

# TK-3160

## SERVICE MANUAL

### SUPPLEMENT

This TK-3160 service manual contains a number of sections which differ from the service manual (B51-8653-00) for the TK-3160. For items other than those in this TK-3160 service manual please refer to the service manual (B51-8653-00) for the TK-3160.



**Does not come with antenna.  
Antenna is available as an option.**

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#### Service Manual List

| Title   | Parts number                         | Remarks    | Destination |
|---------|--------------------------------------|------------|-------------|
| TK-3160 | B51-8653-00                          |            | K, M        |
| TK-3160 | B51-8672-00<br>(This service manual) | SUPPLEMENT | K2,M2,K3,M3 |

## GENERAL / SYSTEM SET-UP

### 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 the publication date. Changes which may occur after publication are covered by either Service Bulletins or Manual Revisions. These 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, or 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.

### PERSONAL SAFETY

The following precautions are recommended for personal safety:

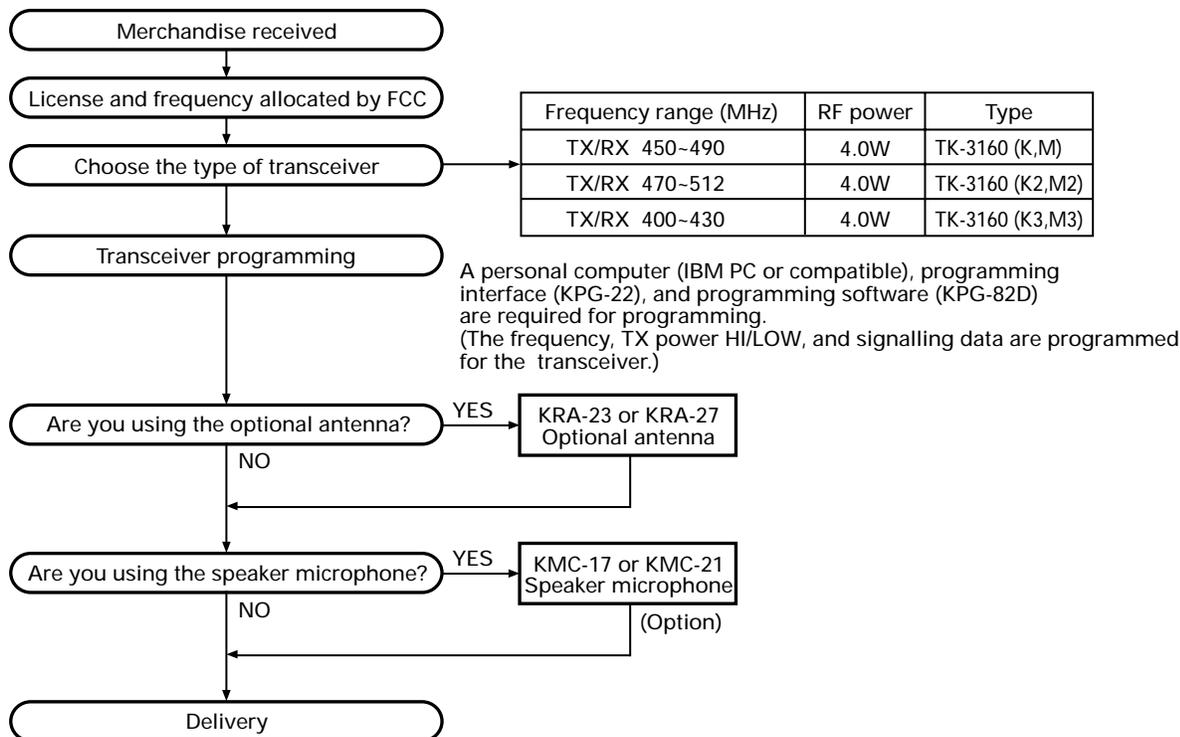
- DO NOT transmit until all RF connectors are verified secure and any open connectors are properly terminated.
- SHUT OFF and DO NOT operate this equipment near electrical blasting caps or in an explosive atmosphere.
- This equipment should be serviced by a qualified technician only.

### SERVICE

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

| Unit                |        | TX-RX Unit  | Frequency range | Remarks                         |
|---------------------|--------|-------------|-----------------|---------------------------------|
| Model & destination |        |             |                 |                                 |
| TK-3160             | K,M    | X57-6730-10 | 450~490MHz      | IF1 : 49.95MHz<br>LOC : 50.4MHz |
|                     | K2, M2 | X57-6730-11 | 470~512MHz      |                                 |
|                     | K3, M3 | X57-6730-12 | 400~430MHz      |                                 |

### SYSTEM SET-UP



## PARTS LIST

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

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

**TK-3160 (Y50-5790-XX)**  
**TX-RX UNIT (X57-6730-XX)**

| Ref. No.       | Address | New parts | Parts No.   | Description                         | Destination | Ref. No.  | Address | New parts | Parts No.     | Description                | Destination |
|----------------|---------|-----------|-------------|-------------------------------------|-------------|---|---------|-----------|---------------|----------------------------|-------------|
| <b>TK-3160</b> |         |           |             |                                     |             |   |         |           |               |                            |             |
| 1              | 1B      |           | A02-3826-43 | CABINET ASSY                        |             | D   | 3B      |           | N30-2612-46   | PAN HEAD MACHINE SCREW     |             |
| 2              | 2B      |           | A10-4068-31 | CHASSIS                             |             | E   | 3A,3B   |           | N30-3006-45   | PAN HEAD MACHINE SCREW     |             |
| 3              | 3A      |           | A82-0054-02 | REAR PANEL                          |             | F   | 2D      |           | N35-3004-45   | BINDING HEAD MACHINE SCREW |             |
| 4              | 3A      |           | B01-0694-03 | ESCUTCHEON                          |             | G   | 3A,3B   |           | N78-2040-46   | PAN HEAD TAPTITE SCREW     |             |
| 5              | 2D      |           | B09-0676-13 | CAP                      ACCESSORY  |             | H   | 2A,2B   |           | N83-2005-46   | PAN HEAD TAPTITE SCREW     |             |
| 6              | 1C      |           | B62-1716-00 | INSTRUCTION MANUAL                  | K,K2,K3     | 44  | 2A      |           | R31-0650-05   | VARIABLE RESISTOR          |             |
| 6              | 1C      |           | B62-1747-00 | INSTRUCTION MANUAL                  | M,M2,M3     | 45  | 2A      |           | S60-0420-05   | ROTARY SWITCH              |             |
| 7              | 3B      |           | B72-2178-14 | MODEL NAME PLATE                    | K           | 46  | 1B      |           | T07-0369-05   | SPEAKER                    |             |
| 7              | 3B      |           | B72-2181-04 | MODEL NAME PLATE                    | M           | <b>TX-RX UNIT (X57-6730-XX) 0-10: K,M 0-11: K2,M2 0-12: K3,M3</b> |         |           |               |                            |             |
| 7              | 3B      | *         | B72-2251-04 | MODEL NAME PLATE                    | K2          | D802  |         |           | B30-2156-05   | LED(RED)                   |             |
| 7              | 3B      | *         | B72-2252-04 | MODEL NAME PLATE                    | K3          | D803  |         |           | B30-2157-05   | LED(YELLOW)                |             |
| 7              | 3B      | *         | B72-2253-04 | MODEL NAME PLATE                    | M2          | C1  |         |           | CK73GB1H392K  | CHIP C    3900PF    K      | K,K2,M2     |
| 7              | 3B      | *         | B72-2254-04 | MODEL NAME PLATE                    | M3          | C1  |         |           | CK73GB1H392K  | CHIP C    3900PF    K      | M3          |
| 8              | 3A      |           | E04-0446-05 | RF COAXIAL RECEPTACLE(SMA)          |             | C1  |         |           | CK73GB1H472K  | CHIP C    4700PF    K      | K,M         |
| 10             | 2A      |           | E37-1101-05 | SPEAKER WIRE(RED)                   |             | C2  |         |           | CK73GB1H471K  | CHIP C    470PF    K       |             |
| 11             | 2A      |           | E37-1102-05 | SPEAKER WIRE(BLACK)                 |             | C3  |         |           | CK73GB1H103K  | CHIP C    0.010UF    K     |             |
| 12             | 3A      |           | E72-0416-23 | BATT TERMINAL BLOCK                 |             | C4  |         |           | CK73GB0J225K  | CHIP C    2.2UF    K       | K,M         |
| 13             | 2B      |           | G11-4090-04 | SHEET(FINAL FET)                    |             | C5  |         |           | CK73GB1H471K  | CHIP C    470PF    K       |             |
| 14             | 3B      |           | G11-4254-04 | SHEET(PTT)                          |             | C6  |         |           | CK73GB1H103K  | CHIP C    0.010UF    K     |             |
| 15             | 3A      |           | G11-4287-04 | SHEET(BATT TERMINAL BLOCK)          |             | C7  |         |           | CK73GB1H471K  | CHIP C    470PF    K       |             |
| 16             | 3A      |           | G11-4289-04 | SHEET(CHASSIS)                      |             | C8  |         |           | CC73GCH1H100D | CHIP C    10PF    D        |             |
| 17             | 3B      | *         | G11-4293-04 | SHEET                               |             | C9  |         |           | CK73GB1H103K  | CHIP C    0.010UF    K     |             |
| 18             | 2A      | *         | G11-4294-04 | SHEET                               |             | C10   |         |           | CC73GCH1H100D | CHIP C    10PF    D        |             |
| 19             | 3B      | *         | G11-4295-04 | SHEET                               |             | C11-13  |         |           | CC73GCH1H101J | CHIP C    100PF    J       |             |
| 20             | 1A      | *         | G11-4306-04 | SHEET                               |             | C14   |         |           | C92-0713-05   | CHIP-TAN    10UF    6.3WV  |             |
| 21             | 2A      | *         | G11-4312-04 | SHEET                               |             | C15   |         |           | CK73GB1H102K  | CHIP C    1000PF    K      |             |
| 22             | 2B      |           | G13-2001-04 | CUSHION(CHASSIS)                    |             | C16   |         |           | CC73GCH1H470J | CHIP C    47PF    J        |             |
| 23             | 2B      | *         | G13-2014-04 | CUSHION(CCHASSIS BOTTOM)            |             | C18,19  |         |           | CK73GB1C104K  | CHIP C    0.10UF    K      |             |
| 24             | 2B      |           | G13-2017-04 | CUSHION                             |             | C22   |         |           | CK73GB1C104K  | CHIP C    0.10UF    K      |             |
| 25             | 2B      |           | G13-2018-04 | CUSHION                             |             | C24   |         |           | C92-0713-05   | CHIP-TAN    10UF    6.3WV  |             |
| 26             | 3A      |           | G13-2019-04 | CUSHION                             |             | C25   |         |           | CK73GB1H471K  | CHIP C    470PF    K       |             |
| 27             | 2B      |           | G13-2020-04 | CUSHION                             |             | C27   |         |           | CK73GB1H103K  | CHIP C    0.010UF    K     |             |
| 28             | 3A      | *         | G13-2026-04 | CUSHION?????                        |             | C28   |         |           | CC73GCH1H560J | CHIP C    56PF    J        |             |
| 29             | 3A      | *         | G13-2027-04 | CUSHION?????                        |             | C29   |         |           | CK73GB1H471K  | CHIP C    470PF    K       |             |
| 30             | 2B      |           | G53-1580-03 | PACKING(CHASSIS)                    |             | C30   |         |           | CC73GCH1H220J | CHIP C    22PF    J        |             |
| 31             | 1B      |           | G53-1581-12 | PACKING(SPEAKER)                    |             | C31   |         |           | CC73GCH1H560J | CHIP C    56PF    J        |             |
| 32             | 3B      |           | G53-1582-03 | PACKING(BATT TERMINAL BLOCK)        |             | C32   |         |           | C92-0002-05   | CHIP-TAN    0.22UF    35WV |             |
| 33             | 3A      |           | G53-1641-02 | PACKING                             |             | C33   |         |           | CC73GCH1H470J | CHIP C    47PF    J        |             |
| 34             | 3C      |           | H12-3150-02 | PACKING FIXTURE                     |             | C34   |         |           | CK73GB1H471K  | CHIP C    470PF    K       |             |
| 35             |         |           | H25-2345-04 | PROTECTION BAG                      |             | C35   |         |           | CC73GCH1H680J | CHIP C    68PF    J        |             |
| 36             | 1D      |           | H52-2000-02 | ITEM CARTON CASE                    |             | C36   |         |           | C92-0585-05   | CHIP-TAN    4.7UF    16WV  |             |
| 37             | 2A      |           | J19-5454-03 | HOLDER                              |             | C37   |         |           | CK73GB1H103K  | CHIP C    0.010UF    K     | K,M,K2      |
| 38             | 2D      |           | J21-8464-04 | HARDWARE FIXTURE    ACCESSORY       |             | C37   |         |           | CK73GB1H103K  | CHIP C    0.010UF    K     | M2          |
| 39             | 2C      |           | J29-0701-05 | HOOK                      ACCESSORY |             | C37   |         |           | CK73GB1H822K  | CHIP C    8200PF    K      | K3,M3       |
| 41             | 3A      |           | J30-1275-04 | SPACER(CH KNOB)                     |             | C38,39  |         |           | C92-0002-05   | CHIP-TAN    0.22UF    35WV |             |
| 41             | 1A      |           | K29-9278-13 | KNOB(VOLUME)                        |             | C40   |         |           | CK73GB1H183K  | CHIP C    0.018UF    K     |             |
| 45             | 3A      |           | K29-9280-13 | KNOB(CH SELECTOR)                   |             | C41,42  |         |           | CK73GB1A105K  | CHIP C    1.0UF    K       |             |
| 43             | 1B      | *         | K29-9332-03 | KNOB(PTT)                           |             | C43,44  |         |           | CC73HCH1H101J | CHIP C    100PF    J       |             |
| A              | 3A      |           | N14-0583-04 | CIRCULAR NUT(CH)                    |             | C45   |         |           | CC73HCH1H020B | CHIP C    2.0PF    B       | K,M         |
| B              | 3A      |           | N14-0805-04 | CIRCULAR NUT(VOLUME)                |             | C45   |         |           | CC73HCH1H040B | CHIP C    4.0PF    B       | K2,M2       |
| C              | 3A      |           | N30-2604-46 | PAN HEAD MACHINE SCREW              |             | C45   |         |           | CC73HCH1H050B | CHIP C    5.0PF    B       | K3,M3       |

