** LO in panel tuning mode PTT : ON				Panel	Top1/ Top2	1.0W	±0.2W 1.4A or less
6. TX low power check	1) Set panel test mode CH No. : 1 Signalling No. : 1 Set low power (Push Side2) PTT : ON						Check	0.8W~1.2W 1.4A or less
	2) CH No. : 2 Signalling No. : 1 Set low power (Push Side2) PTT : ON							
	3) CH No. : 3 Signalling No. : 1 Set low power (Push Side2) PTT : ON							
7. DQT balance adjustment	1) Set panel test mode Select BLNC *** in panel tuning mode Deviation meter filter setting LPF : 3kHz HPF : OFF PTT : ON	Power meter Deviation meter Oscilloscope AG AF VTVM	Panel Side	ANT Universal	Panel	Top1/ Top2	Make the demodulation waves into square waves.	Oscilloscope coupling must be DC.

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
8. Maximum deviation adjustment (Wide)	1) Set panel test mode Select MDV *** in panel tuning mode Push Orange to 3 point adjustment mode Select MDV *** L AG : 1kHz/150mV Deviation meter filter setting LPF : 15kHz HPF : OFF PTT : ON	Power meter Deviation meter Oscilloscope	Panel	ANT	Panel	Top1/ Top2	3.95kHz (According to the larger +, -)	±0.05kHz
	2) Push Side2 to select MDV *** M PTT : ON	AG	Side	Universal				
	3) Push Side2 to select MDV *** H PTT : ON	AF VTVM						
9. Maximum deviation adjustment (Narrow)	1) Set panel test mode Select MDV *** in panel tuning mode Turn the toggle SW to the right (narrow). Push Orange to 3 point adjustment mode Select MDV *** N L AG : 1kHz/150mV Deviation meter filter setting LPF : 15kHz HPF : OFF PTT : ON						1.90kHz (According to the larger +, -)	±0.05kHz
	2) Push Side2 to select MDV *** N M PTT : ON							
	3) Push Side2 to select MDV *** N H PTT : ON							
10. MIC sensitivity check	1) Set panel test mode CH No. : 1 Signalling No. : 1 AG : 1kHz/15mV Deviation meter filter setting LPF : 15kHz HPF : OFF PTT : ON						Check	1.8kHz~3.6kHz
	2) Turn the toggle SW to the right (narrow) PTT : ON							0.9kHz~1.8kHz

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
11. QT deviation adjustment (Wide)	1) Set panel tuning mode MIC input : OFF Select QTDV * * * in panel tuning mode Deviation meter filter setting LPF : 3kHz PTT : ON	Power meter Deviation meter Oscilloscope AG AF VTVM	Panel Side	ANT Universal	Panel	Top1/ Top2	0.75kHz	±0.05kHz
12. QT deviation adjustment (Narrow)	1) Set panel tuning mode MIC input : OFF Select QTDV * * * in panel tuning mode Turn the toggle SW to the right (narrow) Deviation meter filter setting LPF : 3kHz PTT : ON						0.375kHz	±0.05kHz
13. DQT deviation adjustment (Wide)	1) Set panel test mode Select DQDV * * * in panel tuning mode Deviation meter filter setting LPF : 3kHz HPF : OFF PTT : ON						0.75kHz	±0.05kHz
14. DQT deviation adjustment (Narrow)	1) Set panel tuning mode Select DQDV * * * in panel tuning mode Turn the toggle SW to the right (narrow) Deviation meter filter setting LPF : 3kHz HPF : OFF PTT : ON						0.375kHz	±0.05kHz
15. DTMF deviation adjustment (Wide)	1) Set panel test mode Select DTDV * * * in tuning mode Deviation meter filter setting LPF : 15kHz HPF : OFF PTT : ON						3.0kHz	±0.2kHz

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
16. DTMF deviation adjustment (Narrow)	1) Set panel tuning mode Select DTDV *** in panel tuning mode Turn the toggle SW to the right (narrow) Deviation meter filter setting LPF : 15kHz HPF : OFF PTT : ON	Power meter Deviation meter Oscilloscope	Panel	ANT	Panel	Top1/ Top2	1.5kHz	±0.2kHz
17. MSK deviation adjustment (Wide)	1) Set panel test mode Select MSDV *** in panel tuning mode Deviation meter filter setting LPF : 15kHz HPF : OFF PTT : ON	AG AF VTVM	Side	Universal			3.00kHz	±0.2kHz
18. MSK deviation adjustment (Narrow)	1) Set panel tuning mode Select MSDV *** in panel tuning mode Turn the toggle SW to the right (narrow) Deviation meter filter setting LPF : 15kHz HPF : OFF PTT : ON						1.50kHz	±0.2kHz
19. Transmission S/N check (Wide)	1) Set panel test mode CH No. : 1 Signalling No. : 1 Deviation meter filter setting LPF : 300Hz HPF : 3kHz De-emphasis : 750µs PTT : ON						Check	42dB or more
20. Transmission S/N check (Narrow)	1) Set panel test mode CH No. : 1 Signalling No. : 1 Turn the toggle SW to the right (narrow) Deviation meter filter setting LPF : 300Hz HPF : 3kHz De-emphasis : 750µs PTT : ON							37dB or more
21. BATT detection writing	1) Set panel test mode Select BATT *** in panel tuning mode PTT : ON	Power meter DVM	Panel Bottom	ANT BATT terminal	Side	Orange	Write the voltage level when TX.	6.2V

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
22. BATT detection check	1) Set panel test mode CH No. : 1 Signalling No. : 1 BATT terminal voltage : 5.3V PTT : ON	Power meter	Panel	ANT			Check	Cannot transmit LED (RED) blinks
	2) BATT terminal voltage : 6.5V PTT : ON	DVM	Bottom	BATT terminal				Transmit

Receiver Section

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. AF level and distortion check	1) Set panel test mode CH No. : Signalling No. : 1 SSG freq. : Each freq. output : -53dBm/501µV MOD. : 1kHz DEV. : 3kHz	SSG AF VTVM Oscilloscope Distortion meter	Panel	ANT			Check	3.5% or less distortion at 0.9V±0.1V AF level.
	2) Turn the toggle SW to the right (narrow) SSG freq. : Each freq. output : -53dBm/501µV MOD. : 1kHz DEV. : 1.5kHz		Side	Universal				3.5% or less distortion at 0.9V±0.1V AF level.
2. Hum and noise ratio check	1) Set panel test mode CH No. : Signalling No. : 1 SSG output : -53dBm/501µV							42dB or more
	2) Turn the toggle SW to the right (narrow) SSG output : -53dBm/501µV							37dB or more
3. BPF coil Use this adjustment procedure after replacing any of the BPF coils	1) Set panel test mode Connect the spectrum analyzer to TP3. CH No. : 2 Signalling No. : 1	Tracking generator Spectrum analyzer	Panel TX-RX	ANT TP3	TX-RX	L205 L210	Adjust the BPF coil so that the waveform is peaked. The frequency with the peak waveform does not have to be the center frequency. After finished peaking the waveform, perform #4.	

