

# KENWOOD

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This TK-7100H service manual contains a number of sections which differ from the service manual (B51-8645-00) for the TK-7100H.  
For items other than those in this TK-7100H service manual please refer to the service manual (B51-8645-00) for the TK-7100H.



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## 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.

### 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.

## GENERAL / SYSTEM SET-UP

### 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

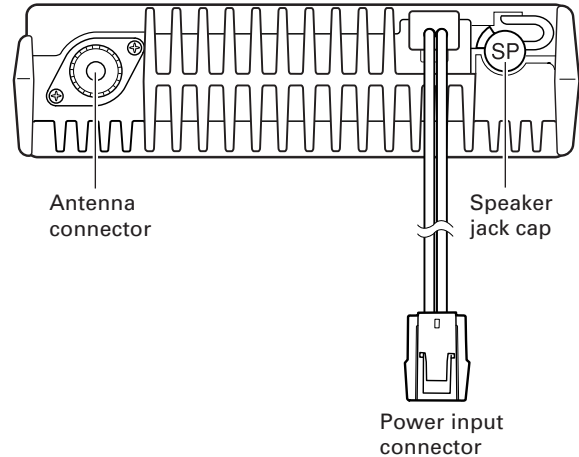
Select a convenient location for your control station radio which is as close as practical to the antenna cable entry point. Secondly, use your system's power supply (which supplies the voltage and current required for your system). Make sure sufficient air can flow around the radio and power supply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

### SERVICE

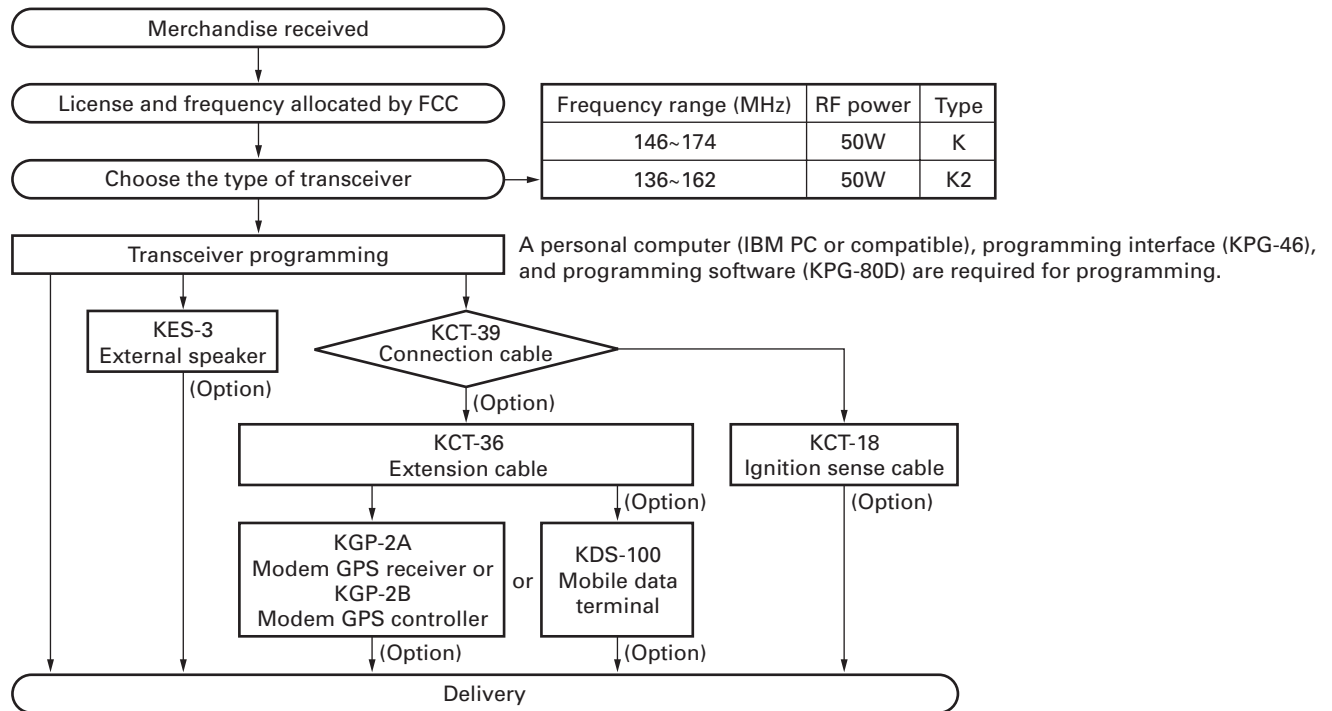
This radio is designed for easy servicing. Refer to the schematic diagrams, printed circuit board views, and alignment procedures contained in this manual.

### 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 from getting in.




### SYSTEM SET-UP



# TK-7100H

## PARTS LIST

\* New Parts.  indicates safety critical components.

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

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

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

**L** : Scandinavia

**Y** : PX (Far East, Hawaii)

**Y** : AAFES (Europe)

**K** : USA

**T** : England

**X** : Australia

**P** : Canada

**E** : Europe

**M** : Other Areas

### TK-7100H, DISPLAY UNIT (X54-3430-20)

### TX-RX UNIT (X57-6700-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
<b>TK-7100H</b>					
1	1B		A01-2181-01	CABINET	
	3B		A10-4048-21	CHASSIS	
3	3A		A62-1074-03	PANEL ASSY	
5	3A		B11-1299-02	ILLUMINATION GUIDE	
6	3A		B38-0878-05	LCD	
8	1D		B62-1673-00	INSTRUCTION MANUAL (ENGLISH)	
9	1D		B62-1674-00	INSTRUCTION MANUAL (SPANISH)	
10	3B		B72-2112-04	MODEL NAME PLATE	K
10	3B	*	B72-2113-04	MODEL NAME PLATE	K2
12	3B		E04-0167-05	RF COAXIAL PECEPTACLE (M)	
13	3A		E29-1197-15	INTER CONNECTOR	
14	3C		E30-3339-05	DC CORD ACCESSORY	
15	2B		E30-3448-05	DC CORD (RADIO)	
16	2A		E37-1041-05	FLAT CABLE	
-			E37-1080-05	FOR SCRAMBLER BOARD (B)	
-			E37-1081-05	FOR SCRAMBLER BOARD (A)	
19	3A		E37-1082-05	SPEAKER CABLE	
21	2B		F10-2449-01	SHIELDING COVER	
22	3C		F51-0017-05	FUSE (6*30) ACCESSORY	
24	2B		G02-0894-04	EARTH SPRING (FINAL FET)	
25	3B		G11-4127-14	RUBBER SHEET (CHASSIS)	
26	2B		G11-4240-04	RUBBER SHEET (DRIVE FET)	
27	3B		G13-1468-04	CUSHION (DC CORD)	
-			G13-1963-04	CUSHION (SCRAMBLER BOARD)	
-			G13-1964-04	CUSHION (SCRAMBLER BOARD)	
-			G13-1972-04	CUSHION (TRUNKING BOARD)	
30	3A		G53-1525-03	PACKING (PANEL)	
31	2B		G53-1542-03	PACKING (PHONE JACK)	
32	1B		G53-1544-01	PACKING (CABINET)	
33	2A		G53-1548-02	GASKET	
35	2C,1D		H12-3112-05	PACKING FIXTURE	
36	3D		H13-1190-02	CARTON BOARD	
37	1D		H25-2341-04	PROTECTION BAG	
38	2D		H52-1829-22	ITEM CARTON CASE	
40	3C		J19-1584-05	HOLDER ACCESSORY	
41	3D		J29-0662-03	BRACKET ACCESSORY	
43	3A		K29-9262-01	KEY TOP	
A	2B		N67-2608-46	PAN HEAD SEMS SCREW	
B	2B,3B		N87-2606-46	BRAZIER HEAD TAPTITE SCREW	
C	1B,2B		N87-2614-46	BRAZIER HEAD TAPTITE SCREW	
45	3C		N99-0395-05	SCREW SET	
47	3A		T07-0739-05	SPEAKER	
48	2C		T91-0624-05	MICROPHONE ACCESSORY	
<b>DISPLAY UNIT (X54-3430-20)</b>					
D2-5			B30-2205-05	LED (YG)	
D19-26			B30-2205-05	LED (YG)	
D28-31			B30-2205-05	LED (YG)	

Ref. No.	Address	New parts	Parts No.	Description	Destination
C4			CC73GCH1H101J	CHIP C 100PF	J
C6			CK73GB1H103K	CHIP C 0.010UF	K
C15,16			CC73GCH1H101J	CHIP C 100PF	J
C18			CK73FB1A105K	CHIP C 1.0UF	K
C19			CK73GB1H681K	CHIP C 680PF	K
C22,23			CK73GB1H102K	CHIP C 1000PF	K
C24			CK73GB1H103K	CHIP C 0.010UF	K
C25			CK73GB1H102K	CHIP C 1000PF	K
C27,28			CK73GB1H102K	CHIP C 1000PF	K
C30			CK73GB1H103K	CHIP C 0.010UF	K
C31-33			CK73GB1H102K	CHIP C 1000PF	K
CN1			E40-6005-05	FLAT CABLE CONNECTOR	
J1			E08-0877-05	MODULAR JACK	
L1			L92-0138-05	FERRITE CHIP	
CP1			R90-0724-05	MULTI-COMP 1K X4	
R4-9			RK73GB1J102J	CHIP R 1.0K	J 1/16W
R10,11			RK73GB1J272J	CHIP R 2.7K	J 1/16W
R21-23			RK73GB1J103J	CHIP R 10K	J 1/16W
R24			RK73GB1J474J	CHIP R 470K	J 1/16W
R25			RK73GB1J473J	CHIP R 47K	J 1/16W
R26			RK73GB1J392J	CHIP R 3.9K	J 1/16W
R33			RK73FB2A560J	CHIP R 56	J 1/10W
R34			RK73GB1J101J	CHIP R 100	J 1/16W
R36			RK73FB2A560J	CHIP R 56	J 1/10W
R37			RK73GB1J100J	CHIP R 10	J 1/16W
R38,39			RK73FB2A390J	CHIP R 39	J 1/10W
R40			RK73FB2A473J	CHIP R 47K	J 1/10W
D17			MA2S111	DIODE	
D18			HSB123	DIODE	
D27			DA221	DIODE	
IC2			LC75834W	MOS IC	
Q6			KRC102S	DIGITAL TRANSISTOR	
Q9			2SB1132(Q,R)	TRANSISTOR	
Q10			KRA225S	DIGITAL TRANSISTOR	
Q11			RN47A4	TRANSISTOR	
<b>TX-RX UNIT (X57-6700-XX) -20 : K -21 : K2</b>					
C10			CK73GB1H102K	CHIP C 1000PF	K
C13-26			CK73GB1H471K	CHIP C 470PF	K
C28			CK73GB1H221K	CHIP C 220PF	K
C29			CK73GB1H471K	CHIP C 470PF	K
C30			CK73GB1H102K	CHIP C 1000PF	K
C33			CK73GB1H102K	CHIP C 1000PF	K
C34			C92-0721-05	CHIP-ELE 330UF	25WV
C35-38			CK73GB1H102K	CHIP C 1000PF	K
C39,40			CK73GB1C104K	CHIP C 0.10UF	K
C41			C92-0795-05	CHIP-TAN 22UF	10WV
C42			CK73GB1H103K	CHIP C 0.010UF	K
C43-45			C92-0795-05	CHIP-TAN 22UF	10WV
C49,50			CK73GB1H103K	CHIP C 0.010UF	K
C51			C92-0560-05	CHIP-TAN 10UF	6.3WV
C52,53			CK73GB1H102K	CHIP C 1000PF	K