## PARTS LIST

## TX-RX UNIT (X57-6730-XX)

| Ref. No. | Address | New parts | Parts No.     | Description    | Destination | Ref. No. | Address | New parts | Parts No.     | Description         | Destination |
|----------|---------|-----------|---------------|----------------|-------------|----------|---------|-----------|---------------|---------------------|-------------|
| C46      |         |           | CC73HCH1H220J | CHIP C 22PF J  | K3,M3       | C75,76   |         |           | CK73HB1H471K  | CHIP C 470PF K      |             |
| C46      |         |           | CC73HCH1H270J | CHIP C 27PF J  | K,M         | C77      |         |           | C92-0713-05   | CHIP-TAN 10UF 6.3WV |             |
| C46      |         |           | CC73HCH1H390J | CHIP C 39PF J  | K2,M2       | C78      |         |           | CK73HB1H471K  | CHIP C 470PF K      |             |
| C47      |         |           | CK73GB1H471K  | CHIP C 470PF K |             | C80      |         |           | CC73HCH1H070D | CHIP C 7.0PF D      |             |
| C48      |         |           | CC73HCH1H110J | CHIP C 11PF J  | K,M         | C82      |         |           | CC73HCH1H330J | CHIP C 33PF J       |             |
| C48      |         |           | CC73HCH1H120J | CHIP C 12PF J  | K3,M3       | C83-85   |         |           | CK73HB1H471K  | CHIP C 470PF K      |             |
| C48      |         |           | CC73HCH1H150J | CHIP C 15PF J  | K2,M2       | C86      |         |           | CC73HCH1H070D | CHIP C 7.0PF D      |             |
| C49      |         |           | CC73HCH1H330J | CHIP C 33PF J  | K,M         | C92      |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C49      |         |           | CC73HCH1H390J | CHIP C 39PF J  | K3,M3       | C94,95   |         |           | CK73HB1A104K  | CHIP C 0.10UF K     |             |
| C49      |         |           | CC73HCH1H470J | CHIP C 47PF J  | K2,M2       | C201,202 |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C50      |         |           | CC73HCH1H020C | CHIP C 2.0PF C | K,K3,M2     | C205     |         |           | CK73GB1A224K  | CHIP C 0.22UF K     |             |
| C50      |         |           | CC73HCH1H020C | CHIP C 2.0PF C | M3          | C223     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C50      |         |           | CC73HCH1H050C | CHIP C 5.0PF C | K,M         | C224     |         |           | CC73GCH1H040C | CHIP C 4.0PF C      | K2,M2       |
| C51      |         |           | CC73HCH1H150J | CHIP C 15PF J  | K,M         | C224     |         |           | CC73GCH1H070D | CHIP C 7.0PF D      | K,M         |
| C51      |         |           | CC73HCH1H220J | CHIP C 22PF J  | K,K2,M2     | C224     |         |           | CC73GCH1H090D | CHIP C 9.0PF D      | K3,M3       |
| C51      |         |           | CC73HCH1H220J | CHIP C 22PF J  | M3          | C226     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C52      |         |           | CC73GCH1H050C | CHIP C 5.0PF C | K,M,K2      | C233     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C52      |         |           | CC73GCH1H050C | CHIP C 5.0PF C | M2          | C241     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C52      |         |           | CC73GCH1H070D | CHIP C 7.0PF D | K3,M3       | C242     |         |           | CC73GCH1H060D | CHIP C 6.0PF D      |             |
| C53      |         |           | CC73HCH1H020B | CHIP C 2.0PF B | K,M         | C243     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C53      |         |           | CC73HCH1H030B | CHIP C 3.0PF B | K2,M2       | C248     |         |           | CC73GCH1H050C | CHIP C 5.0PF C      | K3,M3       |
| C53      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | K3,M3       | C249     |         |           | CC73GCH1H130J | CHIP C 13PF J       |             |
| C54      |         |           | CC73HCH1H020C | CHIP C 2.0PF C | K3,M3       | C255     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C54      |         |           | CC73HCH1H030C | CHIP C 3.0PF C | K2,M2       | C258     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C54      |         |           | CC73HCH1H050C | CHIP C 5.0PF C | K,M         | C280     |         |           | CC73GCH1H100D | CHIP C 10PF D       | K2,M2       |
| C55,56   |         |           | CC73HCH1H010B | CHIP C 1.0PF B |             | C280     |         |           | CC73GCH1H330J | CHIP C 33PF J       | K,M,K3      |
| C57      |         |           | CC73GCH1H030C | CHIP C 3.0PF C | K,M,K2      | C280     |         |           | CC73GCH1H330J | CHIP C 33PF J       | M3          |
| C57      |         |           | CC73GCH1H030C | CHIP C 3.0PF C | M2          | C282     |         |           | CC73GCH1H101J | CHIP C 100PF J      | K3,M3       |
| C57      |         |           | CC73GCH1H040C | CHIP C 4.0PF C | K3,M3       | C282     |         |           | CC73GCH1H330G | CHIP C 33PF J       | K,M         |
| C58      |         |           | CC73HCH1H040B | CHIP C 4.0PF B | K2,M2       | C282     |         |           | CC73GCH1H680J | CHIP C 68PF J       | K2,M2       |
| C58      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | K,M,K3      | C283     |         |           | CC73GCH1H100D | CHIP C 10PF D       |             |
| C58      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | M3          | C284     |         |           | CC73GCH1H200J | CHIP C 20PF J       |             |
| C59      |         |           | CC73GCH1H050C | CHIP C 5.0PF C | K,M,K2      | C286     |         |           | C92-0565-05   | CHIP-TAN 6.8UF 10WV |             |
| C59      |         |           | CC73GCH1H050C | CHIP C 5.0PF C | M2          | C288     |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C59      |         |           | CC73GCH1H070D | CHIP C 7.0PF D | K3,M3       | C290-293 |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C60      |         |           | CC73HCH1H040B | CHIP C 4.0PF B | K,M,K2      | C294     |         |           | CC73GCH1H101J | CHIP C 100PF J      |             |
| C60      |         |           | CC73HCH1H040B | CHIP C 4.0PF B | M2          | C295     |         |           | CC73GCH1H270J | CHIP C 27PF J       |             |
| C60      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | K3,M3       | C296     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C61      |         |           | CK73HB1H471K  | CHIP C 470PF K |             | C297     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C62      |         |           | CC73HCH1H070B | CHIP C 7.0PF B | K,M         | C298     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C62      |         |           | CC73HCH1H090B | CHIP C 9.0PF B | K2,K3,M2    | C299     |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C62      |         |           | CC73HCH1H090B | CHIP C 9.0PF B | M3          | C300     |         |           | CC73GCH1H180J | CHIP C 18PF J       |             |
| C63      |         |           | CC73GCH1H100D | CHIP C 10PF D  |             | C301     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C64      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | K,M,K2      | C308     |         |           | CC73GCH1H120J | CHIP C 12PF J       | K2,M2       |
| C64      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | M2          | C308     |         |           | CC73GCH1H150J | CHIP C 15PF J       | K3,M3       |
| C64      |         |           | CC73HCH1H060B | CHIP C 6.0PF B | K3,M3       | C308     |         |           | CC73GCH1H270J | CHIP C 27PF J       | K,M         |
| C65      |         |           | CC73HCH1H101J | CHIP C 100PF J |             | C309     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C66      |         |           | CC73HCH1H090B | CHIP C 9.0PF B | K2,M2       | C317     |         |           | CC73GCH1H010B | CHIP C 1.0PF B      | K,M         |
| C66      |         |           | CC73HCH1H100B | CHIP C 10PF B  | K,M         | C317     |         |           | CC73GCH1H150J | CHIP C 15PF J       | K2,M2       |
| C66      |         |           | CC73HCH1H120J | CHIP C 12PF J  | K3,M3       | C326     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C67      |         |           | CK73HB1H471K  | CHIP C 470PF K |             | C333     |         |           | CC73GCH1H040B | CHIP C 4.0PF B      | K3,M3       |
| C68      |         |           | CK73GB1H471K  | CHIP C 470PF K |             | C341     |         |           | CC73GCH1H150J | CHIP C 15PF J       | K3,M3       |
| C69      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | K,M1,K2     | C349     |         |           | CC73GCH1H060B | CHIP C 6.0PF B      | K2,M2       |
| C69      |         |           | CC73HCH1H050B | CHIP C 5.0PF B | M2          | C349     |         |           | CC73GCH1H070B | CHIP C 7.0PF B      | K,M,K3      |
| C69      |         |           | CC73HCH1H070B | CHIP C 7.0PF B | K3,M3       | C349     |         |           | CC73GCH1H070B | CHIP C 7.0PF B      | M3          |
| C70      |         |           | CK73HB1H471K  | CHIP C 470PF K |             | C351     |         |           | CC73GCH1H150J | CHIP C 15PF J       | K2,M2       |
| C71      |         |           | CC73GCH1H0R5B | CHIP C 0.5PF B |             | C351     |         |           | CC73GCH1H270J | CHIP C 27PF J       | K,M,K3      |
| C72      |         |           | CC73HCH1H0R5B | CHIP C 0.5PF B |             | C351     |         |           | CC73GCH1H270J | CHIP C 27PF J       | M3          |
| C73      |         |           | CK73GB1H471K  | CHIP C 470PF K |             | C352     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C74      |         |           | CC73HCH1H100D | CHIP C 10PF D  |             | C353     |         |           | CC73GCH1H040B | CHIP C 4.0PF B      |             |

# PARTS LIST

TX-RX UNIT (X57-6730-XX)

| Ref. No. | Address | New parts | Parts No.     | Description         | Destination | Ref. No. | Address | New parts | Parts No.     | Description          | Destination |
|----------|---------|-----------|---------------|---------------------|-------------|----------|---------|-----------|---------------|----------------------|-------------|
| C355     |         |           | CC73GCH1H050B | CHIP C 5.0PF B      |             | C434     |         |           | CC73GCH1H090B | CHIP C 9.0PF B       | K3,M3       |
| C356     |         |           | CC73GCH1H101J | CHIP C 100PF J      | K,M,K3      | C435     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             |
| C356     |         |           | CC73GCH1H101J | CHIP C 100PF J      | M3          | C439     |         |           | CC73GCH1H180J | CHIP C 18PF J        | K3,M3       |
| C356     |         |           | CK73GB1H471K  | CHIP C 470PF K      | K2,M2       | C439     |         |           | CK73GB1H471K  | CHIP C 470PF K       | K,M,K2      |
| C358     |         |           | CC73GCH1H030B | CHIP C 3.0PF B      | K,M,K2      | C439     |         |           | CK73GB1H471K  | CHIP C 470PF K       | M2          |
| C358     |         |           | CC73GCH1H030B | CHIP C 3.0PF B      | M2          | C445     |         |           | CC73GCH1H3R5B | CHIP C 3.5PF B       | K3,M3       |
| C358     |         |           | CC73GCH1H040B | CHIP C 4.0PF B      | K3,M3       | C445     |         |           | CC73GCH1H4R5B | CHIP C 4.5PF B       | K,M,K2      |
| C359     |         |           | CC73GCH1H010B | CHIP C 1.0PF B      | K3,M3       | C445     |         |           | CC73GCH1H4R5B | CHIP C 4.5PF B       | M2          |
| C359     |         |           | CC73GCH1H1R5B | CHIP C 1.5PF B      | K,M,K2      | C447     |         |           | CC73GCH1H180J | CHIP C 18PF J        | K2,M2       |
| C359     |         |           | CC73GCH1H1R5B | CHIP C 1.5PF B      | M2          | C447     |         |           | CC73GCH1H470J | CHIP C 47PF J        | K,M,K3      |
| C360     |         |           | CC73GCH1H060B | CHIP C 6.0PF B      | K2,M2       | C447     |         |           | CC73GCH1H470J | CHIP C 47PF J        | M3          |
| C360     |         |           | CC73GCH1H080B | CHIP C 8.0PF B      | K3,M3       | C448     |         |           | CC73GCH1H030B | CHIP C 3.0PF B       | K,M         |
| C360     |         |           | CC73GCH1H3R5B | CHIP C 3.5PF B      | K,M         | C448     |         |           | CC73GCH1H1R5B | CHIP C 1.5PF B       | K2,M2       |
| C361     |         |           | CC73GCH1H020B | CHIP C 2.0PF B      | K2,M2       | C448     |         |           | CC73GCH1H4R5B | CHIP C 4.5PF B       | K3,M3       |
| C361     |         |           | CC73GCH1H2R5B | CHIP C 2.5PF B      | K,M,K3      | C456     |         |           | CK73HB1H471K  | CHIP C 470PF K       |             |
| C361     |         |           | CC73GCH1H2R5B | CHIP C 2.5PF B      | M3          | C464     |         |           | CC73GCH1H020B | CHIP C 2.0PF B       | K,M         |
| C363     |         |           | CC73GCH1H060B | CHIP C 6.0PF B      | K2,M2       | C464     |         |           | CC73GCH1H1R5B | CHIP C 1.5PF B       | K2,M2       |
| C363     |         |           | CC73GCH1H070B | CHIP C 7.0PF B      | K3,M3       | C464     |         |           | CC73GCH1H4R5B | CHIP C 4.5PF B       | K3,M3       |
| C363     |         |           | CC73GCH1H4R5B | CHIP C 4.5PF B      | K,M         | C465     |         |           | CC73GCH1H010B | CHIP C 1.0PF B       | K,M         |
| C364     |         |           | CC73GCH1H0R5B | CHIP C 0.5PF B      | K2,M2       | C465     |         |           | CC73GCH1H060B | CHIP C 6.0PF B       | K2,M2       |
| C364     |         |           | CC73GCH1H020B | CHIP C 2.0PF B      | K,M         | C465     |         |           | CC73GCH1H1R5B | CHIP C 1.5PF B       | K3,M3       |
| C364     |         |           | CC73GCH1H1R5B | CHIP C 1.5PF B      | K3,M3       | C466     |         |           | CC73GCH1H180J | CHIP C 18PF J        | K2,M2       |
| C365     |         |           | CC73GCH1H020B | CHIP C 2.0PF B      | K2,M2       | C466     |         |           | CC73GCH1H470J | CHIP C 47PF J        | K,M,K3      |
| C368     |         |           | CC73GCH1H070D | CHIP C 7.0PF D      | K2,M2       | C466     |         |           | CC73GCH1H470J | CHIP C 47PF J        | M3          |
| C368     |         |           | CC73GCH1H150J | CHIP C 15PF J       | K,M,K3      | C467     |         |           | CK73HB1H471K  | CHIP C 470PF K       |             |
| C368     |         |           | CC73GCH1H150J | CHIP C 15PF J       | M3          | C468     |         |           | CC73GCH1H020B | CHIP C 2.0PF B       | K2,M2       |
| C371     |         |           | CC73GCH1H010B | CHIP C 1.0PF B      | K,M,K2      | C468,469 |         |           | CC73GCH1H030B | CHIP C 3.0PF B       | K,M         |
| C371     |         |           | CC73GCH1H010B | CHIP C 1.0PF B      | M2          | C468,469 |         |           | CC73GCH1H3R5B | CHIP C 3.5PF B       | K3,M3       |
| C371     |         |           | CC73GCH1H020B | CHIP C 2.0PF B      | K3,M3       | C469     |         |           | CC73GCH1H1R5B | CHIP C 1.5PF B       | K2,M2       |
| C372     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             | C470     |         |           | CK73HB1H471K  | CHIP C 470PF K       |             |
| C401     |         |           | CK73GB1H182K  | CHIP C 1800PF K     |             | C471     |         |           | CC73GCH1H180J | CHIP C 18PF J        | K2,M2       |
| C402,403 |         |           | CC73GCH1H331J | CHIP C 330PF J      |             | C471     |         |           | CC73GCH1H470J | CHIP C 47PF J        | K,M,K3      |
| C405     |         |           | CC73GCH1H390J | CHIP C 39PF J       |             | C471     |         |           | CC73GCH1H470J | CHIP C 47PF J        | M3          |
| C406     |         |           | C92-0713-05   | CHIP-TAN 10UF 6.3WV |             | C472     |         |           | C92-0714-05   | CHIP-TAN 4.7UF 6.3WV |             |
| C407     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             | C473     |         |           | CC73HCH1H050B | CHIP C 5.0PF B       | K2,M2       |
| C408     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             | C473     |         |           | CC73HCH1H060B | CHIP C 6.0PF B       | K,M         |
| C409     |         |           | CC73GCH1H680J | CHIP C 68PF J       |             | C473     |         |           | CC73HCH1H070B | CHIP C 7.0PF B       | K3,M3       |
| C410     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             | C474,475 |         |           | CK73GB1H471K  | CHIP C 470PF K       |             |
| C411-413 |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             | C478,479 |         |           | CK73HB1H471K  | CHIP C 470PF K       |             |
| C414     |         |           | CC73GCH1H100D | CHIP C 10PF D       |             | C481,482 |         |           | CK73GB1H471K  | CHIP C 470PF K       |             |
| C415     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             | C483     |         |           | CC73GCH1H050B | CHIP C 5.0PF B       | K2,M2       |
| C416,417 |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             | C483     |         |           | CC73GCH1H060B | CHIP C 6.0PF B       | K3,M3       |
| C418     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             | C483     |         |           | CC73GCH1H4R5B | CHIP C 4.5PF B       | K,M         |
| C419     |         |           | CC73GCH1H010B | CHIP C 1.0PF B      |             | C484     |         |           | CC73GCH1H180J | CHIP C 18PF J        | K2,M2       |
| C420     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             | C484     |         |           | CC73GCH1H470J | CHIP C 47PF J        | K,M,K3      |
| C421     |         |           | CC73GCH1H080B | CHIP C 8.0PF B      |             | C484     |         |           | CC73GCH1H470J | CHIP C 47PF J        | M3          |
| C422     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             | C485     |         |           | CC73GCH1H030B | CHIP C 3.0PF B       | K,M,K2      |
| C424     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             | C485     |         |           | CC73GCH1H030B | CHIP C 3.0PF B       | M2          |
| C425     |         |           | CC73GCH1H060D | CHIP C 6.0PF D      |             | C485     |         |           | CC73GCH1H2R5B | CHIP C 2.5PF B       | K3,M3       |
| C426     |         |           | CC73GCH1H020B | CHIP C 2.0PF B      | K,M,K2      | C487     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             |
| C426     |         |           | CC73GCH1H020B | CHIP C 2.0PF B      | M2          | C488     |         |           | CC73GCH1H030B | CHIP C 3.0PF B       | K,M,K3      |
| C426     |         |           | CC73GCH1H2R5B | CHIP C 2.5PF B      | K3,M3       | C488     |         |           | CC73GCH1H030B | CHIP C 3.0PF B       | M3          |
| C427     |         |           | CC73GCH1H100D | CHIP C 10PF D       |             | C488     |         |           | CC73GCH1H2R5B | CHIP C 2.5PF B       | K2,M2       |
| C428     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             | C489     |         |           | CC73GCH1H180J | CHIP C 18PF J        | K2,M2       |
| C429     |         |           | CC73GCH1H120J | CHIP C 12PF J       |             | C489     |         |           | CC73GCH1H470J | CHIP C 47PF J        | K,M,K3      |
| C430     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             | C489     |         |           | CC73GCH1H470J | CHIP C 47PF J        | M3          |
| C431     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             | C490     |         |           | CC73GCH1H010B | CHIP C 1.0PF B       | K3,M3       |
| C432     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             | C490     |         |           | CC73GCH1H080B | CHIP C 8.0PF B       | K2,M2       |
| C434     |         |           | CC73GCH1H050B | CHIP C 5.0PF B      | K,M,K2      | C491     |         |           | CC73GCH1H050B | CHIP C 5.0PF B       | K3,M3       |
| C434     |         |           | CC73GCH1H050B | CHIP C 5.0PF B      | M2          | C491     |         |           | CC73GCH1H060B | CHIP C 6.0PF B       | K,M         |

