

# KENWOOD

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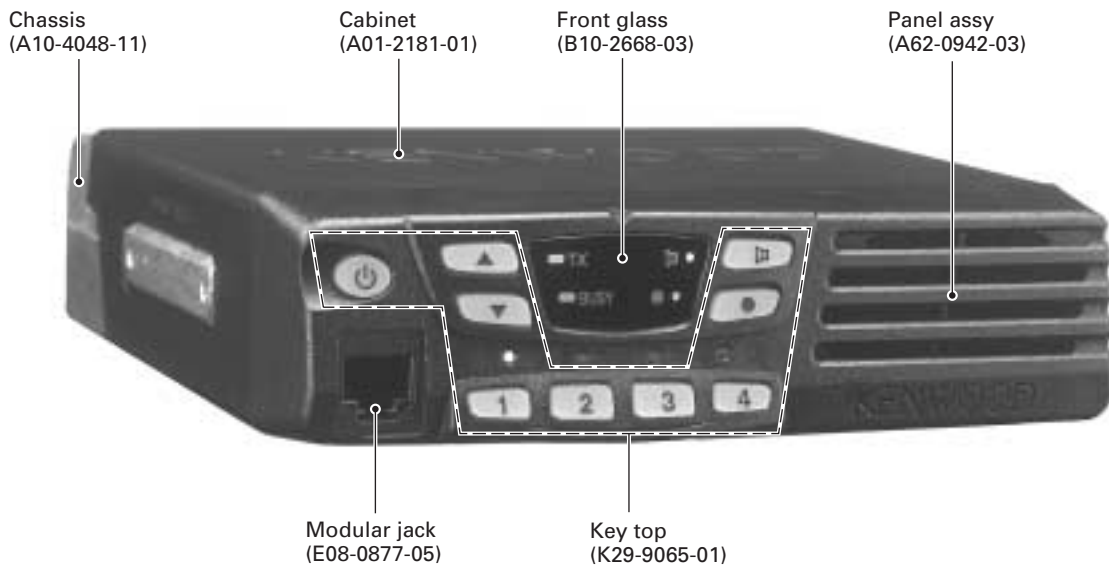
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This TK-8102H service manual contains a number of sections which differ from the service manual (B51-8611-00) for the TK-8102H. For items other than those in this TK-8102H service manual please refer to the service manual (B51-8611-00) for the TK-8102H.



## CONTENTS

<b>GENERAL</b> .....	<b>2</b>	<b>TX-RX UNIT (X57-6390-XX)</b> .....	<b>21</b>
<b>PARTS LIST</b> .....	<b>4</b>	<b>SCHEMATIC DIAGRAM</b> .....	<b>27</b>
<b>EXPLODED VIEW</b> .....	<b>11</b>	<b>BLOCK DIAGRAM</b> .....	<b>31</b>
<b>PACKING</b> .....	<b>12</b>	<b>LEVEL DIAGRAM</b> .....	<b>33</b>
<b>ADJUSTMENT</b> .....	<b>13</b>	<b>SPECIFICATIONS</b> .....	<b>35</b>
<b>PC BOARD VIEWS</b>			
<b>DISPLAY UNIT (X54-3340-20)</b> .....	<b>19</b>		

## GENERAL

### INTRODUCTION

#### SCOPE OF THIS MANUAL

This manual is intended for use by experienced technicians familiar with similar types of commercial grade communications equipment. It contains all required service information for the equipment and is current as of this publication date. Changes which may occur after publication are covered by either Service Bulletins or Manual Revisions, which are issued as required.

#### ORDERING REPLACEMENT PARTS

When ordering replacement parts or equipment information, the full part identification number should be included. This applies to all parts : components, kits, and chassis. If the part number is not known, include the chassis or kit number of which it is a part and a sufficient description of the required component for proper identification.

#### PERSONNEL SAFETY

The following precautions are recommended for personnel safety :

- DO NOT transmit if someone is within two feet (0.6 meter) of the antenna.
- DO NOT transmit until all RF connectors are secure and any open connectors are properly terminated.
- SHUT OFF this equipment when near electrical blasting caps or while in an explosive atmosphere.
- All equipment should be properly grounded before power-up for safe operation.
- This equipment should be serviced by only qualified technicians.

### PRE-INSTALLATION CONSIDERATIONS

#### 1. UNPACKING

Unpack the radio from its shipping container and check for accessory items. If any item is missing, please contact KENWOOD immediately.

#### 2. LICENSING REQUIREMENTS

Federal regulations require a station license for each radio installation (mobile or base) be obtained by the equipment owner. The licensee is responsible for ensuring transmitter power, frequency, and deviation are within the limits permitted by the station license.

Transmitter adjustments may be performed only by a licensed technician holding an FCC first, second or general class commercial radiotelephone operator's license. There is no license required to install or operate the radio.

#### 3. PRE-INSTALLATION CHECKOUT

##### 3-1. Introduction

Each radio is adjusted and tested before shipment. However, it is recommended that receiver and transmitter operation be checked for proper operation before installation.

##### 3-2. Testing

The radio should be tested complete with all cabling and accessories as they will be connected in the final installation. Transmitter frequency, deviation, and power output should be checked, as should receiver sensitivity, squelch operation, and audio output. Signalling equipment operation should be verified.

## GENERAL

### 4. PLANNING THE INSTALLATION

#### 4-1. General

Inspect the vehicle and determine how and where the radio antenna and accessories will be mounted.

Plan cable runs for protection against pinching or crushing wiring, and radio installation to prevent overheating.

#### 4-2. Antenna

The favored location for an antenna is in the center of a large, flat conductive area, usually at the roof center. The trunk lid is preferred, bond the trunk lid and vehicle chassis using ground straps to ensure the lid is at chassis ground.

#### 4-3. Radio

The universal mount bracket allows the radio to be mounted in a variety of ways. Be sure the mounting surface is adequate to support the radio's weight. Allow sufficient space around the radio for air cooling. Position the radio close enough to the vehicle operator to permit easy access to the controls when driving.

#### 4-4. DC Power and wiring

1. This radio may be installed in negative ground electrical systems only. Reverse polarity will cause the cable fuse to blow. Check the vehicle ground polarity before installation to prevent wasted time and effort.
2. Connect the positive power lead directly to the vehicle battery positive terminal. Connecting the Positive lead to any other positive voltage source in the vehicle is not recommended.
3. Connect the ground lead directly to the battery negative terminal.
4. The cable provided with the radio is sufficient to handle the maximum radio current demand. If the cable must be extended, be sure the additional wire is sufficient for the current to be carried and length of the added lead.

### 5. INSTALLATION PLANNING – CONTROL STATIONS

#### 5-1. Antenna system

Control station. The antenna system selection depends on many factors and is beyond the scope of this manual. Your KENWOOD dealer can help you select an antenna system that will best serve your particular needs.

#### 5-2. Radio location

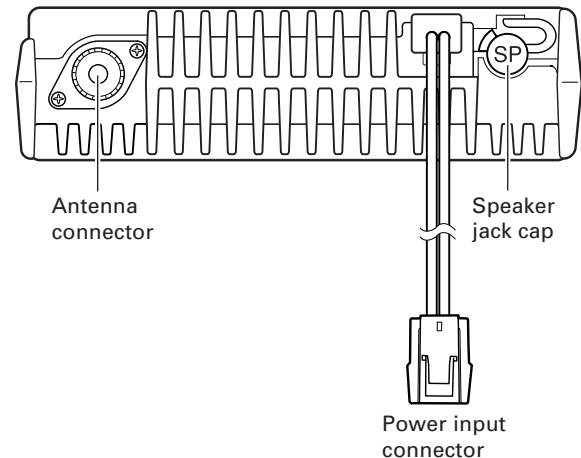
Select a convenient location for your control station radio which is as close as practical to the antenna cable entry point. Secondly, use your system's power supply (which supplies the voltage and current required for your system). Make sure sufficient air can flow around the radio and power supply to allow adequate cooling.

## SERVICE

This radio is designed for easy servicing. Refer to the schematic diagrams, printed circuit board views, and alignment procedures contained in this manual.

## NOTE

If you do not intend to use the 3.5-mm jack for the external speaker, fit the supplied speaker-jack cap to stop dust and sand getting in.



# TK-8102H

## PARTS LIST

\* New Parts.  $\Delta$  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)

Y : AAFES (Europe)

K : USA

T : England

X : Australia

P : Canada

E : Europe

M : Other Areas

### TK-8102H (Y51-4840-XX)

### DISPLAY UNIT (X54-3340-20), TX-RX UNIT (X57-6390-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
<b>TK-8102H</b>					
1	1B		A01-2181-01	CABINET	
2	3B		A10-4048-11	CHASSIS	
3	3A		A62-0942-03	PANEL ASSY	
5	3A		B10-2668-03	FRONT GLASS	
6	1D		B62-1596-00	INSTRUCTION MANUAL (ENGLISH)	
7	1D		B62-1597-00	INSTRUCTION MANUAL (SPANISH)	K,K2,K3
8	3B		B72-2040-04	MODEL NAME PLATE	K
8	3B		B72-2041-04	MODEL NAME PLATE	K2
8	3B		B72-2042-04	MODEL NAME PLATE	K3
8	3B		B72-2043-04	MODEL NAME PLATE	M
8	3B		B72-2044-04	MODEL NAME PLATE	M2
13	3B		E04-0167-05	RF COAXIAL PECEPTACLE (M)	
14	3C		E30-3339-05	DC CORD ACCESSORY	
15	2B		E30-3448-05	DC CORD (RADIO)	
16	2A		E37-0961-05	FLAT CABLE	
17	3A		E37-0962-05	SPEAKER CABLE	
20	3B		F01-1024-24	HEAT CONDUCTOR CUBE (DRIVE FET)	
21	2B		F10-2421-01	SHIELDING COVER (UPPER)	
22	3C		F51-0017-05	FUSE (6*30) ACCESSORY	
-			G10-1274-04	FIBROUS SHEET (PANEL ASSY)	
26	2B,3B		G11-4127-14	RUBBER SHEET	
27	3B		G13-1468-04	CUSHION (DC CORD)	
28	3A		G13-1836-04	CUSHION (SPEAKER)	
29	3B		G53-1525-03	PACKING (PANEL)	
30	2B		G53-1542-03	PACKING (PHONE JACK)	
31	1B		G53-1544-01	PACKING	
32	2A	*	G53-1548-02	GASKET	
34	2C,1D		H12-3112-05	PACKING FIXTURE	
35	2C	*	H13-1190-02	CARTON BOARD	
36	1D		H25-2341-04	PROTECTION BAG	
37	2D	*	H52-1829-12	ITEM CARTON CASE	
39	3C		J19-1584-05	HOLDER ACCESSORY	K,K2,K3
40	3D		J29-0662-03	BRACKET ACCESSORY	
42	3A		K29-9065-01	KEY TOP	
A	2B		N67-2608-46	PAN HEAD SEMS SCREW W	
B	2B,3B		N87-2606-46	BRAZIER HEAD TAPTITE SCREW	
C	1B,2B		N87-2614-46	BRAZIER HEAD TAPTITE SCREW	
44	3C		N99-0395-05	SCREW SET ACCESSORY	
46	3A	*	T07-0739-05	SPEAKER	
47	2C		T91-0624-05	MICROPHONE ACCESSORY	K,K2,K3
<b>DISPLAY UNIT (X54-3340-20)</b>					
D1-4			B30-2238-05	LED (Y)	
D5-10			B30-2239-05	LED (SY)	
D11			B30-2237-05	LED (YG)	
D12			B30-2240-05	LED (SR)	
C4			CK73GB1H103K	CHIP C 0.010UF K	
C8-17			CK73GB1H103K	CHIP C 0.010UF K	
C18			CC73GCH1H101J	CHIP C 100PF J	

Ref. No.	Address	New parts	Parts No.	Description	Destination
C19			CK73GB1H102K	CHIP C 1000PF K	
CN1			E40-6170-05	FLAT CABLE CONNECTOR	
J1			E08-0877-05	MODULAR JACK	
CP3,4			RK75GB1J392J	CHIP-COM 3.9K J 1/16W	
R1-6			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R7-15			RK73FB2A272J	CHIP R 2.7K J 1/10W	
Q1-8			KRC102S	DIGITAL TRANSISTOR	
Q9			KRA225S	DIGITAL TRANSISTOR	
Q10			KRC102S	DIGITAL TRANSISTOR	
<b>TX-RX UNIT (X57-6390-XX) -20 : K,M -21 : K2,M2 -22 : K3</b>					
C12			CK73GB1H102K	CHIP C 1000PF K	
C14			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C22			CK73GB1H102K	CHIP C 1000PF K	
C24			CK73GB1H103K	CHIP C 0.010UF K	
C25			CC73GCH1H220J	CHIP C 22PF J	
C26			CK73GB1C104K	CHIP C 0.10UF K	
C27			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C28			CK73GB1H471K	CHIP C 470PF K	
C29,30			CK73GB1C104K	CHIP C 0.10UF K	
C31,32			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C34			CK73GB1C104K	CHIP C 0.10UF K	
C35			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C36			CK73GB1H103K	CHIP C 0.010UF K	
C37			CK73GB1C104K	CHIP C 0.10UF K	
C40			C92-0514-05	CHIP-TAN 2.2UF 10WV	
C42			CK73GB1H102K	CHIP C 1000PF K	
C44			CK73GB1C273K	CHIP C 0.027UF K	
C45			CK73GB1H102K	CHIP C 1000PF K	
C48,49			CK73GB1H471K	CHIP C 470PF K	
C50			CK73GB1C223K	CHIP C 0.022UF K	
C51			CK73GB1C104K	CHIP C 0.10UF K	
C52			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C53			CK73GB1C104K	CHIP C 0.10UF K	
C54			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C55			CK73GB1H471K	CHIP C 470PF K	
C56			C92-0555-05	CHIP-TAN 0.047UF 35WV	
C58			CK73GB1H122K	CHIP C 1200PF K	
C59			CK73GB1E103K	CHIP C 0.010UF K	
C60			C92-0543-05	CHIP-TAN 3.3UF 10WV	
C61			CK73GB1H821K	CHIP C 820PF K	
C62			CK73GB1H332K	CHIP C 3300PF K	
C63			CK73GB1H472K	CHIP C 4700PF K	
C64			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C65			C92-0001-05	CHIP C 0.1UF 35WV	
C66			CC73GCH1H151J	CHIP C 150PF J	
C69			CK73GB1H471K	CHIP C 470PF K	
C71			CK73GB1C104K	CHIP C 0.10UF K	
C73			CC73GCH1H040B	CHIP C 4.0PF B	K2,M2
C73			CC73GCH1H070B	CHIP C 7.0PF B	K3
C73,74			CC73GCH1H080B	CHIP C 8.0PF B	K,M
C74			CC73GCH1H050B	CHIP C 5.0PF B	K2,M2