## PARTS LIST

TX-RX UNIT (X57-6700-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
C54,55			CK73GB1C104K	CHIP C 0.10UF K		C269			CK73GB1A105K	CHIP C 1.0UF K	
C56			CK73GB1H102K	CHIP C 1000PF K		C270			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C61			CK73GB1H102K	CHIP C 1000PF K		C271			CK73GB1H332K	CHIP C 3300PF K	
C66			CK73GB1H102K	CHIP C 1000PF K		C272			CK73GB1H102K	CHIP C 1000PF K	
C72			CK73GB1H102K	CHIP C 1000PF K		C273			CK73GB1A105K	CHIP C 1.0UF K	
C77,78			CK73GB1H102K	CHIP C 1000PF K		C274			CK73FB1C224K	CHIP C 0.22UF K	
C82			CK73GB1H102K	CHIP C 1000PF K		C275			CK73GB1A105K	CHIP C 1.0UF K	
C83			CK73GB1C104K	CHIP C 0.10UF K		C276,277			CK73GB1H102K	CHIP C 1000PF K	
C87			CC73GCH1H180J	CHIP C 18PF J		C278			CK73GB1C104K	CHIP C 0.10UF K	
C88,89			CC73GCH1H060B	CHIP C 6.0PF B		C279			C92-0516-05	CHIP-TAN 4.7UF 16WV	
C90			CC73GCH1H180J	CHIP C 18PF J		C280			C92-0040-05	CHIP-ELE 47UF 16WV	
C97,98			CK73GB1H102K	CHIP C 1000PF K		C281			CK73GB1H102K	CHIP C 1000PF K	
C101			CK73GB1H102K	CHIP C 1000PF K		C282			C92-0722-05	CHIP-ELE 470UF 16WV	
C102			CK73GB1C104K	CHIP C 0.10UF K		C283			CK73GB1H102K	CHIP C 1000PF K	
C103			CK73GB1H102K	CHIP C 1000PF K		C301			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C104			CK73GB1C104K	CHIP C 0.10UF K		C302			CK73GB1H102K	CHIP C 1000PF K	
C151			CK73GB1H182K	CHIP C 1800PF K		C303			CK73GB1H472K	CHIP C 4700PF K	
C152			CK73GB1H392K	CHIP C 3900PF K		C304,305			CC73GCH1H331J	CHIP C 330PF J	K
C161			CK73GB1H102K	CHIP C 1000PF K		C304,305			CC73GCH1H391J	CHIP C 390PF J	K2
C162			C92-0507-05	CHIP-TAN 4.7UF 6.3WV		C306			CK73GB1H102K	CHIP C 1000PF K	
C163			CK73GB1H102K	CHIP C 1000PF K		C307			CK73GB1E223K	CHIP C 0.022UF K	
C164			C92-0560-05	CHIP-TAN 10UF 6.3WV		C308			CK73GB1H102K	CHIP C 1000PF K	
C201			CK73GB1C104K	CHIP C 0.10UF K		C309			CK73GB1E223K	CHIP C 0.022UF K	
C202			CK73GB1H102K	CHIP C 1000PF K		C310			CK73FB1C334K	CHIP C 0.33UF K	
C203			CK73GB1C273K	CHIP C 0.027UF K		C311,312			CK73GB1C104K	CHIP C 0.10UF K	
C204			C92-0514-05	CHIP-TAN 2.2UF 10WV		C313			C92-0662-05	CHIP-TAN 15UF 6.3WV	
C205			CK73GB1C104K	CHIP C 0.10UF K		C314			CK73GB1H103K	CHIP C 0.010UF K	
C206			CK73GB1H102K	CHIP C 1000PF K		C315-318			CK73GB1C104K	CHIP C 0.10UF K	
C207			CK73GB1C223K	CHIP C 0.022UF K		C319			CC73GCH1H101J	CHIP C 100PF J	
C208			CK73GB1H103K	CHIP C 0.010UF K		C322			CC73GCH1H560J	CHIP C 56PF J	
C210			CK73GB1C104K	CHIP C 0.10UF K		C323			CC73GCH1H271J	CHIP C 270PF J	
C211			CK73GB1H821K	CHIP C 820PF K		C324			CK73GB1H103K	CHIP C 0.010UF K	
C212			CK73GB1H122K	CHIP C 1200PF K		C326			CK73GB1H103K	CHIP C 0.010UF K	
C213			CK73GB1H332K	CHIP C 3300PF K		C350			CK73GB1H471K	CHIP C 470PF K	
C214			CC73GCH1H151J	CHIP C 150PF J		C351			CC73GCH1H330J	CHIP C 33PF J	
C215			CK73GB1C104K	CHIP C 0.10UF K		C353			CK73GB1H103K	CHIP C 0.010UF K	
C217,218			C92-0560-05	CHIP-TAN 10UF 6.3WV		C355			CC73GCH1H150J	CHIP C 15PF J	
C220			C92-0507-05	CHIP-TAN 4.7UF 6.3WV		C357			CK73GB1H103K	CHIP C 0.010UF K	
C221			CK73GB1C104K	CHIP C 0.10UF K		C358			CK73GB1H102K	CHIP C 1000PF K	
C225			C92-0004-05	CHIP-TAN 1.0UF 16WV		C359			CC73GCH1H080B	CHIP C 8.0PF B	
C226			CK73GB1H472K	CHIP C 4700PF K		C360-362			CK73GB1H102K	CHIP C 1000PF K	
C227			CK73GB1E103K	CHIP C 0.010UF K		C363			CK73GB1H103K	CHIP C 0.010UF K	
C228			C92-0560-05	CHIP-TAN 10UF 6.3WV		C364			CK73GB1H102K	CHIP C 1000PF K	
C229			C92-0507-05	CHIP-TAN 4.7UF 6.3WV		C366			CK73GB1C104K	CHIP C 0.10UF K	
C230			CK73GB1C104K	CHIP C 0.10UF K		C367			CC73GCH1H101J	CHIP C 100PF J	K
C231,232			CK73GB1H102K	CHIP C 1000PF K		C367			CC73GCH1H151J	CHIP C 150PF J	K2
C233			C92-0507-05	CHIP-TAN 4.7UF 6.3WV		C368			CC73GCH1H220J	CHIP C 22PF J	
C250			CK73GB1C104K	CHIP C 0.10UF K		C369			CC73GCH1H0R5B	CHIP C 0.5PF B	
C251			C92-0714-05	CHIP-TAN 4.7UF 6.3WV		C369			CC73GCH1H040B	CHIP C 4.0PF B	K
C252			CC73GCH1H390J	CHIP C 39PF J		C370			CK73GB1H102K	CHIP C 1000PF K	
C253,254			CK73GB1A105K	CHIP C 1.0UF K		C371			CC73GCH1H020B	CHIP C 2.0PF B	
C255			CK73GB1H822K	CHIP C 8200PF K		C372			CK73GB1H102K	CHIP C 1000PF K	
C256			CK73GB1E183K	CHIP C 0.018UF K		C373			CC73GCH1H040B	CHIP C 4.0PF B	K
C257			CK73GB1C393K	CHIP C 0.039UF K		C374			CC73GCH1H220J	CHIP C 22PF J	
C258-261			CK73GB1H103J	CHIP C 0.010UF J		C375-380			CK73GB1H102K	CHIP C 1000PF K	
C262			CK73GB1H102K	CHIP C 1000PF K		C382			CC73GCH1H220J	CHIP C 22PF J	
C263,264			CK73GB1C333K	CHIP C 0.033UF K		C383			CK73GB1H102K	CHIP C 1000PF K	
C265,266			CK73GB1C104K	CHIP C 0.10UF K		C384			CC73GCH1H010B	CHIP C 1.0PF B	
C267			CK73GB1A474K	CHIP C 0.47UF K		C386			CC73GCH1H240J	CHIP C 24PF J	K
C268			CK73GB1C104K	CHIP C 0.10UF K		C386			CC73GCH1H270J	CHIP C 27PF J	K2

## PARTS LIST

## TX-RX UNIT (X57-6700-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
C387			CK73GB1H102K	CHIP C 1000PF K		C471			CC73GCH1H120J	CHIP C 12PF J	K2
C388			CC73GCH1H040B	CHIP C 4.0PF B	K	C501,502			CK73GB1H102K	CHIP C 1000PF K	
C388			CC73GCH1H060B	CHIP C 6.0PF B	K2	C503			CC73GCH1H101J	CHIP C 100PF J	
C389			CK73GB1H102K	CHIP C 1000PF K		C504-507			CK73GB1H102K	CHIP C 1000PF K	
C401-403			CC73GCH1H101J	CHIP C 100PF J		C509			CC73GCH1H150J	CHIP C 15PF J	
C404			C92-0662-05	CHIP-TAN 15UF 6.3WV		C510			CC73GCH1H080B	CHIP C 8.0PF B	
C406			CK73GB1H102K	CHIP C 1000PF K		C511-514			CK73GB1H102K	CHIP C 1000PF K	
C408			CC73GCH1H220J	CHIP C 22PF J		C515			CC73GCH1H270J	CHIP C 27PF J	
C409			CK73GB1C104K	CHIP C 0.10UF K		C516			CK73GB1H821K	CHIP C 820PF K	
C410			C92-0560-05	CHIP-TAN 10UF 6.3WV		C517			CC73GCH1H030B	CHIP C 3.0PF B	
C411			CK73GB1C104K	CHIP C 0.10UF K		C518			CC73GCH1H330J	CHIP C 33PF J	
C412			C92-0560-05	CHIP-TAN 10UF 6.3WV		C519			CC73GCH1H820J	CHIP C 82PF J	
C413			CK73GB1H103K	CHIP C 0.010UF K		C522			CK73FB1H102K	CHIP C 1000PF K	
C414			CK73GB1C104K	CHIP C 0.10UF K		C525			CK73GB1H102K	CHIP C 1000PF K	
C416-418			CK73GB1H102K	CHIP C 1000PF K		C526			CK73GB1H681K	CHIP C 680PF K	
C421,422			CK73GB1H471K	CHIP C 470PF K		C527			CK73GB1H102K	CHIP C 1000PF K	
C423			C92-0555-05	CHIP-TAN 0.047UF 35WV		C528			CK73GB1H221K	CHIP C 220PF K	
C424			C92-0004-05	CHIP-TAN 1.0UF 16WV		C529			CK73FB1H102K	CHIP C 1000PF K	
C425			C92-0001-05	CHIP C 0.1UF 35WV		C530			CK73FB1C474K	CHIP C 0.47UF K	
C426			CC73GCH1H120J	CHIP C 12PF J	K2	C531			C92-0719-05	CHIP-ELE 47UF 25WV	
C426			CC73GCH1H270J	CHIP C 27PF J	K	C533			C93-0570-05	CHIP C 68PF J	K
C427			CC73GCH1H040B	CHIP C 4.0PF B	K2	C533			C93-0572-05	CHIP C 100PF J	K2
C427			CC73GCH1H080B	CHIP C 8.0PF B	K	C536			CK73FB1H102K	CHIP C 1000PF K	
C428			CK73GB1H471K	CHIP C 470PF K		C541,542			CM73F2H270J	CHIP C 27PF J	K
C429			CC73GCH1H010B	CHIP C 1.0PF B	K	C545			C93-0603-05	CHIP C 1000PF K	
C429			CC73GCH1H020B	CHIP C 2.0PF B	K2	C546			CK73FB1C474K	CHIP C 0.47UF K	
C430,431			CC73GCH1H050B	CHIP C 5.0PF B		C549			CM73F2H221J	CHIP C 220PF J	
C432			CC73GCH1H0R5B	CHIP C 0.5PF B		C550			CM73F2H680J	CHIP C 68PF J	
C434			CC73GCH1H330J	CHIP C 33PF J	K2	C552			C93-0564-05	CHIP C 22PF J	K2
C434			CK73GB1H471K	CHIP C 470PF K	K	C552,553			C93-0562-05	CHIP C 15PF J	K
C435			CC73GCH1H050B	CHIP C 5.0PF B	K2	C553			C93-0550-05	CHIP C 1.0PF C	K2
C435			CC73GCH1H100C	CHIP C 10PF C	K	C554			C93-0603-05	CHIP C 1000PF K	
C436			CC73GCH1H0R5B	CHIP C 0.5PF B		C555			C93-0555-05	CHIP C 5.0PF C	
C437			CK73GB1H471K	CHIP C 470PF K		C556			C93-0603-05	CHIP C 1000PF K	
C438			CC73GCH1H020B	CHIP C 2.0PF B		C557,558			CK73GB1H103K	CHIP C 0.010UF K	
C439			CC73GCH1H060B	CHIP C 6.0PF B	K	C559			CK73GB1C104K	CHIP C 0.10UF K	
C439,440			CC73GCH1H060B	CHIP C 6.0PF B	K2	C560			CK73GB1H102K	CHIP C 1000PF K	
C440			CC73GCH1H070B	CHIP C 7.0PF B	K	C574			CK73GB1H102K	CHIP C 1000PF K	
C441			CC73GCH1H0R5B	CHIP C 0.5PF B		C576			CK73GB1H221K	CHIP C 220PF K	
C442			C92-0560-05	CHIP-TAN 10UF 6.3WV		C601			CC73GCH1H120J	CHIP C 12PF J	K
C444			CK73GB1H471K	CHIP C 470PF K		C601			CC73GCH1H180J	CHIP C 18PF J	K2
C448,449			CK73GB1H471K	CHIP C 470PF K		C602			C93-0555-05	CHIP C 5.0PF C	
C450			C92-0568-05	CHIP-TAN 22UF 10WV		C603			C93-0603-05	CHIP C 1000PF K	
C451,452			CK73GB1H471K	CHIP C 470PF K		C605			C93-0564-05	CHIP C 22PF J	K
C453			CK73GB1H221K	CHIP C 220PF K		C605			C93-0566-05	CHIP C 33PF J	K2
C454			CC73GCH1H060B	CHIP C 6.0PF B		C606			CC73GCH1H0R5B	CHIP C 0.5PF B	
C455			CC73GCH1H030B	CHIP C 3.0PF B		C607			CC73GCH1H020B	CHIP C 2.0PF B	
C456			CC73GCH1H020B	CHIP C 2.0PF B		C608			C93-0566-05	CHIP C 33PF J	
C457			CK73GB1H102K	CHIP C 1000PF K		C610			CC73GCH1H0R5B	CHIP C 0.5PF B	
C458			CK73GB1H221K	CHIP C 220PF K		C611			CC73GCH1H020B	CHIP C 2.0PF B	
C459			CK73GB1H102K	CHIP C 1000PF K		C613			C93-0566-05	CHIP C 33PF J	
C460			CC73GCH1H180J	CHIP C 18PF J		C615			C93-0564-05	CHIP C 22PF J	
C461			CK73GB1H102K	CHIP C 1000PF K		C616,617			CK73GB1H102K	CHIP C 1000PF K	
C462			CC73GCH1H100C	CHIP C 10PF C		TC351			C05-0399-05	CERAMIC TRIMMER CAP (6PF)	
C463,464			CK73GB1H102K	CHIP C 1000PF K		TC352			C05-0245-05	CERAMIC TRIMMER CAP (10PF)	
C465			CC73GCH1H220J	CHIP C 22PF J		TC401,402			C05-0245-05	CERAMIC TRIMMER CAP (10PF)	
C466			CC73GCH1H101J	CHIP C 100PF J		J1			E11-0425-05	3.5D PHONE JACK (3P)	
C467			CK73GB1H102K	CHIP C 1000PF K		CN1			E40-6268-05	FLAT CABLE CONNECTOR	
C468			CK73GB1H221K	CHIP C 220PF K		CN2			E40-5702-05	PIN ASSY	
C471			CC73GCH1H100C	CHIP C 10PF C	K						