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## TX-RX UNIT (X57-6730-XX)

| Ref. No. | Address | New parts | Parts No.     | Description          | Destination | Ref. No. | Address | New parts | Parts No.     | Description         | Destination |
|----------|---------|-----------|---------------|----------------------|-------------|----------|---------|-----------|---------------|---------------------|-------------|
| C491     |         |           | CC73GCH1H330J | CHIP C 33PF J        | K2,M2       | C662,663 |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C492     |         |           | CC73GCH1H030B | CHIP C 3.0PF B       | K,M         | C664     |         |           | CK73GB1H102K  | CHIP C 1000PF K     |             |
| C492     |         |           | CC73GCH1H3R5B | CHIP C 3.5PF B       | K2,M2       | C665     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C492     |         |           | CC73GCH1H4R5B | CHIP C 4.5PF B       | K3,M3       | C667     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C493     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             | C668     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C494     |         |           | CK73GB1H103K  | CHIP C 0.010UF K     |             | C669     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C495     |         |           | CC73GCH1H010C | CHIP C 1.0PF C       |             | C671     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C501     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             | C672,673 |         |           | CK73GB1H392K  | CHIP C 3900PF K     |             |
| C503     |         |           | CC73HCH1H1R5B | CHIP C 1.5PF B       | K2,M2       | C674     |         |           | CC73GCH1H221J | CHIP C 220PF J      |             |
| C504     |         |           | CK73HB1H471K  | CHIP C 470PF K       |             | C675,676 |         |           | C92-0804-05   | CHIP-TAN 1.5UF 15WV |             |
| C506     |         |           | CK73GB1A105K  | CHIP C 1.0UF K       | K2,K3,M2    | C677     |         |           | CK73GB1H332K  | CHIP C 3300PF K     |             |
| C506     |         |           | CK73GB1A105K  | CHIP C 1.0UF K       | M3          | C678     |         |           | CK73FB1C474K  | CHIP C 0.47UF K     |             |
| C506,507 |         |           | CK73GB1A105K  | CHIP C 1.0UF K       | K,M         | C679     |         |           | CC73GCH1H101J | CHIP C 100PF J      |             |
| C507     |         |           | CK73GB0J225K  | CHIP C 2.2UF K       | K2,K2,M2    | C680     |         |           | C92-0560-05   | CHIP-TAN 10UF 6.3WV |             |
| C507     |         |           | CK73GB0J225K  | CHIP C 2.2UF K       | M3          | C681     |         |           | CK73GB1C223K  | CHIP C 0.022UF K    | K2,K3,M2    |
| C508     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             | C681     |         |           | CK73GB1C223K  | CHIP C 0.022UF K    | M3          |
| C601     |         |           | CK73GB1A224K  | CHIP C 0.22UF K      |             | C681     |         |           | CK73GB1C273K  | CHIP C 0.027UF K    | K,M         |
| C605     |         |           | C92-0632-05   | CHIP-TAN 6.8UF 6.3WV |             | C684     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C607     |         |           | CK73GB1H103K  | CHIP C 0.010UF K     |             | C686     |         |           | CK73GB1C473K  | CHIP C 0.047UF K    |             |
| C608     |         |           | CK73GB1H392K  | CHIP C 3900PF K      |             | C687     |         |           | C92-0560-05   | CHIP-TAN 10UF 6.3WV |             |
| C609     |         |           | CK73GB1H103K  | CHIP C 0.010UF K     |             | C688     |         |           | CC73GCH1H221J | CHIP C 220PF J      |             |
| C610     |         |           | C92-0714-05   | CHIP-TAN 4.7UF 6.3WV |             | C689     |         |           | CK73GB1C223K  | CHIP C 0.022UF K    |             |
| C611     |         |           | CK73GB1A105K  | CHIP C 1.0UF K       |             | C690     |         |           | CK73GB1H102K  | CHIP C 1000PF K     |             |
| C613-615 |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C691     |         |           | C92-0665-05   | TANTAL 100UF 6.3WV  |             |
| C616     |         |           | CK73GB1H332K  | CHIP C 3300PF K      |             | C692     |         |           | CC73GCH1H221J | CHIP C 220PF J      |             |
| C618     |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C693     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C619     |         |           | CK73GB1H392K  | CHIP C 3900PF K      |             | C695     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C621,622 |         |           | C92-0714-05   | CHIP-TAN 4.7UF 6.3WV |             | C696     |         |           | CK73GB1A224K  | CHIP C 0.22UF K     |             |
| C624     |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C801     |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C625     |         |           | CC73GCH1H680J | CHIP C 68PF J        |             | C802     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C627     |         |           | CK73GB1E123K  | CHIP C 0.012UF K     |             | C803,804 |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C628     |         |           | CK73GB1H222K  | CHIP C 2200PF K      |             | C805     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C629     |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C807     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C630     |         |           | CC73GCH1H101J | CHIP C 100PF J       |             | C809     |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C631     |         |           | CK73GB1E123K  | CHIP C 0.012UF K     |             | C811     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C632     |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C812     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C633     |         |           | CC73GCH1H020B | CHIP C 2.0PF B       |             | C814     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C634     |         |           | CK73GB1H102K  | CHIP C 1000PF K      |             | C816,817 |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C635     |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C818     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C636     |         |           | CK73GB1C683K  | CHIP C 0.068UF K     |             | C819     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C637     |         |           | CC73GCH1H101J | CHIP C 100PF J       |             | C820,821 |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C638     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             | C822     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C639     |         |           | CC73GCH1H470J | CHIP C 47PF J        |             | C823     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C640     |         |           | CC73GCH1H101J | CHIP C 100PF J       |             | C825     |         |           | C92-0713-05   | CHIP-TAN 10UF 6.3WV |             |
| C641,642 |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C828     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C643     |         |           | CC73GCH1H680J | CHIP C 68PF J        |             | C830     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C645     |         |           | CK73GB0J225K  | CHIP C 2.2UF K       |             | C833     |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C646     |         |           | CK73GB1H821K  | CHIP C 820PF K       |             | C834     |         |           | CK73GB1C104K  | CHIP C 0.10UF K     |             |
| C647     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             | C835,836 |         |           | CK73GB1A105K  | CHIP C 1.0UF K      |             |
| C648,649 |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C837     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C650     |         |           | C92-0713-05   | CHIP-TAN 10UF 6.3WV  |             | C840     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C652     |         |           | CK73GB1H471K  | CHIP C 470PF K       |             | C841     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C653     |         |           | CK73GB1A224K  | CHIP C 0.22UF K      |             | C842     |         |           | CC73GCH1H150J | CHIP C 15PF J       |             |
| C654     |         |           | CK73GB1H103K  | CHIP C 0.010UF K     |             | C843     |         |           | CC73GCH1H030C | CHIP C 3.0PF C      |             |
| C655     |         |           | CK73GB1C223K  | CHIP C 0.022UF K     |             | C845     |         |           | CC73GCH1H150J | CHIP C 15PF J       |             |
| C656     |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C846     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C657     |         |           | CC73GCH1H470J | CHIP C 47PF J        |             | C847     |         |           | C92-0712-05   | CHIP-TAN 22UF 6.3WV |             |
| C658     |         |           | CK73GB1C104K  | CHIP C 0.10UF K      |             | C849     |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |
| C659     |         |           | CK73GB1H103K  | CHIP C 0.010UF K     |             | C850     |         |           | CK73GB1H103K  | CHIP C 0.010UF K    |             |
| C660     |         |           | CK73GB1A105K  | CHIP C 1.0UF K       |             | C852,853 |         |           | CK73GB1H471K  | CHIP C 470PF K      |             |

PARTS LIST

TX-RX UNIT (X57-6730-XX)

| Ref. No. | Address | New parts | Parts No.    | Description                  | Destination | Ref. No.  | Address | New parts | Parts No.    | Description                  | Destination |
|----------|---------|-----------|--------------|------------------------------|-------------|-----------|---------|-----------|--------------|------------------------------|-------------|
| C854     |         |           | CK73GB1H103K | CHIP C 0.010UF K             |             | L404      |         |           | L40-2785-92  | SMALL FIXED INDUCTOR(270NH)  |             |
| C861     |         |           | CK73FB1A475K | CHIP C 4.7UF K               |             | L405      |         |           | L40-2275-92  | SMALL FIXED INDUCTOR(22NH)   | K2,M2       |
| CTC1,2   |         |           | C05-0384-05  | CERAMIC TRIMMER CAP(10PF)    |             | L405      |         |           | L40-2775-92  | SMALL FIXED INDUCTOR(27NH)   | K,M         |
| 9        | 3B      |           | E37-1085-05  | FLAT CABLE                   |             | L405      |         |           | L40-3375-92  | SMALL FIXED INDUCTOR(33NH)   | K3,M3       |
| CN801    |         |           | E40-5932-05  | PIN ASSY SOCKET              |             | L407-409  |         |           | L41-6868-14  | SMALL FIXED INDUCTOR         | K,M,K2      |
| J601     |         |           | E11-0457-05  | PHONE JACK (2.5/3.5)         |             | L407-409  |         |           | L41-6868-14  | SMALL FIXED INDUCTOR         | M2          |
| F801     |         | *         | F20-3352-04  | INSULATING SHEET             |             | L407-409  |         |           | L41-8268-14  | SMALL FIXED INDUCTOR         | K3,M3       |
|          |         |           | F53-0190-05  | FUSE                         |             | L410      |         |           | L92-0138-05  | FERRITE CHIP                 |             |
|          |         |           | G11-4300-04  | RUBBER CUSHION               |             | L411      |         |           | L41-2285-03  | SMALL FIXED INDUCTOR         |             |
|          |         | *         | J99-0374-04  | ADHESIVE TAPE                |             | L413,414  |         |           | L41-6868-14  | SMALL FIXED INDUCTOR         | K,M,K2      |
| CD401    |         |           | L79-1582-05  | TUNING COIL                  |             | L413,414  |         |           | L41-6868-14  | SMALL FIXED INDUCTOR         | M2          |
| CF401    |         | *         | L72-1015-05  | CERAMIC FILTER               |             | L413,414  |         |           | L41-8268-14  | SMALL FIXED INDUCTOR         | K3,M3       |
| L1       |         |           | L40-4795-85  | SMALL FIXED INDUCTOR(4.7UH)  |             | L415      |         |           | L41-3978-03  | SMALL FIXED INDUCTOR         | K2,M2       |
| L3       |         |           | L40-1581-86  | SMALL FIXED INDUCTOR(0.15UH) |             | L415      |         |           | L41-4778-03  | SMALL FIXED INDUCTOR         | K,M,K3      |
| L5       |         |           | L92-0138-05  | FERRITE CHIP                 |             | L415      |         |           | L41-4778-03  | SMALL FIXED INDUCTOR         | M3          |
| L6       |         |           | L40-1085-92  | SMALL FIXED INDUCTOR(100NH)  |             | L416      |         |           | L40-5681-86  | SMALL FIXED INDUCTOR(0.56UH) |             |
| L7       |         |           | L92-0138-05  | FERRITE CHIP                 |             | L601      |         |           | L92-0140-05  | FERRITE CHIP                 |             |
| L8       |         |           | L40-1885-92  | SMALL FIXED INDUCTOR(180NH)  |             | L602      |         |           | L92-0149-05  | FERRITE CHIP                 |             |
| L9       |         |           | L40-2785-92  | SMALL FIXED INDUCTOR(270NH)  |             | L801      |         |           | L92-0149-05  | FERRITE CHIP                 |             |
| L10      |         |           | L92-0163-05  | BEADS CORE                   |             | L802      |         |           | L92-0140-05  | FERRITE CHIP                 |             |
| L11      |         |           | L40-1885-92  | SMALL FIXED INDUCTOR(180NH)  |             | L803-807  |         |           | L92-0138-05  | FERRITE CHIP                 |             |
| L12      |         |           | L40-2785-92  | SMALL FIXED INDUCTOR(270NH)  | K2,M2       | X1        |         |           | L77-1932-05  | TCXO (16.8MHZ)               |             |
| L14      |         |           | L41-1278-14  | SMALL FIXED INDUCTOR         | K,M         | X801      |         |           | L77-1933-05  | CRYSTAL RESONATOR(7.3728MHZ) |             |
| L14      |         |           | L41-1578-14  | SMALL FIXED INDUCTOR         | K3,M3       | XF401     |         |           | L71-0617-15  | MCF (49.95MHZ)               |             |
| L14      |         |           | L41-1878-14  | SMALL FIXED INDUCTOR         |             | CP1,2     |         |           | RK75HA1J473J | CHIP-COM 47K J 1/16W         |             |
| L15      |         |           | L41-1578-14  | SMALL FIXED INDUCTOR         | K2,M2       | CP3,4     |         |           | RK75HA1J102J | CHIP-COM 1.0K J 1/16W        |             |
| L15      |         |           | L41-1878-14  | SMALL FIXED INDUCTOR         | K,M         | CP801,802 |         |           | RK75HA1J473J | CHIP-COM 47K J 1/16W         |             |
| L15      |         |           | L41-2278-14  | SMALL FIXED INDUCTOR         | K3,M3       | CP803-805 |         |           | RK75HA1J102J | CHIP-COM 1.0K J 1/16W        |             |
| L16      |         |           | L40-1275-92  | SMALL FIXED INDUCTOR(12NH)   |             | CP806     |         |           | RK75HA1J473J | CHIP-COM 47K J 1/16W         |             |
| L17,18   |         |           | L41-2285-03  | SMALL FIXED INDUCTOR         |             | CP807     |         |           | RK75HA1J102J | CHIP-COM 1.0K J 1/16W        |             |
| L19      |         |           | L40-1875-92  | SMALL FIXED INDUCTOR(18NH)   |             | CP808     |         |           | RK75HA1J472J | CHIP-COM 4.7K J 1/16W        |             |
| L20,21   |         |           | L40-3391-86  | SMALL FIXED INDUCTOR(3.3UH)  |             | CP809-818 |         |           | RK75HA1J102J | CHIP-COM 1.0K J 1/16W        |             |
| L22      |         |           | L92-0163-05  | BEADS CORE                   |             | R1        |         |           | RK73GB1J223J | CHIP R 22K J 1/16W           |             |
| L23      |         |           | L40-1875-92  | SMALL FIXED INDUCTOR(18NH)   | K2,M2       | R2        |         |           | RK73GB1J103J | CHIP R 10K J 1/16W           |             |
| L23      |         |           | L40-2275-92  | SMALL FIXED INDUCTOR(22NH)   | K,M         | R3        |         |           | RK73GB1J124J | CHIP R 120K J 1/16W          | K,M         |
| L23      |         |           | L40-2275-92  | SMALL FIXED INDUCTOR(22NH)   |             | R3        |         |           | RK73GB1J474J | CHIP R 470K J 1/16W          | K2,K3,M2    |
| L23      |         |           | L40-2275-92  | SMALL FIXED INDUCTOR(22NH)   |             | R3        |         |           | RK73GB1J474J | CHIP R 470K J 1/16W          | M3          |
| L23      |         |           | L40-2775-92  | SMALL FIXED INDUCTOR(27NH)   | K3,M3       | R4        |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W         |             |
| L25      |         |           | L40-2275-92  | SMALL FIXED INDUCTOR(22NH)   |             | R5        |         |           | RK73GB1J224J | CHIP R 220K J 1/16W          |             |
| L205     |         |           | L40-1875-92  | SMALL FIXED INDUCTOR(18NH)   |             | R6        |         |           | RK73GB1J473J | CHIP R 47K J 1/16W           |             |
| L207     |         |           | L40-1875-92  | SMALL FIXED INDUCTOR(18NH)   |             | R7        |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W         | K,M         |
| L208     |         |           | L92-0138-05  | FERRITE CHIP                 |             | R7,8      |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W         | K2,K3,M2    |
| L209     |         |           | L40-8265-92  | SMALL FIXED INDUCTOR(8.2NH)  |             | R7,8      |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W         | M3          |
| L213     |         |           | L40-8265-92  | SMALL FIXED INDUCTOR(8.2NH)  |             | R9        |         |           | RK73GB1J393J | CHIP R 39K J 1/16W           |             |
| L216     |         |           | L40-1575-54  | SMALL FIXED INDUCTOR(15NH)   |             | R12       |         |           | RK73GB1J101J | CHIP R 100 J 1/16W           |             |
| L217     |         |           | L92-0149-05  | FERRITE CHIP                 |             | R13       |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W         |             |
| L218     |         |           | L40-1263-92  | SMALL FIXED INDUCTOR(1.2NH)  | K,M1        | R14       |         |           | RK73GB1J222J | CHIP R 2.2K J 1/16W          |             |
| L218     |         |           | L40-1563-92  | SMALL FIXED INDUCTOR(1.5NH)  | K3,M3       | R15       |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W         |             |
| L220     |         |           | L34-4602-05  | AIR-CORE COIL                |             | R16       |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W          |             |
| L221     |         |           | L92-0149-05  | FERRITE CHIP                 |             | R17       |         |           | RK73GB1J101J | CHIP R 100 J 1/16W           |             |
| L222     |         |           | L40-2285-54  | SMALL FIXED INDUCTOR(220NH)  |             | R18       |         |           | RK73GB1J474J | CHIP R 470K J 1/16W          |             |
| L223     |         |           | L34-4572-05  | AIR-CORE COIL                |             | R19       |         |           | RK73GB1J100J | CHIP R 10 J 1/16W            |             |
| L224-226 |         |           | L34-4564-05  | AIR-CORE COIL                |             | R20,21    |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W         |             |
| L227     |         |           | L40-1092-81  | SMALL FIXED INDUCTOR         |             | R22       |         |           | RK73GB1J122J | CHIP R 1.2K J 1/16W          | K2,K3,M2    |
| L228     |         |           | L41-3369-16  | SMALL FIXED INDUCTOR         | K3,M3       | R22       |         |           | RK73GB1J821J | CHIP R 820 J 1/16W           | M3          |
| L401     |         |           | L92-0138-05  | FERRITE CHIP                 |             | R23       |         |           | RK73GB1J471J | CHIP R 470 J 1/16W           | K,M         |
| L402     |         |           | L40-1875-92  | SMALL FIXED INDUCTOR(18NH)   |             | R23,24    |         |           | RK73GB1J681J | CHIP R 680 J 1/16W           | K3,M3       |
| L403     |         |           | L40-5685-85  | SMALL FIXED INDUCTOR(0.56UH) |             | R23,24    |         |           | RK73GB1J681J | CHIP R 680 J 1/16W           | K,M,K2      |
|          |         |           |              |                              |             |           |         |           |              |                              | M2          |