## PARTS LIST

TX-RX UNIT (X57-6390-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
C74			CC73GCH1H080B	CHIP C 8.0PF B	K3	C143			CK73GB1H102K	CHIP C 1000PF K	
C75			CC73GCH1H030B	CHIP C 3.0PF B	K2,M2	C144			CK73GB1H392K	CHIP C 3900PF K	
C75			CC73GCH1H060B	CHIP C 6.0PF B	K,M,K3	C145			CC73GCH1H060B	CHIP C 6.0PF B	
C77			CC73GCH1H0R5B	CHIP C 0.5PF B		C146			CK73GB1H471K	CHIP C 470PF K	
C78			CC73GCH1H040B	CHIP C 4.0PF B	K2,M2	C147			CK73GB1E223K	CHIP C 0.022UF K	
C78			CC73GCH1H050B	CHIP C 5.0PF B	K3	C150			CC73GCH1H180J	CHIP C 18PF J	
C78			CC73GCH1H060B	CHIP C 6.0PF B	K,M	C154			CK73GB1H471K	CHIP C 470PF K	
C79			CK73GB1H471K	CHIP C 470PF K		C155			CK73GB1H103K	CHIP C 0.010UF K	
C80			CK73GB1H103K	CHIP C 0.010UF K		C156			CC73GCH1H020B	CHIP C 2.0PF B	
C81			CC73GCH1H271J	CHIP C 270PF J		C157			CK73GB1H471K	CHIP C 470PF K	
C82			CK73GB1H471K	CHIP C 470PF K		C160			CK73FB1C334K	CHIP C 0.33UF K	
C84			CC73GB1C104K	CHIP C 0.10UF K		C162			CC73GCH1H050B	CHIP C 5.0PF B	
C85			CC73GCH1H010B	CHIP C 1.0PF B	K,M	C163			CC73GCH1H120J	CHIP C 12PF J	
C85			CC73GCH1H020B	CHIP C 2.0PF B	K2,M2	C165			CK73GB1H103K	CHIP C 0.010UF K	
C85,86			CC73GCH1H020B	CHIP C 2.0PF B	K3	C166			CC73GCH1H060B	CHIP C 6.0PF B	K2,M2
C86			CC73GCH1H1R5B	CHIP C 1.5PF B	K,M,K2	C166			CC73GCH1H1R5B	CHIP C 1.5PF B	K,M
C86			CC73GCH1H1R5B	CHIP C 1.5PF B	M2	C168			CK73GB1H103K	CHIP C 0.010UF K	
C87			CC73GCH1H560J	CHIP C 56PF J		C169			CK73GB1H471K	CHIP C 470PF K	
C88			CK73GB1C104K	CHIP C 0.10UF K		C170			CC73GCH1H050B	CHIP C 5.0PF B	K,M,K3
C89			CC73GCH1H270J	CHIP C 27PF J		C170			CC73GCH1H100C	CHIP C 10PF C	K2,M2
C90			CK73GB1H471K	CHIP C 470PF K		C171			CC73GCH1H080B	CHIP C 8.0PF B	
C94			CC73GCH1H101J	CHIP C 100PF J		C173			CK73GB1C104K	CHIP C 0.10UF K	
C95			CC73GCH1H020B	CHIP C 2.0PF B	K2,K3,M2	C174			CC73GCH1H100C	CHIP C 10PF C	
C95			CC73GCH1H050B	CHIP C 5.0PF B	K,M	C176			CK73GB1H471K	CHIP C 470PF K	
C97			CC73GCH1H020B	CHIP C 2.0PF B	K2,K3,M2	C177			CC73GCH1H070B	CHIP C 7.0PF B	
C97			CC73GCH1H040B	CHIP C 4.0PF B	K,M	C178			CK73GB1C104K	CHIP C 0.10UF K	
C99			CC73GCH1H050B	CHIP C 5.0PF B	K,M	C179			CK73GB1H471K	CHIP C 470PF K	
C99,100			CC73GCH1H030B	CHIP C 3.0PF B	K2,K3,M2	C180			CK73GB1H103J	CHIP C 0.010UF J	
C100			CC73GCH1H040B	CHIP C 4.0PF B	K,M	C182			CK73GB1C104K	CHIP C 0.10UF K	
C101			CK73GB1H471K	CHIP C 470PF K		C184			CK73GB1H471K	CHIP C 470PF K	
C102			CK73GB1C104K	CHIP C 0.10UF K		C185			CK73GB1H103J	CHIP C 0.010UF J	
C103			C92-0568-05	CHIP-TAN 22UF 10WV		C186			CC73GCH1H0R5B	CHIP C 0.5PF B	
C104,105			CC73GCH1H0R5B	CHIP C 0.5PF B		C187,188			CK73GB1H471K	CHIP C 470PF K	
C106			CC73GCH1H180J	CHIP C 18PF J		C191			CK73GB1C473K	CHIP C 0.047UF K	
C107			CC73GCH1H060B	CHIP C 6.0PF B		C192,193			CK73GB1H103J	CHIP C 0.010UF J	
C108,109			CK73GB1H471K	CHIP C 470PF K		C194			CK73GB1H471K	CHIP C 470PF K	
C110			CC73GCH1H060B	CHIP C 6.0PF B		C196			CK73GB1C333K	CHIP C 0.033UF K	
C111,112			CC73GCH1H121J	CHIP C 120PF J	K3	C197			CK73GB1H471K	CHIP C 470PF K	
C111,112			CC73GCH1H221J	CHIP C 220PF J	K,M,K2	C198			CK73GB1C333K	CHIP C 0.033UF K	
C111,112			CC73GCH1H221J	CHIP C 220PF J	M2	C199			CC73GCH1H180J	CHIP C 18PF J	K2,M2
C113			CK73GB1H471K	CHIP C 470PF K		C199			CC73GCH1H330J	CHIP C 33PF J	K3
C114			CK73GB1C104K	CHIP C 0.10UF K		C199			CC73GCH1H560J	CHIP C 56PF J	K,M
C115			CC73GCH1H060B	CHIP C 6.0PF B		C200			CC73GCH1H070B	CHIP C 7.0PF B	K2,M2
C116,117			CK73GB1C104K	CHIP C 0.10UF K		C200			CC73GCH1H080B	CHIP C 8.0PF B	K3
C118			CC73GCH1H020B	CHIP C 2.0PF B		C200			CC73GCH1H090B	CHIP C 9.0PF B	K,M
C119			CK73GB1H103K	CHIP C 0.010UF K		C201			CK73GB1H471K	CHIP C 470PF K	
C120			CK73GB1H102K	CHIP C 1000PF K	K3	C202			CC73GCH1H150J	CHIP C 15PF J	
C120			CK73GB1H472K	CHIP C 4700PF K	K,M,K2	C207			CC73GCH1H221J	CHIP C 220PF J	
C120			CK73GB1H472K	CHIP C 4700PF K	M2	C208			CK73GB1H103K	CHIP C 0.010UF K	
C122			CC73GCH1H040B	CHIP C 4.0PF B		C211			CK73GB1E183K	CHIP C 0.018UF K	
C123			C92-0662-05	CHIP-TAN 15UF 6.3WV		C212			CK73GB1H822K	CHIP C 8200PF K	
C125,126			CK73GB1H471K	CHIP C 470PF K		C213			CK73GB1H471K	CHIP C 470PF K	
C127			CK73GB1H103K	CHIP C 0.010UF K		C214			CK73GB1C683K	CHIP C 0.068UF K	
C128			CK73GB1H102K	CHIP C 1000PF K		C217			CK73FB1A105K	CHIP C 1.0UF K	
C129			CK73GB1C104K	CHIP C 0.10UF K		C218			CK73GB1C104K	CHIP C 0.10UF K	
C135			CK73GB1H103K	CHIP C 0.010UF K		C220			CK73GB1C473K	CHIP C 0.047UF K	
C136			CK73GB1H102K	CHIP C 1000PF K		C221			CK73GB1H471K	CHIP C 470PF K	
C138			CC73GCH1H330J	CHIP C 33PF J		C222			CK73GB1E123K	CHIP C 0.012UF K	
C141			CK73GB1H471K	CHIP C 470PF K		C223			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C142			CK73GB1E223K	CHIP C 0.022UF K		C225			CK73GB1H222K	CHIP C 2200PF K	

## PARTS LIST

### TX-RX UNIT (X57-6390-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
C226			CK73GB1C683K	CHIP C 0.068UF K		C367			CK73GB1H471K	CHIP C 470PF K	K,M,K3
C228			CK73GB1H471K	CHIP C 470PF K		C369			CK73GB1H471K	CHIP C 470PF K	
C236			CC73GCH1H060B	CHIP C 6.0PF B	K2,M2	C371,372			CK73GB1H471K	CHIP C 470PF K	
C236			CC73GCH1H070B	CHIP C 7.0PF B	K,M,K3	C374			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C239			CK73GB1H471K	CHIP C 470PF K		C375			CK73GB1C104K	CHIP C 0.10UF K	
C247			CC73GCH1H050B	CHIP C 5.0PF B	K2,M2	C376			CK73GB1H471K	CHIP C 470PF K	
C247			CC73GCH1H070B	CHIP C 7.0PF B	K,M,K3	C377			C92-0004-05	CHIP-TAN 1.0UF 16WV	
C251			CK73GB1H471K	CHIP C 470PF K		C378			CK73GB1H471K	CHIP C 470PF K	
C255			CC73GCH1H0R5B	CHIP C 0.5PF B		C379			CK73GB1C104K	CHIP C 0.10UF K	
C262		*	C92-0795-05	CHIP-TAN 22UF 10WV		C511			CK73GB1H471K	CHIP C 470PF K	
C265		*	C92-0795-05	CHIP-TAN 22UF 10WV		C512,513			CC73GCH1H101J	CHIP C 100PF J	
C266			CK73GB1H030B	CHIP C 3.0PF B	K2,M2	C515			CK73GB1H471K	CHIP C 470PF K	
C266			CC73GCH1H060B	CHIP C 6.0PF B	K,M,K3	C518			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C268		*	C92-0795-05	CHIP-TAN 22UF 10WV		C520			CK73GB1H102K	CHIP C 1000PF K	
C271			CK73GB1H103K	CHIP C 0.010UF K		C521			CK73GB1H392K	CHIP C 3900PF K	
C273			CC73GCH1H0R5B	CHIP C 0.5PF B		C522			CK73FB1A105K	CHIP C 1.0UF K	
C274			CK73GB1H103K	CHIP C 0.010UF K		C524			CK73GB1H102K	CHIP C 1000PF K	
C275			CK73GB1C104K	CHIP C 0.10UF K		C526			CK73GB1H102K	CHIP C 1000PF K	
C277			CK73FB1A105K	CHIP C 1.0UF K		C802			CK73GB1H471K	CHIP C 470PF K	
C279			CK73GB1H471K	CHIP C 470PF K		C803			CC73FCH1H120J	CHIP C 12PF J	K,M,K2
C280		*	C92-0795-05	CHIP-TAN 22UF 10WV		C803			CC73FCH1H120J	CHIP C 12PF J	M2
C283			CK73GB1H471K	CHIP C 470PF K		C803			CC73FCH1H270J	CHIP C 27PF J	K3
C284			CK73FB1C224K	CHIP C 0.22UF K		C804,805			CK73GB1H471K	CHIP C 470PF K	
C286			CK73GB1C104K	CHIP C 0.10UF K		C806			CC73FCH1H100D	CHIP C 10PF D	
C288			C92-0721-05	ELECTRO 330UF 25WV		C807			CK73GB1C104K	CHIP C 0.10UF K	
C290			CK73GB1H471K	CHIP C 470PF K		C808			C92-0040-05	CHIP-ELE 47UF 16WV	
C295			CK73GB1H471K	CHIP C 470PF K		C809			CK73GB1H471K	CHIP C 470PF K	
C298,299			CK73GB1H471K	CHIP C 470PF K		C810			CK73GB1H103K	CHIP C 0.010UF K	
C302			C92-0040-05	CHIP-ELE 47UF 16WV		C811			CC73FCH1H471J	CHIP C 470PF J	
C304			CK73GB1H471K	CHIP C 470PF K		C812			CC73FCH1H120J	CHIP C 12PF J	
C307			CK73GB1H471K	CHIP C 470PF K		C813			CC73FCH1H150J	CHIP C 15PF J	K3
C308			C92-0560-05	CHIP-TAN 10UF 6.3WV		C813,814			CC73FCH1H220J	CHIP C 22PF J	K,M,K2
C310			CK73GB1H103K	CHIP C 0.010UF K		C813,814			CC73FCH1H220J	CHIP C 22PF J	M2
C314			CK73GB1C104K	CHIP C 0.10UF K		C814			CC73FCH1H330J	CHIP C 33PF J	K3
C316			C92-0516-05	CHIP-TAN 4.7UF 16WV		C815			CK73FB1H471K	CHIP C 470PF K	
C318			CK73GB1H471K	CHIP C 470PF K		C817			C93-0566-05	CHIP C 33PF J	K2,K3,M2
C320			C92-0722-05	ELECTRO 470UF 16WV		C817			C93-0567-05	CHIP C 39PF J	K,M
C326			CK73GB1H471K	CHIP C 470PF K		C818			CK73FB1H471K	CHIP C 470PF K	
C327			CK73GB1H102K	CHIP C 1000PF K		C820			C93-0563-05	CHIP C 18PF J	K2,M2
C328			CK73GB1H471K	CHIP C 470PF K		C820			C93-0564-05	CHIP C 22PF J	K,M
C329			CK73GB1H103K	CHIP C 0.010UF K		C820			C93-0565-05	CHIP C 27PF J	K3
C330-332			CC73GCH1H101J	CHIP C 100PF J		C821			CK73FB1C474K	CHIP C 0.47UF K	
C333			CK73GB1H471K	CHIP C 470PF K		C823			C92-0719-05	ELECTRO 47UF 25WV	
C334			CC73GCH1H180J	CHIP C 18PF J		C825,826			C93-0563-05	CHIP C 18PF 500WV	K3
C335,336			CK73GB1C104K	CHIP C 0.10UF K		C826			C93-0560-05	CHIP C 10PF 500WV	K2,M2
C337			C92-0507-05	CHIP-TAN 4.7UF 6.3WV		C826			C93-0562-05	CHIP C 15PF 500WV	K,M
C338			CK73GB1C104K	CHIP C 0.10UF K		C827			C93-0599-05	CHIP C 470PF K	
C340			C92-0560-05	CHIP-TAN 10UF 6.3WV		C828,829			CM73F2H300J	CHIP C 30PF 500WV	
C341			CK73GB1H471K	CHIP C 470PF K		C831			CM73F2H200J	CHIP C 20PF J	K2,M2
C342			C92-0507-05	CHIP-TAN 4.7UF 6.3WV		C831			CM73F2H270J	CHIP C 27PF J	K,M
C344-350			CK73GB1H471K	CHIP C 470PF K		C831			CM73F2H300J	CHIP C 30PF J	K3
C351			CK73GB1H102K	CHIP C 1000PF K		C832			C93-0599-05	CHIP C 470PF K	
C352,353			CK73GB1H471K	CHIP C 470PF K		C833			CK73FB1C474K	CHIP C 0.47UF K	
C355			CK73GB1C104K	CHIP C 0.10UF K		C835			C93-0557-05	CHIP C 7.0PF D	K2,M2
C358-360			CK73GB1H471K	CHIP C 470PF K		C835			C93-0558-05	CHIP C 8.0PF D	K,M,K3
C363			CC73GCH1H050B	CHIP C 5.0PF B	K2,M2	C836			CK73GB1H471K	CHIP C 470PF K	
C363			CC73GCH1H080B	CHIP C 8.0PF B	K,M,K3	C837			C93-0599-05	CHIP C 470PF K	
C364,365			CK73GB1H471K	CHIP C 470PF K		C838,839			CK73GB1H103K	CHIP C 0.010UF K	
C366			CC73GCH1H070B	CHIP C 7.0PF B		C841			C93-0560-05	CHIP C 10PF D	K3
C367			CC73GCH1H470J	CHIP C 47PF J	K2,M2	C841			C93-0561-05	CHIP C 12PF J	K,M