ADJUSTMENT

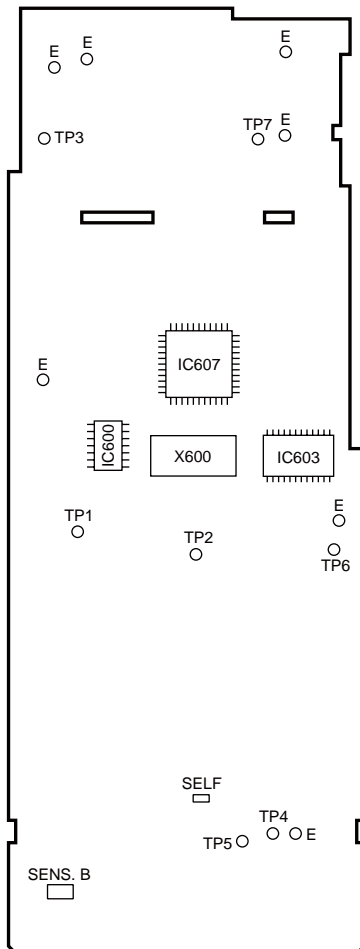
Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
4. Sensitivity adjustment and check (Wide)	1) Set panel test mode Select SNS *** in panel tuning mode Push Orange to 3 point adjustment mode Select SNS *** L SSG freq. : Low output : -116dBm/0.35μV	SSG AF VTVM Oscilloscope Distortion meter	Panel Side	ANT Universal	Panel	Top1/ Top2	Adjust for maximum SINAD	12dB SINAD or more
	2) Push Side2 to select SNS *** M SSG freq. : Center							
	3) Push Side2 to select SNS *** H SSG freq. : Hi							
5. Sensitivity check (Narrow)	1) Set panel test mode CH No. : 1 Signalling No. : 1 SSG output : -116dBm/0.35μV MOD. : 1kHz DEV. : 1.5kHz Turn the toggle SW to the right (narrow)					Check	12dB SINAD or more	
	2) Set panel test mode CH No. : 2 Signalling No. : 1 Turn the toggle SW to the right (narrow)							
	3) Set panel test mode CH No. : 3 Signalling No. : 1 Turn the toggle SW to the right (narrow)							
6. Tight squelch adjustment (Wide)	1) Set panel test mode Select SQ T *** in panel tuning mode SSG output : 6dB above to 12dB SINAD level.				Panel	Top1/ Top2	Adjust to point of opening squelch	
7. Tight squelch adjustment (Narrow)	1) Set panel test mode Select SQ T *** in panel tuning mode Turn the toggle SW to the right (narrow) SSG output : 6dB above to 12dB SINAD level.							
8. Squelch adjustment (Wide)	1) Set panel test mode Select SQ O *** in panel tuning mode SSG output : 3dB below to 12dB SINAD level						Adjust to point of opening squelch	

ADJUSTMENT

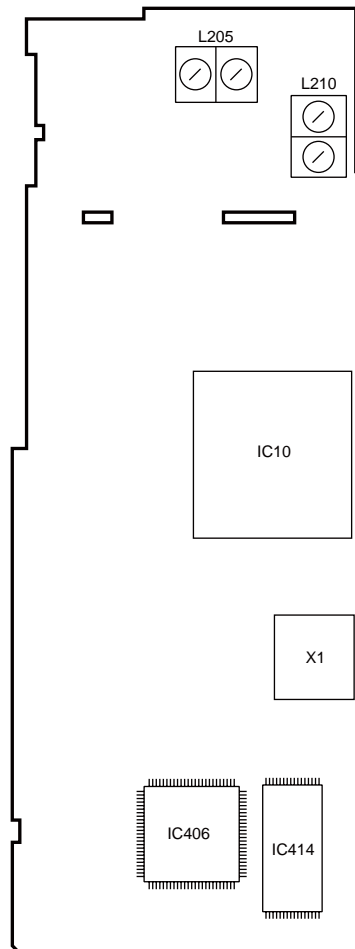
Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
9. Squelch adjustment (Narrow)	1) Set panel test mode Select SQ O * * * in panel tuning mode Turn the toggle SW to the right (narrow) SSG output : 3dB below to 12dB SINAD level	SSG	Panel	ANT	Panel	Top1/ Top2	Adjust to point of opening squelch	
10. Squelch check (Wide)	1) Set panel test mode CH No. : 1 Signalling No. : 1 SSG output : -118dBm/0.28μV						Check	Squelch must be opened
	2) SSG output : -127dBm/0.1μV							Squelch must be closed
11. Squelch check (Narrow)	1) Set panel test mode CH No. : 1 Signalling No. : 1 Turn the toggle SW to the right (narrow) SSG output : -118dBm						Check	Squelch must be opened
	2) SSG output : -127dBm							Squelch must be closed

Adjustment Point

■ Component side

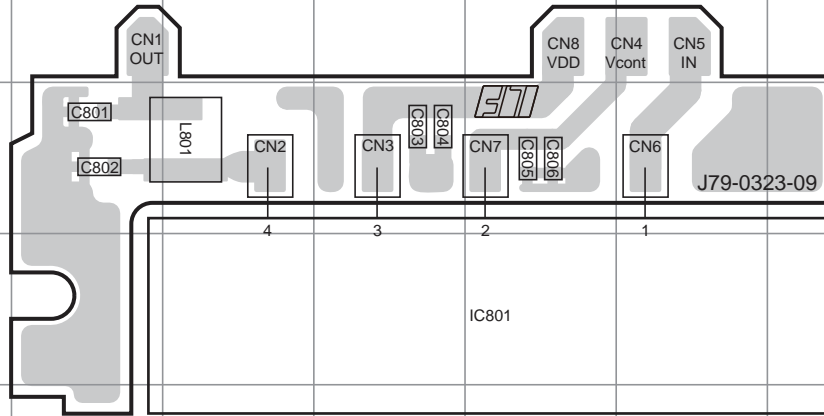


■ Foil side

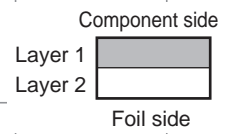


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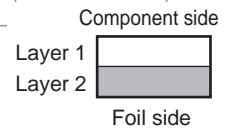
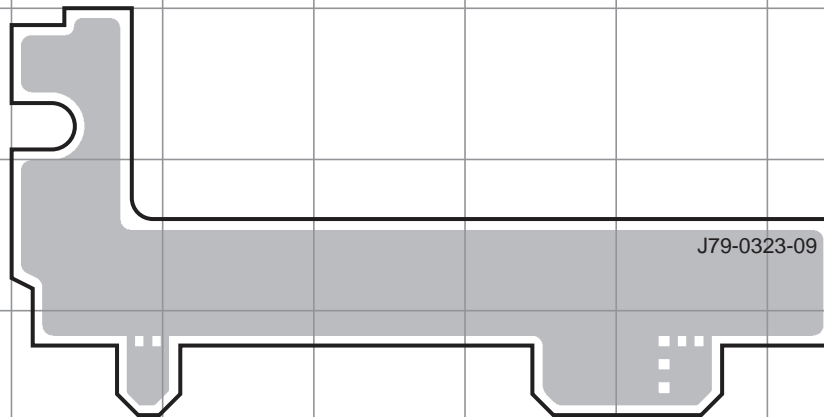
FINAL UNIT (X45-3590-11) Component side view (J79-0323-09)