## PARTS LIST

## TX-RX UNIT (X57-6730-XX)

| Ref. No. | Address | New parts | Parts No.    | Description          | Destination | Ref. No. | Address | New parts | Parts No.    | Description          | Destination |
|----------|---------|-----------|--------------|----------------------|-------------|----------|---------|-----------|--------------|----------------------|-------------|
| R24      |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  | K3,M3       | R258     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W | K2,M2       |
| R25      |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R259     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   | K2,M2       |
| R26      |         |           | RK73GB1J223J | CHIP R 22K J 1/16W   |             | R259,260 |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   | K,M         |
| R27      |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R259,260 |         |           | RK73GB1J683J | CHIP R 68K J 1/16W   | K3,M3       |
| R28      |         |           | RK73GB1J393J | CHIP R 39K J 1/16W   |             | R260     |         |           | RK73GB1J823J | CHIP R 82K J 1/16W   | K2,M2       |
| R29      |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  | K,M         | R261     |         |           | RK73EB2ER39K | CHIP R 0.39 K 1/4W   |             |
| R29      |         |           | RK73GB1J154J | CHIP R 150K J 1/16W  | K2,M2       | R262     |         |           | R92-0670-05  | CHIP R 0 OHM         |             |
| R29      |         |           | RK73GB1J823J | CHIP R 82K J 1/16W   | K3,M3       | R263     |         |           | RK73GB1J101J | CHIP R 100 J 1/16W   |             |
| R30      |         |           | RK73HB1J123J | CHIP R 12K J 1/16W   | K3,M3       | R264,265 |         |           | RK73GH1J154D | CHIP R 150K D 1/16W  |             |
| R30      |         |           | RK73HB1J333J | CHIP R 33K J 1/16W   | K,M,K2      | R267-270 |         |           | RK73GH1J154D | CHIP R 150K D 1/16W  |             |
| R30      |         |           | RK73HB1J333J | CHIP R 33K J 1/16W   | M2          | R271     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             |
| R31      |         |           | RK73GB1J560J | CHIP R 56 J 1/16W    |             | R272     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             |
| R32      |         |           | RK73HB1J153J | CHIP R 15K J 1/16W   |             | R273     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R33      |         |           | RK73HB1J473J | CHIP R 47K J 1/16W   |             | R274     |         |           | RK73GB1J105J | CHIP R 1.0M J 1/16W  |             |
| R34      |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             | R275     |         |           | RK73GB1J222J | CHIP R 2.2K J 1/16W  |             |
| R35      |         |           | RK73GB1J220J | CHIP R 22 J 1/16W    |             | R276,277 |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  |             |
| R36      |         |           | RK73HB1J100J | CHIP R 10 J 1/16W    |             | R278     |         |           | R92-0670-05  | CHIP R 0 OHM K,M,K2  |             |
| R37      |         |           | RK73HB1J181J | CHIP R 180 J 1/16W   |             | R278     |         |           | R92-0670-05  | CHIP R 0 OHM M2      |             |
| R38      |         |           | RK73HB1J100J | CHIP R 10 J 1/16W    |             | R279,280 |         |           | RK73GB1J271J | CHIP R 270 J 1/16W   |             |
| R39      |         |           | RK73HB1J151J | CHIP R 150 J 1/16W   |             | R281,282 |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R40      |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             | R401     |         |           | RK73GB1J100J | CHIP R 10 J 1/16W    |             |
| R41      |         |           | RK73GB1J154J | CHIP R 150K J 1/16W  |             | R403     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             |
| R43      |         |           | RK73HB1J154J | CHIP R 150K J 1/16W  |             | R404     |         |           | RK73GB1J334J | CHIP R 330K J 1/16W  |             |
| R44      |         |           | RK73HB1J472J | CHIP R 4.7K J 1/16W  |             | R406     |         |           | RK73GB1J332J | CHIP R 3.3K J 1/16W  |             |
| R46      |         |           | RK73HB1J101J | CHIP R 100 J 1/16W   |             | R407     |         |           | RK73GB1J474J | CHIP R 470K J 1/16W  |             |
| R47      |         |           | RK73HB1J682J | CHIP R 6.8K J 1/16W  |             | R408     |         |           | RK73GB1J332J | CHIP R 3.3K J 1/16W  |             |
| R48      |         |           | RK73HB1J103J | CHIP R 10K J 1/16W   |             | R409     |         |           | RK73GB1J392J | CHIP R 3.9K J 1/16W  |             |
| R49      |         |           | RK73G1J333D  | CHIP R 33K D 1/16W   |             | R412     |         |           | RK73GB1J122J | CHIP R 1.2K J 1/16W  | K,M         |
| R50      |         |           | RK73HB1J331J | CHIP R 330 J 1/16W   |             | R412     |         |           | RK73GB1J331J | CHIP R 330 J 1/16W   | K2,K3,M2    |
| R51      |         |           | RK73G1J104D  | CHIP R 100K D 1/16W  |             | R412     |         |           | RK73GB1J331J | CHIP R 330 J 1/16W   | M3          |
| R55      |         |           | RK73HB1J222J | CHIP R 2.2K J 1/16W  |             | R413     |         |           | RK73GB1J124J | CHIP R 120K J 1/16W  |             |
| R56      |         |           | RK73HB1J470J | CHIP R 47 J 1/16W    |             | R414     |         |           | RK73GB1J681J | CHIP R 680 J 1/16W   |             |
| R57      |         |           | R92-1368-05  | CHIP R 0 OHM         |             | R415     |         |           | RK73GB1J472J | CHIP R 4.7K J 1/16W  |             |
| R58      |         |           | RK73GB1J472J | CHIP R 4.7K J 1/16W  |             | R416     |         |           | RK73GB1J101J | CHIP R 100 J 1/16W   |             |
| R202     |         |           | RK73GB1J472J | CHIP R 4.7K J 1/16W  |             | R417     |         |           | RK73GB1J470J | CHIP R 47 J 1/16W    |             |
| R203     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R419     |         |           | RK73GB1J222J | CHIP R 2.2K J 1/16W  |             |
| R204     |         |           | RK73GB1J153J | CHIP R 15K J 1/16W   |             | R420     |         |           | RK73GB1J151J | CHIP R 150 J 1/16W   |             |
| R207     |         |           | RK73GB1J333J | CHIP R 33K J 1/16W   |             | R422     |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  |             |
| R215     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R423     |         |           | RK73GB1J563J | CHIP R 56K J 1/16W   |             |
| R222     |         |           | RK73GB1J331J | CHIP R 330 J 1/16W   |             | R424     |         |           | RK73HB1J104J | CHIP R 100K J 1/16W  |             |
| R224     |         |           | RK73GB1J220J | CHIP R 22 J 1/16W    |             | R425     |         |           | RK73GB1J563J | CHIP R 56K J 1/16W   |             |
| R229     |         |           | RK73GB1J331J | CHIP R 330 J 1/16W   |             | R427     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R230     |         |           | RK73GB1J180J | CHIP R 18 J 1/16W    |             | R430,431 |         |           | RK73HB1J105J | CHIP R 1.0M J 1/16W  |             |
| R231,232 |         |           | RK73GB1J331J | CHIP R 330 J 1/16W   |             | R438     |         |           | RK73HB1J105J | CHIP R 1.0M J 1/16W  |             |
| R234     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R440     |         |           | RK73HB1J221J | CHIP R 220 J 1/16W   |             |
| R235     |         |           | RK73GB1J101J | CHIP R 100 J 1/16W   |             | R441     |         |           | RK73HB1J101J | CHIP R 100 J 1/16W   | K,M,K3      |
| R237     |         |           | RK73GB1J123J | CHIP R 12K J 1/16W   | K3,M3       | R441     |         |           | RK73HB1J101J | CHIP R 100 J 1/16W   | M3          |
| R237     |         |           | RK73GB1J223J | CHIP R 22K J 1/16W   | K,M,K2      | R441     |         |           | RK73HB1J680J | CHIP R 68 J 1/16W    | K2,M2       |
| R237     |         |           | RK73GB1J223J | CHIP R 22K J 1/16W   | M2          | R457     |         |           | RK73HB1J104J | CHIP R 100K J 1/16W  |             |
| R242     |         |           | RK73GB1J124J | CHIP R 120K J 1/16W  | K,M,K2      | R459     |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  |             |
| R242     |         |           | RK73GB1J124J | CHIP R 120K J 1/16W  | M2          | R460     |         |           | RK73GB1J683J | CHIP R 68K J 1/16W   |             |
| R242     |         |           | RK73GB1J563J | CHIP R 56K J 1/16W   | K3,M3       | R461     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R247     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   | K,M,K3      | R462,463 |         |           | RK73GB1J105J | CHIP R 1.0M J 1/16W  |             |
| R247     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   | M3          | R464     |         |           | R92-0670-05  | CHIP R 0 OHM         |             |
| R247     |         |           | RK73GB1J683J | CHIP R 68K J 1/16W   | K2,M2       | R465     |         |           | RK73GB1J332J | CHIP R 3.3K J 1/16W  |             |
| R251     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R469     |         |           | RK73GB1J221J | CHIP R 220 J 1/16W   |             |
| R252     |         |           | RK73GB1J220J | CHIP R 22 J 1/16W    |             | R471     |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  |             |
| R253     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R474     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   | K,M,K3      |
| R255     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R474     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   | M3          |
| R256,257 |         |           | RK73EB2ER39K | CHIP R 0.39 K 1/4W   |             | R474     |         |           | RK73GB1J223J | CHIP R 22K J 1/16W   | K2,M2       |

# PARTS LIST

TX-RX UNIT (X57-6730-XX)

| Ref. No. | Address | New parts | Parts No.    | Description          | Destination | Ref. No. | Address | New parts | Parts No.    | Description          | Destination |
|----------|---------|-----------|--------------|----------------------|-------------|----------|---------|-----------|--------------|----------------------|-------------|
| R475     |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  | K2,M2       | R673     |         |           | RK73GB1J272J | CHIP R 2.7K J 1/16W  |             |
| R475     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   | K,M         | R674     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R475     |         |           | RK73GB1J683J | CHIP R 68K J 1/16W   | K3,M3       | R675     |         |           | RK73GB1J822J | CHIP R 8.2K J 1/16W  |             |
| R476     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R676     |         |           | RK73GB1J151J | CHIP R 150 J 1/16W   |             |
| R601     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R677-679 |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R602     |         |           | RK73GB1J124J | CHIP R 120K J 1/16W  | K2,K3,M2    | R681     |         |           | RK73GB1J222J | CHIP R 2.2K J 1/16W  |             |
| R602     |         |           | RK73GB1J124J | CHIP R 120K J 1/16W  | M3          | R682     |         |           | RK73GB1J100J | CHIP R 10 J 1/16W    |             |
| R602     |         |           | RK73GB1J184J | CHIP R 180K J 1/16W  | K,M         | R683     |         |           | RK73GB1J474J | CHIP R 470K J 1/16W  |             |
| R603     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R684     |         |           | RK73GB1J182J | CHIP R 1.8K J 1/16W  |             |
| R604     |         |           | RK73GB1J184J | CHIP R 180K J 1/16W  |             | R686     |         |           | RK73GB1J471J | CHIP R 470 J 1/16W   |             |
| R607-609 |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R687     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             |
| R610     |         |           | RK73GB1J472J | CHIP R 4.7K J 1/16W  |             | R688,689 |         |           | RK73GB1J101J | CHIP R 100 J 1/16W   |             |
| R612     |         |           | RK73GB1J273J | CHIP R 27K J 1/16W   |             | R691     |         |           | RK73GB1J333J | CHIP R 33K J 1/16W   |             |
| R613     |         |           | RK73GB1J824J | CHIP R 820K J 1/16W  |             | R692     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R615     |         |           | RK73GB1J334J | CHIP R 330K J 1/16W  |             | R693     |         |           | RK73GB1J273J | CHIP R 27K J 1/16W   |             |
| R616     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R694,695 |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R617     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             | R696     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             |
| R618     |         |           | RK73G1J364D  | CHIP R 360K D 1/16W  |             | R697     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R621     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             | R698     |         |           | RK73GB1J152J | CHIP R 1.5K J 1/16W  |             |
| R622     |         |           | RK73GB1J684J | CHIP R 680K J 1/16W  |             | R802     |         |           | RK73GB1J101J | CHIP R 100 J 1/16W   |             |
| R623     |         |           | RK73GB1J274G | CHIP R 270K G 1/16W  |             | R803,804 |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R624     |         |           | RK73GB1J562J | CHIP R 5.6K J 1/16W  |             | R805     |         |           | RK73GB1J153J | CHIP R 15K J 1/16W   |             |
| R625     |         |           | RK73GB1J563J | CHIP R 56K J 1/16W   |             | R807     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             |
| R626,627 |         |           | RK73GB1J184J | CHIP R 180K J 1/16W  |             | R808     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             |
| R628     |         |           | RK73GB1J224J | CHIP R 220K J 1/16W  |             | R809     |         |           | RK73GB1J272J | CHIP R 2.7K J 1/16W  |             |
| R629     |         |           | RK73GB1J394J | CHIP R 390K J 1/16W  |             | R810     |         |           | RK73GB1J334J | CHIP R 330K J 1/16W  |             |
| R630     |         |           | RK73GB1J684J | CHIP R 680K J 1/16W  |             | R811     |         |           | RK73GB1J332J | CHIP R 3.3K J 1/16W  |             |
| R631     |         |           | RK73GB1J394J | CHIP R 390K J 1/16W  |             | R812     |         |           | RK73GB1J334J | CHIP R 330K J 1/16W  |             |
| R632     |         |           | RK73GB1J823J | CHIP R 82K J 1/16W   |             | R813     |         |           | RK73GB1J332J | CHIP R 3.3K J 1/16W  |             |
| R633     |         |           | RK73GB1J223J | CHIP R 22K J 1/16W   |             | R814     |         |           | RK73GB1J153J | CHIP R 15K J 1/16W   |             |
| R634     |         |           | RK73GB1J153J | CHIP R 15K J 1/16W   |             | R815     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R636     |         |           | RK73GB1J474J | CHIP R 470K J 1/16W  |             | R816     |         |           | RK73GB1J224J | CHIP R 220K J 1/16W  |             |
| R637     |         |           | RK73GB1J394J | CHIP R 390K J 1/16W  |             | R817     |         |           | RK73GB1J272J | CHIP R 2.7K J 1/16W  |             |
| R639     |         |           | RK73GB1J393J | CHIP R 39K J 1/16W   |             | R818     |         |           | RK73GB1J821J | CHIP R 820 J 1/16W   |             |
| R640     |         |           | RK73GB1J184J | CHIP R 180K J 1/16W  |             | R819     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             |
| R641,642 |         |           | RK73GB1J124J | CHIP R 120K J 1/16W  |             | R820     |         |           | RK73GB1J561J | CHIP R 560 J 1/16W   |             |
| R643     |         |           | RK73GB1J184J | CHIP R 180K J 1/16W  |             | R821     |         |           | RK73GB1J331J | CHIP R 330 J 1/16W   |             |
| R644,645 |         |           | RK73GB1J472J | CHIP R 4.7K J 1/16W  |             | R823     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             |
| R646     |         |           | RK73GB1J823J | CHIP R 22K J 1/16W   |             | R824     |         |           | RK73GB1J183J | CHIP R 18K J 1/16W   |             |
| R647     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R825     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             |
| R648     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R827     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             |
| R649     |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  |             | R828     |         |           | RK73GB1J332J | CHIP R 3.3K J 1/16W  |             |
| R650     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             | R829     |         |           | RK73GB1J272J | CHIP R 2.7K J 1/16W  |             |
| R651     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R830     |         |           | RK73GB1J821J | CHIP R 820 J 1/16W   |             |
| R652     |         |           | RK73GB1J273J | CHIP R 27K J 1/16W   |             | R833,834 |         |           | RK73GH1J474D | CHIP R 470K D 1/16W  |             |
| R653     |         |           | RK73GB1J392J | CHIP R 3.9K J 1/16W  |             | R835,836 |         |           | RK73HB1J102J | CHIP R 1.0K J 1/16W  |             |
| R654     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R839,840 |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             |
| R655,656 |         |           | RK73GB1J105J | CHIP R 1.0M J 1/16W  |             | R841     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R657     |         |           | RK73GB1J332J | CHIP R 3.3K J 1/16W  |             | R842     |         |           | R92-1368-05  | CHIP R 0 OHM         |             |
| R658     |         |           | RK73GB1J103J | CHIP R 10K J 1/16W   |             | R844     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             |
| R660     |         |           | RK73GB1J154J | CHIP R 150K J 1/16W  |             | R845     |         |           | R92-1368-05  | CHIP R 0 OHM         |             |
| R661     |         |           | RK73GB1J684J | CHIP R 680K J 1/16W  |             | R847,848 |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             |
| R665     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             | R849     |         |           | R92-1252-05  | CHIP R 0 OHM J 1/16W |             |
| R666     |         |           | RK73GB1J822J | CHIP R 8.2K J 1/16W  |             | R851     |         |           | R92-1368-05  | CHIP R 0 OHM         |             |
| R667     |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  |             | R852     |         |           | RK73HB1J473J | CHIP R 47K J 1/16W   |             |
| R668     |         |           | RK73GB1J473J | CHIP R 47K J 1/16W   |             | R854     |         |           | RK73GB1J680J | CHIP R 68 J 1/16W    |             |
| R669     |         |           | RK73GB1J222J | CHIP R 2.2K J 1/16W  |             | R855-857 |         |           | RK73HB1J102J | CHIP R 1.0K J 1/16W  |             |
| R670     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             | R858     |         |           | R92-1368-05  | CHIP R 0 OHM         |             |
| R671     |         |           | RK73GB1J683J | CHIP R 68K J 1/16W   |             | R859     |         |           | RK73GB1J104J | CHIP R 100K J 1/16W  |             |
| R672     |         |           | RK73GB1J102J | CHIP R 1.0K J 1/16W  |             |          |         |           |              |                      |             |