## PARTS LIST

TX-RX UNIT (X57-6390-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
C841			C93-0599-05	CHIP C 470PF K	K2,M2	L19,20			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K2,K3,M2
C842			C93-0552-05	CHIP C 2.0PF C	K2,M2	L21			L41-2775-06	SMALL FIXED INDUCTOR	
C842			C93-0556-05	CHIP C 6.0PF D	K,M,K3	L22			L34-4554-05	COIL	
C843			CC73GCH1H0R5B	CHIP C 0.5PF B		L23			L92-0140-05	FERRITE CHIP	
C844			CC73GCH1H020B	CHIP C 2.0PF B		L24			L41-2775-06	SMALL FIXED INDUCTOR	
C846			CK73GB1H471K	CHIP C 470PF K		L26,27			L40-4785-85	SMALL FIXED INDUCTOR (0.47UH)	
C847			CC73GCH1H0R5B	CHIP C 0.5PF B		L30			L34-4603-05	AIR-CORE COIL	K2,M2
C848			CC73GCH1H020B	CHIP C 2.0PF B		L30			L34-4604-05	AIR-CORE COIL	K,M
C849			C93-0555-05	CHIP C 5.0PF C	K2,M2	L30			L34-4605-05	AIR-CORE COIL	K3
C849			C93-0558-05	CHIP C 8.0PF D	K,M	L31			L41-6865-08	SMALL FIXED INDUCTOR	
C849			C93-0560-05	CHIP C 10PF D	K3	L32			L34-4604-05	AIR-CORE COIL	K,M,K2
C852			CK73GB1H471K	CHIP C 470PF K		L32			L34-4604-05	AIR-CORE COIL	M2
C853			C93-0553-05	CHIP C 3.0PF C	K2,K3,M2	L32			L34-4605-05	AIR-CORE COIL	K3
C853			C93-0555-05	CHIP C 5.0PF C	K,M	L36			L34-4603-05	AIR-CORE COIL	K2,M2
C854			CK73GB1H103K	CHIP C 0.010UF K		L36			L34-4604-05	AIR-CORE COIL	K,M
TC1			C05-0245-05	CERAMIC TRIMMER CAP (10PF)	K3	L36			L34-4605-05	AIR-CORE COIL	K3
TC1,2			C05-0245-05	CERAMIC TRIMMER CAP (10PF)	K,M,K2	L38			L34-4604-05	AIR-CORE COIL	K,M,K2
TC1,2			C05-0245-05	CERAMIC TRIMMER CAP (10PF)	M2	L38			L34-4604-05	AIR-CORE COIL	M2
TC2,3			C05-0399-05	CERAMIC TRIMMER CAP (6PF)	K3	L38			L34-4605-05	AIR-CORE COIL	K3
TC3			C05-0399-05	CERAMIC TRIMMER CAP (6PF)	K,M,K2	L46			L41-1575-06	SMALL FIXED INDUCTOR	
TC3			C05-0399-05	CERAMIC TRIMMER CAP (6PF)	M2	L48,49			L34-4604-05	AIR-CORE COIL	
TC5			C05-0399-05	CERAMIC TRIMMER CAP (6PF)	K,M,K2	L50			L40-3975-92	SMALL FIXED INDUCTOR (39NH)	
TC5			C05-0399-05	CERAMIC TRIMMER CAP (6PF)	M2	L51			L40-1875-92	SMALL FIXED INDUCTOR (18NH)	K,M,K2
TC5			C05-0400-05	CERAMIC TRIMMER CAP (3PF)	K3	L51			L40-1875-92	SMALL FIXED INDUCTOR (18NH)	M2
						L51			L40-2275-92	SMALL FIXED INDUCTOR (22NH)	K3
CN1			E40-5651-05	FLAT CABLE CONNECTOR							
CN5			E40-3246-05	PIN ASSY		L800			L41-3363-08	SMALL FIXED INDUCTOR	
CN6			E23-0486-05	TERMINAL		L801			L41-1075-08	SMALL FIXED INDUCTOR	
J1			E11-0425-05	3.5D PHONE JACK (3P)		L802			L34-4602-05	AIR-CORE COIL	
						L803			L34-4607-05	AIR-CORE COIL	
101	3B		F20-3320-04	INSULATING SHEET (C363/R835)	K3	L804			L34-4694-05	AIR-CORE COIL	
CF1			L72-0993-05	CERAMIC FILTER		L806			L34-4667-05	AIR-CORE COIL	
CF2			L72-0999-05	CERAMIC FILTER		L807			L34-4669-05	AIR-CORE COIL	
L1			L92-0140-05	FERRITE CHIP		L808,809			L34-4694-05	AIR-CORE COIL	
L2			L41-1005-08	SMALL FIXED INDUCTOR		L810			L34-4667-05	AIR-CORE COIL	
L3			L92-0138-05	FERRITE CHIP		X1			L77-1868-15	TCXO (16.8MHZ)	
L4			L92-0140-05	FERRITE CHIP		X2			L77-1867-05	CRYSTAL RESONATOR (7.159MHZ)	
L5,6			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K,M	X2			L77-1905-05	CRYSTAL RESONATOR (7.159MHZ)	
L5,6			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K2,K3,M2	XF1			L71-0591-05	MCF (49.95MHZ/UM-4)	
L7			L92-0140-05	FERRITE CHIP							
L8			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K,M	R1			RK73GB1J332J	CHIP R 3.3K J 1/16W	
						R2			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L8			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K2,K3,M2	R3			R92-1252-05	CHIP R 0 OHM J 1/16W	
L9			L40-3378-67	SMALL FIXED INDUCTOR (33NH)	K,M	R4,5			RK73GB1J101J	CHIP R 100 J 1/16W	
L9			L40-3978-67	SMALL FIXED INDUCTOR (39NH)	K2,M2	R6,7			R92-1252-05	CHIP R 0 OHM J 1/16W	
L9			L40-5678-67	SMALL FIXED INDUCTOR (56NH)	K3						
L10			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K,M	R10,11			RK73GB1J102J	CHIP R 1.0K J 1/16W	
						R12			RK73GB1J152J	CHIP R 1.5K J 1/16W	
L10			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K2,K3,M2	R13			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L11			L40-2778-67	SMALL FIXED INDUCTOR (27NH)	K,M	R15			RK73GB1J100J	CHIP R 10 J 1/16W	
L11			L40-3378-67	SMALL FIXED INDUCTOR (33NH)	K2,M2	R18			RK73GB1J913J	CHIP R 91K J 1/16W	
L11			L40-4778-67	SMALL FIXED INDUCTOR (47NH)	K3						
L12			L40-3381-86	SMALL FIXED INDUCTOR (0.33UH)		R19			RK73GB1J683J	CHIP R 68K J 1/16W	
						R20			RK73GB1J104J	CHIP R 100K J 1/16W	
L13			L40-1885-92	SMALL FIXED INDUCTOR (180NH)	K2,K3,M2	R21			RK73GB1J152J	CHIP R 1.5K J 1/16W	
L13			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K,M	R22			RK73GB1J122J	CHIP R 1.2K J 1/16W	
L14			L40-3381-86	SMALL FIXED INDUCTOR (0.33UH)		R23			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L15			L40-1885-92	SMALL FIXED INDUCTOR (180NH)	K2,M2						
L15			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K,M	R24			RK73GB1J754J	CHIP R 750K J 1/16W	
						R26,27			RK73GB1J153D	CHIP R 15K D 1/16W	
L15			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K3	R28			R92-1252-05	CHIP R 0 OHM J 1/16W	
L16			L92-0140-05	FERRITE CHIP		R30			RK73GB1J152J	CHIP R 1.5K J 1/16W	
L17			L41-3385-08	SMALL FIXED INDUCTOR		R31			RK73GB1J244J	CHIP R 240K J 1/16W	
L18			L92-0140-05	FERRITE CHIP							
L19,20			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K,M	R32			R92-1252-05	CHIP R 0 OHM J 1/16W	



## PARTS LIST

### TX-RX UNIT (X57-6390-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
R33			RK73GB1J102J	CHIP R 1.0K J 1/16W		R108			RK73GB1J274J	CHIP R 270K J 1/16W	M2
R34			RK73GB1J123J	CHIP R 12K J 1/16W		R109			R92-1252-05	CHIP R 0 OHM J 1/16W	
R36			RK73GB1J471J	CHIP R 470 J 1/16W		R111			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R37-39			RK73GB1J103J	CHIP R 10K J 1/16W		R113			RK73GB1J183J	CHIP R 18K J 1/16W	
R40			RK73GB1J224J	CHIP R 220K J 1/16W		R114			R92-1252-05	CHIP R 0 OHM J 1/16W	
R41,42			RK73GB1J183J	CHIP R 18K J 1/16W		R115			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R43			RK73GB1J223J	CHIP R 22K J 1/16W		R117			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R44			R92-1252-05	CHIP R 0 OHM J 1/16W		R118			RK73GB1J473J	CHIP R 47K J 1/16W	
R45			RK73GB1J334J	CHIP R 330K J 1/16W		R119			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R46			RK73GB1J102J	CHIP R 1.0K J 1/16W		R120			RK73GB1J473J	CHIP R 47K J 1/16W	
R47			RK73GB1J473J	CHIP R 47K J 1/16W		R122,123			RK73GB1J473J	CHIP R 47K J 1/16W	
R48			RK73GB1J683J	CHIP R 68K J 1/16W		R124			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R49			RK73GB1J823J	CHIP R 82K J 1/16W		R127			RK73GB1J104J	CHIP R 100K J 1/16W	
R50			RK73GB1J153J	CHIP R 15K J 1/16W		R128			RK73GB1J105J	CHIP R 1.0M J 1/16W	
R51			RK73GB1J102J	CHIP R 1.0K J 1/16W		R130			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R52			RK73GB1J683J	CHIP R 68K J 1/16W		R132			RK73GB1J471J	CHIP R 470 J 1/16W	
R53			RK73GB1J823J	CHIP R 82K J 1/16W		R133			RK73GB1J101J	CHIP R 100 J 1/16W	
R54			RK73GB1J103J	CHIP R 10K J 1/16W		R134			R92-1252-05	CHIP R 0 OHM J 1/16W	
R55			RK73GB1J222J	CHIP R 2.2K J 1/16W		R135-140			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R56			RK73GB1J152J	CHIP R 1.5K J 1/16W		R141			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R57			RK73GB1J683J	CHIP R 68K J 1/16W		R142-144			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R58			RK73GB1J473J	CHIP R 47K J 1/16W		R145			R92-1252-05	CHIP R 0 OHM J 1/16W	
R59			RK73GB1J223J	CHIP R 22K J 1/16W		R146			RK73GB1J334J	CHIP R 330K J 1/16W	
R60			RK73GB1J103J	CHIP R 10K J 1/16W		R147			RK73GB1J124J	CHIP R 120K J 1/16W	
R61			RK73GB1J473J	CHIP R 47K J 1/16W		R149			RK73GB1J104J	CHIP R 100K J 1/16W	
R62,63			RK73GB1J104J	CHIP R 100K J 1/16W		R150			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R64			RK73GB1J154J	CHIP R 150K J 1/16W		R151			RK73GB1J103J	CHIP R 10K J 1/16W	
R67			RK73GB1J223J	CHIP R 22K J 1/16W		R152			RK73GB1J473J	CHIP R 47K J 1/16W	
R70			RK73GB1J473J	CHIP R 47K J 1/16W		R153			RK73GB1J561J	CHIP R 560 J 1/16W	
R72			RK73GB1J154J	CHIP R 150K J 1/16W		R154			RK73GB1J471J	CHIP R 470 J 1/16W	
R73,74			RK73GB1J103J	CHIP R 10K J 1/16W		R155			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R76			RK73GB1J101J	CHIP R 100 J 1/16W		R156			RK73GB1J101J	CHIP R 100 J 1/16W	
R77,78			RK73GB1J103J	CHIP R 10K J 1/16W		R158			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R80-85			RK73GB1J102J	CHIP R 1.0K J 1/16W		R159			RK73GB1J101J	CHIP R 100 J 1/16W	
R86			RK73GB1J101J	CHIP R 100 J 1/16W		R160			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R87			RK73GB1J223J	CHIP R 22K J 1/16W		R161			RK73GB1J393J	CHIP R 39K J 1/16W	
R88			RK73GB1J101J	CHIP R 100 J 1/16W		R162			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R89			RK73GB1J104J	CHIP R 100K J 1/16W		R163			RK73GB1J561J	CHIP R 560 J 1/16W	
R94			RK73GB1J472J	CHIP R 4.7K J 1/16W		R164			RK73GB1J473J	CHIP R 47K J 1/16W	
R95			R92-1252-05	CHIP R 0 OHM J 1/16W		R165			R92-1252-05	CHIP R 0 OHM J 1/16W	
R97			RK73GB1J102J	CHIP R 1.0K J 1/16W		R166			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R98			RK73GB1J221J	CHIP R 220 J 1/16W	K,M	R167			RK73GB1J470J	CHIP R 47 J 1/16W	
R98			RK73GB1J271J	CHIP R 270 J 1/16W	K2,M2	R168			RK73GB1J183J	CHIP R 18K J 1/16W	
R98			RK73GB1J331J	CHIP R 330 J 1/16W	K3	R169			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R99			RK73GB1J151J	CHIP R 150 J 1/16W	K,M	R172			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R99			RK73GB1J221J	CHIP R 220 J 1/16W	K2,M2	R173			RK73GB1J104J	CHIP R 100K J 1/16W	
R99			RK73GB1J271J	CHIP R 270 J 1/16W	K3	R174			RK73GB1J220J	CHIP R 22 J 1/16W	
R100			RK73GB1J102J	CHIP R 1.0K J 1/16W		R175			RK73GB1J470J	CHIP R 47 J 1/16W	
R101			RK73GB1J124J	CHIP R 120K J 1/16W		R176			RK73GB1J823J	CHIP R 82K J 1/16W	
R102			RK73GB1J223J	CHIP R 22K J 1/16W		R177			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R103			RK73GB1J182J	CHIP R 1.8K J 1/16W	K,M,K2	R179			RK73GB1J154J	CHIP R 150K J 1/16W	
R103			RK73GB1J182J	CHIP R 1.8K J 1/16W	M2	R181			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R103			RK73GB1J183J	CHIP R 18K J 1/16W	K3	R183			RK73GB1J100J	CHIP R 10 J 1/16W	
R104,105			R92-1252-05	CHIP R 0 OHM J 1/16W		R184			R92-1252-05	CHIP R 0 OHM J 1/16W	
R106			RK73GB1J123J	CHIP R 12K J 1/16W	K3	R185			RK73GB1J471J	CHIP R 470 J 1/16W	
R106			RK73GB1J472J	CHIP R 4.7K J 1/16W	K,M,K2	R186			RK73GB1J100J	CHIP R 10 J 1/16W	
R106			RK73GB1J472J	CHIP R 4.7K J 1/16W	M2	R188			RK73GB1J104J	CHIP R 100K J 1/16W	
R107			RK73GB1J101J	CHIP R 100 J 1/16W		R189			RK73GH1J124D	CHIP R 120K D 1/16W	
R108			RK73GB1J224J	CHIP R 220K J 1/16W	K3	R190			RK73GB1J123J	CHIP R 12K J 1/16W	
R108			RK73GB1J274J	CHIP R 270K J 1/16W	K,M,K2	R191			RK73GH1J913D	CHIP R 91K D 1/16W	