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IC801	5F

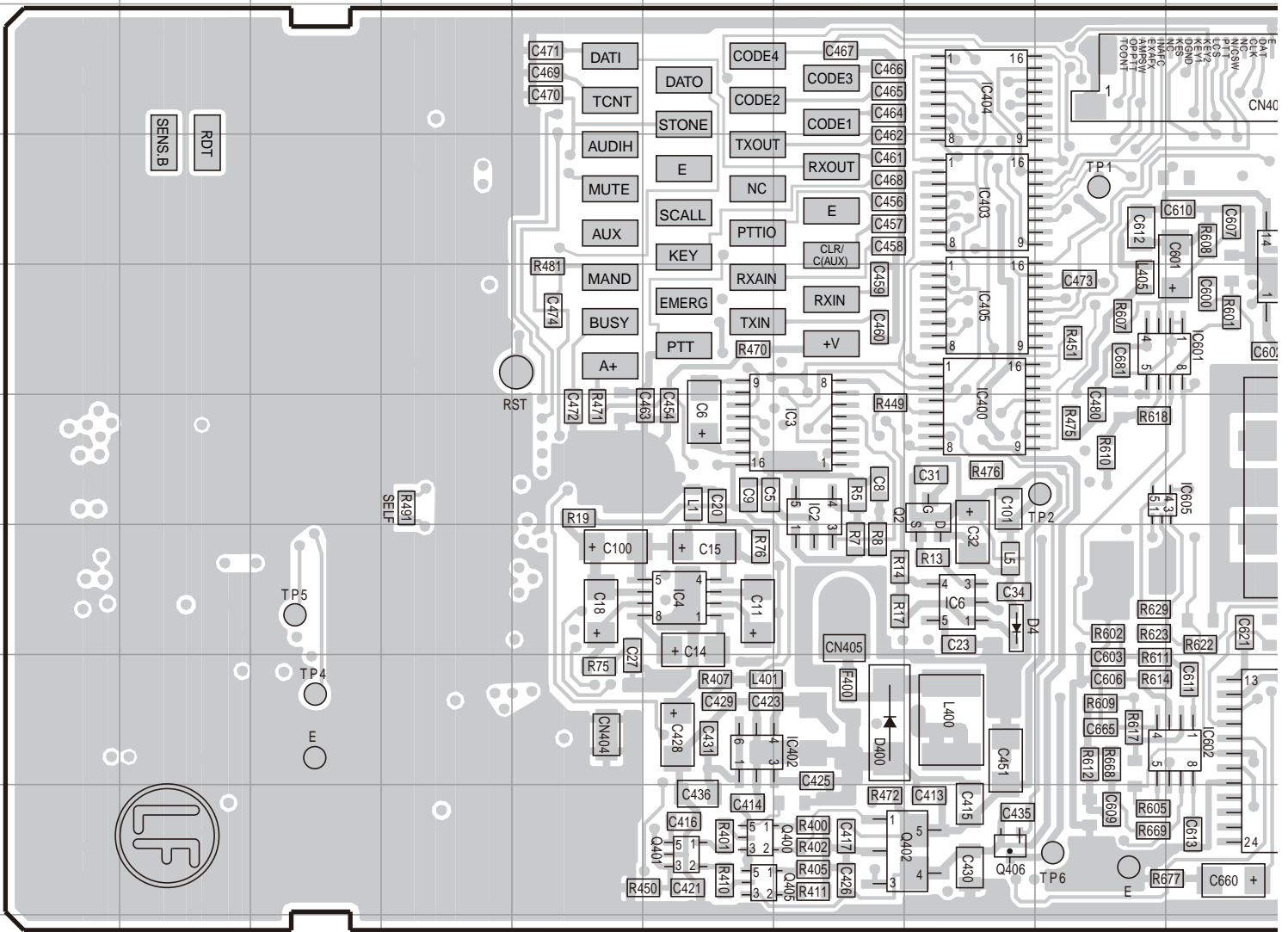


FINAL UNIT (X45-3590-11) Foil side view (J79-0323-09)



TK-390 PC BOARD

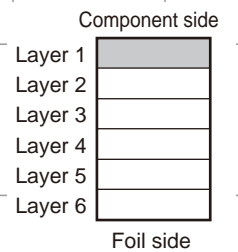
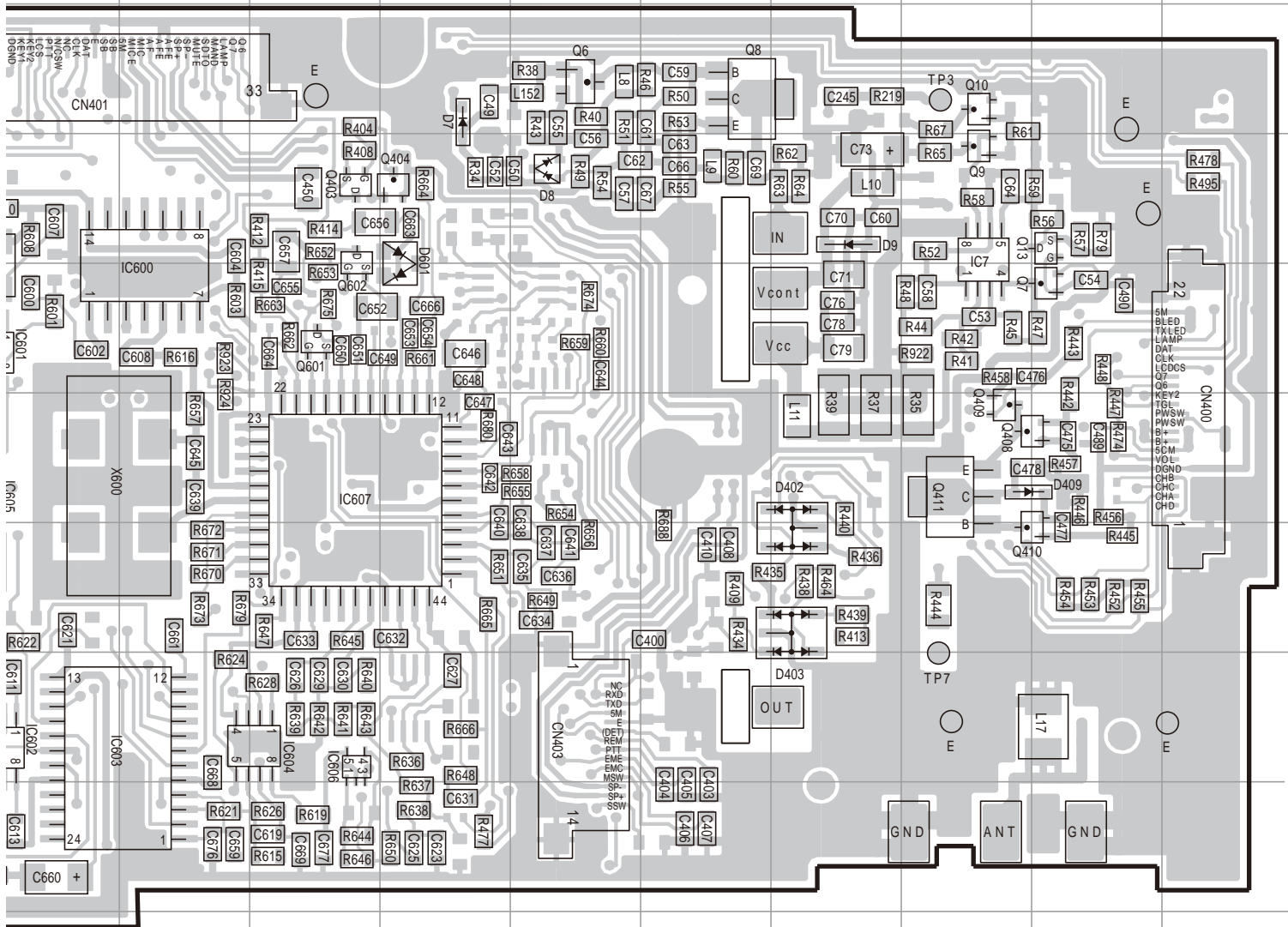
TX-RX UNIT (X57-5400-10) Component side view (J79-0068-09)