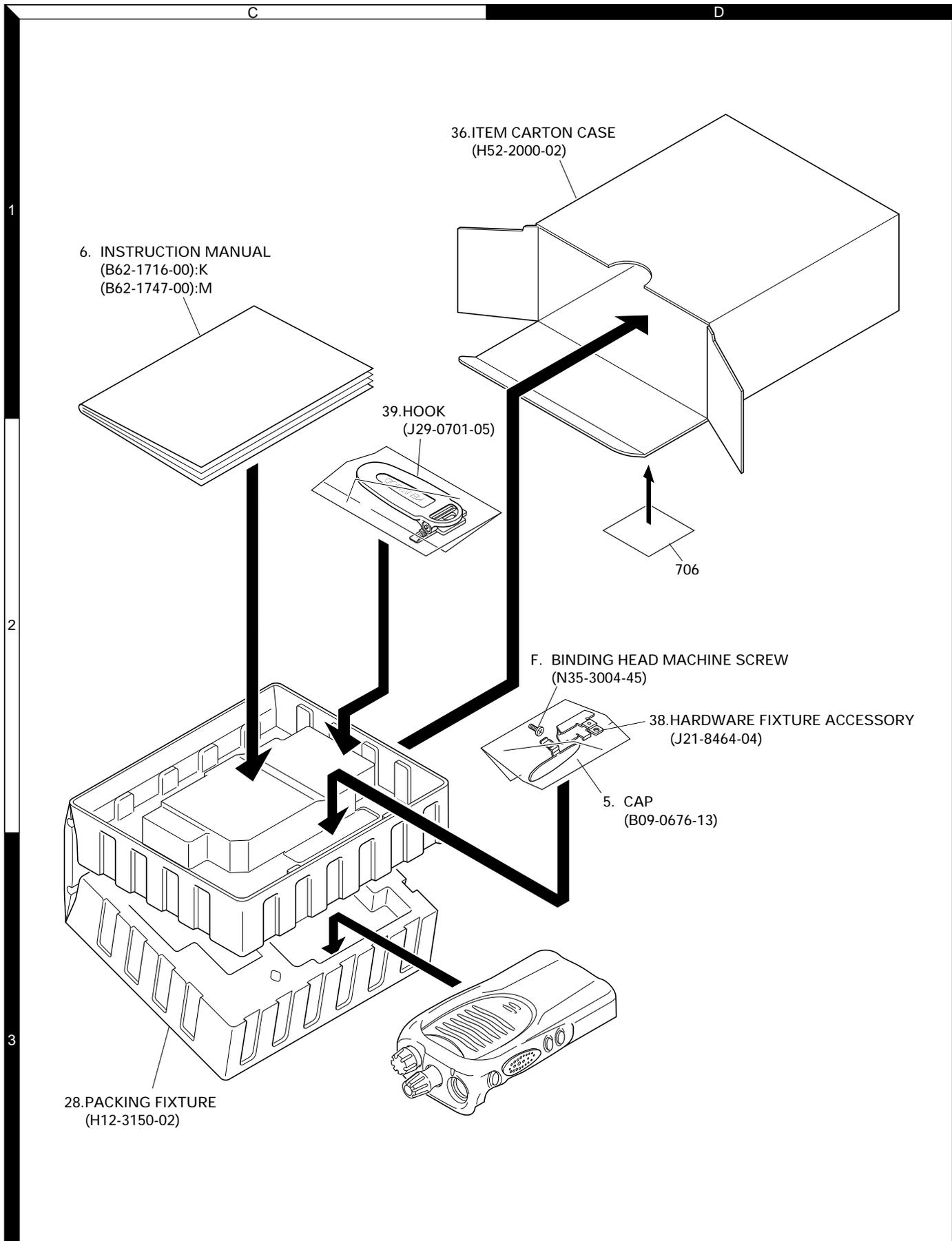
## PARTS LIST

## TX-RX UNIT (X57-6730-XX)

| Ref. No. | Address | New parts | Parts No.      | Description                | Destination | Ref. No. | Address | New parts | Parts No.     | Description        | Destination |
|----------|---------|-----------|----------------|----------------------------|-------------|----------|---------|-----------|---------------|--------------------|-------------|
| VR1      |         |           | R12-7491-05    | TRIMMING POT.(68K)         |             | Q603     |         |           | DTC144EE      | DIGITAL TRANSISTOR |             |
| S802-805 |         |           | S70-0457-05    | TACT SWITCH                |             | Q604     |         |           | 2SA1362(GR)   | TRANSISTOR         |             |
| MIC60    |         |           | T91-0543-05    | MIC ELEMENT                |             | Q605     |         |           | 2SC4116(Y)    | TRANSISTOR         |             |
| D3,4     |         |           | 1SV325         | VARIABLE CAPACITANCE DIODE |             | Q606     |         |           | 2SA1586(Y,GR) | TRANSISTOR         |             |
| D7       |         |           | 1SV325         | VARIABLE CAPACITANCE DIODE |             | Q607     |         |           | DTC144EE      | DIGITAL TRANSISTOR |             |
| D9       |         |           | 1SV325         | VARIABLE CAPACITANCE DIODE |             | Q608     |         |           | 2SK1588       | FET                |             |
| D10      |         |           | 1SV278         | VARIABLE CAPACITANCE DIODE |             | Q801     |         |           | UMG3N         | TRANSISTOR         |             |
| D11      |         |           | HSC277         | DIODE                      |             | Q802     |         |           | UPA672T       | FET                |             |
| D201     |         |           | HSC277         | DIODE                      |             | Q803     |         |           | FP210         | TRANSISTOR         |             |
| D203     |         |           | HZU5CLL        | ZENER DIODE                |             | Q804     |         |           | UMG3N         | TRANSISTOR         |             |
| D204     |         |           | HVC131         | DIODE                      |             | Q805     |         |           | UMG9N         | TRANSISTOR         |             |
| D206     |         |           | HVC131         | DIODE                      |             | Q806     |         |           | KTA1298(Y)    | TRANSISTOR         |             |
| D208     |         |           | HVC131         | DIODE                      |             | Q807     |         |           | UMG3N         | TRANSISTOR         |             |
| D212     |         |           | HVC131         | DIODE                      |             | Q808,809 |         |           | DTA123JE      | DIGITAL TRANSISTOR |             |
| D401     |         |           | HSC277         | DIODE                      |             | Q810     |         |           | 2SK1824       | FET                |             |
| D402-406 |         |           | HVC369B        | VARIABLE CAPACITANCE DIODE |             | TH1      |         |           | B57331V2104J  | THERMISTOR         |             |
| D407     |         |           | RB521S-30      | DIODE                      |             | TH600    |         |           | B57331V2104J  | THERMISTOR         |             |
| D603-606 |         |           | RB706F-40      | DIODE                      |             |          |         |           |               |                    |             |
| D801     |         |           | RB521S-30      | DIODE                      |             |          |         |           |               |                    |             |
| D805     |         |           | 1SR154-400     | DIODE                      |             |          |         |           |               |                    |             |
| IC1      |         |           | MB15E03SL      | MOS IC                     |             |          |         |           |               |                    |             |
| IC201    |         |           | TA75W01FU      | MOS IC                     |             |          |         |           |               |                    |             |
| IC401    |         |           | TA31136FN      | MOS IC                     |             |          |         |           |               |                    |             |
| IC601    |         |           | AQUA           | MOS IC                     |             |          |         |           |               |                    |             |
| IC602    |         |           | TC75S51FE      | MOS IC                     |             |          |         |           |               |                    |             |
| IC603    |         |           | TC75W51FU      | MOS IC                     |             |          |         |           |               |                    |             |
| IC604    |         |           | TC75S51FE      | MOS IC                     |             |          |         |           |               |                    |             |
| IC605    |         |           | TA7368F        | MOS IC                     |             |          |         |           |               |                    |             |
| IC801    |         |           | XC6204B502MR   | MOS IC                     |             |          |         |           |               |                    |             |
| IC802    |         |           | PST9134NR      | MOS IC                     |             |          |         |           |               |                    |             |
| IC803    |         |           | XC61CN5002NR   | MOS IC                     |             |          |         |           |               |                    |             |
| IC804    |         |           | CAT24WC64JI    | ROM IC                     |             |          |         |           |               |                    |             |
| IC805    |         |           | 30622MCA-7G7GP | MPU                        |             |          |         |           |               |                    |             |
| IC806    |         |           | TC7W74FU       | MOS IC                     |             |          |         |           |               |                    |             |
| Q1       |         |           | DTC144EE       | DIGITAL TRANSISTOR         |             |          |         |           |               |                    |             |
| Q2,3     |         |           | UMG9N          | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q4       |         |           | KTC4082        | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q5,6     |         |           | 2SK508NV(K52)  | FET                        |             |          |         |           |               |                    |             |
| Q7       |         |           | 2SC5108(Y)     | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q8       |         |           | 2SJ347         | FET                        |             |          |         |           |               |                    |             |
| Q9       |         |           | 2SC5108(Y)     | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q10      |         |           | 2SC4617(S)     | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q11      |         |           | 2SC5108(Y)     | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q12      |         |           | 2SJ347         | FET                        |             |          |         |           |               |                    |             |
| Q205     |         |           | 2SC5108(Y)     | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q206     |         |           | 2SK3077        | FET                        |             |          |         |           |               |                    |             |
| Q207     |         |           | 2SK2596        | FET                        |             |          |         |           |               |                    |             |
| Q208     |         |           | DTC114EE       | DIGITAL TRANSISTOR         |             |          |         |           |               |                    |             |
| Q209     |         |           | 2SK879(GR)     | FET                        |             |          |         |           |               |                    |             |
| Q210     |         |           | DTC114EE       | DIGITAL TRANSISTOR         |             |          |         |           |               |                    |             |
| Q211     |         |           | 2SK3476        | FET                        |             |          |         |           |               |                    |             |
| Q212     |         |           | 2SK1824        | FET                        |             |          |         |           |               |                    |             |
| Q213     |         |           | DTA144EE       | DIGITAL TRANSISTOR         |             |          |         |           |               |                    |             |
| Q401     |         |           | DTA144EE       | DIGITAL TRANSISTOR         |             |          |         |           |               |                    |             |
| Q402     |         |           | 2SC4649(N,P)   | TRANSISTOR                 |             |          |         |           |               |                    |             |
| Q403,404 |         |           | 3SK318         | FET                        |             |          |         |           |               |                    |             |
| Q407,408 |         |           | 2SK1824        | FET                        |             |          |         |           |               |                    |             |
| Q601,602 |         |           | 2SK1824        | FET                        |             |          |         |           |               |                    |             |



## PACKING



# ADJUSTMENT

## Test Equipment Required for Alignment

| Test Equipment                        | Major Specifications  |   |
|---------------------------------------|---|---|
| 1. Standard Signal Generator (SSG)    | Frequency Range<br>Modulation<br>Output                     | 400 ~ 512MHz<br>Frequency modulation and external modulation.<br>-127dBm/0.1μV to greater than -47dBm/1mV |
| 2. Power Meter                        | Input Impedance<br>Operation Frequency<br>Measurement Range | 50Ω.<br>400 ~ 512MHz<br>Vicinity of 10W   |
| 3. Deviation Meter                    | Frequency Range   | 400 ~ 512MHz  |
| 4. Digital Volt Meter (DVM)           | Measuring Range<br>Input Impedance                          | 10mV to 10V DC<br>High input impedance for minimum circuit loading.                                       |
| 5. Oscilloscope                       |   | DC through 30MHz.   |
| 6. High Sensitivity Frequency Counter | Frequency Range<br>Frequency Stability                      | 10Hz to 1000MHz.<br>0.2ppm or less.   |
| 7. Ammeter                            |   | 5A.   |
| 8. AF Volt Meter (AF VTVM)            | Frequency Range<br>Voltage Range                            | 50Hz to 10kHz.<br>1mV to 10V.   |
| 9. Audio Generator (AG)               | Frequency Range<br>Output                                   | 50Hz to 5kHz or more.<br>0 to 1V.   |
| 10. Distortion Meter                  | Capability<br>Input Level                                   | 3% or less at 1kHz.<br>50mV to 10Vrms.  |
| 11. 8Ω Dummy Load                     |   | Approx. 8Ω, 3W.   |
| 12. Regulated Power Supply            |   | 5V to 10V, approx. 3A<br>Useful if ammeter equipped.  |

### ■ The following parts are required for adjustment

#### 1. Antenna connector adapter

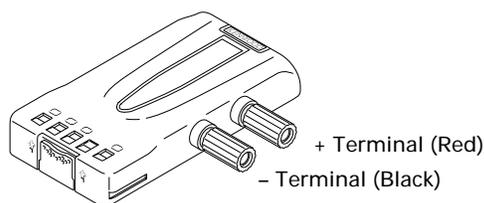
The antenna connector of this radio uses an SMA terminal. Use an antenna connector adapter [SMA(f) – BNC(f) or SMA(f) – N(f)] for adjustment. (The adapter is not provided as an option, so buy a commercially-available one.)

#### 2. Repair Jig (Chassis)

Use jig (part No.: A10-4082-02) for repairing the TK-3160. Place the TX-RX unit on the jig and fit it with screws.

The jig facilitates the voltage check and protects the final amplifier FET when the voltage on the flow side of the TX-RX unit is checked during repairs.

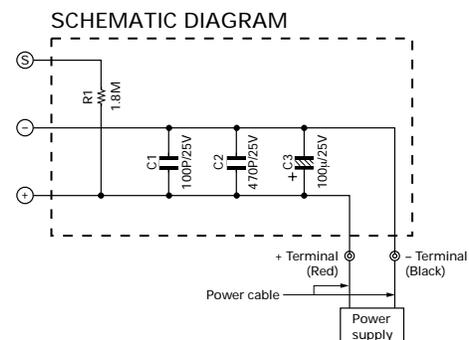
#### 3. Battery Jig (W05-0909-00)



Connect the power cable properly between the battery jig installed in the transceiver and the power supply, and be sure output voltage and the power supply polarity prior to switching the power supply ON, otherwise over voltage and reverse connection may damage the transceiver, or the power supply or both.

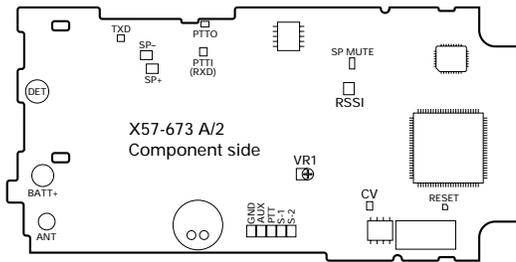
When using the battery jig in user mode, the transceiver assumes that a lithium-ion battery pack is attached to the transceiver. In adjustment mode, battery type detection is not performed. Refer to page 10 for details.

**Note:** When using the battery jig, you must measure the voltage at the terminals of the battery jig. Otherwise, a slight voltage drop may occur within the power cable, between the power supply and the battery jig, especially while the transceiver transmits.



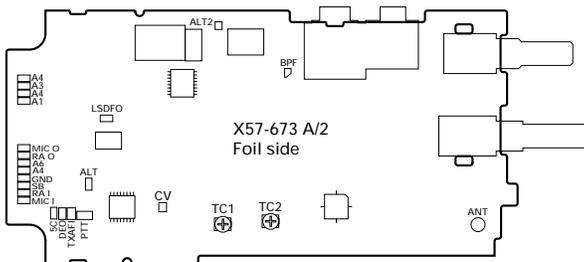
## ADJUSTMENT

### Adjustment points TX-RX unit (X57-673) Component side view



VR1 : Frequency adjustment  
RSSI : Band-pass wave form test point

### Foil Side View



TC1 : Transmit lock voltage adjustment  
TC2 : Receive lock voltage adjustment  
CV : Lock voltage adjustment terminal.

Fig. 1 Adjustment points

### ■ Frequency and signalling

The set has been adjusted for the frequencies shown in the following table. When required, re-adjust them following the adjustment procedure to obtain the frequencies you want in actual operation.