## PARTS LIST

TX-RX UNIT (X57-6390-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
R192			RK73GB1J562J	CHIP R 5.6K J 1/16W		R302			RK73GB1J683J	CHIP R 68K J 1/16W	
R194			RK73GB1J153J	CHIP R 15K J 1/16W		R303			RK73GB1J334J	CHIP R 330K J 1/16W	
R195			RK73GH1J562D	CHIP R 5.6K D 1/16W		R304			RK73GB1J224J	CHIP R 220K J 1/16W	
R197			RK73GB1J332J	CHIP R 3.3K J 1/16W		R305			RK73GB1J913J	CHIP R 91K J 1/16W	
R198			RK73GB1J100J	CHIP R 10 J 1/16W		R306			RK73GB1J334J	CHIP R 330K J 1/16W	
R202			RK73GB1J332J	CHIP R 3.3K J 1/16W		R307			RK73GB1J333J	CHIP R 33K J 1/16W	
R204			RK73GB1J104J	CHIP R 100K J 1/16W		R308			R92-1252-05	CHIP R 0 OHM J 1/16W	
R207			RK73GB1J823J	CHIP R 82K J 1/16W		R310			RK73GB1J104J	CHIP R 100K J 1/16W	
R208			RK73GB1J151J	CHIP R 150 J 1/16W		R311			RK73GB1J101J	CHIP R 100 J 1/16W	
R209			RK73GB1J394J	CHIP R 390K J 1/16W		R313			RK73GB1J821J	CHIP R 820 J 1/16W	
R210			RK73GB1J334J	CHIP R 330K J 1/16W		R319,320			RK73GB1J474J	CHIP R 470K J 1/16W	
R211			RK73GB1J473J	CHIP R 47K J 1/16W		R321			R92-1252-05	CHIP R 0 OHM J 1/16W	
R214			RK73GB1J562J	CHIP R 5.6K J 1/16W		R322			RK73GB1J683J	CHIP R 68K J 1/16W	
R215			RK73GB1J104J	CHIP R 100K J 1/16W		R323			R92-1252-05	CHIP R 0 OHM J 1/16W	
R216			RK73GB1J562J	CHIP R 5.6K J 1/16W		R324,325			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R217			RK73GB1J474J	CHIP R 470K J 1/16W		R326			RK73GB1J333J	CHIP R 33K J 1/16W	
R218			RK73GB1J394J	CHIP R 390K J 1/16W		R327			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R219			RK73GB1J105J	CHIP R 1.0M J 1/16W		R328			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R227			RK73GB1J223J	CHIP R 22K J 1/16W		R329			RK73GB1J474J	CHIP R 470K J 1/16W	
R228			RK73GB1J184J	CHIP R 180K J 1/16W		R330			RK73GB1J394J	CHIP R 390K J 1/16W	
R229			RK73GB1J223J	CHIP R 22K J 1/16W		R335			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R232			RK73GB1J184J	CHIP R 180K J 1/16W		R800			RK73GB1J153J	CHIP R 15K J 1/16W	
R234			RK73GB1J153J	CHIP R 15K J 1/16W		R801			RK73FB2A220J	CHIP R 22 J 1/10W	
R237			RK73GB1J104J	CHIP R 100K J 1/16W		R802			RK73GB1J333J	CHIP R 33K J 1/16W	
R242			RK73GB1J472J	CHIP R 4.7K J 1/16W		R803			R92-1217-05	CHIP R 0 OHM	
R245			RK73GB1J104J	CHIP R 100K J 1/16W		R805			RK73GB1J101J	CHIP R 100 J 1/16W	
R248			RK73GB1J473J	CHIP R 47K J 1/16W		R806			RK73FB2A821J	CHIP R 820 J 1/10W	K3
R252			RK73GB1J152J	CHIP R 1.5K J 1/16W		R807			R92-1211-05	CHIP R 5.6 J 1/2W	K3
R255			RK73GB1J473J	CHIP R 47K J 1/16W		R807			R92-1217-05	CHIP R 0 OHM	K,M,K2
R256			RK73GB1J104J	CHIP R 100K J 1/16W		R807			R92-1217-05	CHIP R 0 OHM	M2
R258			RK73GB1J104J	CHIP R 100K J 1/16W		R808			RK73GB1J474J	CHIP R 470K J 1/16W	
R260			RK73GB1J473J	CHIP R 47K J 1/16W		R809			RK73FB2A821J	CHIP R 820 J 1/10W	K3
R261			RK73GB1J123J	CHIP R 12K J 1/16W		R810			RK73GB1J471J	CHIP R 470 J 1/16W	
R262			R92-1215-05	CHIP R 470 J 1/2W		R811			RK73GB1J473J	CHIP R 47K J 1/16W	
R264			RK73GB1J391J	CHIP R 390 J 1/16W		R812			RK73GB1J471J	CHIP R 470 J 1/16W	
R265			RK73GB1J472J	CHIP R 4.7K J 1/16W		R813			RK73EB2B100J	CHIP R 10 J 1/8W	
R266			RK73GB1J334J	CHIP R 330K J 1/16W		R814			RK73GB1J683J	CHIP R 68K J 1/16W	
R268			R92-0670-05	CHIP R 0 OHM		R815			RK73GB1J821J	CHIP R 820 J 1/16W	
R271			RK73GB1J472J	CHIP R 4.7K J 1/16W		R818			R92-1252-05	CHIP R 0 OHM J 1/16W	
R273			RK73GB1J102J	CHIP R 1.0K J 1/16W		R819			RK73GB1J473J	CHIP R 47K J 1/16W	
R274			RK73GB1J223J	CHIP R 22K J 1/16W		R820			RK73GB1J563J	CHIP R 56K J 1/16W	
R275			RK73GB1J333J	CHIP R 33K J 1/16W		R822			R92-1215-05	CHIP R 470 J 1/2W	
R276-278			RK73GB1J102J	CHIP R 1.0K J 1/16W		R823,824			RK73GB1J473J	CHIP R 47K J 1/16W	
R279			RK73GJ1J393D	CHIP R 39K D 1/16W		R825			R92-1252-05	CHIP R 0 OHM J 1/16W	
R280			RK73GH1J274D	CHIP R 270K D 1/16W		R826			RK73GB1J221J	CHIP R 220 J 1/16W	
R281			RK73GB1J102J	CHIP R 1.0K J 1/16W		R827			RK73GB1J473J	CHIP R 47K J 1/16W	
R282			RK73GB1J684J	CHIP R 680K J 1/16W		R828			R92-1213-05	CHIP R 100 J 1/2W	
R283			RK73GB1J184J	CHIP R 180K J 1/16W		R829,830			RK73GB1J223J	CHIP R 22K J 1/16W	
R285			RK73GB1J681J	CHIP R 680 J 1/16W		R831			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R286			RK73GB1J124J	CHIP R 120K J 1/16W		R832			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R287			RK73GB1J472J	CHIP R 4.7K J 1/16W		R833			RK73GB1J473J	CHIP R 47K J 1/16W	
R288,289			R92-1252-05	CHIP R 0 OHM J 1/16W		R834			RK73GB1J103J	CHIP R 10K J 1/16W	
R291			RK73GB1J103J	CHIP R 10K J 1/16W		R835			RK73GB1J100J	CHIP R 10 J 1/16W	K3
R293			RK73GB1J682J	CHIP R 6.8K J 1/16W		R888			F53-0108-05	FUSE 1.8A 50V	
R294			RK73FB2A470J	CHIP R 47 J 1/10W	K,M	D1-4			DA221	DIODE	
R294			RK73FB2A560J	CHIP R 56 J 1/10W	K2,K3,M2	D6			MA2S111	DIODE	
R295,296			R92-1252-05	CHIP R 0 OHM J 1/16W		D7			HZU5ALL	DIODE	
R298			RK73GB1J101J	CHIP R 100 J 1/16W		D9-12			MA2S304	VARIABLE CAPACITANCE DIODE	
R300			R92-1252-05	CHIP R 0 OHM J 1/16W		D13			DAN222	DIODE	
R301			RK73GB1J104J	CHIP R 100K J 1/16W							

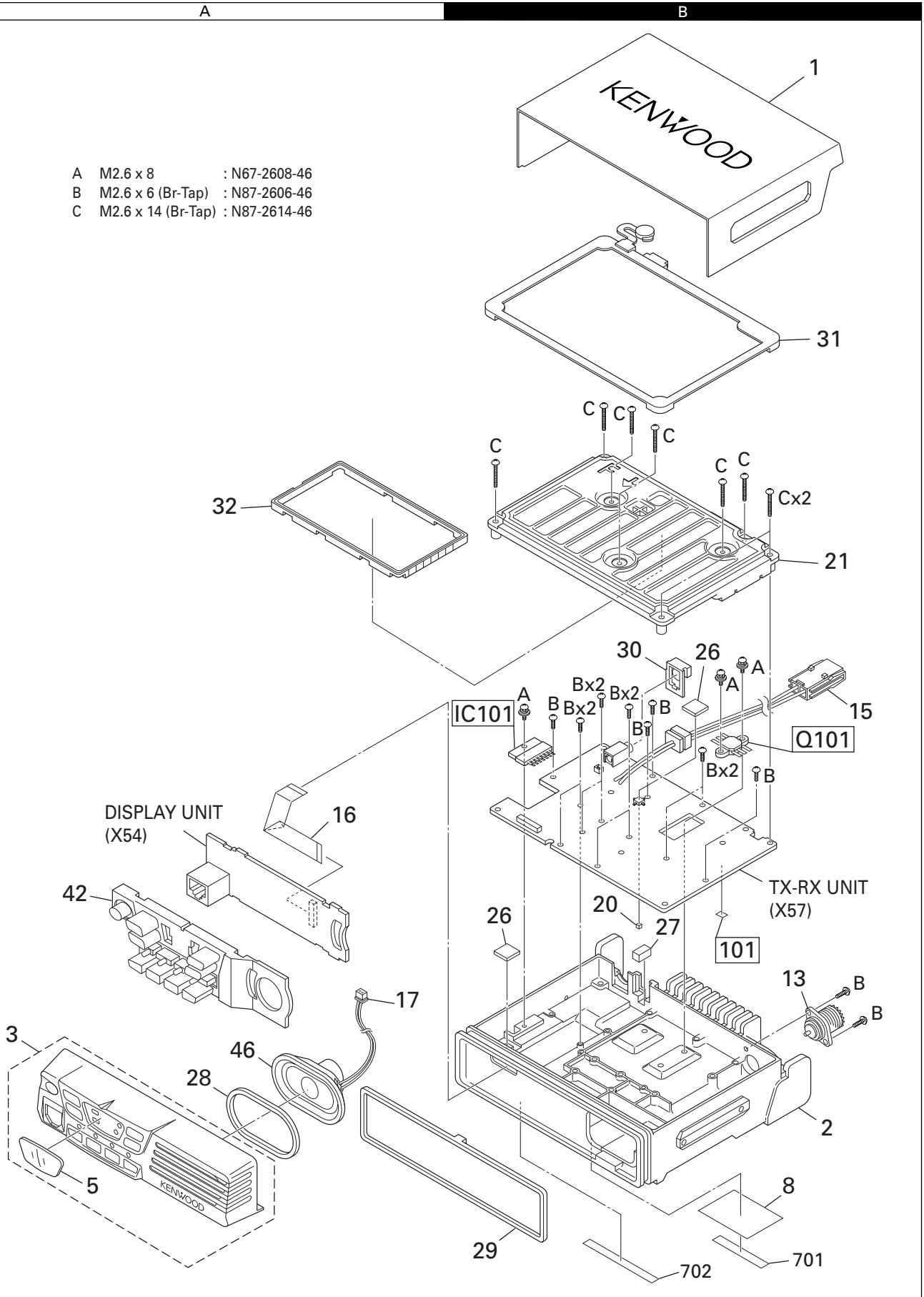
## PARTS LIST

## TX-RX UNIT (X57-6390-XX)

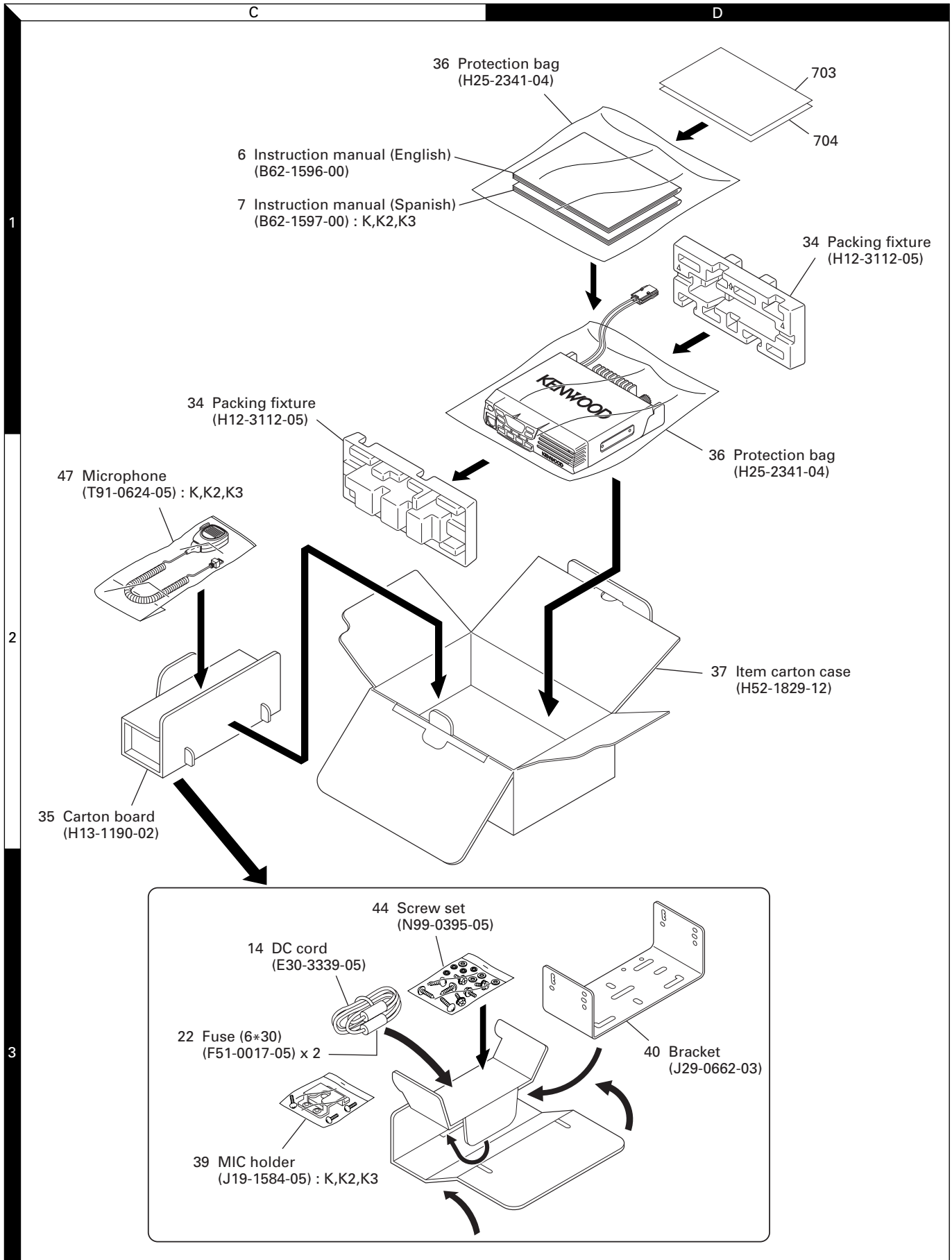
Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
D14			MA360	VARIABLE CAPACITANCE DIODE		Q22			2SK1824	FET	
D15			DAN222	DIODE		Q23			2SC3356(R24)	TRANSISTOR	
D16			MA2S111	DIODE		Q24			2SC4617(S)	TRANSISTOR	
D18			MA742	DIODE		Q26			3SK255	FET	
D19			DAN235E	DIODE		Q29,30			KRC102S	DIGITAL TRANSISTOR	
D21,22			HVC350B	VARIABLE CAPACITANCE DIODE	K,M,K3	Q31			2SA1745(6,7)	TRANSISTOR	
D21,22			HVC355B	VARIABLE CAPACITANCE DIODE	K2,M2	Q32			DTC363EU	DIGITAL TRANSISTOR	
D23			DA221	DIODE		Q33			KTA1664(Y)	TRANSISTOR	
D24			MA742	DIODE		Q34,35			KRC102S	DIGITAL TRANSISTOR	
D25			HVC355B	VARIABLE CAPACITANCE DIODE	K3	Q37			2SK1824	FET	
D25,26			HVC350B	VARIABLE CAPACITANCE DIODE	K,M	Q38			KRC404RTK	DIGITAL TRANSISTOR	
D25,26			HVC355B	VARIABLE CAPACITANCE DIODE	K2,M2	Q39			2SC5110(O)	TRANSISTOR	
D26			HVC350B	VARIABLE CAPACITANCE DIODE	K3	Q41			2SC4919	TRANSISTOR	
D28			HVC350B	VARIABLE CAPACITANCE DIODE	K,M,K3	Q42			2SA1641(S,T)	TRANSISTOR	
D28			HVC355B	VARIABLE CAPACITANCE DIODE	K2,M2	Q43			2SK1824	FET	
D38			ZSH5MA27	SURGE ABSORBER		Q101	2B		2SK3478-22	FET	
D39			02DZ18(X,Y)	ZENER DIODE		Q800			2SK2596	FET	
D41			1812L110PR	VARISTOR		Q801			2SK3075	FET	
D43			DAN222	DIODE		TH1			B57331V2104J	THERMISTOR	
D44			1SS372	DIODE		TH3			B57331V2104J	THERMISTOR	
D800			02DZ5.1(Y)	ZENER DIODE		TH5			B57331V2104J	THERMISTOR	
D801,802			MA4PH633	DIODE							
D803,804			XB15A709	DIODE							
D805,806			MA742	DIODE							
D807			1SS355	DIODE							
IC1			MB15A02	MOS IC							
IC3			M62363FP	MOS IC							
IC4			NJM2902V	MOS IC							
IC5			TK14489V	BI-POLAR IC							
IC6			784214AGC141	MPU							
IC7			24LC08BT-1SN	ROM IC							
IC9			LC73872M	MOS IC							
IC10			NJM2902V	MOS IC							
IC11			NJM2904V	MOS IC							
IC14			NJM78L05UA	BI-POLAR IC							
IC15			PST9140NR	MOS IC							
IC17			NJM78L05UA	BI-POLAR IC							
IC18			PST9140NR	MOS IC							
IC19			TC7W74FU	MOS IC							
IC20			KIA7808AF	ANALOG IC							
IC21			NJM2100V	MOS IC							
IC22			NJM2904V	MOS IC							
IC101	2B		LA4600	BI-POLAR IC							
IC800			TA75W01FU	MOS IC							
Q2			2SJ243	FET							
Q3			2SC4649(N,P)	TRANSISTOR							
Q4			2SA1832(GR)	TRANSISTOR							
Q5			2SC4738(GR)	TRANSISTOR							
Q6			2SC4649(N,P)	TRANSISTOR							
Q7			2SJ243	FET							
Q10,11			2SK508NV(K52)	FET							
Q12			KRX102U	TRANSISTOR							
Q13			2SK1824	FET							
Q14			2SC4617(S)	TRANSISTOR							
Q15			2SC5108(Y)	TRANSISTOR							
Q16			KRC414RTK	DIGITAL TRANSISTOR							
Q18			2SC2412K	TRANSISTOR							
Q19			2SC4649(N,P)	TRANSISTOR							
Q20			2SC5108(Y)	TRANSISTOR							
Q21			3SK255	FET							