## PARTS LIST

TX-RX UNIT (X57-6700-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
CN3			E40-6292-05	PIN ASSY		R31			RK73GB1J472J	CHIP R 4.7K J 1/16W	
CN4			E40-5932-05	PIN ASSY SOCKET		R32			R92-1215-05	CHIP R 470 J 1/2W	
CN5			E40-3246-05	PIN ASSY		R33			RK73GB1J473J	CHIP R 47K J 1/16W	
CN601			E23-0486-05	TERMINAL		R34			RK73GB1J472J	CHIP R 4.7K J 1/16W	
F501			F53-0108-05	FUSE (1.8A/50V)		R35			RK73GB1J473J	CHIP R 47K J 1/16W	
CF301			L72-0993-05	CERAMIC FILTER		R36			RK73GB1J152J	CHIP R 1.5K J 1/16W	
CF302			L72-0999-05	CERAMIC FILTER		R37			R92-1252-05	CHIP R 0 OHM J 1/16W	
L101			L92-0443-05	FERRITE CHIP		R38			RK73GB1J334J	CHIP R 330K J 1/16W	
L201			L92-0443-05	FERRITE CHIP		R39			RK73GB1J474J	CHIP R 470K J 1/16W	
L301			L34-4554-05	COIL		R40			RK73GB1J394J	CHIP R 390K J 1/16W	
L302			L41-3385-08	SMALL FIXED INDUCTOR		R41			RK73GB1J334J	CHIP R 330K J 1/16W	
L303,304			L40-3381-86	SMALL FIXED INDUCTOR (0.33UH)		R61			RK73GB1J471J	CHIP R 470 J 1/16W	
L351			L41-8285-08	SMALL FIXED INDUCTOR		R62			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L352			L41-5685-08	SMALL FIXED INDUCTOR		R66,67			RK73GB1J473J	CHIP R 47K J 1/16W	
L354-356			L34-4612-05	AIR-CORE COIL	K	R68,69			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L354-356			L34-4613-05	AIR-CORE COIL	K2	R70			RK73GB1J473J	CHIP R 47K J 1/16W	
L357			L34-4611-05	AIR-CORE COIL		R71			RK73GB1J472J	CHIP R 4.7K J 1/16W	
L401			L92-0443-05	FERRITE CHIP		R72			RK73GB1J105J	CHIP R 1.0M J 1/16W	
L403			L41-1005-08	SMALL FIXED INDUCTOR		R73			RK73GB1J104J	CHIP R 100K J 1/16W	
L404			L92-0442-05	FERRITE CHIP		R74			RK73GB1J473J	CHIP R 47K J 1/16W	
L405			L92-0443-05	FERRITE CHIP		R75			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L406,407			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K	R76			RK73GH1J183D	CHIP R 18K D 1/16W	
L406,407			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K2	R77			RK73GH1J134D	CHIP R 130K D 1/16W	
L408			L40-2778-67	SMALL FIXED INDUCTOR (27NH)	K	R78			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L408			L40-3978-67	SMALL FIXED INDUCTOR (39NH)	K2	R81			RK73GB1J473J	CHIP R 47K J 1/16W	
L409-412			L40-2702-86	SMALL FIXED INDUCTOR (27UH)	K	R82			R92-1252-05	CHIP R 0 OHM J 1/16W	
L409-412			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K2	R86			R92-1252-05	CHIP R 0 OHM J 1/16W	
L413			L40-3978-67	SMALL FIXED INDUCTOR (39NH)	K	R87			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L413			L40-6878-67	SMALL FIXED INDUCTOR (68NH)	K2	R91,92			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L414			L40-2785-92	SMALL FIXED INDUCTOR (270NH)	K2	R93,94			RK73GB1J562J	CHIP R 5.6K J 1/16W	
L414,415			L40-4791-86	SMALL FIXED INDUCTOR (4.7UH)	K	R101,102			RK73GB1J473J	CHIP R 47K J 1/16W	
L415			L40-1085-92	SMALL FIXED INDUCTOR (100NH)	K2	R103-106			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L416,417			L92-0443-05	FERRITE CHIP		R107,108			RK73GB1J473J	CHIP R 47K J 1/16W	
L418			L40-6875-92	SMALL FIXED INDUCTOR (68NH)	K2	R109			RK73GB1J152J	CHIP R 1.5K J 1/16W	
L418			L41-3375-06	SMALL FIXED INDUCTOR	K	R110			RK73GB1J473J	CHIP R 47K J 1/16W	
L419			L41-1085-06	SMALL FIXED INDUCTOR		R111			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L420			L41-1585-06	SMALL FIXED INDUCTOR		R112,113			RK73GB1J473J	CHIP R 47K J 1/16W	
L421			L41-1085-06	SMALL FIXED INDUCTOR		R114-119			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L422			L41-5675-06	SMALL FIXED INDUCTOR		R120-123			R92-1252-05	CHIP R 0 OHM J 1/16W	
L501,502			L41-6875-08	SMALL FIXED INDUCTOR		R124			RK73GB1J473J	CHIP R 47K J 1/16W	
L503,504			L41-2775-06	SMALL FIXED INDUCTOR		R125-128			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L505			L34-4606-05	AIR-CORE COIL	K	R129			R92-1252-05	CHIP R 0 OHM J 1/16W	
L505			L34-4645-05	AIR-CORE COIL	K2	R130,131			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L506			L34-4693-05	AIR-CORE COIL		R151			RK73GB1J103J	CHIP R 10K J 1/16W	
L507			L34-4732-05	AIR-CORE COIL		R152			RK73GB1J472J	CHIP R 4.7K J 1/16W	
L508			L34-4669-05	AIR-CORE COIL		R161			RK73GB1J122J	CHIP R 1.2K J 1/16W	
L509			L34-4667-05	AIR-CORE COIL		R162			RK73GB1J152J	CHIP R 1.5K J 1/16W	
L601			L34-4668-05	AIR-CORE COIL		R163			RK73GB1J473J	CHIP R 47K J 1/16W	
L602-604			L34-4670-05	AIR-CORE COIL		R164-166			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L605			L34-4667-05	AIR-CORE COIL		R201			RK73GB1J681J	CHIP R 680 J 1/16W	
X86			L77-1934-05	CRYSTAL RESONATOR (14.31818MHZ)		R202			R92-0670-05	CHIP R 0 OHM	
X401			L77-1868-15	TCXO (16.8MHZ)		R203			RK73GB1J104J	CHIP R 100K J 1/16W	
XF351			L71-0591-05	MCF (49.95MHZ)		R204			RK73GB1J183J	CHIP R 18K J 1/16W	
R1			RK73GB1J101J	CHIP R 100 J 1/16W		R205			RK73GB1J821J	CHIP R 820 J 1/16W	
R2			R92-1252-05	CHIP R 0 OHM J 1/16W		R206			RK73GB1J101J	CHIP R 100 J 1/16W	
R3			RK73GB1J102J	CHIP R 1.0K J 1/16W		R207			RK73GB1J754J	CHIP R 750K J 1/16W	
R4			RK73GB1J332J	CHIP R 3.3K J 1/16W		R208			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R5			RK73GB1J223J	CHIP R 22K J 1/16W		R209			RK73GB1J244J	CHIP R 240K J 1/16W	
						R210			RK73GB1J183J	CHIP R 18K J 1/16W	
						R211,212			RK73GB1J823J	CHIP R 82K J 1/16W	