Ref No.	Address	Ref No.	Address	Ref No.	Address	Ref No.	Address
IC2	6G	IC602	8J	Q13	4R	Q601	5L
IC3	6G	IC603	8J	Q400	9F	Q602	4L
IC4	7F	IC604	8L	Q401	9F	D4	7H
IC6	7H	IC605	6I	Q402	9H	D7	3M
IC7	4R	IC606	8L	Q403	4L	D8	4N
IC400	6H	IC607	6L	Q404	4M	D9	4P
IC402	8F	Q2	6H	Q405	9F	D400	8G
IC403	4H	Q6	3N	Q406	9H	D402	7P
IC404	3H	Q7	5R	Q408	6R	D403	7P
IC405	5H	Q8	3O	Q409	6Q	D409	6R
IC600	5K	Q9	4Q	Q410	7R	D601	4M
IC601	5I	Q10	3Q	Q411	6Q		

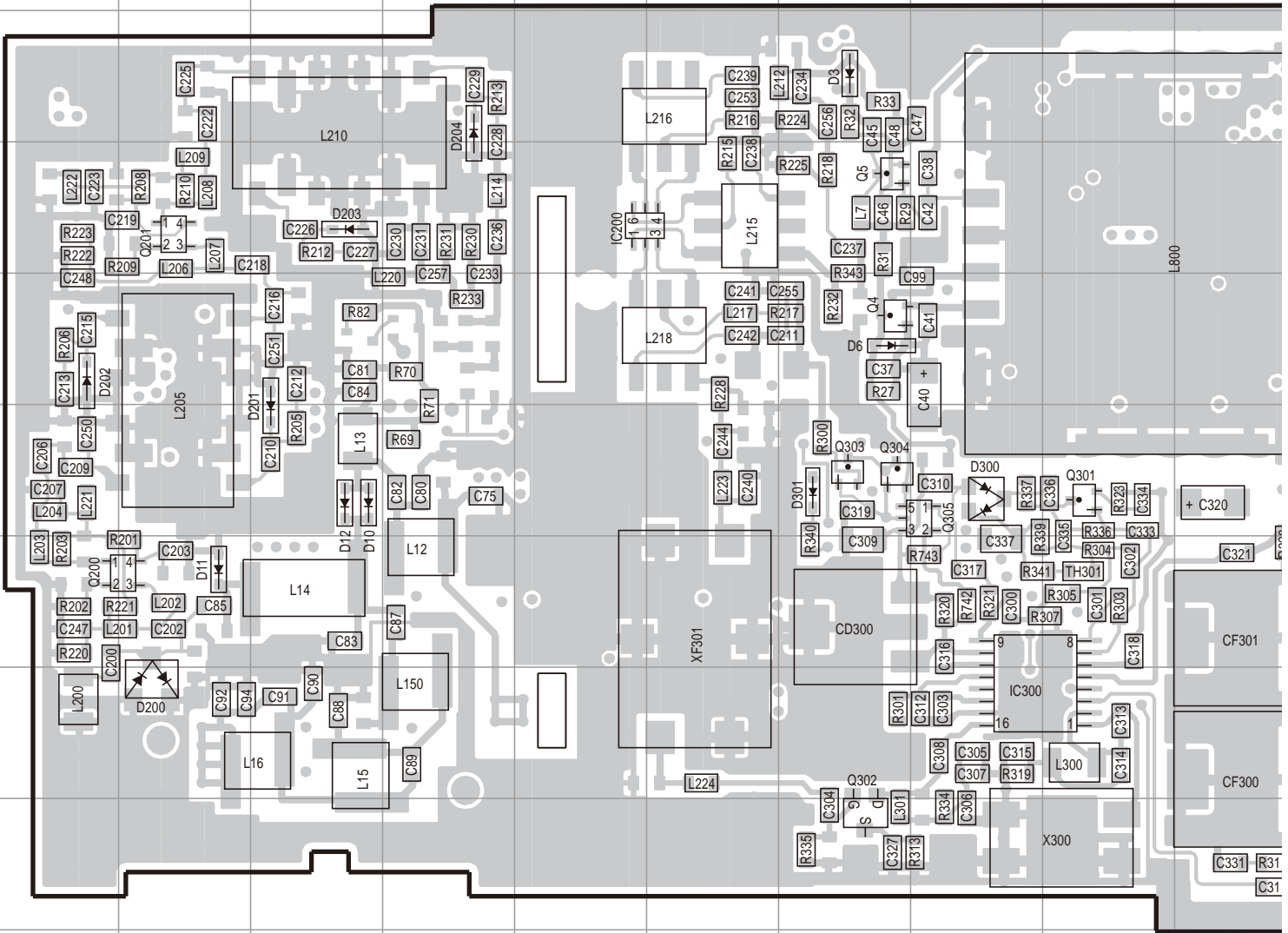
PC BOARD TK-390

TX-RX UNIT (X57-5400-10) Component side view (J79-0068-09)



TK-390 PC BOARD

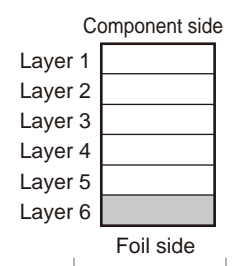
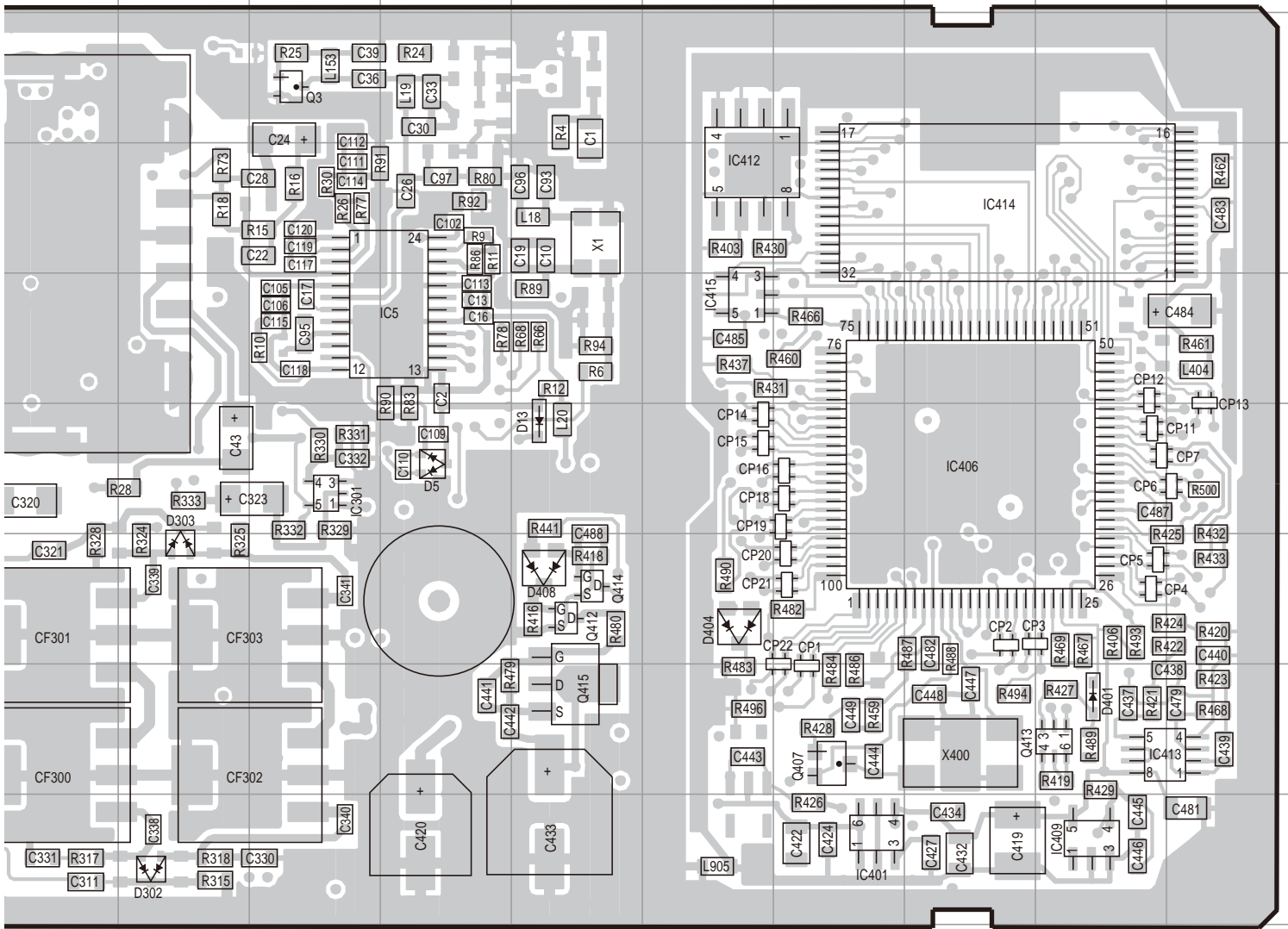
TX-RX UNIT (X57-5400-10) Foil side view (J79-0068-09)