## EXPLODED VIEW

- A M2.6 x 8 : N67-2608-46  
 B M2.6 x 6 (Br-Tap) : N87-2606-46  
 C M2.6 x 14 (Br-Tap) : N87-2614-46



## PACKING

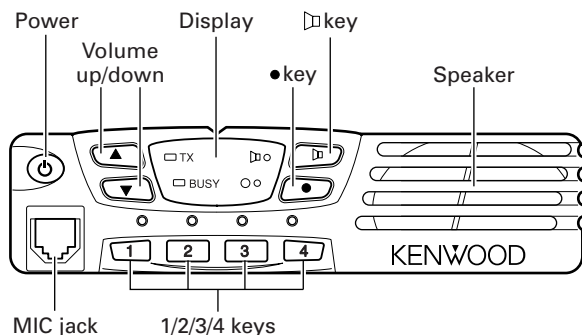




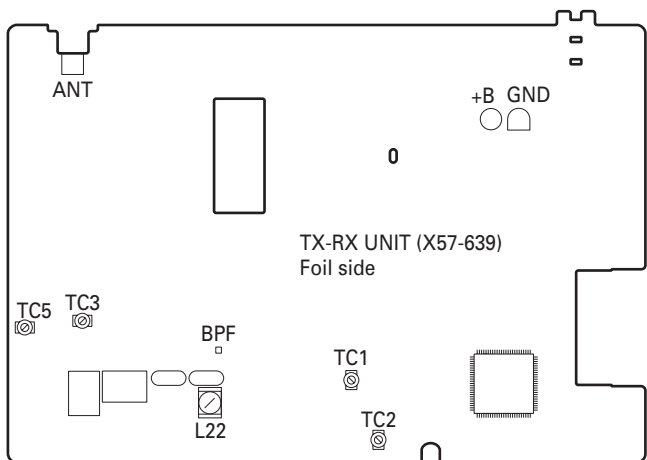
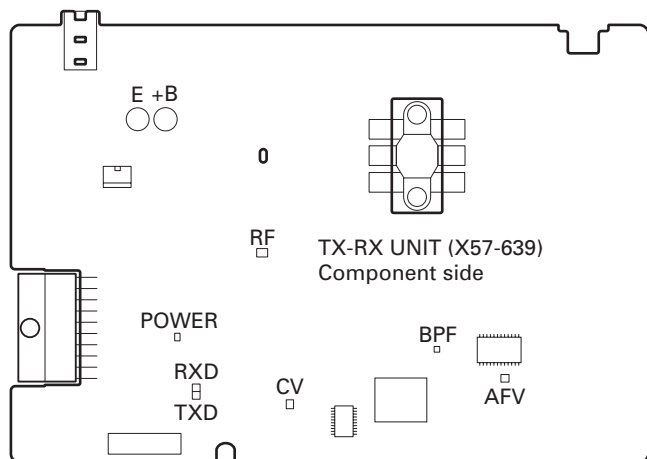
## ADJUSTMENT

### Adjustment Location

#### ■ Switch



#### ■ Adjustment Points



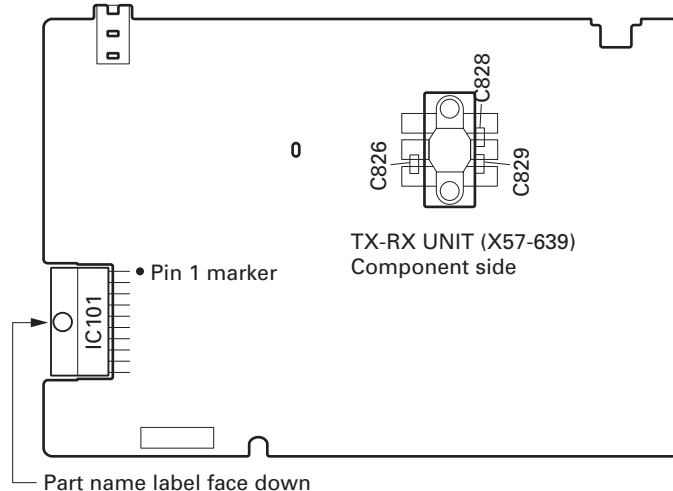
#### ■ Note

##### • EEPROM

The tuning data (Deviation, Squelch, etc.) for the EEPROM, is stored in memory. When parts are changed, readjust the transceiver.

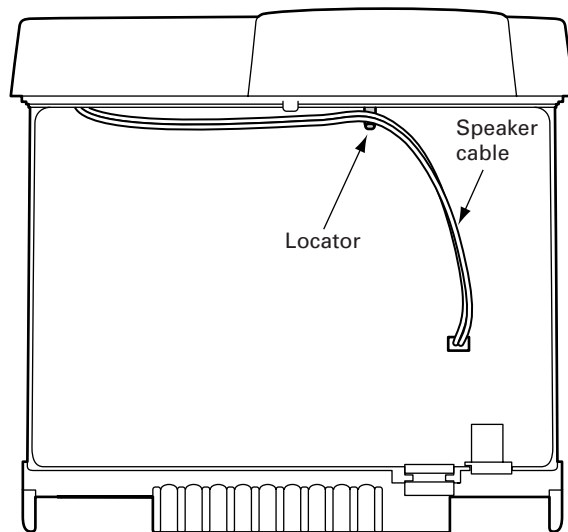
##### • AF PA IC (IC101)

How to mounting the IC101.



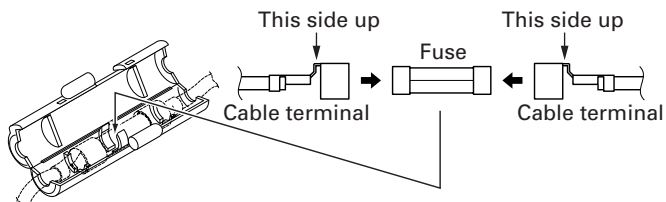
##### • SPEAKER CABLE

The speaker cable should be formed before mounting the shield cover as below.



##### • FUSE

To mount the Fuse, the cable terminal direction must be as follows.



## ADJUSTMENT

### Replacing a Drive FET (Q801)

1. When replacing the Drive FET, you must also replace its heat conductor cube, because the heat conductor cube is removed along with the FET.
2. After removing the FET and its heat conductor cube, solder a new Drive FET to the PCB. Make sure the FET is in the proper position before soldering.
3. Attach the heat conductor cube to the FET as instructed below.

#### ■ How to Solder the Heat Conductor Cube

1. Place a piece of soldering wire (about 2.5~3.0 mm long x 0.6mm diameter) into the FET hole on the PCB ( ① ).
2. Place the heat conductor cube on the PCB surface beside the FET hole. The rounded surface of the heat conductor cube must face upward (as shown below) ( ② ).
3. Slide and drop the cube into the FET hole so that the rounded surface of the cube is now horizontal (as shown below) ( ③ ).

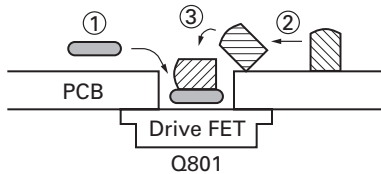


Fig. 1

4. Place a heated soldering iron onto the top of the cube, using an iron tip 900M-T-3CF. Hold the soldering iron in position for about 5 seconds (See the figure 2).

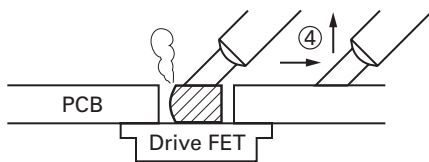
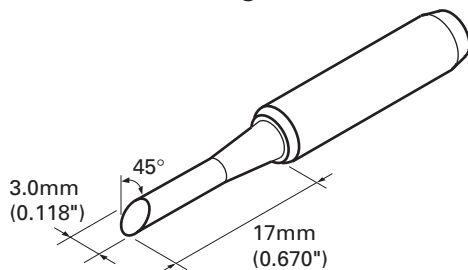


Fig. 2



900M-T-3CF

5. The solder melts and binds the FET and the cube securely. Then, slide the soldering iron along the PCB surface to cool the soldering down ( ④ ). If the heat conductor cube comes off from the PCB or the soldering can be seen on the top of the plate, the soldering has not been successful. The soldering must bind the heat conductor cube and FET securely (see the figure 3).

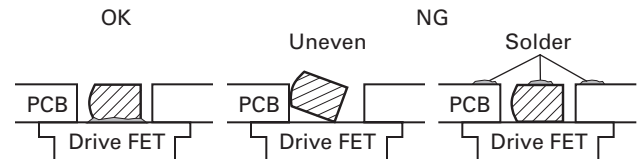


Fig. 3

6. After soldering the heat conductor cube to the PCB, check the level of PCB surface. The surface of the heat conductor cube must be free of flux and solder. It must be flat and smooth, at the same level as the PCB surface (as shown below).

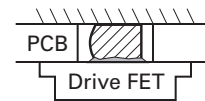


Fig. 4

#### ■ How to Check the Heat Conductor Cube Surface

1. Slide your index finger along the PCB surface (as shown below) ( ⑤ ).

The surface should be flat and smooth. If you feel that the surface is uneven because of solder or flux, grind them using meshed copper or re-solder the cube in order to flatten the surface.

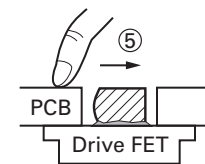


Fig. 5



## ADJUSTMENT

### Test Frequency (MHz)

Channel	K,M (F1)		K2 (F2)		M2 (F2)		K3 (F3)	
	TX	RX	TX	RX	TX	RX	TX	RX
1 : Center	470.100	470.050	498.600	498.550	502.600	502.550	415.100	415.050
2 : Low	450.100	450.050	485.100	485.050	485.100	485.050	400.100	400.050
3 : High	489.900	489.950	511.900	511.950	519.900	519.950	429.900	429.950
4	470.000	470.000	498.500	498.500	502.000	502.000	415.000	415.000
5	470.200	470.200	498.700	498.700	502.200	502.200	415.200	415.200
6	470.400	470.400	498.900	498.900	502.400	502.400	415.400	415.400

### PCB Section

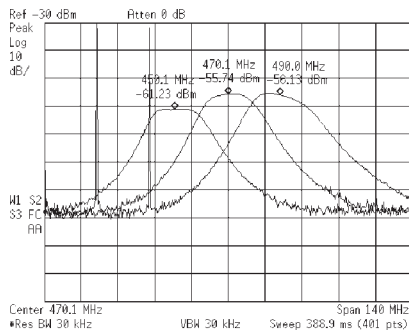
Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
1. Setting	1) Power supply voltage DC Power supply terminal : 13.6V					
2. VCO lock voltage*	1) CH : TX high	Digital voltmeter	CV	TC2	5.5V	±0.1V
	2) CH : RX high			TC1	5.5V	±0.1V
	3) CH : TX low				Check	0.8V or more
	4) CH : RX low					
3. IF coil	1) CH : RX center (Wide) 2) SSG output : -53dBm (501μV) Mod : 1kHz, Dev : 3kHz	SSG Digital voltmeter	AFV	L22	3.2~3.3V (DC)	
4. RF bandpass filter	1) CH : RX center (Wide) CH : RX low (Wide) CH : RX high (Wide) 2) Tra generator output : -30dBm Connect the spectrum analyzer to BPF terminal	Tra generator Spectrum analyzer	ANT BPF	TC3 TC5	Adjust the BPF waveform to Fig. 1	

#### \* Adjustment of TX VCO lock voltage

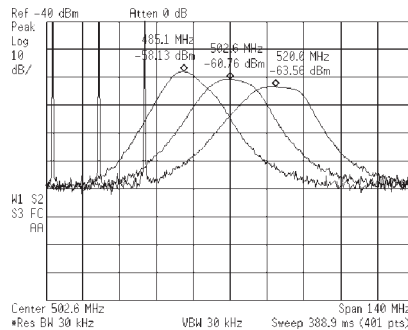
1. Remove R814, R888 (fuse), R823 and R807 (all on component side).
2. Remove PCB from chassis.
3. Transmit and check voltage at [CV] point.

**Warning :** Do not transmit if step "1." is not complete.

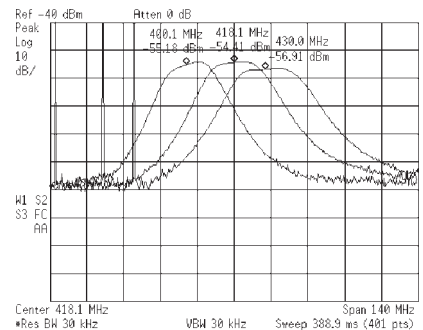
4. Adjust of voltage can be done by tuning TC2.



K,M (F1)



K2,M2 (F2)



K3 (F3)

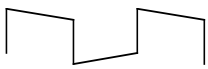
Fig. 1

## ADJUSTMENT

## Receiver Section

Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
1. Seisitivity	1) CH : RX low (Wide/Narrow) CH : RX center (Wide/Narrow) CH : RX high (Wide/Narrow) 2) SSG output : -118dBm (0.28 $\mu$ V) (Wide) : -116dBm (0.35 $\mu$ V) (Narrow) Mod : 1kHz Dev : $\pm$ 3.0kHz (Wide) Dev : $\pm$ 1.5kHz (Narrow)	SSG Oscilloscope AF V.M Distortion meter	ANT EXT. SP		Check	SINAD : 12dB or higher
2. Squelch 9	1) CH : RX low (Wide) CH : RX center (Wide/Narrow) CH : RX high (Wide) 2) SSG output : -113dBm (0.5 $\mu$ V) (Wide) : -112dBm (0.56 $\mu$ V) (Narrow) Mod : 1kHz Dev : $\pm$ 3.0kHz (Wide) Dev : $\pm$ 1.5kHz (Narrow)			PC key	Adjust to open the squelch	
3. Squelch 1	1) CH : RX low (Wide) CH : RX center (Wide/Narrow) CH : RX high (Wide) 2) SSG output : -120dBm (0.22 $\mu$ V) (Wide) : -119dBm (0.25 $\mu$ V) (Narrow) Mod : 1kHz Dev : $\pm$ 3.0kHz (Wide) Dev : $\pm$ 1.5kHz (Narrow)					

## Transmitter Section

Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
1. Frequency	1) CH : TX center 2) Transmit	Frequency counter	ANT	PC key	Adjust to center frequency	Within $\pm$ 100Hz
2. High power	1) CH : TX low CH : TX low' CH : TX center CH : TX high' CH : TX high 2) Transmit	Power meter			45W	$\pm$ 1.0W
3. Low power	1) CH : TX low CH : TX low' CH : TX center CH : TX high' CH : TX high 2) Transmit				25W	$\pm$ 1.0W
4. DQT balance	1) CH : TX low (Wide) CH : TC center (Wide/Narrow) CH : TX high (Wide) 2) Transmit	Modulation analyzer or Linear detector (LPF : 3kHz) Oscilloscope			Adjust the waveform as below 	

## ADJUSTMENT

## Transmitter Section

Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
5. MAX balance	1) CH : TX low (Wide) CH : TC center (Wide/Narrow) CH : TX high (Wide) 2) AG : 1kHz/50mV 3) Transmit	Modulation analyzer or Linear detector (LPF : 15kHz) Oscilloscope AG AF V.M	ANT MIC	PC key	±4.0kHz (Wide) ±2.0kHz (Narrow) According to the large +, -	±50Hz
6. MIC sensitivity	1) CH : TX center (Wide/Narrow) 2) AG : 1kHz/5mV 3) Transmit				Check	±3kHz±0.2kHz (Wide) ±1.5kHz±0.1kHz (Narrow)
7. DQT deviation	1) CH : TX low (Wide) CH : TX center (Wide/Narrow) CH : TX high (Wide) 2) Transmit				±0.75kHz (Wide) ±0.35kHz (Narrow)	±0.05kHz
8. QT deviation	1) CH : TX low (Wide) CH : TX center (Wide/Narrow) CH : TX high (Wide) 2) Transmit				±0.75kHz (Wide) ±0.35kHz (Narrow)	±0.05kHz
9. DTMF deviation	1) CH : TX center (Wide/Narrow) 2) Transmit				±3.0kHz (Wide) ±1.5kHz (Narrow)	±0.2kHz

**If normal power is not obtained, please follow the step below**

Open the shielding cover (upper), and screw 3 locations around ANT pin.