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## PARTS LIST

### TX-RX UNIT (X57-6700-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
R213			RK73GB1J334J	CHIP R 330K J 1/16W		R315			RK73GB1J183J	CHIP R 18K J 1/16W	
R214,215			RK73GB1J683J	CHIP R 68K J 1/16W		R316			RK73GB1J223J	CHIP R 22K J 1/16W	
R216			RK73GB1J274J	CHIP R 270K J 1/16W		R317-320			RK73GB1J103J	CHIP R 10K J 1/16W	
R217			RK73GB1J224J	CHIP R 220K J 1/16W		R321			RK73GB1J223J	CHIP R 22K J 1/16W	
R218			RK73GB1J823J	CHIP R 82K J 1/16W		R322			RK73GB1J101J	CHIP R 100 J 1/16W	
R219			RK73GB1J184J	CHIP R 180K J 1/16W		R323			RK73GB1J224J	CHIP R 220K J 1/16W	
R220,221			RK73GH1J153D	CHIP R 15K D 1/16W		R324			R92-1252-05	CHIP R 0 OHM J 1/16W	
R222			RK73GB1J102J	CHIP R 1.0K J 1/16W		R325			RK73GB1J333J	CHIP R 33K J 1/16W	
R223			RK73GB1J472J	CHIP R 4.7K J 1/16W		R349			RK73GB1J473J	CHIP R 47K J 1/16W	
R224			RK73GB1J102J	CHIP R 1.0K J 1/16W		R350			RK73GB1J273J	CHIP R 27K J 1/16W	
R225			RK73GB1J154J	CHIP R 150K J 1/16W		R351			RK73GB1J471J	CHIP R 470 J 1/16W	
R226			RK73GB1J104J	CHIP R 100K J 1/16W		R352			RK73GB1J101J	CHIP R 100 J 1/16W	
R227			RK73GB1J223J	CHIP R 22K J 1/16W		R353			RK73GB1J104J	CHIP R 100K J 1/16W	
R228			RK73GB1J103J	CHIP R 10K J 1/16W		R354			RK73GB1J331J	CHIP R 330 J 1/16W	
R229			RK73GB1J684J	CHIP R 680K J 1/16W		R355			RK73GB1J471J	CHIP R 470 J 1/16W	K
R230			RK73GB1J124J	CHIP R 120K J 1/16W		R355,356			RK73GB1J102J	CHIP R 1.0K J 1/16W	K2
R231			RK73GB1J683J	CHIP R 68K J 1/16W		R356			RK73GB1J102J	CHIP R 1.0K J 1/16W	K
R232			RK73GB1J912J	CHIP R 9.1K J 1/16W		R358			RK73GB1J470J	CHIP R 47 J 1/16W	
R233			RK73GB1J682J	CHIP R 6.8K J 1/16W		R359			RK73GB1J224J	CHIP R 220K J 1/16W	
R249-251			RK73GB1J473J	CHIP R 47K J 1/16W		R360			RK73GB1J474J	CHIP R 470K J 1/16W	
R252			RK73GB1J474J	CHIP R 470K J 1/16W		R361			RK73GB1J470J	CHIP R 47 J 1/16W	K
R253			R92-1252-05	CHIP R 0 OHM J 1/16W		R361			RK73GB1J560J	CHIP R 56 J 1/16W	K2
R254			RK73GB1J681J	CHIP R 680 J 1/16W		R362			RK73GB1J474J	CHIP R 470K J 1/16W	
R255,256			RK73GB1J562J	CHIP R 5.6K J 1/16W		R363			RK73GB1J154J	CHIP R 150K J 1/16W	
R257			RK73GB1J105J	CHIP R 1.0M J 1/16W		R364			R92-1252-05	CHIP R 0 OHM J 1/16W	
R258			RK73GB1J272J	CHIP R 2.7K J 1/16W		R365			RK73GB1J104J	CHIP R 100K J 1/16W	
R259			RK73GB1J123J	CHIP R 12K J 1/16W		R366			RK73GB1J471J	CHIP R 470 J 1/16W	
R260			RK73GB1J224J	CHIP R 220K J 1/16W		R367			RK73GB1J470J	CHIP R 47 J 1/16W	
R261			RK73GB1J124J	CHIP R 120K J 1/16W		R368			RK73GB1J104J	CHIP R 100K J 1/16W	
R262			RK73GB1J183J	CHIP R 18K J 1/16W		R369			R92-1252-05	CHIP R 0 OHM J 1/16W	
R263			RK73GH1J913D	CHIP R 91K D 1/16W		R370			RK73GB1J151J	CHIP R 150 J 1/16W	
R264			RK73GH1J124D	CHIP R 120K D 1/16W		R371			RK73GB1J474J	CHIP R 470K J 1/16W	
R265			RK73GH1J562D	CHIP R 5.6K D 1/16W		R372			RK73GB1J124J	CHIP R 120K J 1/16W	K2
R266			RK73GB1J562J	CHIP R 5.6K J 1/16W		R372			RK73GB1J224J	CHIP R 220K J 1/16W	K
R267			R92-0670-05	CHIP R 0 OHM		R373			RK73GB1J684J	CHIP R 680K J 1/16W	
R268			RK73GB1J102J	CHIP R 1.0K J 1/16W		R374			RK73GB1J124J	CHIP R 120K J 1/16W	K2
R269			RK73GB1J823J	CHIP R 82K J 1/16W		R374			RK73GB1J184J	CHIP R 180K J 1/16W	K
R270			RK73GB1J272J	CHIP R 2.7K J 1/16W		R375,376			RK73GB1J104J	CHIP R 100K J 1/16W	
R271			RK73GB1J561J	CHIP R 560 J 1/16W		R378			RK73GB1J100J	CHIP R 10 J 1/16W	K2
R272			RK73GB1J152J	CHIP R 1.5K J 1/16W		R378			R92-1252-05	CHIP R 0 OHM J 1/16W	K
R273			RK73GB1J472J	CHIP R 4.7K J 1/16W		R379			RK73GB1J104J	CHIP R 100K J 1/16W	
R274,275			RK73GB1J153J	CHIP R 15K J 1/16W		R401-403			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R276			RK73GB1J473J	CHIP R 47K J 1/16W		R404			RK73GB1J103J	CHIP R 10K J 1/16W	
R277			RK73GB1J683J	CHIP R 68K J 1/16W		R405			R92-1252-05	CHIP R 0 OHM J 1/16W	
R278			RK73GB1J123J	CHIP R 12K J 1/16W		R407			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R279			RK73GB1J472J	CHIP R 4.7K J 1/16W		R408			RK73GB1J100J	CHIP R 10 J 1/16W	
R280			RK73GB1J391J	CHIP R 390 J 1/16W		R409			RK73GB1J104J	CHIP R 100K J 1/16W	
R281			R92-0670-05	CHIP R 0 OHM		R410			RK73GB1J103J	CHIP R 10K J 1/16W	K2
R301,302			RK73GB1J472J	CHIP R 4.7K J 1/16W		R410			RK73GB1J822J	CHIP R 8.2K J 1/16W	K
R303			RK73GB1J223J	CHIP R 22K J 1/16W		R411			RK73GB1J562J	CHIP R 5.6K J 1/16W	
R304			RK73GB1J472J	CHIP R 4.7K J 1/16W		R412,413			RK73GB1J103J	CHIP R 10K J 1/16W	
R305			RK73GB1J182J	CHIP R 1.8K J 1/16W		R414			RK73GB1J471J	CHIP R 470 J 1/16W	
R306			RK73GB1J274J	CHIP R 270K J 1/16W		R415			R92-1252-05	CHIP R 0 OHM J 1/16W	
R308			RK73GB1J334J	CHIP R 330K J 1/16W		R416			RK73GB1J471J	CHIP R 470 J 1/16W	
R309			RK73GB1J332J	CHIP R 3.3K J 1/16W		R417			RK73GB1J224J	CHIP R 220K J 1/16W	
R310			RK73GB1J102J	CHIP R 1.0K J 1/16W		R418,419			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R311			RK73GB1J333J	CHIP R 33K J 1/16W		R420			RK73GB1J272J	CHIP R 2.7K J 1/16W	
R312			RK73GB1J473J	CHIP R 47K J 1/16W		R421			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R313			RK73GB1J104J	CHIP R 100K J 1/16W		R422			RK73GB1J103J	CHIP R 10K J 1/16W	
R314			RK73GB1J222J	CHIP R 2.2K J 1/16W		R423			RK73GB1J331J	CHIP R 330 J 1/16W	K2

## PARTS LIST

TX-RX UNIT (X57-6700-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
R423,424			RK73GB1J221J	CHIP R 220 J 1/16W	K	D251			MA742	DIODE	
R424			RK73GB1J221J	CHIP R 220 J 1/16W	K2	D301			MA742	DIODE	
R425,426			RK73GB1J473J	CHIP R 47K J 1/16W		D302,303			DAN222	DIODE	
R427			RK73GB1J104J	CHIP R 100K J 1/16W		D351-354			HVC350B	VARIABLE CAPACITANCE DIODE	
R428			RK73GB1J473J	CHIP R 47K J 1/16W		D401			MA2S111	DIODE	
R429,430			RK73GB1J101J	CHIP R 100 J 1/16W		D402			HZU5ALL	DIODE	
R431			RK73GB1J104J	CHIP R 100K J 1/16W		D403-406			MA2S304	VARIABLE CAPACITANCE DIODE	
R432			RK73GB1J102J	CHIP R 1.0K J 1/16W		D407			MA360	VARIABLE CAPACITANCE DIODE	
R433			RK73GB1J472J	CHIP R 4.7K J 1/16W		D408			MA2S111	DIODE	
R434			R92-1252-05	CHIP R 0 OHM J 1/16W		D409			DAN235E	DIODE	
R435			RK73GB1J101J	CHIP R 100 J 1/16W		D501			1SS355	DIODE	
R436			RK73GB1J124J	CHIP R 120K J 1/16W		D502			DA221	DIODE	
R437			RK73GB1J102J	CHIP R 1.0K J 1/16W		D503			02DZ5.1(Y)	ZENER DIODE	
R438			RK73GB1J223J	CHIP R 22K J 1/16W		D602			MA4PH633	DIODE	
R439			RK73GB1J473J	CHIP R 47K J 1/16W		D603			XB15A709	DIODE	K
R440-442			RK73GB1J101J	CHIP R 100 J 1/16W		D604,605			XB15A709	DIODE	K2
R443			RK73GB1J222J	CHIP R 2.2K J 1/16W		D605			XB15A709	DIODE	K
R444			RK73GB1J102J	CHIP R 1.0K J 1/16W		D606,607			MA742	DIODE	
R501			RK73GB1J102J	CHIP R 1.0K J 1/16W		D608			1SS355	DIODE	
R502			RK73GB1J271J	CHIP R 270 J 1/16W		IC31			KIA7808AF	ANALOG IC	
R503			RK73GB1J180J	CHIP R 18 J 1/16W		IC32,33			NJM78L05UA	BI-POLAR IC	
R504			RK73GB1J271J	CHIP R 270 J 1/16W		IC34,35			PST9140NR	MOS IC	
R505			RK73GB1J222J	CHIP R 2.2K J 1/16W		IC66			AT24C64N10SI18	ROM IC	
R506			RK73GB1J103J	CHIP R 10K J 1/16W		IC101			30622MAA-B76GP	MPU	
R507			RK73GB1J100J	CHIP R 10 J 1/16W		IC161			M62363FP	MOS IC	
R509			RK73GB1J220J	CHIP R 22 J 1/16W		IC201			NJM2100V	MOS IC	
R510			RK73GB1J152J	CHIP R 1.5K J 1/16W		IC202			NJM2904V	MOS IC	
R511			RK73FB2A470J	CHIP R 47 J 1/10W		IC203			NJM2902V	MOS IC	
R512			RK73FB2A100J	CHIP R 10 J 1/10W		IC251			NJM2902V	MOS IC	
R513			RK73FB2A222J	CHIP R 2.2K J 1/10W		IC252	2B		LA4600	AF POWER IC	
R514			R92-1217-05	CHIP R 0 OHM		IC301			TK14489V	BI-POLAR IC	
R516			R92-0670-05	CHIP R 0 OHM		IC401			MB15A02	MOS IC	
R518			RK73EB2B330J	CHIP R 33 J 1/8W		IC402			UPB1509GV	BI-POLAR IC	
R519			RK73GB1J333J	CHIP R 33K J 1/16W		IC501			TA75W01FU	MOS IC	
R520			RK73GB1J183J	CHIP R 18K J 1/16W		Q1			2SK1824	FET	
R521			RK73GB1J101J	CHIP R 100 J 1/16W		Q31			2SA1641(S,T)	TRANSISTOR	
R522			RK73EB2B181J	CHIP R 180 J 1/8W	K	Q32			KRC102S	DIGITAL TRANSISTOR	
R522			RK73EB2B331J	CHIP R 330 J 1/8W	K2	Q33			2SA1745(6,7)	TRANSISTOR	
R523			RK73GB1J393J	CHIP R 39K J 1/16W	K	Q34			KRC102S	DIGITAL TRANSISTOR	
R523			RK73GB1J473J	CHIP R 47K J 1/16W	K2	Q35			KTA1664(Y)	TRANSISTOR	
R524			R92-1215-05	CHIP R 470 J 1/2W		Q36			KRC102S	DIGITAL TRANSISTOR	
R525			RK73GB1J563J	CHIP R 56K J 1/16W		Q61			KRC404RTK	DIGITAL TRANSISTOR	
R526			R92-1261-05	CHIP R 150 J 1/2W		Q71			KRC414RTK	DIGITAL TRANSISTOR	
R527			RK73GB1J224J	CHIP R 220K J 1/16W		Q86,87			2SK1824	FET	
R528,529			RK73GB1J471J	CHIP R 470 J 1/16W		Q201			2SC4919	TRANSISTOR	
R530			RK73GB1J102J	CHIP R 1.0K J 1/16W		Q202			2SJ243	FET	
R531			RK73GB1J473J	CHIP R 47K J 1/16W		Q251			2SC4617(S)	TRANSISTOR	
R532,533			R92-1252-05	CHIP R 0 OHM J 1/16W		Q252,253			2SK1824	FET	
R601,602			RK73GB1J223J	CHIP R 22K J 1/16W		Q254			DTC363EU	DIGITAL TRANSISTOR	
R603			RK73GB1J473J	CHIP R 47K J 1/16W		Q255			KRC102S	DIGITAL TRANSISTOR	
R605			RK73GB1J153J	CHIP R 15K J 1/16W		Q301			2SC2412K	TRANSISTOR	
R606			RK73GB1J221J	CHIP R 220 J 1/16W		Q302			2SC4617(S)	TRANSISTOR	
VR1			R12-6427-05	TRIMMING POT. (47K)		Q351			2SC5108(Y)	TRANSISTOR	
D1-11			DA221	DIODE		Q352,353			3SK255	FET	
D31			ZSH5MA27	SURGE ABSORBER		Q354			2SK1824	FET	
D32			1812L110PR	VARISTOR		Q402			2SA1832(GR)	TRANSISTOR	
D61			02DZ18(X,Y)	ZENER DIODE		Q403			2SC4738(GR)	TRANSISTOR	
D201			DAN222	DIODE		Q404			2SC4649(N,P)	TRANSISTOR	
D202			1SS372	DIODE		Q405,406			2SK508NV(K52)	FET	
						Q407			2SJ243	FET	