Ref No.	Address	Ref No.	Address	Ref No.	Address	Ref No.	Address
IC5	5M	Q3	3L	Q412	7N	D201	5C
IC200	4E	Q4	5G	Q413	8R	D202	5A
IC300	8H	Q5	4G	Q414	7N	D203	4C
IC301	6L	Q200	7B	Q415	8N	D204	3D
IC401	9P	Q201	4B	D3	3G	D300	6H
IC406	6Q	Q301	6I	D6	5G	D301	6G
IC409	9R	Q302	9G	D10	6C	D302	9K
IC412	4O	Q303	6G	D11	7B	D303	7K
IC413	8R	Q304	6G	D12	6C	D401	8R
IC414	4Q	Q305	6H	D13	6N	D404	7O
IC415	5O	Q407	8P	D200	8B	D408	7N

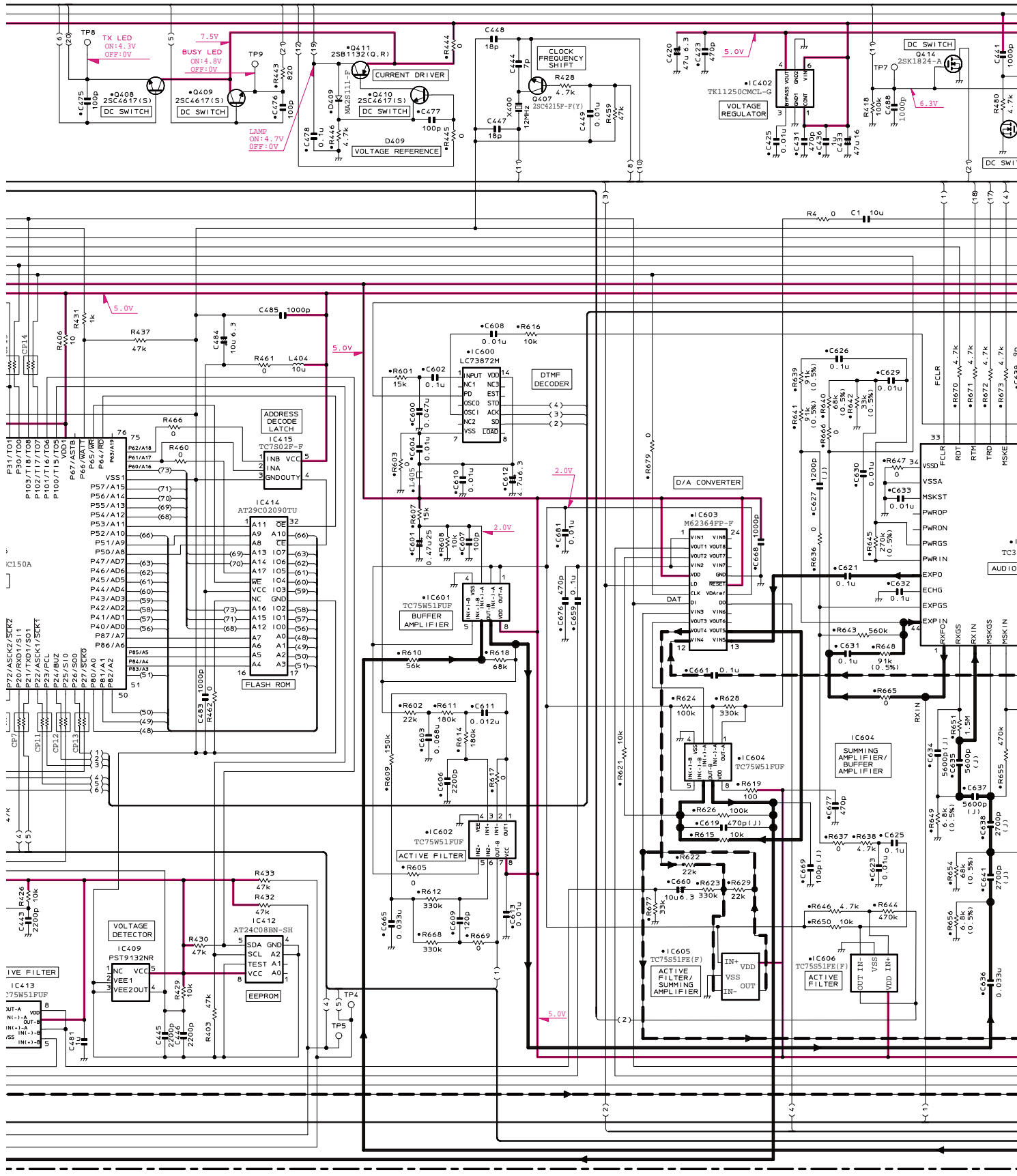
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TX-RX UNIT (X57-5400-10) Foil side view (J79-0068-09)