1. Switch off the transceiver.

Impedance of Final FET (Q101) and Drive FET (Q801) can be measured easily using DVM  $\Omega$  mode.

Normal condition – Gate : 2M $\Omega$ ~, Drain : 20k $\Omega$ ~50k $\Omega$

The above impedance values are rough estimations.

2. Switch on the transceiver. Check the voltage at R888 (fuse) output point.

The voltage is around 13.6V in receiving condition. The voltage will be 12.6V~ in transmitting condition. If found 0V at this point then R888 (fuse) is broken.

3. Remove R807.

4. Connect 50 $\Omega$  load at the ANT location.

Transmit and check current drain at High power mode.

If the current drain is less than 1A, then Final FET is broken.

If the current drain is less than 5.0A, short the Drive FET gate to ground, and check the current drain.

If the current drain is not 0.1A less than the original value, then the Drive FET is broken.

5. Check input power level at Drive FET gate location.

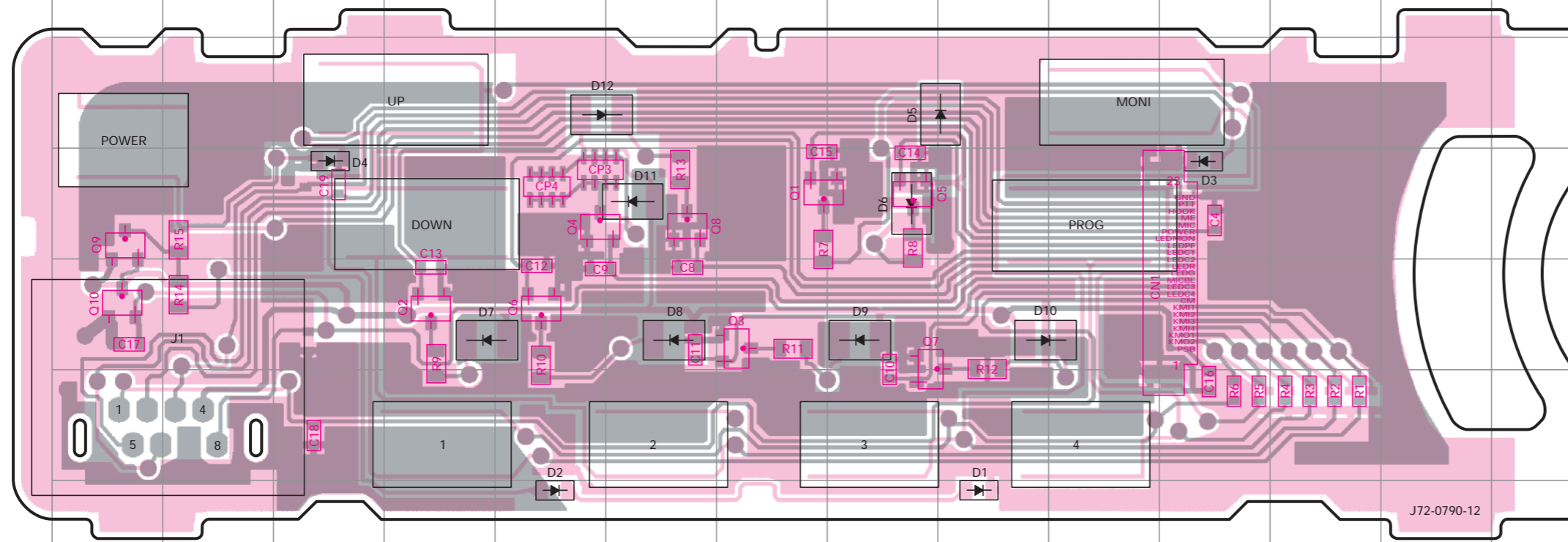
Connect the wire to [RF] location.

Transmit and check for power to be within the range of 0.7W~1W.

If power found is less than 0.5W, check the circuit before the Drive FET.

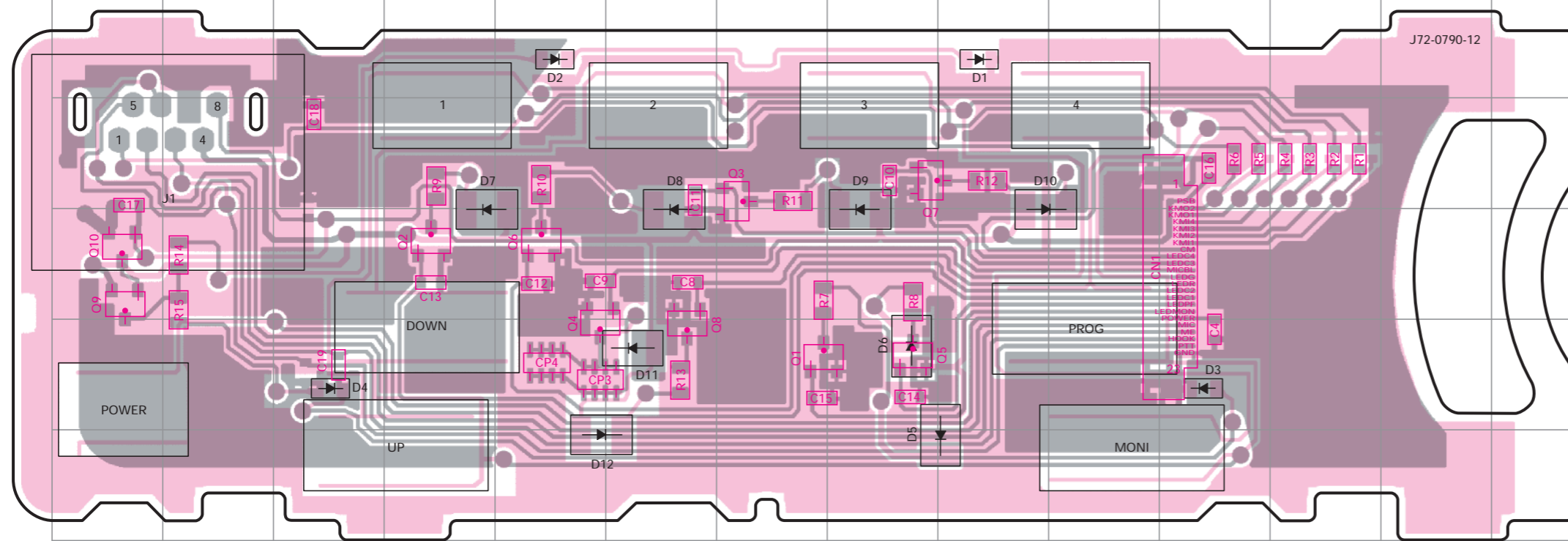
# PC BOARD VIEWS TK-8102H

DISPLAY UNIT (X54-3340-20) Component side view (J72-0790-12)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
Q1	3G	Q5	3H	Q9	3A	D3	3K	D7	4D	D11	3F
Q2	4D	Q6	4E	Q10	4A	D4	3C	D8	4F	D12	2E
Q3	4G	Q7	4H	D1	6I	D5	2I	D9	4H		
Q4	3E	Q8	3F	D2	6E	D6	3H	D10	4I		

DISPLAY UNIT (X54-3340-20) Foil side view (J72-0790-12)



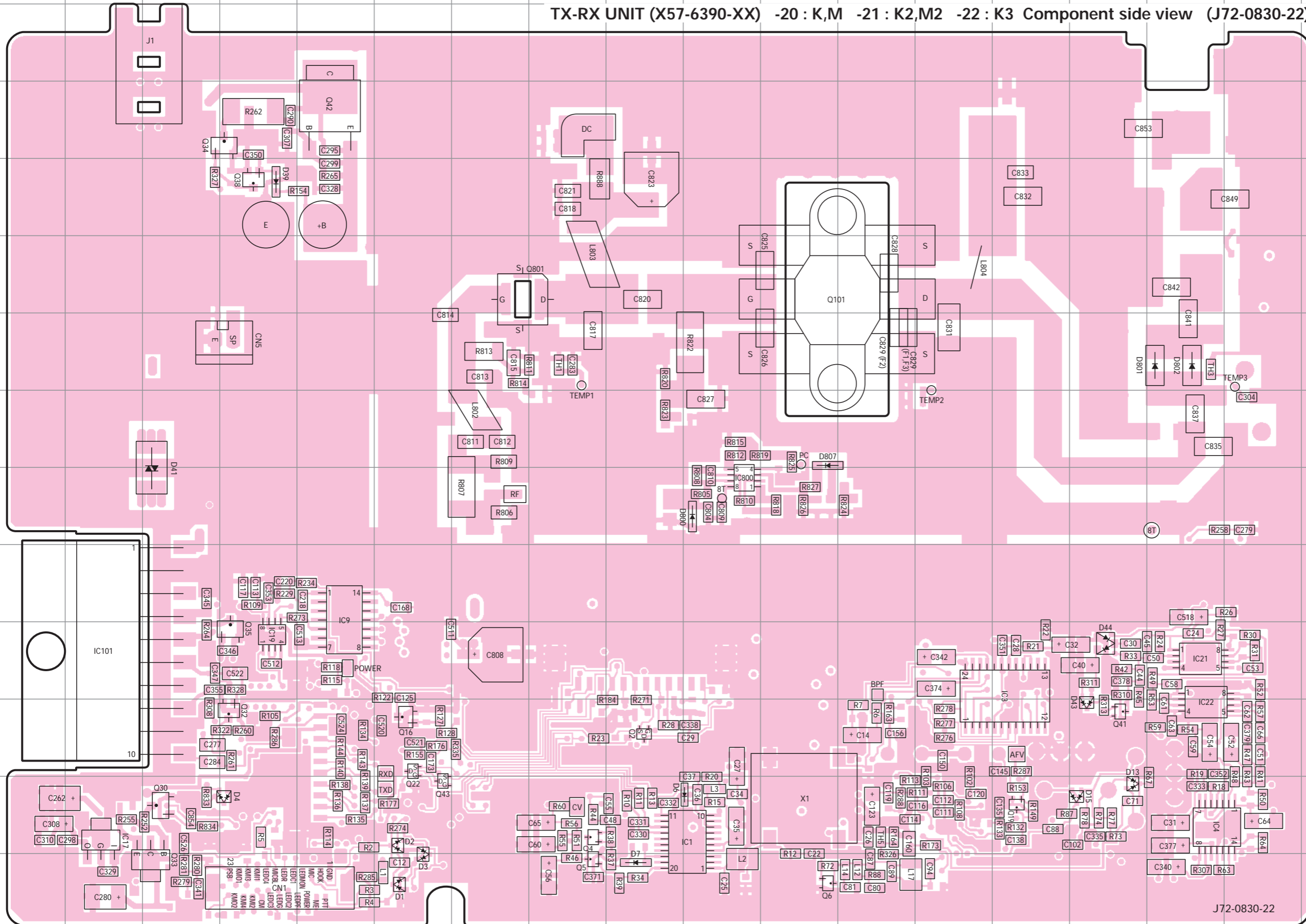
Component side  
 Foil side

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
Q1	11G	Q5	11H	Q9	10A	D3	11K	D7	10D	D11	11F
Q2	10D	Q6	10E	Q10	10A	D4	11C	D8	10F	D12	12E
Q3	9G	Q7	9H	D1	8I	D5	12I	D9	10H		
Q4	11E	Q8	11F	D2	8E	D6	11H	D10	10I		

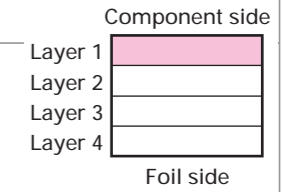
- KRC404RTK
- KRC414RTK
- 2SA1745
- 2SA1832
- 2SC2412K
- 2SC3356
- 2SC4617
- 2SC4738
- 2SC5108
- 2SC5110
- MA742
- NJM2100V
- NJM2904V
- 24LC08BT-ISN
- 2SK508NV
- 2SK2596
- TA75W01FU
- 2SA1641
- 3SK255
- LC73872M
- NJM2902V
- 2SJ243
- 2SK1824
- KIA7808AF
- KTA1664
- DTC363EU
- M62363FP
- TK14489V
- KRA225S
- KRC102S
- KRX102U
- 2SK3075
- 2SC4649
- 2SC4919
- 784214AGC141
- 2SK3478-22
- LA4600
- PST9140NR
- TC7W74FU
- MR15A02
- DA221
- NJM78L05UA

# TK-8102H PC BOARD VIEW

TX-RX UNIT (X57-6390-XX) -20 : K,M -21 : K2,M2 -22 : K3 Component side view (J72-0830-22)



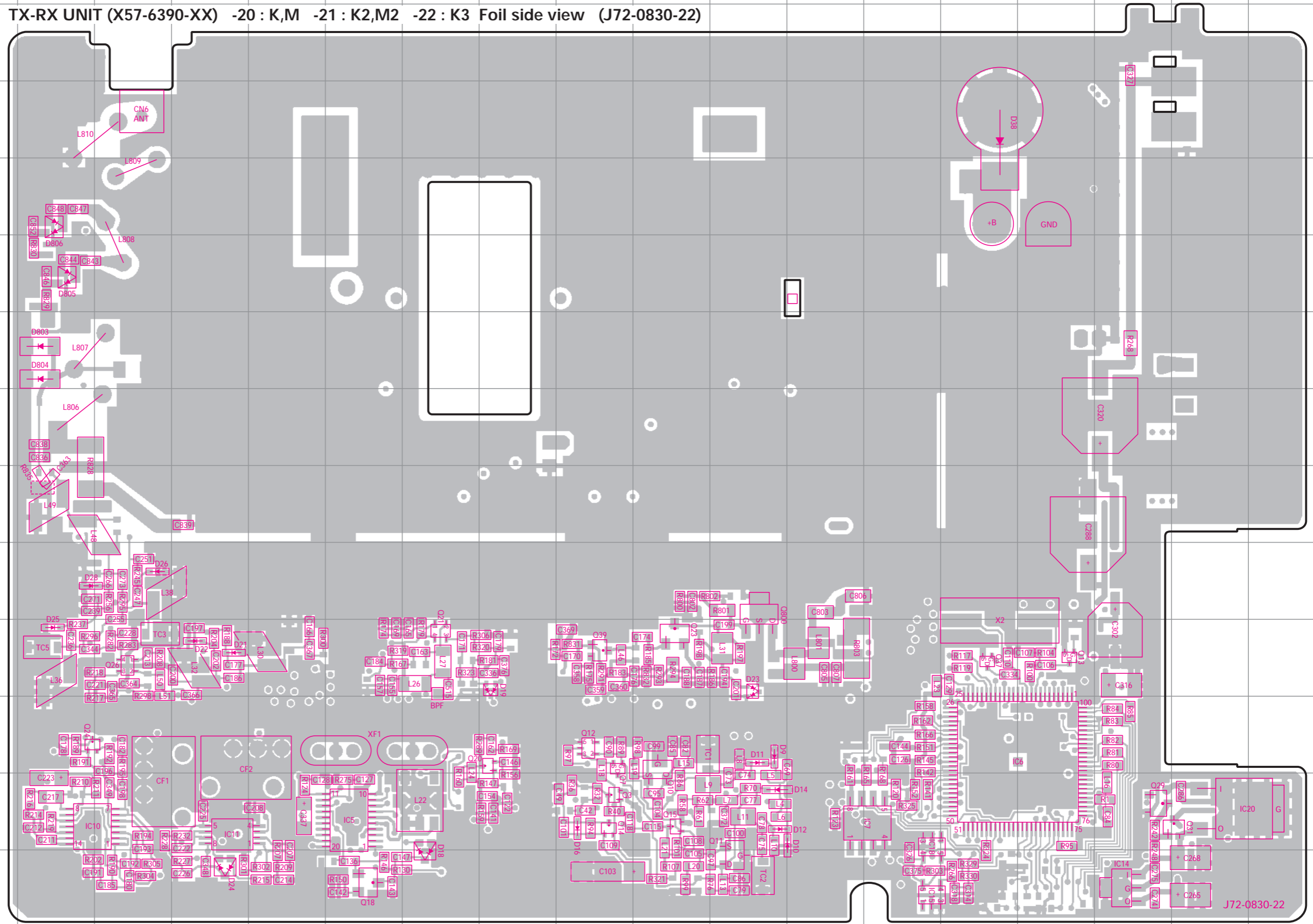
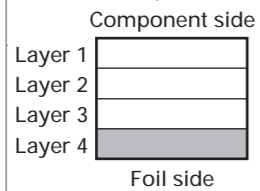
Ref. No.	Address
IC1	12J
IC3	10N
IC4	12P
IC9	9E
IC17	12B
IC19	10D
IC21	10P
IC22	11P
IC101	10B
IC800	8J
Q2	11I
Q4	12H
Q5	13H
Q6	13K
Q16	11F
Q19	12N
Q22	11F
Q30	12C
Q32	11D
Q33	13C
Q34	3D
Q35	10D
Q38	4D
Q41	11O
Q42	3E
Q43	12F
Q101	5K
Q801	5G
D1	13F
D2	12F
D3	13F
D4	12D
D6	12J
D7	13I
D13	12O
D15	12O
D39	4D
D41	7C
D43	11O
D44	10O
D800	8J
D801	6P
D802	6P
D807	7K