#### Frequency (MHz) K, M type

| Channel No. | RX Frequency | TX Frequency |
|-------------|--------------|--------------|
| 1           | 470.050      | 470.100      |
| 2           | 450.050      | 450.100      |
| 3           | 489.950      | 489.900      |
| 4           | 470.000      | 470.000      |
| 5           | 470.200      | 470.200      |
| 6           | 470.400      | 470.400      |
| 7~16        | —            | —            |

#### Frequency (MHz) K2, M2 type

| Channel No. | RX Frequency | TX Frequency |
|-------------|--------------|--------------|
| 1           | 491.050      | 491.100      |
| 2           | 470.050      | 470.100      |
| 3           | 511.950      | 511.900      |
| 4           | 491.000      | 491.000      |
| 5           | 491.200      | 491.200      |
| 6           | 491.400      | 491.400      |
| 7~16        | —            | —            |

#### Frequency (MHz) K3, M3 type

| Channel No. | RX Frequency | TX Frequency |
|-------------|--------------|--------------|
| 1           | 415.050      | 415.100      |
| 2           | 400.050      | 400.100      |
| 3           | 429.950      | 429.900      |
| 4           | 415.000      | 415.000      |
| 5           | 415.200      | 415.200      |
| 6           | 415.400      | 415.400      |
| 7~16        | —            | —            |

### Signalling

| Signalling No. | RX                                | TX                                |
|----------------|-----------------------------------|-----------------------------------|
| 1              | None                              | None                              |
| 2              | None                              | 100Hz Square Wave                 |
| 3              | QT 67.0Hz                         | QT 67.0Hz                         |
| 4              | QT 151.4Hz                        | QT 151.4Hz                        |
| 5              | QT 210.7Hz                        | QT 210.7Hz                        |
| 6              | QT 254.1Hz                        | QT 254.1Hz                        |
| 7              | DOT D023N                         | DOT D023N                         |
| 8              | DOT D754I                         | DOT D754I                         |
| 9              | DTMF 159D                         | DTMF 159D                         |
| 10             | None                              | DTMF tone 9                       |
| 11             | 2 Tone:<br>A:321.7Hz<br>B:928.1Hz | 2 Tone:<br>A:321.7Hz<br>B:928.1Hz |
| 12             | None                              | Single Tone:1000Hz                |
| 13             | None                              | MSK                               |
| 14             | MSK Code                          | MSK Code                          |

### • Preparations for tuning the transceiver

Before attempting to tune the transceiver, connect the unit to a suitable power supply.

Whenever the transmitter is tuned, the unit must be connected to a suitable dummy load (i.e. power meter).

The speaker output connector must be terminated with a 8Ω dummy load and connected to an AC voltmeter and an audio distortion meter or a SINAD measurement meter at all times during tuning.

### Adjustment Frequency (K, M type)

| TEST CH | K,M        |            |
|---------|------------|------------|
|         | RX         | TX         |
| Center  | 470.050MHz | 470.100MHz |
| Low     | 450.050MHz | 450.100MHz |
| High    | 489.950MHz | 489.900MHz |
| Low'    | 460.050MHz | 460.100MHz |
| High'   | 480.050MHz | 480.100MHz |
|         | 470.000MHz | 470.000MHz |
|         | 470.200MHz | 470.200MHz |
|         | 470.400MHz | 470.400MHz |

### Adjustment Frequency (K2, M2 type)

| TEST CH | K2,M2      |            |
|---------|------------|------------|
|         | RX         | TX         |
| Center  | 491.050MHz | 491.100MHz |
| Low     | 470.050MHz | 470.100MHz |
| High    | 511.950MHz | 511.900MHz |
| Low'    | 480.550MHz | 480.600MHz |
| High'   | 501.550MHz | 501.600MHz |
|         | 491.000MHz | 491.000MHz |
|         | 491.200MHz | 491.200MHz |
|         | 491.400MHz | 491.400MHz |

### Adjustment Frequency (K3, M3 type)

| TEST CH | K3,M3      |            |
|---------|------------|------------|
|         | RX         | TX         |
| Center  | 415.050MHz | 415.100MHz |
| Low     | 400.050MHz | 400.100MHz |
| High    | 429.950MHz | 429.900MHz |
| Low'    | 407.550MHz | 407.600MHz |
| High'   | 422.550MHz | 422.600MHz |
|         | 415.000MHz | 415.000MHz |
|         | 415.200MHz | 415.200MHz |
|         | 415.400MHz | 415.400MHz |

# ADJUSTMENT

## Common Section

| Item                        | Condition  | Measurement        |           | Adjustment |        | Specifications/<br>Remark                    |
|-----------------------------|--|--------------------|-----------|------------|--------|--|
|                             |  | Test equipment     | Terminal  | Parts      | Method |  |
| 1.Setting                   | 1) BATT terminal vorage:7.5V<br>2) SSG standard modulation<br>[Wide] MOD:1kHz,DEV:3kHz<br>[Narrow] MOD:1kHz,DEV:1.5kHz |                    |           |            |        |  |
| 2.VCO lock<br>voltage<br>RX | 1) CH:High   | Power meter<br>DVM | ANT<br>CV | TC2        | ADJ    | 3.8V±0.2V(K,M)<br>3.5V±0.2V<br>(K2,M2,K3,M3) |
|                             | 2) CH:Low  |                    |           |            | Check  | 0.6V or more                                 |
| 3.VCO lock<br>voltage<br>TX | 3) CH:High<br>PTT:ON   |                    |           | TC1        | ADJ    | 3.8V±0.2V(K,M)<br>3.5V±0.2V<br>(K2,M2,K3,M3) |
|                             | 4) CH:Low<br>PTT:ON  |                    |           |            | Check  | 0.6V or more                                 |

## Transmitter Section

| Item                                 | Condition   | Measurement   |                         | Adjustment                      |        | Specifications/<br>Remark                 |   |
|--------------------------------------|---|---|-------------------------|---------------------------------|--------|---|---|
|                                      |   | Test equipment  | Terminal                | Parts                           | Method |   |   |
| 1.Frequency<br>Adjust<br>[Wide]      | 1) CH:Center<br>2) PTT:ON   | Frequency counter   | ANT                     | VR1                             |        | Center frequency<br>±50Hz                 |   |
| 2.High power<br>Adjust<br>[Wide]     | TEST CH: Low<br>Low'<br>Center<br>High'<br>High<br>(5 points)<br>BATT terminal voltage:7.5V<br>PTT:ON               | Power meter<br>Ampere meter                               |                         | Programming<br>Software:KPG-82D |        | 4.0W ±0.1W<br>2.0 A or less               |   |
|                                      | 3.Low power<br>Adjust<br>[Wide]   |   |                         |                                 |        |   | TEST CH: Low<br>Low'<br>Center<br>High'<br>High<br>(5 points)<br>BATT terminal voltage:7.5V<br>PTT:ON |
| 4. Max deviation<br>Adjust<br>[Wide] | TEST CH: Low<br>Center<br>High<br>(3 points)<br>AG:1kHz/150mV<br>Dev meter filter<br>LPF:15kHz<br>HPF:OFF<br>PTT:ON | Power meter<br>Dev meter<br>Oscilloscope<br>AG<br>AF VTVM | ANT<br>SP/MIC connector |                                 |        | 4.2kHz<br>(According to<br>the lager +,-) | ±50Hz   |
|                                      | [Narrow]  |   |                         |                                 |        | TEST CH:Center<br>PTT:ON                  | 2.1kHz<br>(According to<br>the lager +,-)   |
| 5.VOX 1<br>Writing<br>[Wide]         | TEST CH: Center<br>AG:1KHz/60mV   | Power meter<br>Dev meter<br>Oscilloscope                  |                         |                                 |        |   |   |
| 6.VOX 10<br>Writing<br>[Wide]        | TEST CH: Center<br>AG:1KHz/4.0mV  | AG<br>AF VTVM   |                         |                                 |        |   |   |

## ADJUSTMENT

| Item   | Condition  | Measurement  |                      | Adjustment                      |   | Specifications/<br>Remark   |                                     |       |
|--|--|--|----------------------|---------------------------------|---|---|-------------------------------------|-------|
|  |  | Test equipment   | Terminal             | Parts                           | Method  |   |                                     |       |
| 7.DQT TCXO<br>Balance<br>Writing<br>[Wide]<br>[Narrow] | TEST CH: Center  | Power mete<br>Dev meter<br>Oscilloscope<br>AG<br>AF VTVM | ANT                  | Programming<br>Software:KPG-82D | Write   | 70 hex(K,M)<br>200 hex(K2,M2,K3,M3)   |                                     |       |
|  |  |  |                      |                                 |   |   | 40 hex(K,M)<br>120 hex(K2,M2,K3,M3) |       |
| 8.DQT VCO<br>Balance<br>Adjust<br>[Wide]<br>[Narrow]   | TEST CH: Low<br>Center<br>High<br>(3 points)<br>LPF:3kHz<br>HPF:OFF<br>PTT:ON  |  |                      |                                 | Make the<br>demodulation<br>wave into<br>square waves |  | 0.8kHz                              | ±40Hz |
|  | TEST CH: Center<br>PTT:ON  |  |                      |                                 |   |   |                                     |       |
| 9.QT Deviation<br>Adjust<br>[Wide]<br>[Narrow]         | TEST CH: Low<br>Center<br>High<br>(3 points)<br>LPF:3kHz<br>HPF:OFF<br>PTT:ON  |  |                      |                                 | 0.4kHz  | ±40Hz   |                                     |       |
|  | TEST CH:Center<br>PTT:ON   |  |                      |                                 |   |   |                                     |       |
| 10.DQT Deviation<br>Adjust<br>[Wide]<br>[Narrow]       | TEST CH: Low<br>Center<br>High<br>(3 points)<br>LPF:3kHz<br>HPF:OFF<br>PTT:ON  |  |                      |                                 | 0.75kHz   | ±40Hz   |                                     |       |
|  | TEST CH: Center<br>PTT:ON  |  |                      |                                 |   |   |                                     |       |
| 11.Tone Deviation<br>Adjust<br>[Wide]<br>[Narrow]      | TEST CH: Center<br>LPF:15kHz<br>HPF:OFF<br>PTT:ON                              |  |                      |                                 | 3.0kHz  | ±100Hz  |                                     |       |
|  |  |  |                      |                                 |   |   |                                     |       |
| 12.DTMF Deviation<br>Adjust<br>[Wide]<br>[Narrow]      | TEST CH: Center<br>LPF:15kHz<br>HPF:OFF<br>PTT:ON                              |  |                      |                                 | 3.0kHz  | ±100Hz  |                                     |       |
|  |  |  |                      |                                 |   |   |                                     |       |
| 13.MSK Deviation<br>Adjust<br>[Wide]<br>[Narrow]       | TEST CH: Low<br>Center<br>High<br>(3 points)<br>LPF:15kHz<br>HPF:OFF<br>PTT:ON |  |                      |                                 | 3.0kHz  | ±100Hz  |                                     |       |
|  | TEST CH: Center<br>PTT:ON  |  |                      |                                 |   |   |                                     |       |
| 14.BATT Detection<br>Writing<br>[Wide]                 | BATT terminal voltage:5.9V<br>PTT:ON   | Power meter<br>DVM                                       | ANT<br>BATT terminal | Write                           | BATT terminal<br>voltage:5.9V                         |   |                                     |       |

# ADJUSTMENT

| Item                          | Condition                               | Measurement        |                      | Adjustment |        | Specifications/<br>Remark |
|-------------------------------|---|--------------------|----------------------|------------|--------|---------------------------|
|                               |   | Test equipment     | Terminal             | Parts      | Method |                           |
| 15.BATT<br>Detection<br>Check | 1) BATT terminal voltage:5.5V<br>PTT:ON | Power meter<br>DVM | ANT<br>BATT terminal |            | Check  | LED<br>blinks             |
|                               | 2) BATT terminal voltage:7.5V<br>PTT:ON |                    |                      |            |        | LED does not<br>blink     |

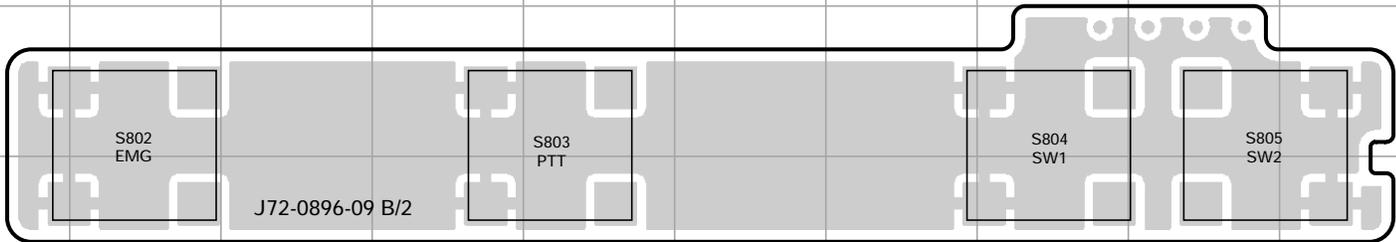
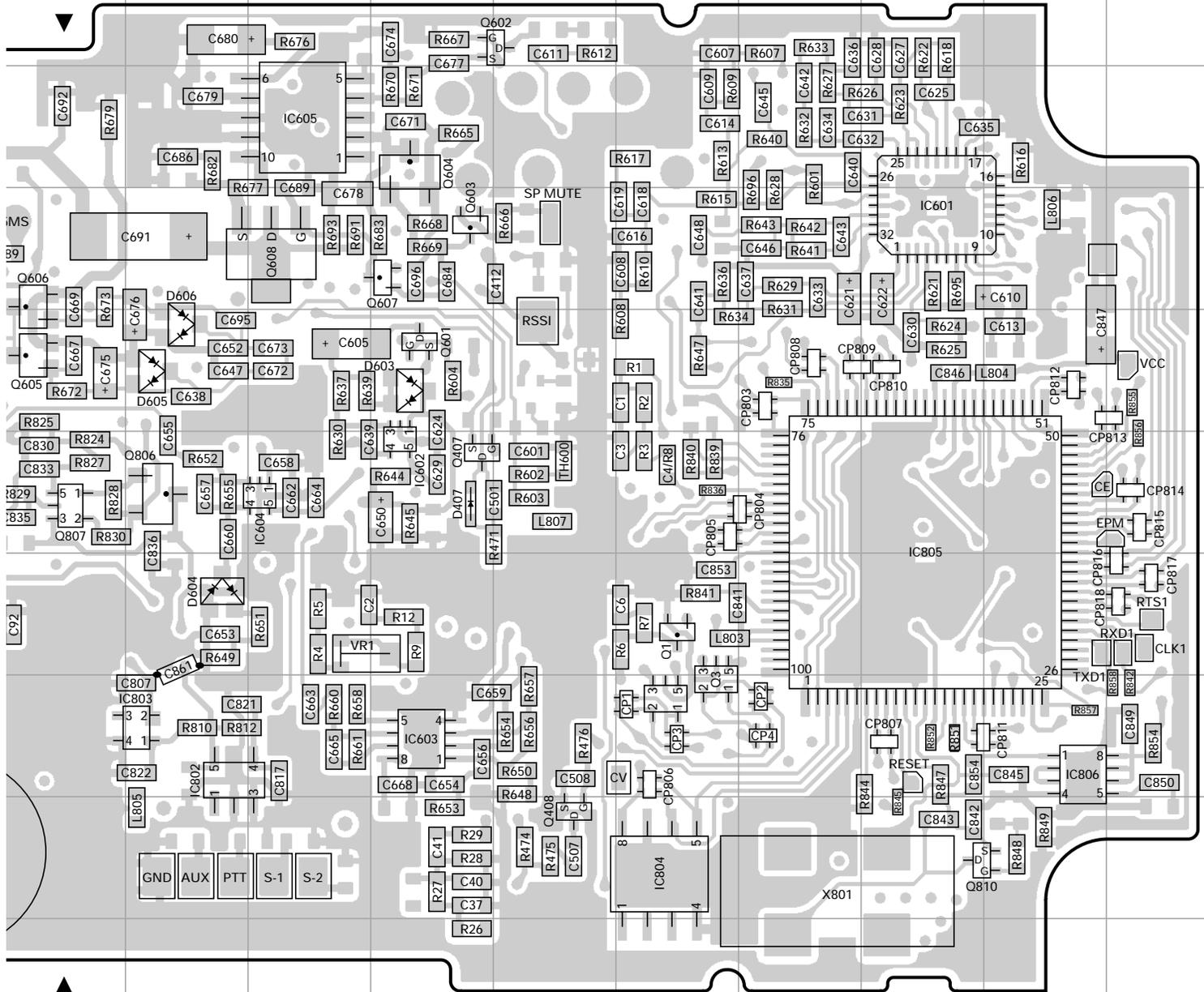
## Receiver Section

| Item                                      | Condition   | Measurement   |             | Adjustment                      |          | Specifications/<br>Remark  |
|---|---|---|-------------|---------------------------------|----------|--|
|   |   | Test equipment  | Terminal    | Parts                           | Method   |  |
| 1.BPF Wave<br>form ADJ<br>[Wide]          | TEST CH:Low<br>Low'<br>Center<br>High'<br>High<br>(5 points)<br>SSG otuput:-103 dBm(1.58μV) | SSG<br>DVM<br>Oscilloscope<br>AF VTVM                           | ANT<br>RSSI | Programming<br>Software:KPG-82D | RSSI MAX |  |
|   | 2.Sesitivity<br>check<br>[Wide]   |   |             |                                 |          | TEST CH:Low<br>Low'<br>Center<br>High'<br>High<br>(5 points)<br>SSG otuput:-117 dBm(0.3μV)<br>SSG MOD:3kHz |
| [Narrow]                                  | TEST CH:Center<br>SSG otuput:-115 dBm(0.4μV)<br>SSG MOD:1.5kHz                              |   |             |                                 |          | 12dB SINAD or<br>more  |
| 3.Squelch<br>tight writing<br>[Wide]      | TEST CH:Center<br>SSG otuput:-117 dBm(0.3μV)<br>SSG MOD:3.0kHz                              |   |             | Programming<br>Software:KPG-82D |          | Squelch open   |
|   | [Narrow]  | TEST CH:Center<br>SSG otuput:-116 dBm(0.35μV)<br>SSG MOD:1.5kHz |             |                                 |          | Squelch open   |
| 4. Squelch<br>threshold writing<br>[Wide] | TEST CH:Center<br>SSG otuput:-122 dBm(0.18μV)<br>SSG MOD:3.0kHz                             |   |             |                                 |          | Squelch open   |
|   | [Narrow]  | TEST CH:Center<br>SSG otuput:-121 dBm(0.2μV)<br>SSG MOD:1.5kHz  |             |                                 |          | Squelch open   |
| 5.RSSI writing<br>[Wide]                  | TEST CH:Center<br>SSG otuput:-123 dBm(0.16μV)<br>SSG MOD:off                                |   |             |                                 |          |  |
|   | [Narrow]  | TEST CH:Center<br>SSG otuput:-122 dBm(0.18μV)<br>SSG MOD:off    |             |                                 |          |  |