# TK-7100H

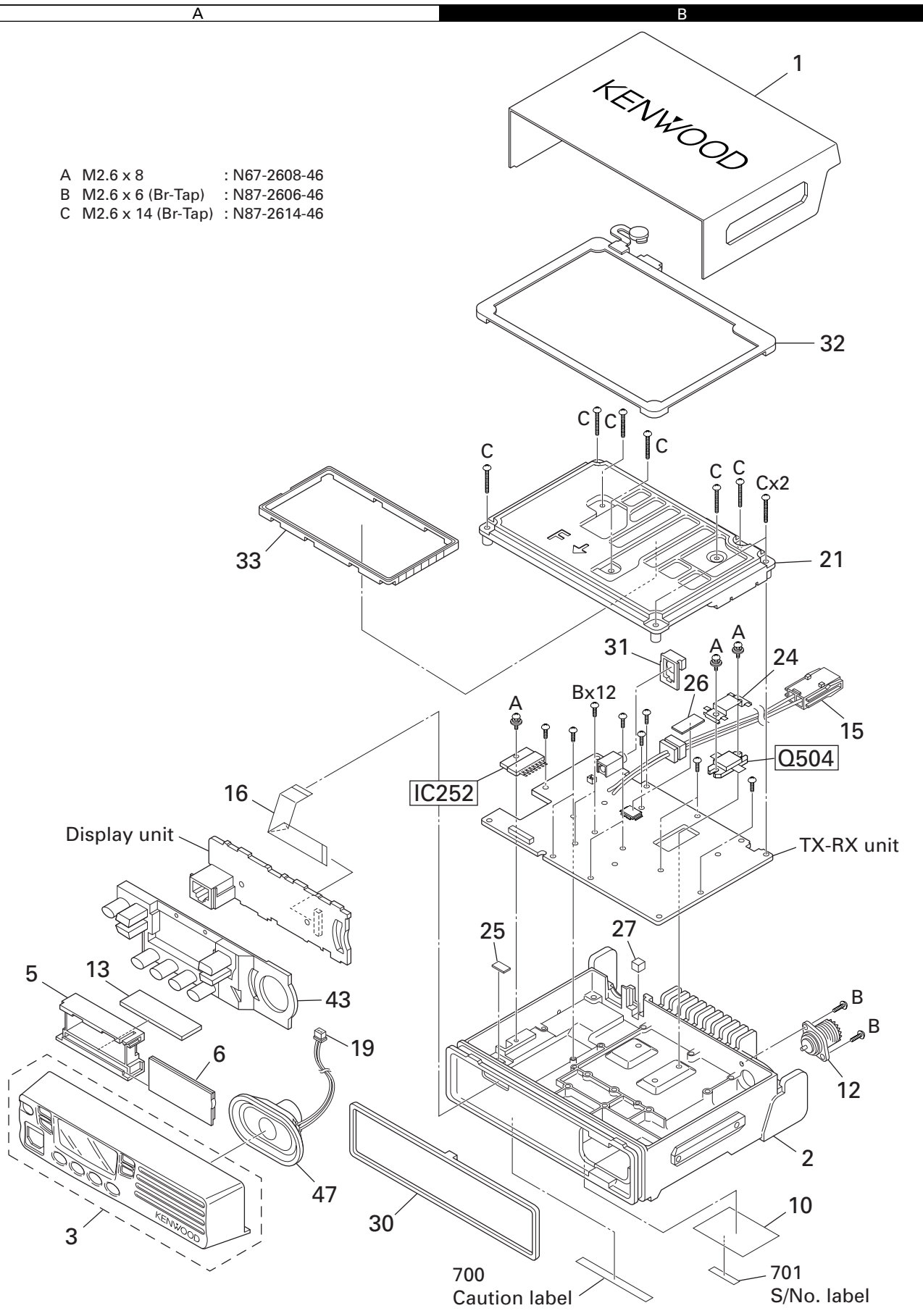
## PARTS LIST

### TX-RX UNIT (X57-6700-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
Q408			KRX102U	TRANSISTOR							
Q410			2SC5108(Y)	TRANSISTOR							
Q411			2SC4649(N,P)	TRANSISTOR							
Q440			2SC4617(S)	TRANSISTOR							
Q501,502			2SC3357	TRANSISTOR							
Q503			PD55003TR	FET							
Q504	2B		RD70HVF1-01	RF POWER FET							
TH97,98			B57331V2104J	THERMISTOR							
TH301			B57331V2104J	THERMISTOR							
TH351			B57331V2104J	THERMISTOR	K2						

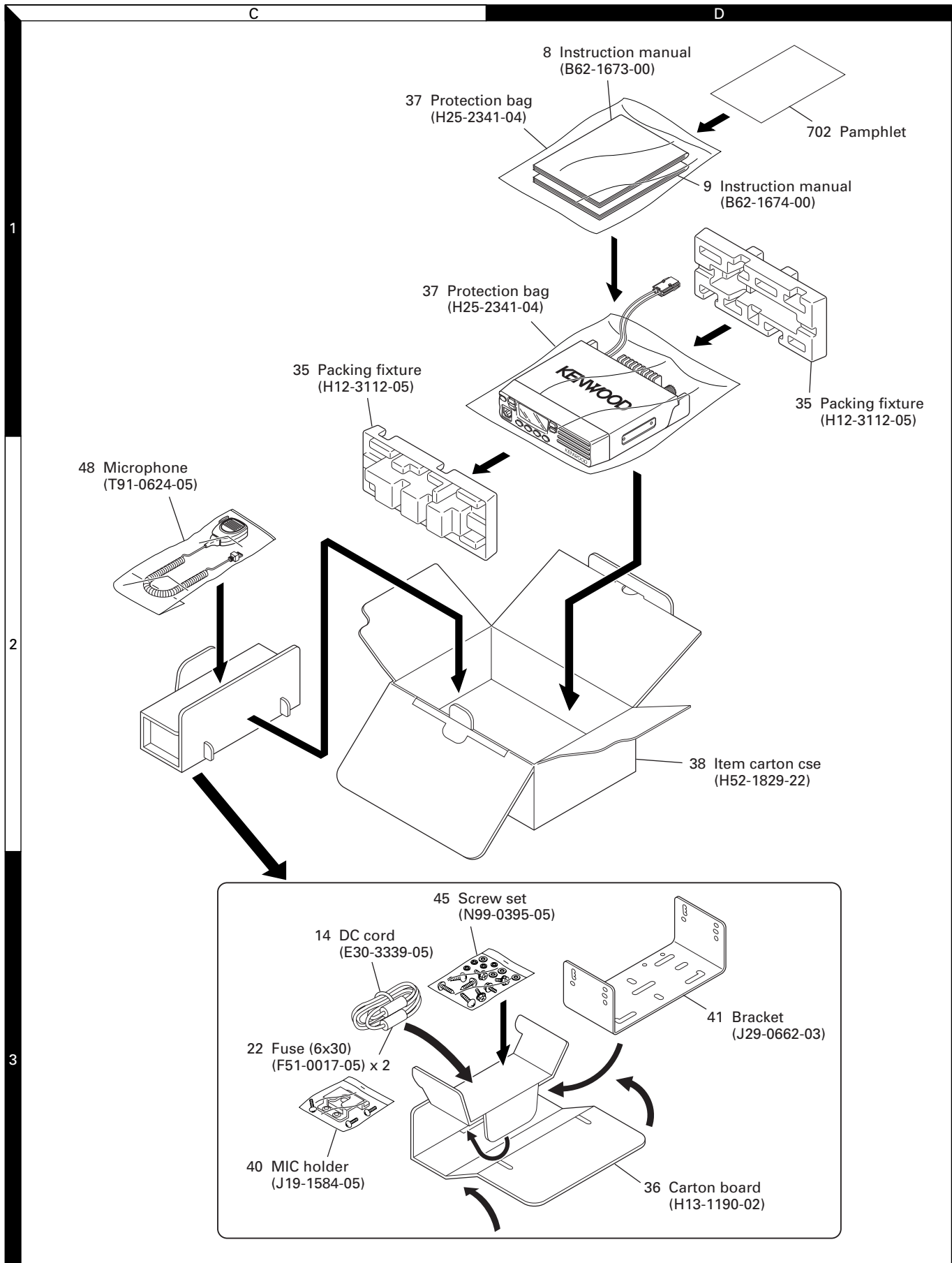
## EXPLODED VIEW

- 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



Parts with the exploded numbers larger than 700 are not supplied.