# PC BOARD VIEW TK-8102H

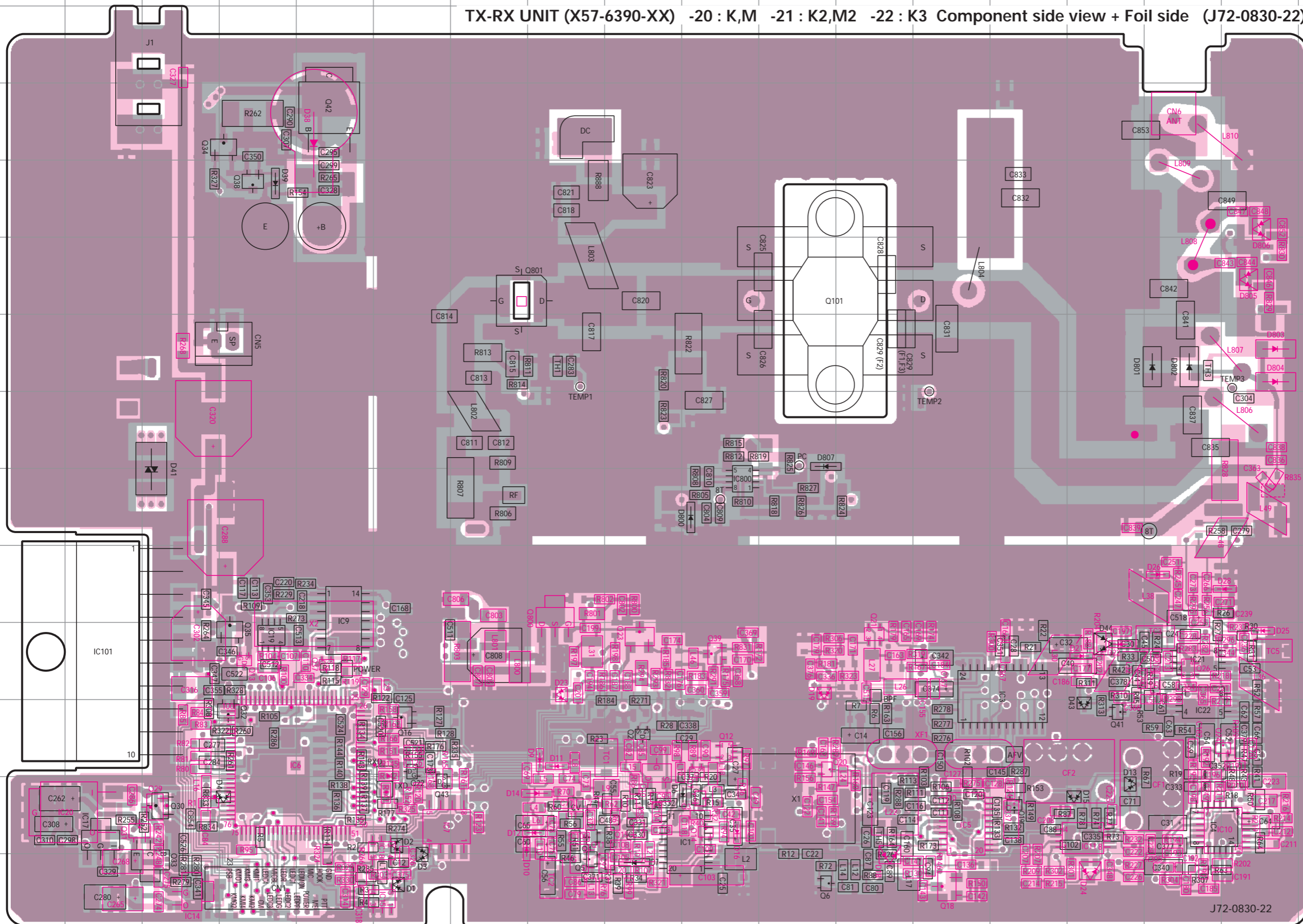
TX-RX UNIT (X57-6390-XX) -20 : K,M -21 : K2,M2 -22 : K3 Foil side view (J72-0830-22)

Ref. No.	Address
IC5	12G
IC6	11O
IC7	12N
IC10	12C
IC11	12E
IC14	13Q
IC15	13N
IC18	12N
IC20	12R
Q3	12J
Q7	11J
Q10	11K
Q11	13L
Q12	11J
Q13	10P
Q14	12J
Q15	12K
Q18	13G
Q20	11I
Q21	10H
Q23	10K
Q24	11C
Q26	10D
Q29	12Q
Q31	12R
Q37	10O
Q39	10J
Q800	9L
D9	11L
D10	12M
D11	11L
D12	12L
D14	12L
D16	12J
D18	13H
D19	10I
D21	10E
D22	10E
D23	10L
D24	13E
D25	10C
D26	9D
D28	9C
D38	3O
D803	6C
D804	6C
D805	5C
D806	4C

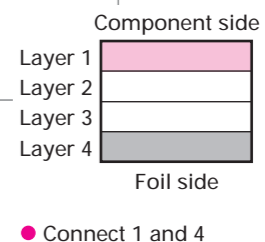


# TK-8102H PC BOARD VIEW

TX-RX UNIT (X57-6390-XX) -20 : K,M -21 : K2,M2 -22 : K3 Component side view + Foil side (J72-0830-22)

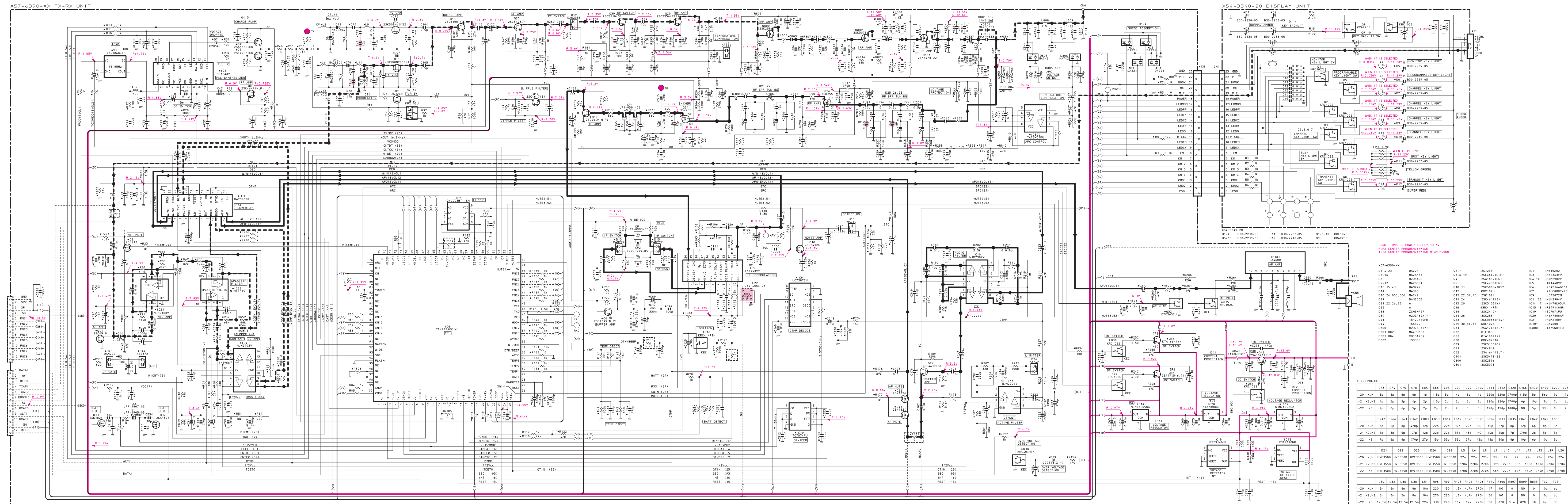


Ref. No.	Address	Ref. No.	Address
IC1	12J	Q35	10D
IC3	10N	Q37	10E
IC4	12P	Q38	4D
IC5	12M	Q39	10J
IC6	11D	Q41	11O
IC7	12F	Q42	3E
IC9	9E	Q43	12F
IC10	12Q	Q101	5K
IC11	12O	Q800	9H
IC14	13C	Q801	5G
IC15	13F	D1	13F
IC17	12B	D2	12F
IC18	12F	D3	13F
IC19	10D	D4	13D
IC20	12B	D6	13J
IC21	10P	D7	14I
IC22	11P	D9	11H
IC101	10B	D10	12H
IC800	8J	D11	11H
Q2	11I	D12	12H
Q3	12J	D13	13O
Q4	12H	D14	13H
Q5	13H	D15	13O
Q6	13K	D16	13J
Q7	11J	D18	14L
Q10	11I	D19	11K
Q11	13H	D21	10O
Q12	11J	D22	10O
Q13	10D	D23	11H
Q14	12I	D24	13O
Q15	12I	D25	11Q
Q16	11F	D26	10P
Q18	13M	D28	10Q
Q19	12N	D38	4E
Q20	11K	D39	5D
Q21	10L	D41	8C
Q22	11F	D43	11O
Q23	10I	D44	10O
Q24	11Q	D800	9J
Q26	10P	D801	6P
Q29	12C	D802	6P
Q30	12C	D803	6Q
Q31	12B	D804	6Q
Q32	11D	D805	5Q
Q33	13C	D806	4Q
Q34	3D	D807	8K



Note : Component marked with a dot (●) are parts of layer 1.