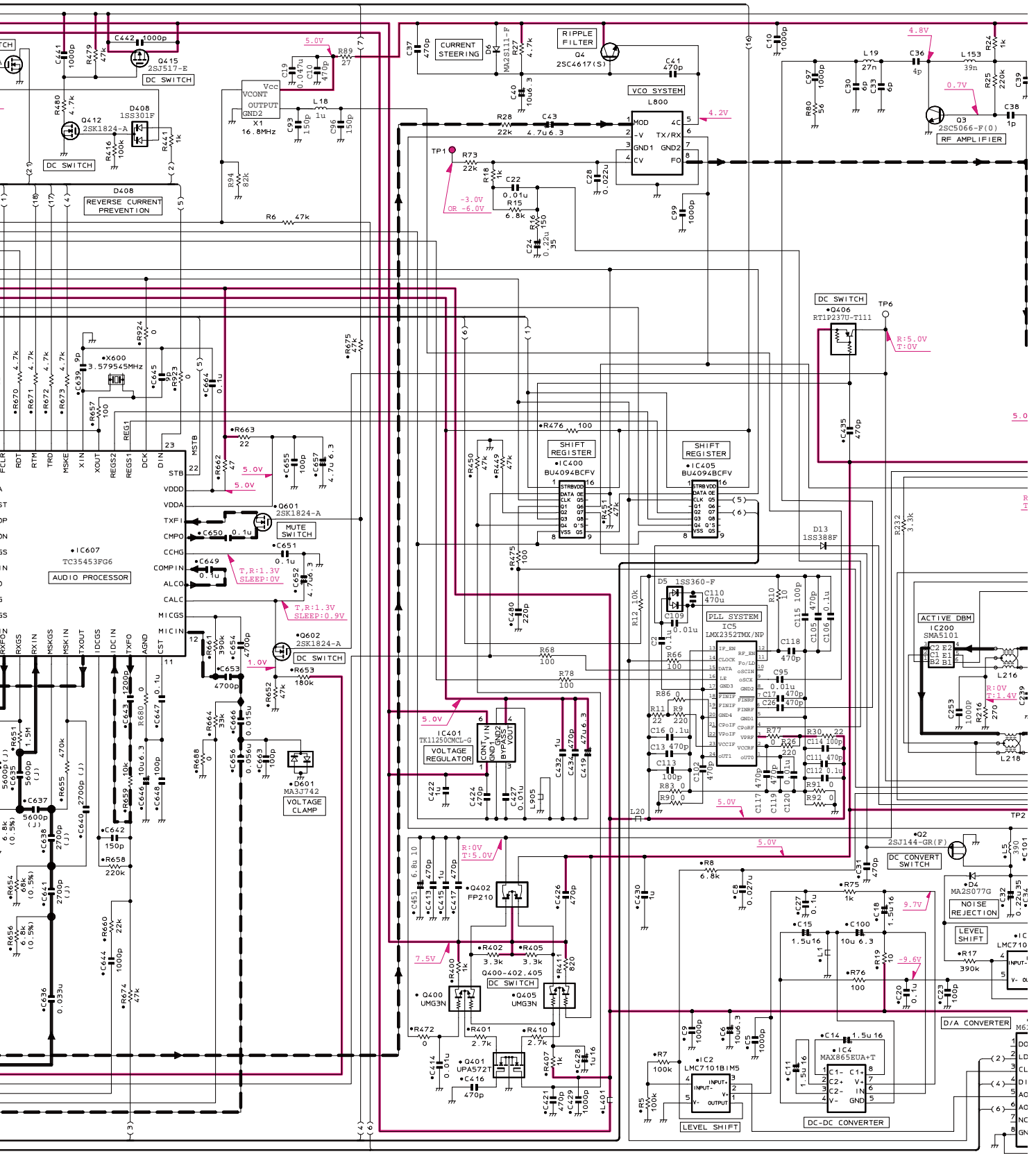
SCHEMATIC DIAGRAM TK-390

TX-RX UNIT(X57-5400-10)

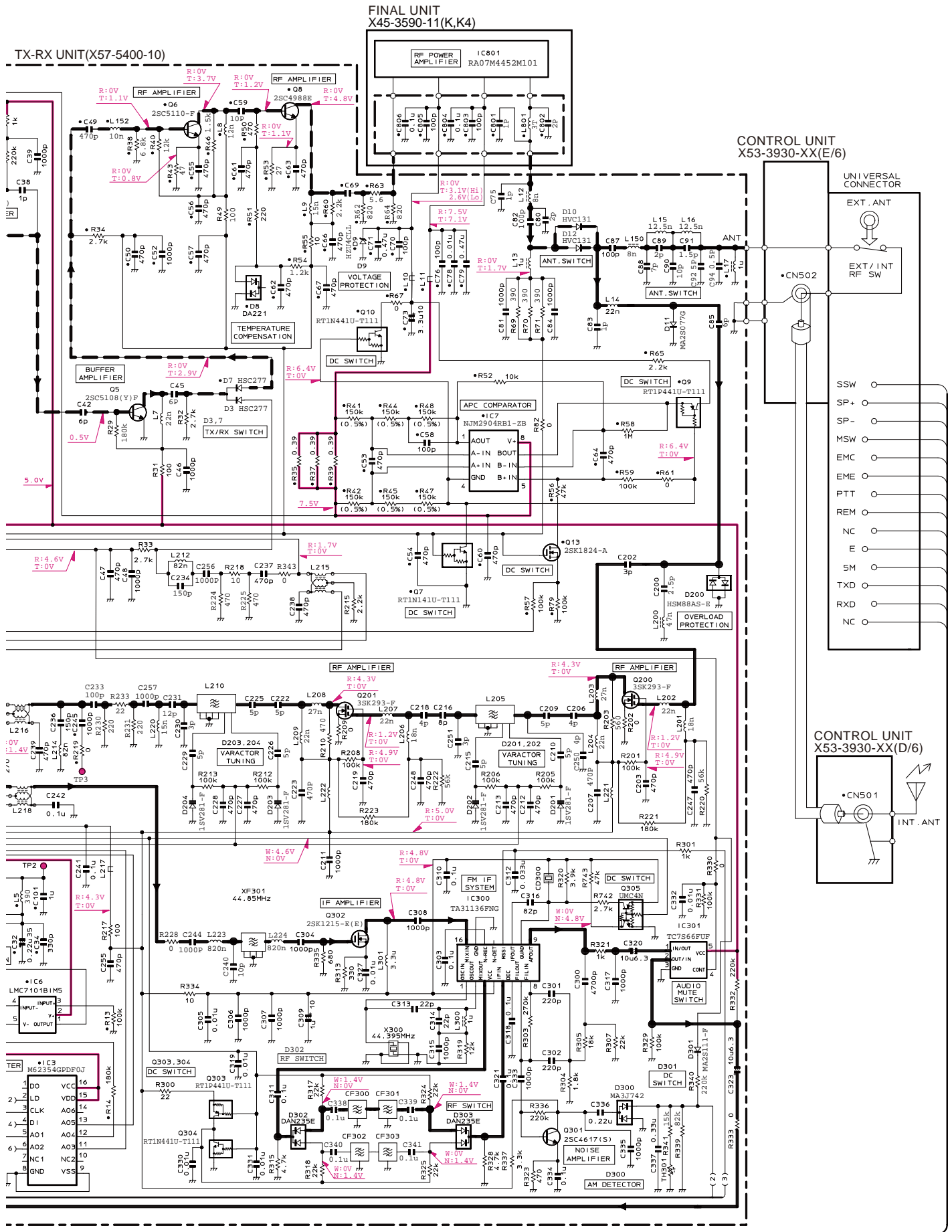


TK-390 SCHEMATIC DIAGRAM

TX-RX UNIT(X57-5400-10)



SCHEMATIC DIAGRAM TK-390



Note : The components marked with a dot (•) are parts of layer 1.

TK-390

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Kenwood Electronics Australia Pty. Ltd.

Talavera Business Park Building A, 4 Talavera Road,
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Kenwood Electronics (Hong Kong) Ltd.