## PACKING

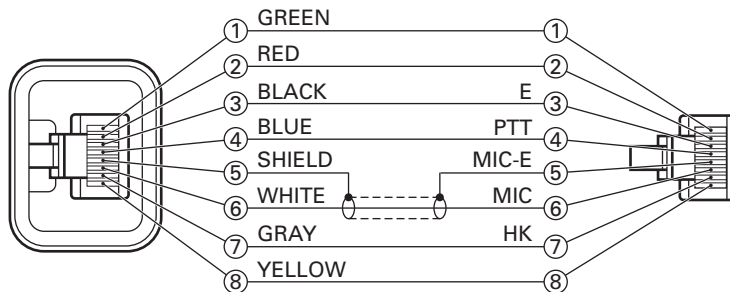


## ADJUSTMENT

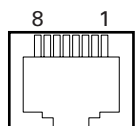
### Test Equipment Required for Alignment

Test Equipment	Major Specifications	
1. Standard Signal Generator (SSG)	Frequency Range	136 to 175MHz
	Modulation	Frequency modulation and external modulation
	Output	-127dBm/0.1μV to greater than -7dBm/100mV
2. Power Meter	Input Impedance	50Ω
	Operation Frequency	136 to 175MHz or more
	Measurement Capability	Vicinity of 100W
3. Deviation Meter	Frequency Range	136 to 175MHz
4. Digital Volt Meter (DVM)	Measuring Range	1 to 20V DC
	Accuracy	High input impedance for minimum circuit loading
5. Oscilloscope		DC through 30MHz
6. High Sensitivity Frequency Counter	Frequency Range	10Hz to 1000MHz
	Frequency Stability	0.2ppm or less
7. Ammeter		20A
8. AF Volt Meter (AF VTVM)	Frequency Range	50Hz to 10kHz
	Voltage Range	1mV to 3V
9. Audio Generator (AG)	Frequency Range	20Hz to 20kHz or more
	Output	0 to 1V
10. Distortion Meter	Capability	3% or less at 1kHz
	Input Level	50mV to 10Vrms
11. 4Ω Dummy Load		Approx. 4Ω, 10W or more
12. Regulated Power Supply		13.6V, approx. 20A (adjustable from 9 to 17V) Useful if ammeter required
13. Spectrum Analyzer	Center frequency	50KHz to 600MHz
14. Tracking Generator	Output Voltage	100mV or more

### Test cable for microphone input (E30-3360-08)



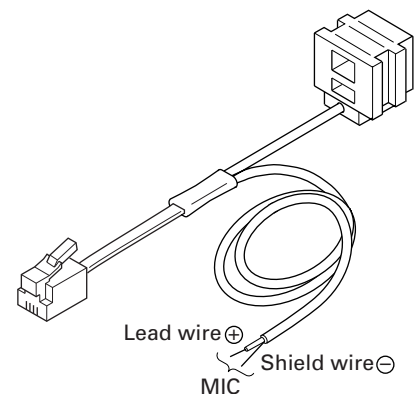
### MIC connector (Front view)



- 1 : BLC
- 2 : PSB
- 3 : E
- 4 : PTT
- 5 : ME
- 6 : MIC
- 7 : HOOK
- 8 : CM

### Tuning cable (E30-3383-05)

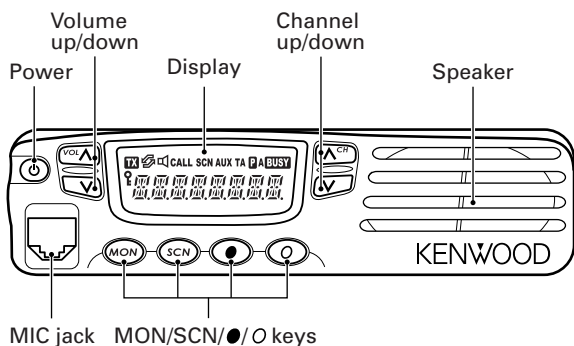
Adapter cable (E30-3383-05) is required for injecting an audio if PC tuning is used. See "PC Mode" section for the connection.



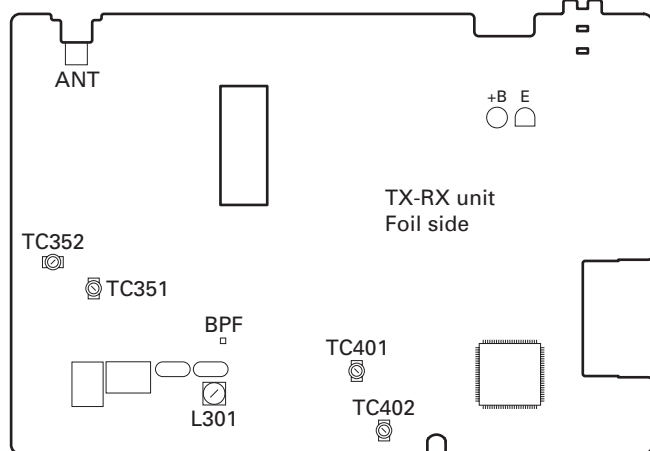
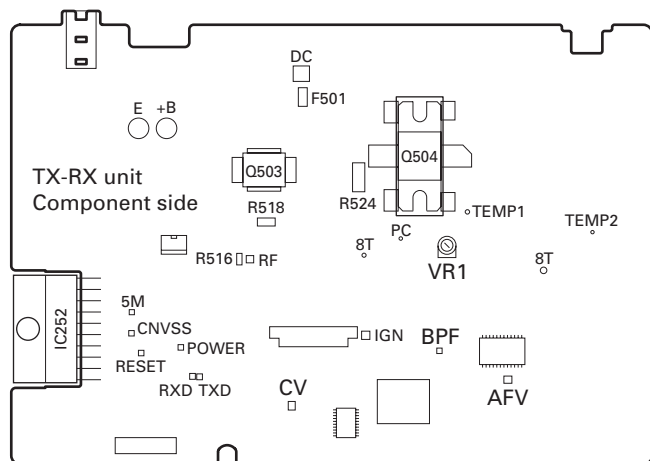
## ADJUSTMENT

### Adjustment Location

#### ■ Switch



#### ■ Adjustment Points



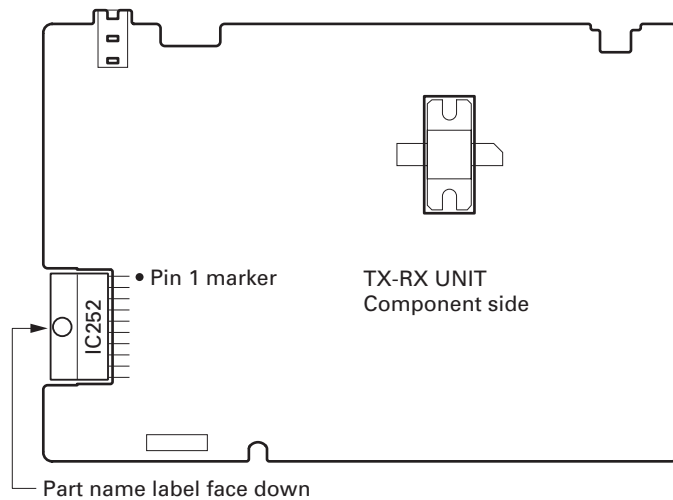
#### ■ Notes

##### • EEPROM

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

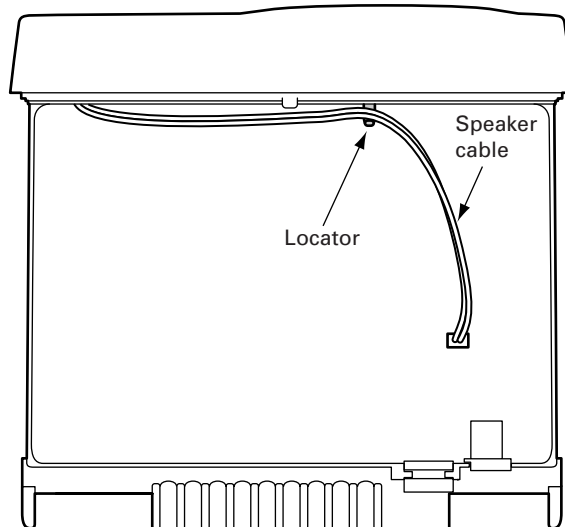
##### • AF PA IC (IC252)

How to mounting the IC252.



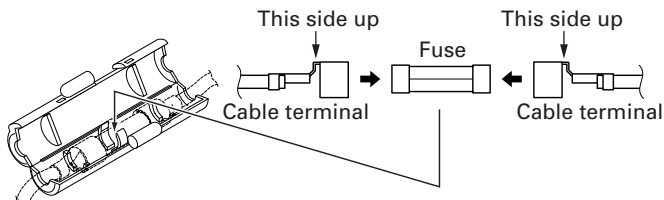
##### • Speaker Cable

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 follow.



## ADJUSTMENT

### Test Frequency (MHz)

Channel	K		K2	
	TX	RX	TX	RX
1 : Center	160.100	160.050	149.100	149.050
2 : Low	146.100	146.050	136.100	136.050
3 : High	173.900	173.950	161.900	161.950
4	160.000	160.000	149.000	149.000
5	160.200	160.200	149.200	149.200
6	160.400	160.400	149.400	149.400

### PCB Section

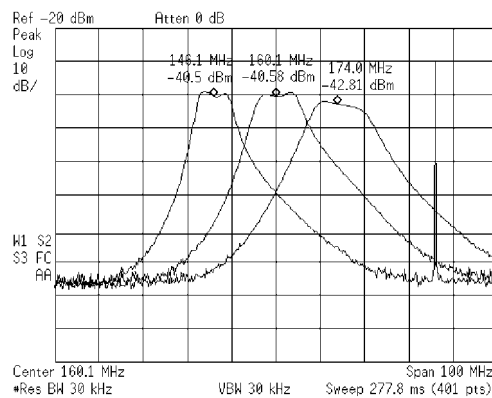
Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
1. Setting	1) Power supply voltage DC Power supply terminal : 13.6V					
2. VCO lock voltage*	1) CH : TX high	Digital voltmeter	CV	TC402	5.5V	±0.1V
	2) CH : RX high			TC401	5.5V	±0.1V
	3) CH : TX low				Check	0.7V 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	L301	3.25~3.35V (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	TC351 TC352	Adjust the BPF waveform to Fig. 1	

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

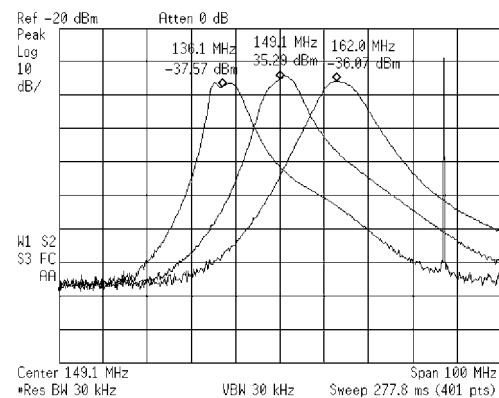
1. Remove R516, F501, R518 and R524 (all on component side).
2. Remove PCB from chassis.
3. Transmit and check voltage at [CV] point.

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

4. Adjust of voltage can be done by tuning TC402.



K



K2

Fig. 1



## ADJUSTMENT

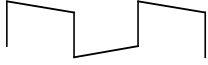
### Receiver Section

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 (0.28μV) (Wide) : -116dBm (0.35μV) (Narrow) Mod : 1kHz Dev : ±3.0kHz (Wide) Dev : ±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 : -115dBm (0.4μV) (Wide) : -114dBm (0.45μV) (Narrow) Mod : 1kHz Dev : ±3.0kHz (Wide) Dev : ±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 (0.22μV) (Wide) : -119dBm (0.25μV) (Narrow) Mod : 1kHz Dev : ±3.0kHz (Wide) Dev : ±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 ±100Hz
2. Maximum power limiting	1) CH : TX high 2) Transmit	Power meter		VR1	53W	±1W
3. High power	1) CH : TX low CH : TX low' CH : TX center CH : TX high' CH : TX high 2) Transmit			PC key	50W	±1.0W
4. Low power	1) CH : TX low CH : TX low' CH : TX center CH : TX high' CH : TX high 2) Transmit				25W	±1.0W

## ADJUSTMENT

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

- Switch off the transceiver.  
Impedance of Final FET (Q504) and Drive FET (Q503) can be measured easily using DVM  $\Omega$  mode.  
Normal condition – Gate : 20k $\Omega$ ~50k $\Omega$ , Drain : 1M $\Omega$ ~2M $\Omega$   
The above impedance values are rough estimations.
- Switch on the transceiver. Check the voltage at F501 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 F501 is broken.
- Remove R516.