# PC BOARD TK-3160

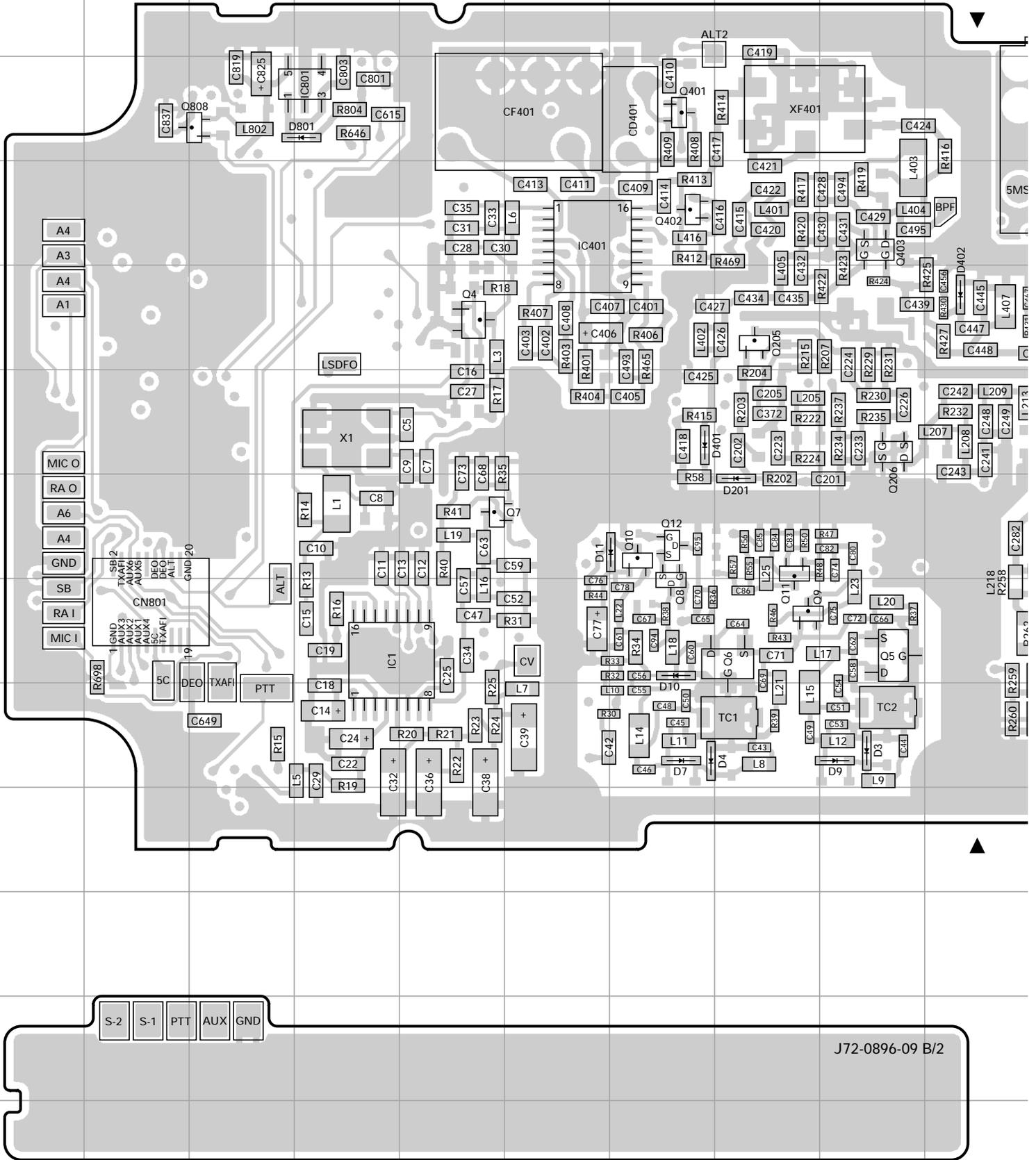
TX-RX UNIT (X57-6730-XX) -10 : K,M -11 : K2,M2 -12 : K3,M3  
Component side view (J72-0896-09)



J72-0896-09 B/2

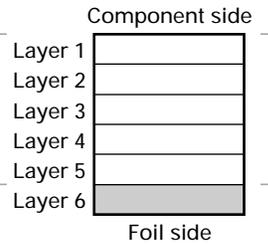
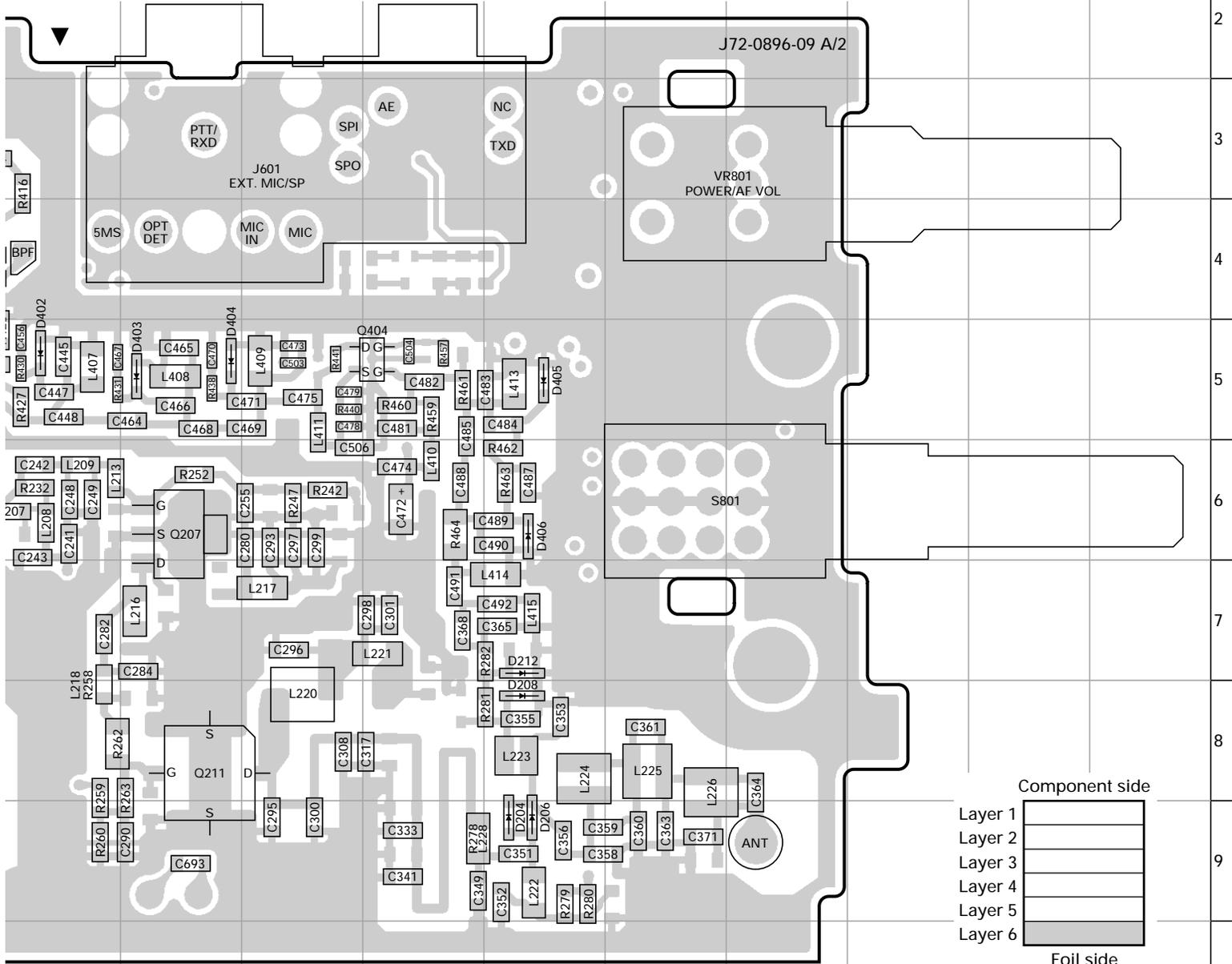
# TK-3160 PC BOARD

TX-RX UNIT (X57-6730-XX) -10 : K,M -11 : K2,M2 -12 : K3,M3  
Foil side view (J72-0896-09)



J72-0896-09 B/2

TX-RX UNIT (X57-6730-XX) -10 : K,M -11 : K2,M2 -12 : K3,M3  
 Foil side view (J72-0896-09)



TX-RX UNIT  
 (X57-6730-XX)

| Ref. NO. | Address |
|----------|---------|
| IC1      | 8D      |
| IC401    | 4F      |
| IC801    | 3D      |
| Q4       | 5E      |
| Q5       | 8I      |
| Q6       | 8H      |
| Q7       | 7E      |
| Q8       | 8G      |
| Q9       | 8H      |
| Q10      | 7G      |
| Q11      | 7H      |
| Q12      | 7G      |
| Q205     | 5H      |
| Q206     | 6I      |

| Ref. NO. | Address |
|----------|---------|
| Q207     | 6K      |
| Q211     | 8K      |
| Q401     | 3G      |
| Q402     | 4G      |
| Q403     | 4I      |
| Q404     | 5M      |
| Q808     | 3C      |
| D3       | 9I      |
| D4       | 9G      |
| D7       | 9G      |
| D9       | 9I      |
| D10      | 8G      |
| D11      | 7G      |
| D201     | 7H      |

| Ref. NO. | Address |
|----------|---------|
| D204     | 9N      |
| D206     | 9N      |
| D208     | 8N      |
| D212     | 7N      |
| D401     | 6G      |
| D402     | 5J      |
| D403     | 5K      |
| D404     | 5K      |
| D405     | 5N      |
| D406     | 6N      |
| D801     | 3D      |

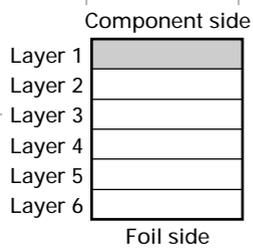
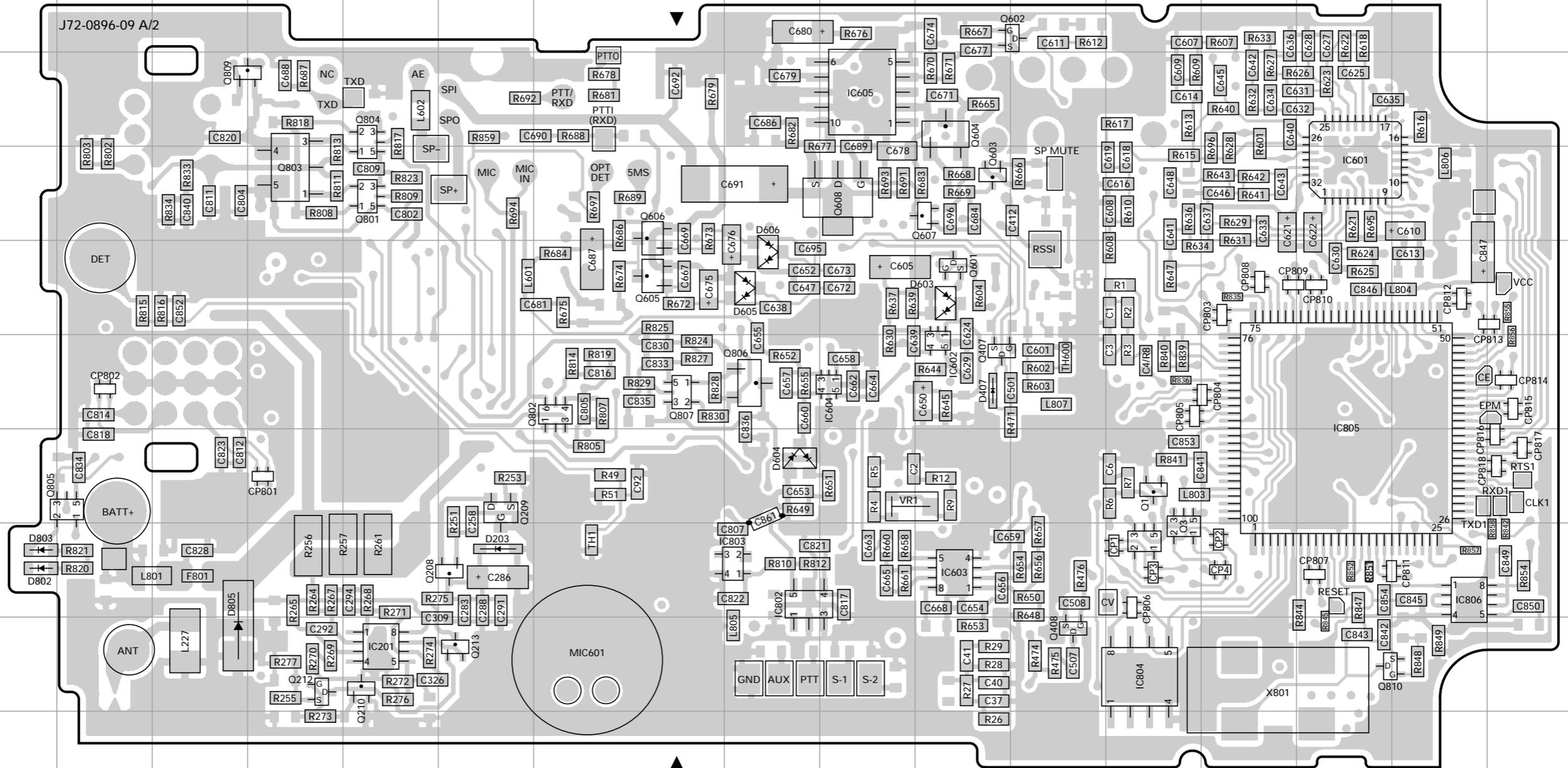
# TK-3160 PC BOARD

# PC BOARD TK-3160

TX-RX UNIT (X57-6730-XX) -10 : K,M -11 : K2,M2 -12 : K3,M3  
Component side view (J72-0896-09)

### TX-RX UNIT (X57-6730-XX)

| Ref. NO. | Address |
|----------|---------|
| IC201    | 9G      |
| IC601    | 4Q      |
| IC602    | 6M      |
| IC603    | 8M      |
| IC604    | 6L      |
| IC605    | 3L      |
| IC802    | 8K      |
| IC803    | 8K      |
| IC804    | 9O      |
| IC805    | 7Q      |
| IC806    | 8R      |
| Q1       | 7O      |
| Q3       | 8O      |
| Q208     | 8H      |
| Q209     | 7H      |
| Q210     | 9G      |
| Q212     | 9F      |
| Q213     | 9H      |
| Q407     | 6M      |
| Q408     | 9N      |
| Q601     | 5M      |
| Q602     | 2N      |
| Q603     | 4M      |
| Q604     | 3M      |
| Q605     | 5J      |
| Q606     | 4J      |
| Q607     | 4M      |
| Q608     | 4L      |
| Q801     | 4G      |
| Q802     | 6I      |
| Q803     | 4F      |
| Q804     | 3G      |
| Q805     | 7D      |
| Q806     | 6K      |
| Q807     | 6J      |
| Q809     | 3E      |
| Q810     | 9R      |
| D203     | 8H      |
| D407     | 6M      |
| D603     | 5M      |
| D604     | 7K      |
| D605     | 5K      |
| D606     | 5K      |
| D802     | 8C      |
| D803     | 8C      |
| D805     | 9E      |