# SCHEMATIC DIAGRAM TK-8102H



CONDITIONS DC POWER SUPPLY 13.6V  
 R: X CENTER FREQUENCY WIDE  
 T: X CENTER FREQUENCY WIDE HIGH POWER

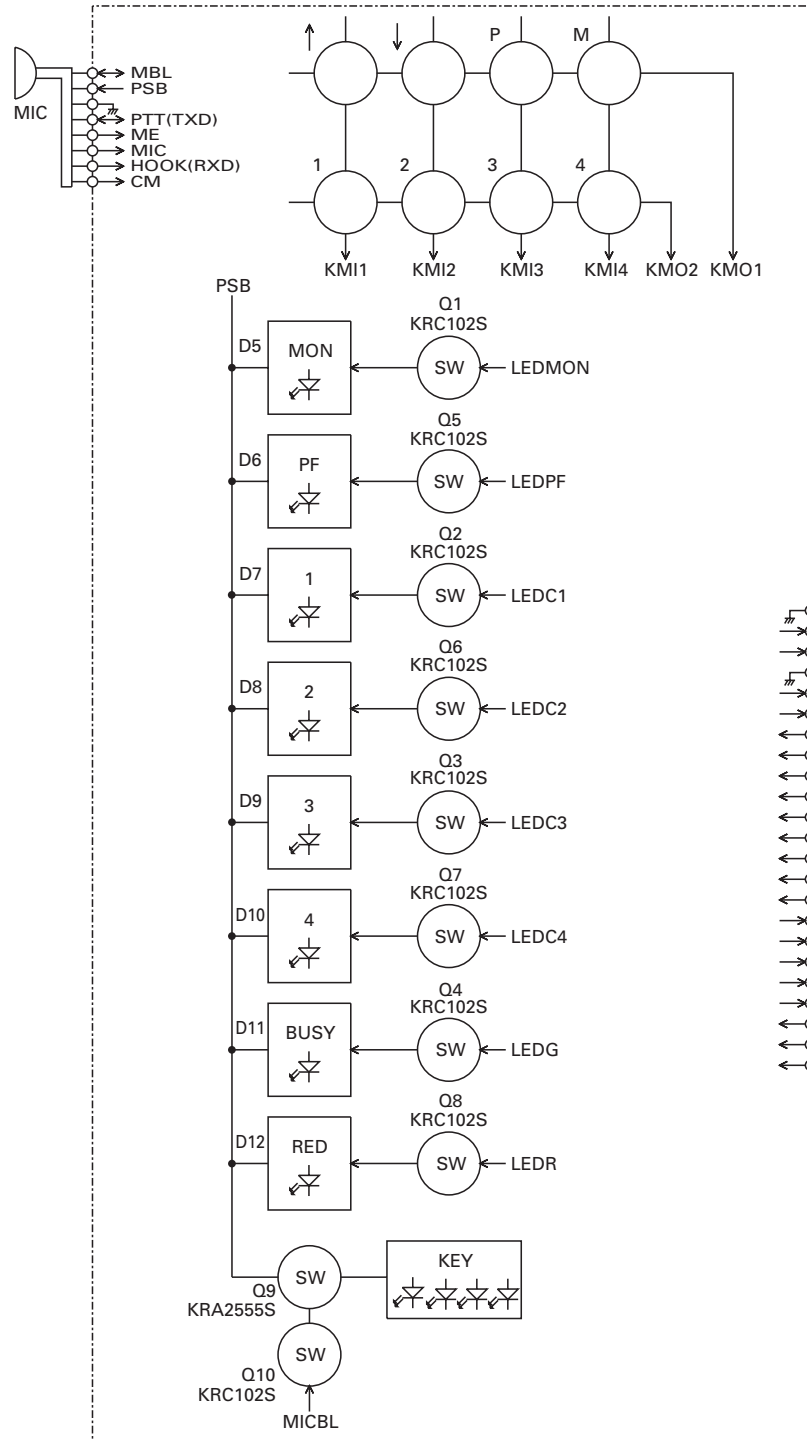
X57-6390-XX		X54-3340-20		X57-6390-XX		X54-3340-20	
Q1-4.23	DA221	Q2.7	3S1243	IC1	MB15A02	C73	C74
Q6.16	HA25111	Q4	25A1832(OR)	IC3	M62363P	C75 <td>C76</td>	C76
Q9.12	HA25394	Q5	25A1832(OR)	IC4	NJ2902V	C77 <td>C78</td>	C78
D13.15.43	DAN222	D12	24LC088T-1SN	IC5	TK1448V	C79 <td>C80</td>	C80
D14	MA360	D11	24LC088T-1SN	IC6	7842144GC14	C81 <td>C82</td>	C82
D19	DA225E	D12	24LC088T-1SN	IC7	24LC088T-1SN	C83 <td>C84</td>	C84
Q21.22.26.28	Q1	Q16	PS791408R	IC8	LC7892M	C85 <td>C86</td>	C86
Q38	Z5HMA27	Q18	25C412K	IC9	TC74V4P	C87 <td>C88</td>	C88
Q39	Q20218(Y)	Q19	39K355	IC10	NJ2904V	C89 <td>C90</td>	C90
Q41	1812L109R	Q20	25C412K	IC11	NJ78L05A	C91 <td>C92</td>	C92
D4	02025(Y)	Q31	25A1745(6.7)	IC12	NJ2904V	C93 <td>C94</td>	C94
Q801	800	Q32	25A1745(6.7)	IC13	NJ2904V	C95 <td>C96</td>	C96
Q802	800	Q33	25A1745(6.7)	IC14	NJ2904V	C97 <td>C98</td>	C98
Q803	804	Q34	25A1745(6.7)	IC15	NJ2904V	C99 <td>C100</td>	C100
Q807	155355	Q35	25A1745(6.7)	IC16	NJ2904V	C101 <td>C102</td>	C102
		Q36	25A1745(6.7)	IC17	NJ2904V	C103 <td>C104</td>	C104
		Q37	25A1745(6.7)	IC18	NJ2904V	C105 <td>C106</td>	C106
		Q38	25A1745(6.7)	IC19	NJ2904V	C107 <td>C108</td>	C108
		Q39	25A1745(6.7)	IC20	NJ2904V	C109 <td>C110</td>	C110
		Q40	25A1745(6.7)	IC21	NJ2904V	C111 <td>C112</td>	C112
		Q41	25A1745(6.7)	IC22	NJ2904V	C113 <td>C114</td>	C114
		Q42	25A1745(6.7)	IC23	NJ2904V	C115 <td>C116</td>	C116
		Q43	25A1745(6.7)	IC24	NJ2904V	C117 <td>C118</td>	C118
		Q44	25A1745(6.7)	IC25	NJ2904V	C119 <td>C120</td>	C120
		Q45	25A1745(6.7)	IC26	NJ2904V	C121 <td>C122</td>	C122
		Q46	25A1745(6.7)	IC27	NJ2904V	C123 <td>C124</td>	C124
		Q47	25A1745(6.7)	IC28	NJ2904V	C125 <td>C126</td>	C126
		Q48	25A1745(6.7)	IC29	NJ2904V	C127 <td>C128</td>	C128
		Q49	25A1745(6.7)	IC30	NJ2904V	C129 <td>C130</td>	C130
		Q50	25A1745(6.7)	IC31	NJ2904V	C131 <td>C132</td>	C132
		Q51	25A1745(6.7)	IC32	NJ2904V	C133 <td>C134</td>	C134
		Q52	25A1745(6.7)	IC33	NJ2904V	C135 <td>C136</td>	C136
		Q53	25A1745(6.7)	IC34	NJ2904V	C137 <td>C138</td>	C138
		Q54	25A1745(6.7)	IC35	NJ2904V	C139 <td>C140</td>	C140
		Q55	25A1745(6.7)	IC36	NJ2904V	C141 <td>C142</td>	C142
		Q56	25A1745(6.7)	IC37	NJ2904V	C143 <td>C144</td>	C144
		Q57	25A1745(6.7)	IC38	NJ2904V	C145 <td>C146</td>	C146
		Q58	25A1745(6.7)	IC39	NJ2904V	C147 <td>C148</td>	C148
		Q59	25A1745(6.7)	IC40	NJ2904V	C149 <td>C150</td>	C150
		Q60	25A1745(6.7)	IC41	NJ2904V	C151 <td>C152</td>	C152
		Q61	25A1745(6.7)	IC42	NJ2904V	C153 <td>C154</td>	C154
		Q62	25A1745(6.7)	IC43	NJ2904V	C155 <td>C156</td>	C156
		Q63	25A1745(6.7)	IC44	NJ2904V	C157 <td>C158</td>	C158
		Q64	25A1745(6.7)	IC45	NJ2904V	C159 <td>C160</td>	C160
		Q65	25A1745(6.7)	IC46	NJ2904V	C161 <td>C162</td>	C162
		Q66	25A1745(6.7)	IC47	NJ2904V	C163 <td>C164</td>	C164
		Q67	25A1745(6.7)	IC48	NJ2904V	C165 <td>C166</td>	C166
		Q68	25A1745(6.7)	IC49	NJ2904V	C167 <td>C168</td>	C168
		Q69	25A1745(6.7)	IC50	NJ2904V	C169 <td>C170</td>	C170
		Q70	25A1745(6.7)	IC51	NJ2904V	C171 <td>C172</td>	C172
		Q71	25A1745(6.7)	IC52	NJ2904V	C173 <td>C174</td>	C174
		Q72	25A1745(6.7)	IC53	NJ2904V	C175 <td>C176</td>	C176
		Q73	25A1745(6.7)	IC54	NJ2904V	C177 <td>C178</td>	C178
		Q74	25A1745(6.7)	IC55	NJ2904V	C179 <td>C180</td>	C180
		Q75	25A1745(6.7)	IC56	NJ2904V	C181 <td>C182</td>	C182
		Q76	25A1745(6.7)	IC57	NJ2904V	C183 <td>C184</td>	C184
		Q77	25A1745(6.7)	IC58	NJ2904V	C185 <td>C186</td>	C186
		Q78	25A1745(6.7)	IC59	NJ2904V	C187 <td>C188</td>	C188
		Q79	25A1745(6.7)	IC60	NJ2904V	C189 <td>C190</td>	C190
		Q80	25A1745(6.7)	IC61	NJ2904V	C191 <td>C192</td>	C192
		Q81	25A1745(6.7)	IC62	NJ2904V	C193 <td>C194</td>	C194
		Q82	25A1745(6.7)	IC63	NJ2904V	C195 <td>C196</td>	C196
		Q83	25A1745(6.7)	IC64	NJ2904V	C197 <td>C198</td>	C198
		Q84	25A1745(6.7)	IC65	NJ2904V	C199 <td>C200</td>	C200
		Q85	25A1745(6.7)	IC66	NJ2904V	C201 <td>C202</td>	C202
		Q86	25A1745(6.7)	IC67	NJ2904V	C203 <td>C204</td>	C204
		Q87	25A1745(6.7)	IC68	NJ2904V	C205 <td>C206</td>	C206
		Q88	25A1745(6.7)	IC69	NJ2904V	C207 <td>C208</td>	C208
		Q89	25A1745(6.7)	IC70	NJ2904V	C209 <td>C210</td>	C210
		Q90	25A1745(6.7)	IC71	NJ2904V	C211 <td>C212</td>	C212
		Q91	25A1745(6.7)	IC72	NJ2904V	C213 <td>C214</td>	C214
		Q92	25A1745(6.7)	IC73	NJ2904V	C215 <td>C216</td>	C216
		Q93	25A1745(6.7)	IC74	NJ2904V	C217 <td>C218</td>	C218
		Q94	25A1745(6.7)	IC75	NJ2904V	C219 <td>C220</td>	C220
		Q95	25A1745(6.7)	IC76	NJ2904V	C221 <td>C222</td>	C222
		Q96	25A1745(6.7)	IC77	NJ2904V	C223 <td>C224</td>	C224
		Q97	25A1745(6.7)	IC78	NJ2904V	C225 <td>C226</td>	C226
		Q98	25A1745(6.7)	IC79	NJ2904V	C227 <td>C228</td>	C228
		Q99	25A1745(6.7)	IC80	NJ2904V	C229 <td>C230</td>	C230
		Q100	25A1745(6.7)	IC81	NJ2904V	C231 <td>C232</td>	C232
		Q101	25A1745(6.7)	IC82	NJ2904V	C233 <td>C234</td>	C234
		Q102	25A1745(6.7)	IC83	NJ2904V	C235 <td>C236</td>	C236



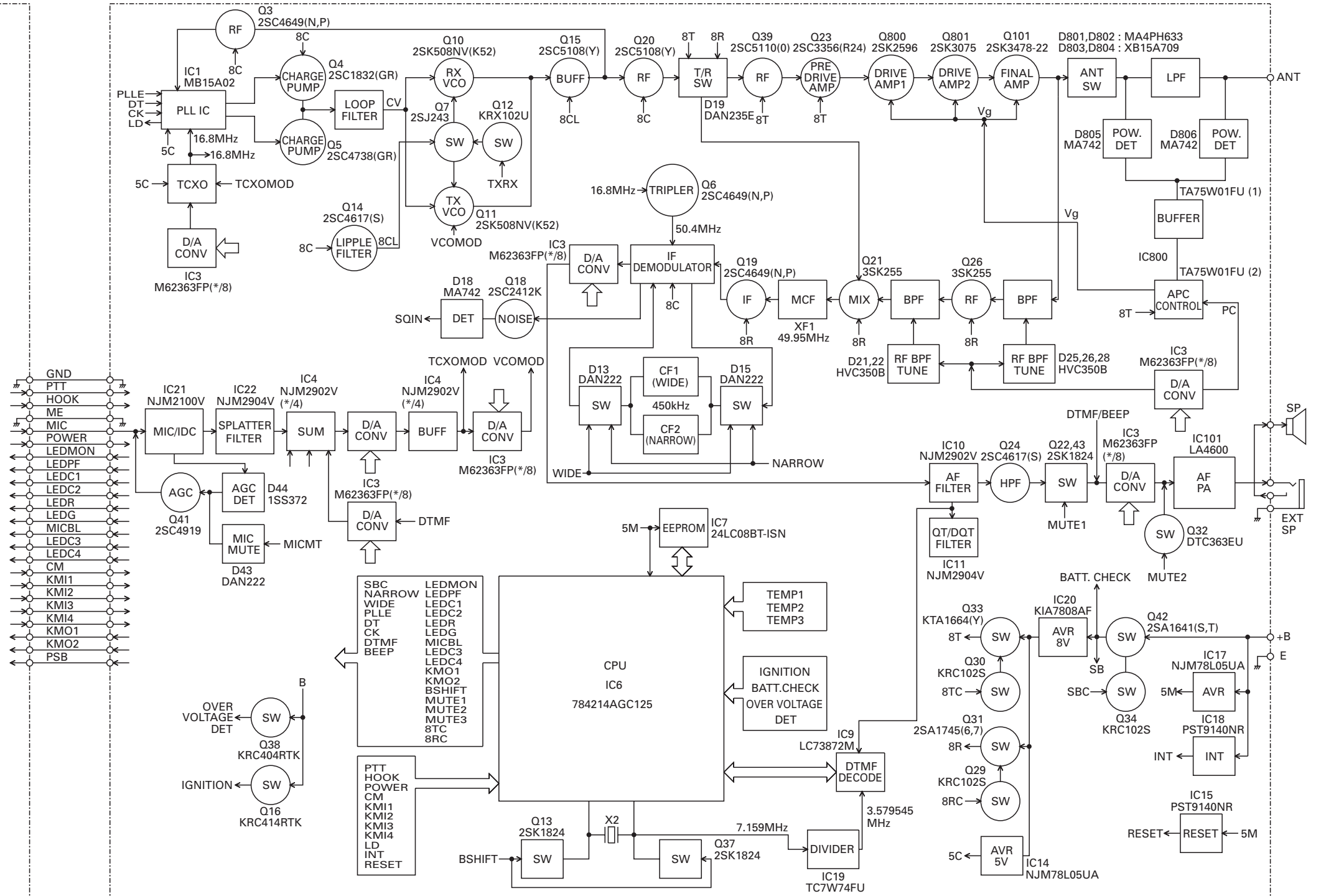
# TK-8102H TK-8102H

## BLOCK DIAGRAM

DISPLAY UNIT  
X54-334\*\*\*



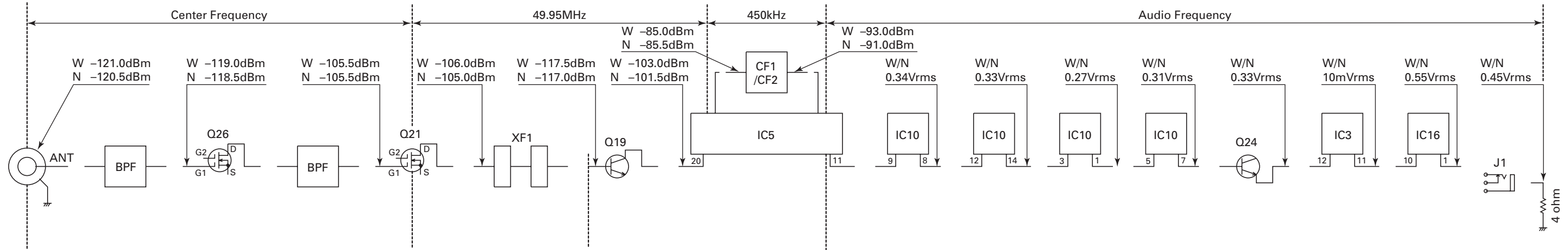
TX-RX UNIT  
X57-639\*\*\*



# TK-8102H TK-8102H

## LEVEL DIAGRAM

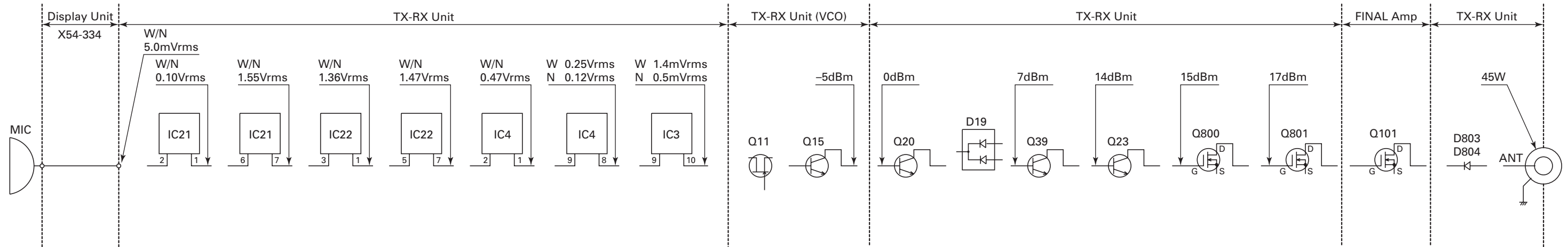
### Receiver Section



To make measurements in the RF section, connect the RF level meter.  
In the RF section, use a 0.01uF coupling capacitor.  
(The display shows the SSG input value required to obtain 12dB SINAD.)

To make measurements in the AF section, connect the AC level meter.  
(ANT input : -53dBm, 1kHz FM, 3kHz DEV (Wide)/1.5kHz DEV (Narrow))  
The AF output level is adjusted for a 0.45V/4ohm by the front panel AF VOL control.

### Transmitter Section



To make measurements in the AF section, connect the AC level meter.  
AG is set so that MIC input becomes 3kHz/1.5kHz (Wide/Narrow) DEV at 1kHz MOD.

To make measurements in the RF section, connect the RF Wattmeter (50 ohm).

## SPECIFICATIONS

### GENERAL

Frequency Range .....	K,M : 450 to 490MHz	K2 : 485 to 512MHz
	K3 : 400 to 430MHz	M2 : 485 to 520MHz
Number of Channels .....	4 channels	
Channel Spacing .....	Wide : 25kHz	Narrow : 12.5kHz
PLL Channel Stepping .....	5.0, 6.25kHz	
Operating Voltage .....	13.6V DC $\pm$ 15%	
Current Drain .....	Less than 0.4A on standby	
	Less than 1.0A on receive	
	Less than 14.0A on transmit	
Operating Temperature Range .....	-30°C to +60°C	
Dimensions & Weight .....	6.30 (160) W x 1.70 (43) H x 5.40 (137) D inch (mm), 2.60 lbs (1.18kg)	
Channel Frequency Spread .....	K,M : 40MHz	K2 : 27MHz K3 : 30MHz M2 : 35MHz

### RECEIVER (Measurements made per EIA standard EIA/TIA-603)

Sensitivity (12dB SINAD) .....	Wide : 0.28 $\mu$ V	Narrow : 0.35 $\mu$ V
Selectivity .....	Wide : 75dB	Narrow : 65dB
Intermodulation .....	Wide : 70dB	Narrow : 60dB
Spurious Response .....	75dB	
Audio Power Output .....	4.0W	
Frequency Stability .....	$\pm$ 2.5ppm	

### TRANSMITTER (Measurements made per EIA standard EIA/TIA-603)

RF Power Output .....	45W	
Spurious and Harmonics .....	70dB	
Modulation .....	Wide : 16K0F3E	Narrow : 11K0F3E
FM Noise .....	Wide : 45dB	Narrow : 40dB
Audio Distortion .....	Less than 3%	
Frequency Stability .....	$\pm$ 2.5ppm	

# TK-8102H

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