- 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.
- 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 0.3W~0.6W.  
If power found is less than 0.3W, check the circuit before the Drive FET.

## TERMINAL FUNCTION

### CN2

No.	Name	I/O	Function
1	SB	O	Battery voltage DC supply
2	NC	-	-
3	GND	O	Ground
4	NC	-	-
5	FNC1	I/O	Programable I/O (programmed by FPU)
6	FNC2	I/O	Programable I/O (programmed by FPU)
7	FNC3	I/O	Programable I/O (programmed by FPU)
8	FNC4	I/O	Programable I/O (programmed by FPU)
9	FNC5	I/O	Programable I/O (programmed by FPU)
10	FNC6	I/O	Programable I/O (programmed by FPU)
11	FNC7	I/O	Programable I/O (programmed by FPU)
12	FNC8	I/O	Programable I/O (programmed by FPU)

### ■ Function Port Assignment

KDS100, KGP-2A/2B		
	Name	I/O
FNC1	-	-
FNC2	-	-
FNC3	Data Channel	I
FNC4	PTT	I
FNC5	Carrier Operated Relay	O
FNC6	Audio Mute	I
FNC7	Mic Mute	I
FNC8	TX Relay	O
SmarTrunk II		
	Name	I/O
FNC1	TXD	O
FNC2	RXD	I
FNC3	Reset	O
FNC4	-	-
FNC5	-	-
FNC6	-	-
FNC7	-	-
FNC8	-	-
Scrambler		
	Name	I/O
FNC1	-	-
FNC2	-	-
FNC3	TX Relay	O
FNC4	Scrambler	O
FNC5	Scrambler Code1 (1)	O
FNC6	Scrambler Code2 (2)	O
FNC7	Scrambler Code3 (4)	O
FNC8	Scrambler Code4 (8)	O

Port Function is Low Active. (Exclude : Scrambler Code)

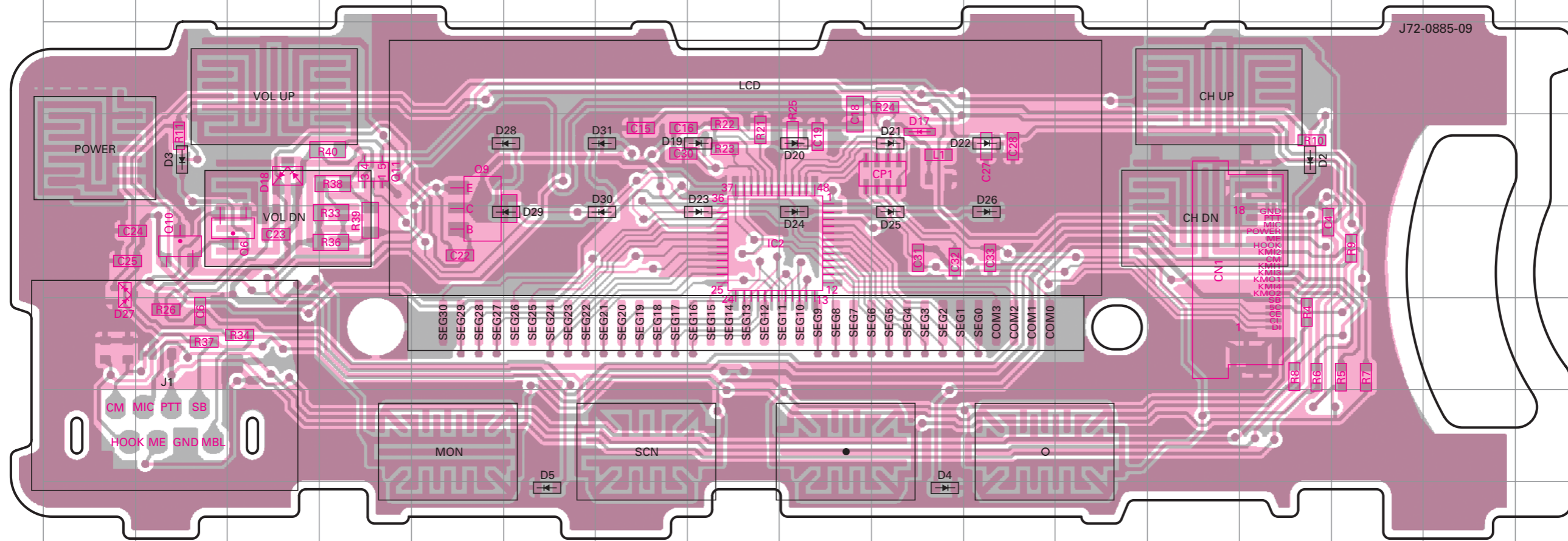
### CN3

No.	Name	I/O	Function
1	IGN	I	Ignition sens input
2	DATAI	I	External transmit signal input
3	DETO	O	FM detector output
4	TXAFI	I	TX audio input from scrambler board
5	TXAFO	O	TX audio output to scrambler board
6	EMGMIC	I	Emergency MIC input (1kHz/1.2mVrms)
7	RXAFO	O	RX audio output to scrambler board
8	ALTI	I	External alert tone signal input
9	RXAFI	I	RX audio input from scrambler board
10	5C	O	5V DC power supply (50mA MAX)
11	8C	O	8V DC power supply (50mA MAX)

### CN4

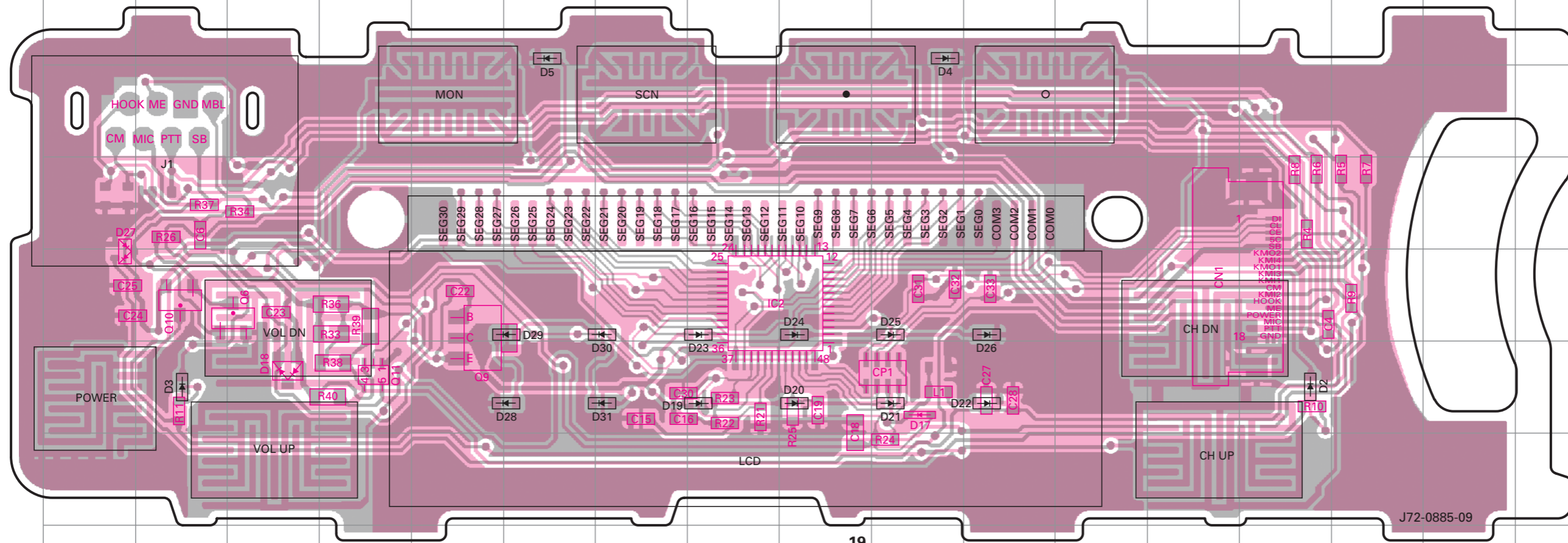
No.	Name	I/O	Function
1	GND	O	Ground
2	NC	-	-
3	NC	-	-
4	NC	-	-
5	FNC2	I/O	Programable I/O (programmed by FPU)
6	NC	-	-
7	NC	-	-
8	FNC3	I/O	Programable I/O (programmed by FPU)
9	FNC1	I/O	Programable I/O (programmed by FPU)
10	NC	-	-
11	5C	O	5V DC power supply (50mA MAX)
12	NC	-	-
13	DATAI	I	External transmit signal input
14	DETO2	O	FM detector output
15	ALTI	I	External alert tone signal input
16	NC	-	-
17	NC	-	-
18	NC	-	-
19	NC	-	-
20	GND	O	Ground

DISPLAY UNIT (X54-3430-20) Component side view (J72-0885-09)



Ref. No.	Address	Ref. No.	Address
IC2	4H	D20	3I
Q6	4C	D21	3J
Q9	4E	D22	3K
Q10	4B	D23	4H
Q11	3D	D24	4L
D2	3N	D25	4J
D3	3B	D26	4K
D4	7J	D27	4A
D5	7F	D28	3F
D17	3J	D29	4F
D18	3C	D30	4G
D19	3H	D31	3G

DISPLAY UNIT (X54-3430-20) Foil side view (J72-0885-09)

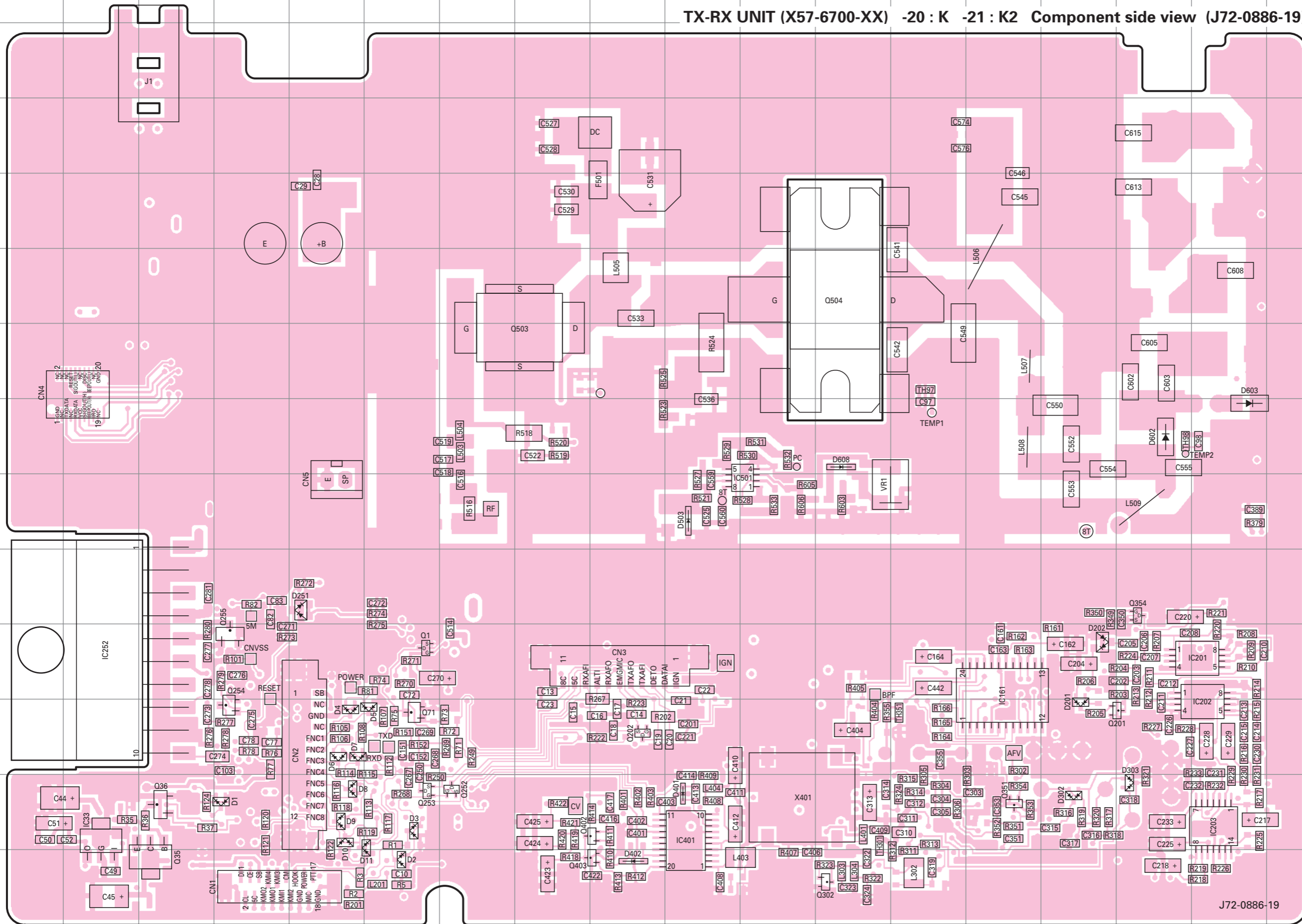


Ref. No.	Address	Ref. No.	Address
IC2	11H	D20	12I
Q6	11C	D21	12J
Q9	11E	D22	12K
Q10	11B	D23	11H
Q11	12D	D24	11I
D2	12N	D25	11J
D3	12B	D26	11K
D4	8J	D27	11A
D5	8F	D28	12F
D17	12J	D29	11F
D18	12C	D30	11G
D19	12H	D31	12G