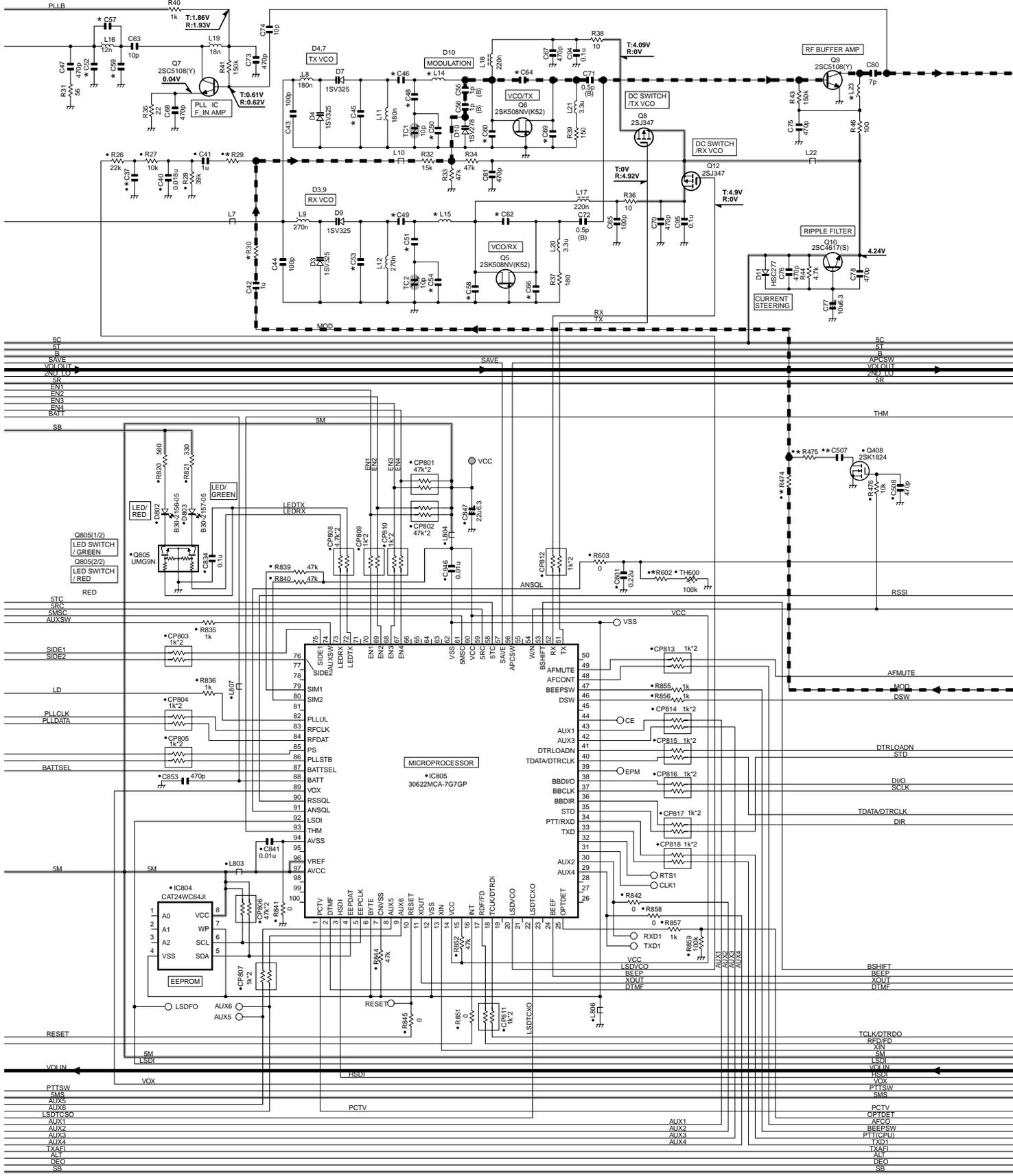




# SCHEMATIC DIAGRAM TK-3160

|             |       |       |      |       |       |     |     |     |     |     |       |       |     |     |       |     |       |       |       |        |       |       |      |      |        |      |       |       |      |       |      |       |         |         |
|-------------|-------|-------|------|-------|-------|-----|-----|-----|-----|-----|-------|-------|-----|-----|-------|-----|-------|-------|-------|--------|-------|-------|------|------|--------|------|-------|-------|------|-------|------|-------|---------|---------|
| X57-6730-XX | C1    | C4    | C37  | C45   | C46   | C48 | C49 | C50 | C51 | C52 | C53   | C54   | C57 | C58 | C59   | C60 | C62   | C64   | C66   | C69    | C224  | C248  | C280 | C282 | C308   | C317 | C333  | C341  | C349 | C351  | C356 | C358  | C359    |         |
| -11         | K.M   | 4700p | 2.2u | 0.01u | 2p(B) | 27p | 11p | 33p | 5p  | 15p | 5p    | 2p(B) | 5p  | 3p  | 5p(B) | 5p  | 4p(B) | 7p(B) | 5p(B) | 10p(B) | 5p(B) | 7p    | NO   | 33p  | 33p(G) | 27p  | 1p(B) | NO    | NO   | 7p(B) | 27p  | 100p  | 3p(B)   | 1.5p(B) |
| -11         | K2.M2 | 3900p | NO   | 0.01u | 4p(B) | 39p | 47p | 2p  | 22p | 5p  | 4p(B) | 3p(B) | 3p  | 3p  | 4p(B) | 5p  | 4p(B) | 9p(B) | 5p(B) | 9p(B)  | 12p   | 7p(B) | 9p   | NO   | 10p    | 68p  | 12p   | 15p   | NO   | NO    | 470p | 3p(B) | 1.5p(B) |         |
| -12         | K3.M3 | 3900p | NO   | 8200p | 5p(B) | 22p | 12p | 39p | 2p  | 22p | 7p    | 5p(B) | 2p  | 4p  | 5p(B) | 7p  | 5p(B) | 9p(B) | 6p(B) | 12p    | 7p(B) | 9p    | 5p   | 33p  | 100p   | 15p  | NO    | 4p(B) | 15p  | 7p(B) | 27p  | 100p  | 4p(B)   | 1p(B)   |

## TX-RX UNIT (X57-6730-XX)

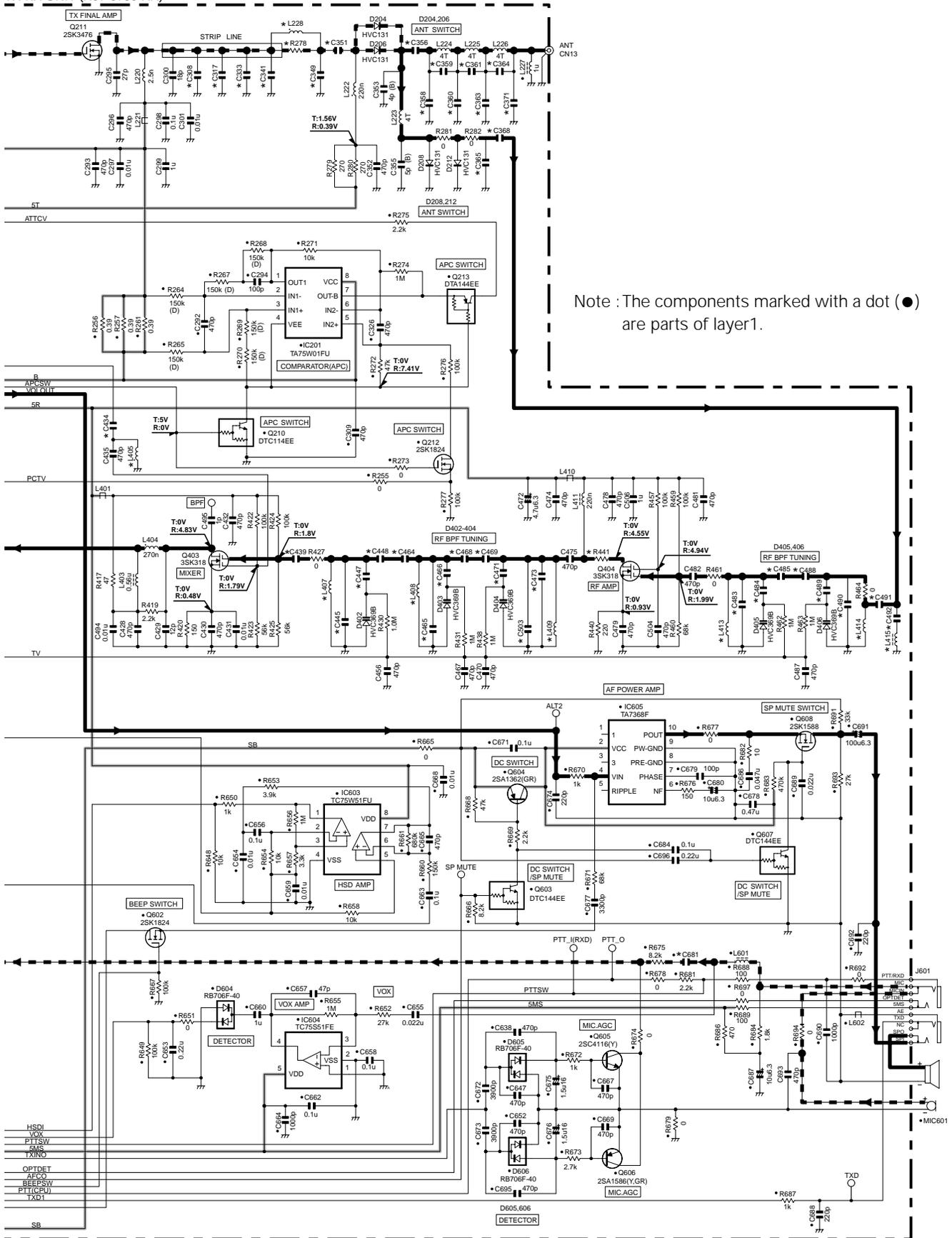




# SCHEMATIC DIAGRAM TK-3160

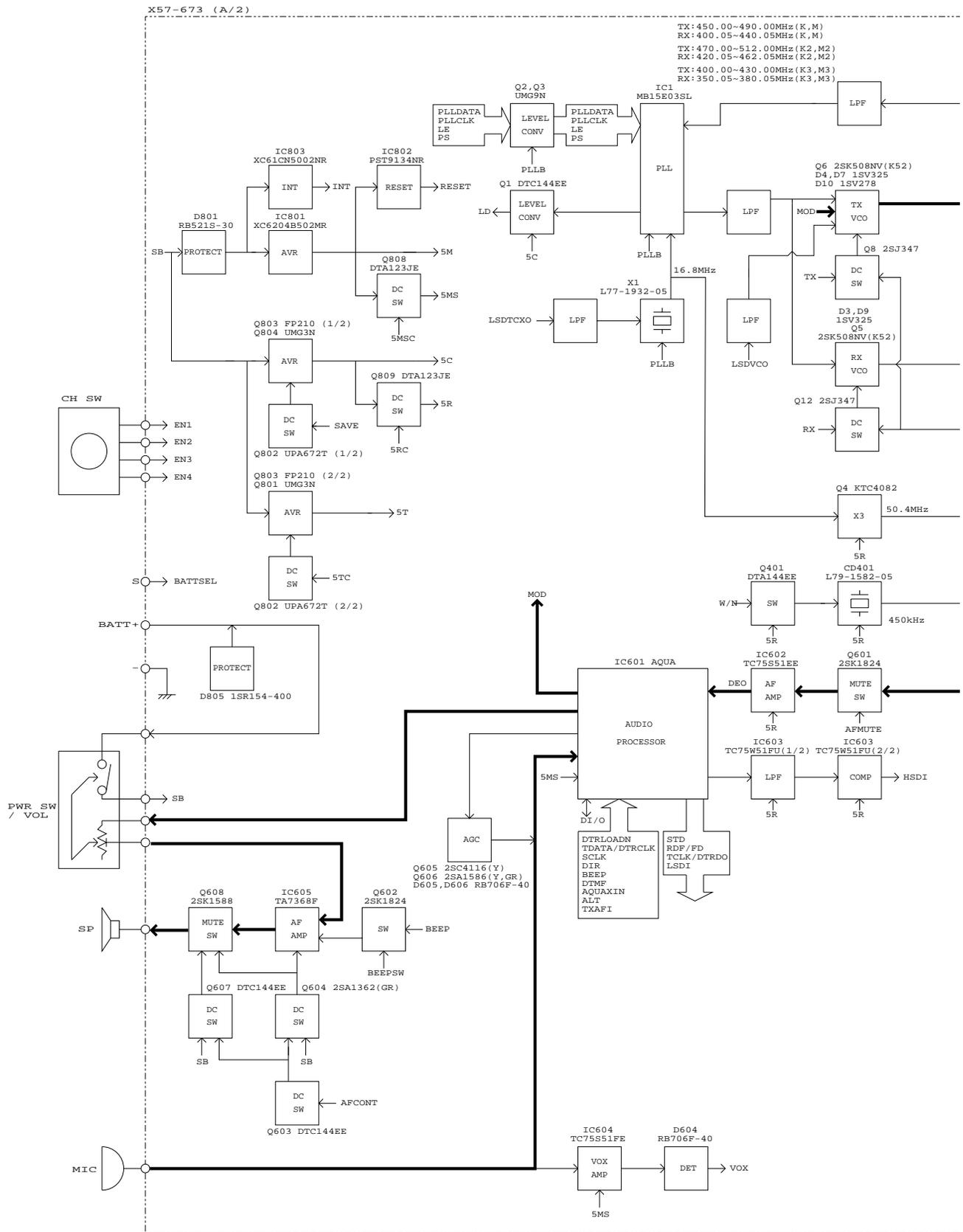
|             |       |         |      |        |      |     |      |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |      |      |      |      |      |      |      |      |      |     |
|-------------|-------|---------|------|--------|------|-----|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|------|------|------|------|------|------|------|------|------|-----|
| X57-6730-XX | C503  | C507    | C681 | R3     | R8   | R22 | R23  | R24 | R29 | R30  | R237 | R242 | R247 | R258 | R259 | R260 | R278 | R412 | R441 | R474 | R475 | R602 | L14  | L15 | L23 | L218 | L228 | L405 | L407 | L408 | L409 | L413 | L414 | L415 |     |
| -10         | K.M   | NO      | 1u   | 0.027u | 120k | NO  | 820  | 680 | 680 | 100k | 33k  | 22k  | 120k | 47k  | NO   | 47k  | 47k  | 0    | 1.2k | 100  | 10k  | 47k  | 180k | 15n | 18n | 22n  | NO   | NO   | 27n  | 6.8n | 6.8n | 6.8n | 6.8n | 6.8n | 47n |
| -11         | K2.M2 | 1.5p(B) | 2.2u | 0.022u | 470k | 0   | 1.2k | 680 | 680 | 150k | 33k  | 22k  | 120k | 68k  | 0    | 47k  | 82k  | 0    | 330  | 68   | 22k  | 100k | 120k | 12n | 15n | 18n  | NO   | NO   | 22n  | 6.8n | 6.8n | 6.8n | 6.8n | 6.8n | 39n |
| -12         | K3.M3 | NO      | 2.2u | 0.022u | 470k | 0   | 1.2k | 470 | 1k  | 82k  | 12k  | 12k  | 56k  | 47k  | NO   | 68k  | 68k  | NO   | 330  | 100  | 10k  | 68k  | 120k | 18n | 22n | 27n  | 1.5n | 3.3n | 33n  | 8.2n | 8.2n | 8.2n | 8.2n | 8.2n | 47n |

## TX-RX UNIT (X57-6730-XX)





## BLOCK DIAGRAM





## SPECIFICATIONS

**General**

|                                      |   |
|--------------------------------------|---|
| Frequency Range .....                | 450~490MHz (K, M), 470~512MHz (K2, M2), 400~430MHz (K3, M3)                 |
| Number of channels .....             | Max. 16   |
| Number of groups .....               | Max. 16   |
| Channel Spacing .....                | 25kHz (Wide) 12.5kHz (Narrow)   |
| PLL Channel Stepping .....           | 5kHz, 6.25kHz   |
| Operating Voltage .....              | 7.5 VDC $\pm$ 20%   |
| Battery Life .....                   | More than 9 hours at 4 watts (5-5-90 duty cycle with KNB-24L battery)       |
| Operating Temperature range .....    | -30°C to +60°C (-22 °F to +140 °F)  |
| Dimensions and Weight                |   |
| With KNB-24L (1400mAh battery) ..... | 56 (2-3/16) W x 109.3 (4-5/16) H x 34.5 (1-3/8) D mm (in)<br>290g (0.64lbs) |
| With KNB-25A (1200mAh battery) ..... | 56 (2-3/16) W x 109.3 (4-5/16) H x 40.7 (1-5/8) D mm (in)<br>355g (0.78lbs) |
| With KNB-26N (2000mAh battery) ..... | 56 (2-3/16) W x 109.3 (4-5/16) H x 40.7 (1-5/8) D mm (in)<br>400g (0.88lbs) |

**Receiver** (Measurements made per EIA standard EIA-603)

|                                |  |
|--------------------------------|--|
| Sensitivity                    |  |
| EIA 12dB SINAD .....           | 0.25 $\mu$ V (Wide)/0.28 $\mu$ V (Narrow)    |
| Selectivity .....              | 70dB (Wide)/62dB (Narrow)                    |
| Intermodulation .....          | 65dB (Wide)/62dB (Narrow)                    |
| Spurious response .....        | 65dB   |
| Audio Power Output .....       | 500mW/8 $\Omega$                             |
| Frequency Stability .....      | $\pm$ 2.5ppm                                 |
| Channel Frequency Spread ..... | 40MHz (K, M), 42MHz (K2, M2), 30MHz (K3, M3) |

**Transmitter** (Measurements made per EIA standard EIA-603)

|                                |   |
|--------------------------------|---|
| RF Power output .....          | 4W/1W   |
| Spurious and Harmonics .....   | 70dB  |
| Modulation .....               | 16K $\phi$ F3E (Wide)/11K $\phi$ F3E (Narrow) |
| FM Noise .....                 | 45dB (Wide)/40dB (Narrow)                     |
| Audio Distortion .....         | Less than 5%                                  |
| Frequency Stability .....      | $\pm$ 2.5ppm                                  |
| Channel Frequency Spread ..... | 40MHz (K, M), 42MHz (K2, M2), 30MHz (K3, M3)  |

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