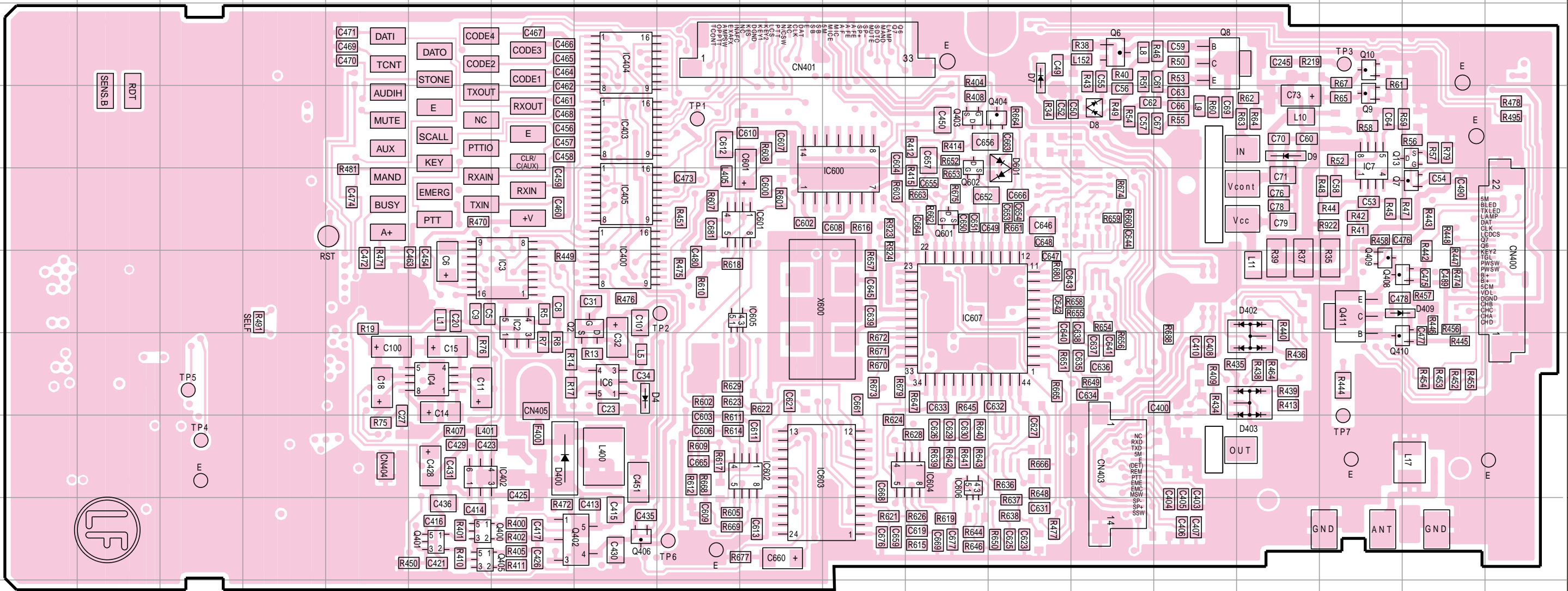
Suite 2504, 25/F, Tower 2, Nina Tower, No. 8 Yeung Uk Road,
Tsuen Wan, New Territories, Hong Kong

Kenwood Electronics Singapore Pte Ltd

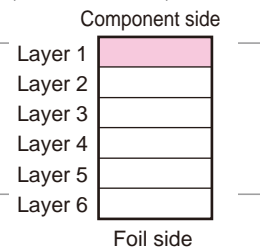
1 Ang Mo Kio Street 63, Singapore 569110

TX-RX UNIT (X57-5400-10) Component side view (J79-0068-09)

TX-RX UNIT (X57-5400-10) Component side view (J79-0068-09)



Ref No.	Address	Ref No.	Address	Ref No.	Address	Ref No.	Address
IC2	6G	IC602	8J	Q13	4R	Q601	5L
IC3	6G	IC603	8J	Q400	9F	Q602	4L
IC4	7F	IC604	8L	Q401	9F	D4	7H
IC6	7H	IC605	6I	Q402	9H	D7	3M
IC7	4R	IC606	8L	Q403	4L	D8	4N
IC400	6H	IC607	6L	Q404	4M	D9	4P
IC402	8F	Q2	6H	Q405	9F	D400	8G
IC403	4H	Q6	3N	Q406	9H	D402	7P
IC404	3H	Q7	5R	Q408	6R	D403	7P
IC405	5H	Q8	3O	Q409	6Q	D409	6R
IC600	5K	Q9	4Q	Q410	7R	D601	4M
IC601	5I	Q10	3Q	Q411	6Q		