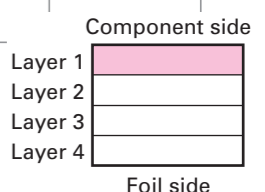
Component side  
 Foil side

# TK-7100H PC BOARD

TX-RX UNIT (X57-6700-XX) -20 : K -21 : K2 Component side view (J72-0886-19)



Ref. No.	Address
IC33	12B
IC161	10N
IC201	10Q
IC202	11Q
IC203	12Q
IC252	10B
IC401	12J
IC501	8K
Q1	10F
Q35	13C
Q36	12C
Q71	11F
Q201	11P
Q202	11I
Q252	12G
Q253	12F
Q254	11D
Q255	10D
Q302	13L
Q351	12N
Q354	9P
Q402	12I
Q403	13I
Q503	6H
Q504	5L
D1	12D
D2	13F
D3	12F
D4	11E
D5	11F
D6	11E
D7	11E
D8	12E
D9	12E
D10	12E
D11	12F
D201	11O
D202	10O
D251	9E
D302	12O
D303	12P
D401	12J
D402	13I
D503	8J
D602	7P
D603	7Q
D608	7L

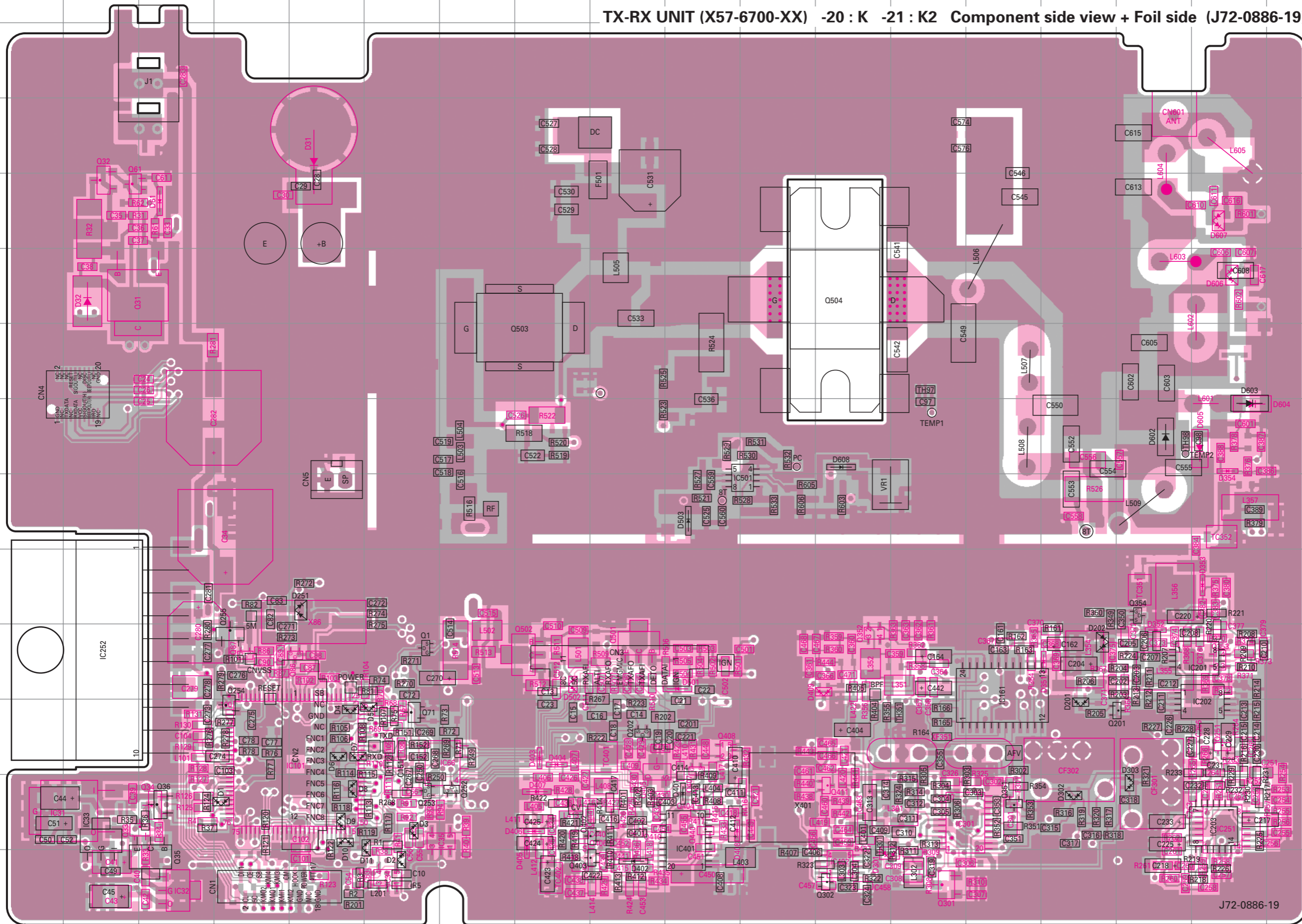


J72-0886-19

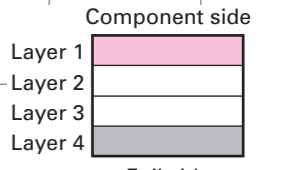


# TK-7100H PC BOARD

TX-RX UNIT (X57-6700-XX) -20 : K -21 : K2 Component side view + Foil side (J72-0886-19)



Ref. No.	Address	Ref. No.	Address
IC31	12B	Q411	12L
IC32	13C	Q440	12J
IC33	12B	Q501	10I
IC34	13F	Q502	10H
IC35	12G	Q503	6H
IC66	11G	Q504	5L
IC101	11E	D1	12D
IC161	10N	D2	13F
IC201	10Q	D3	12F
IC202	11Q	D4	11E
IC203	12Q	D5	11F
IC251	12Q	D6	11E
IC252	10B	D7	11E
IC301	12N	D8	12E
IC401	12J	D9	12E
IC402	13L	D10	12E
IC501	8K	D11	12F
Q1	10F	D31	3E
Q31	5B	D32	5B
Q32	4B	D61	4C
Q33	12C	D201	11O
Q34	12C	D202	10O
Q35	13C	D251	9E
Q36	12C	D301	13L
Q61	4B	D302	12O
Q71	11F	D303	12P
Q86	10E	D351	10O
Q87	10D	D352	10P
Q201	11P	D353	9Q
Q202	11I	D354	7Q
Q251	11Q	D401	12J
Q252	12G	D402	13I
Q253	12F	D403	11H
Q254	11D	D404	11H
Q255	10D	D405	12H
Q301	13M	D406	12H
Q302	13L	D407	12H
Q351	12N	D408	12J
Q352	10L	D409	10L
Q353	10Q	D501	10J
Q354	9P	D502	10H
Q402	12I	D503	8J
Q403	13I	D602	7P
Q404	12J	D603	7Q
Q405	11I	D604	7Q
Q406	13H	D605	7Q
Q407	11J	D606	5Q
Q408	11J	D607	4Q
Q410	12I	D608	7L



● Connect 1 and 4

J72-0886-19



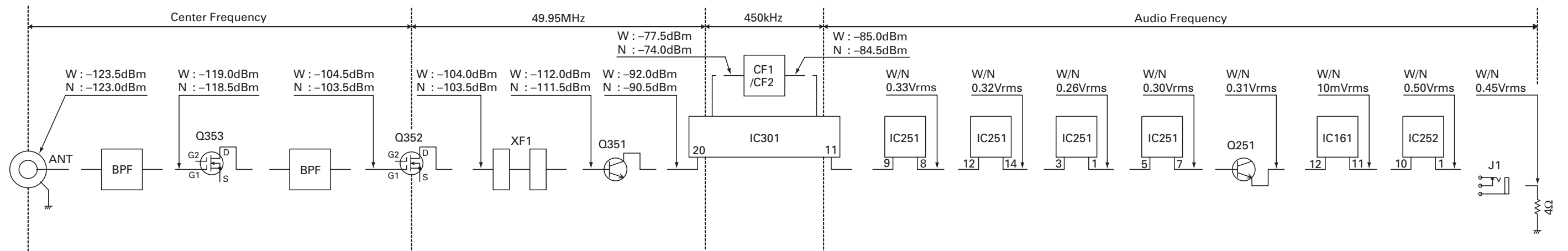




# TK-7100H TK-7100H

## LEVEL DIAGRAM

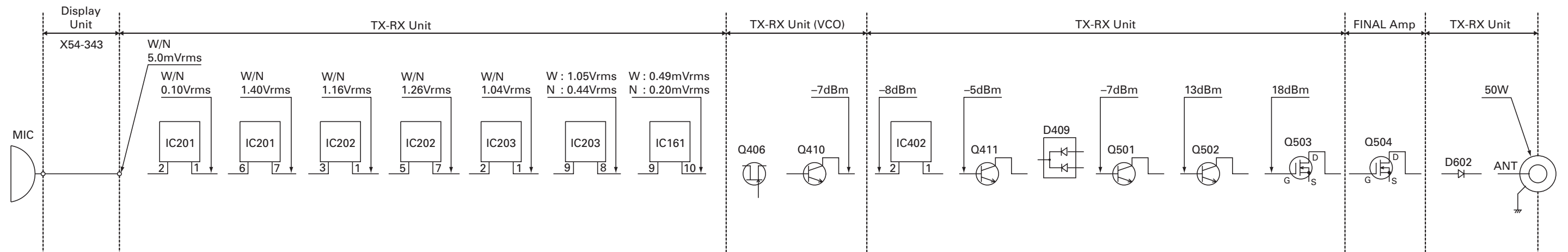
### Receiver Section



To make measurements in the RF section, connect the RF level meter.  
In the RF section, use a 0.01 $\mu$ F 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/4 $\Omega$  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 $\Omega$ ).

## SPECIFICATIONS

### GENERAL

Frequency Range .....	K : 146 to 174MHz	K2 : 136 to 162MHz
Channels / Groups .....	64CH / 8GRP	
Channel Spacing .....	Wide : 25kHz	Narrow : 12.5kHz
PLL Channel Stepping .....	2.5, 5, 6.25, 7.5kHz	
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 : 28MHz	K2 : 26MHz

### 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 .....	High : 50W	Low : 25W
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-7100H

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