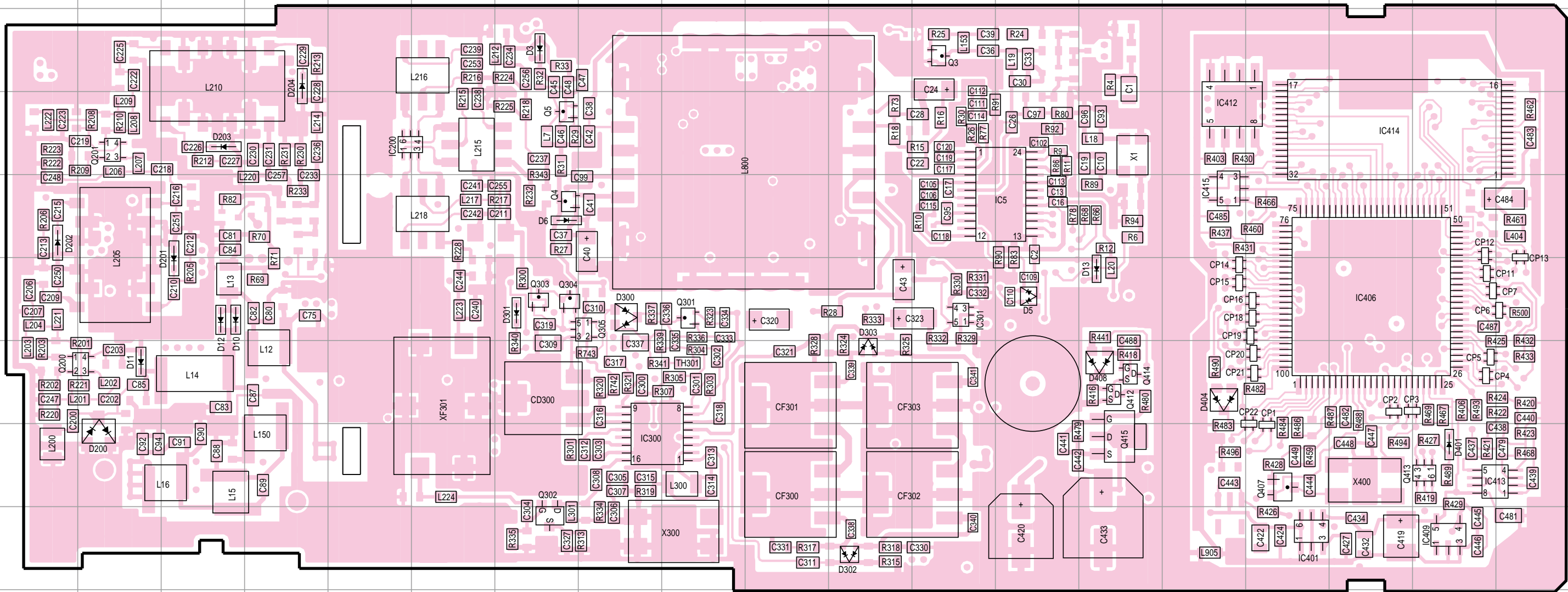


TK-390 PC BOARD

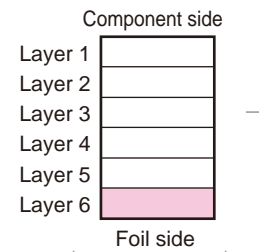
PC BOARD TK-390

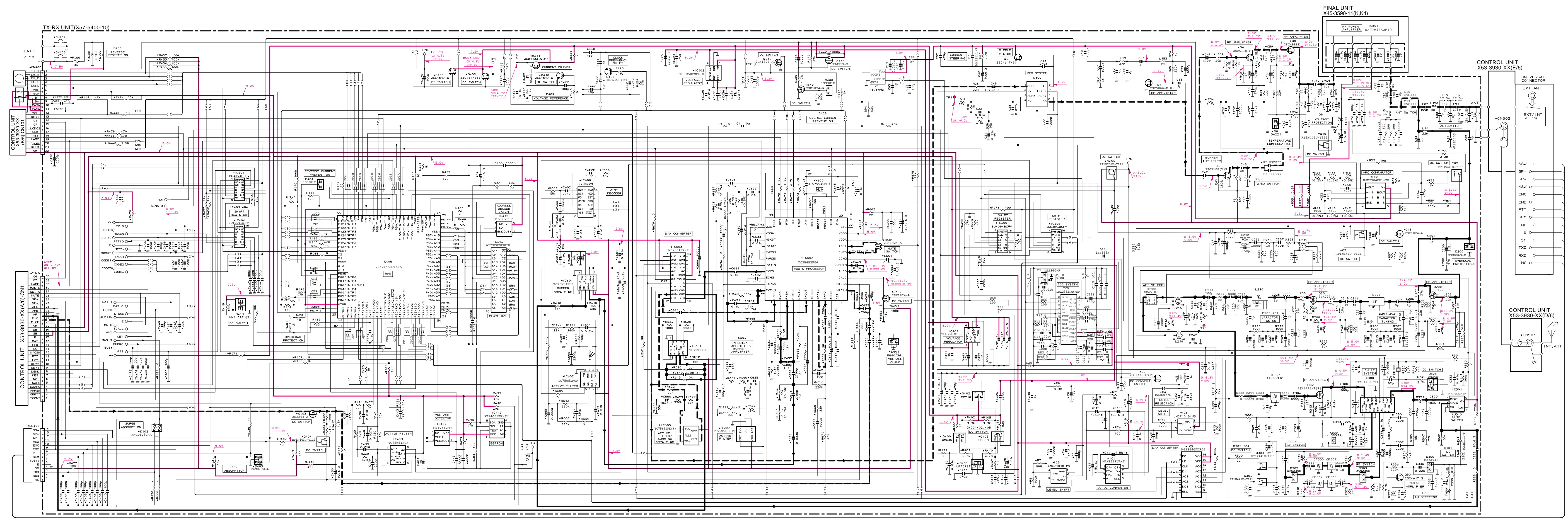
TX-RX UNIT (X57-5400-10) Foil side view (J79-0068-09)

TX-RX UNIT (X57-5400-10) Foil side view (J79-0068-09)



Ref No.	Address	Ref No.	Address	Ref No.	Address	Ref No.	Address
IC5	5M	Q3	3L	Q412	7N	D201	5C
IC200	4E	Q4	5G	Q413	8R	D202	5A
IC300	8H	Q5	4G	Q414	7N	D203	4C
IC301	6L	Q200	7B	Q415	8N	D204	3D
IC401	9P	Q201	4B	D3	3G	D300	6H
IC406	6Q	Q301	6I	D6	5G	D301	6G
IC409	9R	Q302	9G	D10	6C	D302	9K
IC412	4O	Q303	6G	D11	7B	D303	7K
IC413	8R	Q304	6G	D12	6C	D401	8R
IC414	4Q	Q305	6H	D13	6N	D404	7O
IC415	5O	Q407	8P	D200	8B	D408	7N



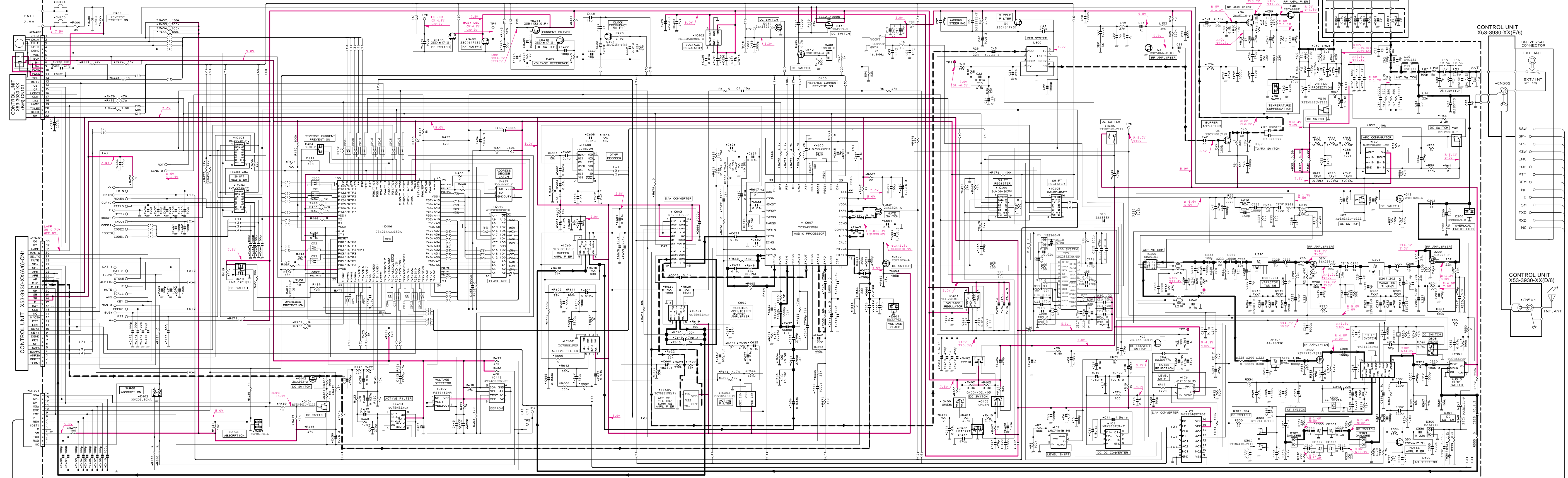


TX-RX UNIT (X57-5400-10)

FINAL UNIT X45-3590-11(K,K4)

CONTROL UNIT X53-3930-XX(E/E6)

CONTROL UNIT X53-3930-XX(D/6)



CONTROL UNIT X53-3930-XX(A/6)-CN1

CONTROL UNIT X53-3930-XX(A/6)-CN1

CONTROL UNIT X53-3930-XX(A/6)-CN1

CONTROL UNIT X53-3930-XX(A/6)-CN1

CONTROL UNIT X53-3930-XX(A/6)-CN1

CONTROL UNIT X53-3930-XX(A/6)-CN1

CONTROL UNIT X53-3930-XX(A/6)-CN1

