VHF FM TRANSCEIVER

TK-760G/762G

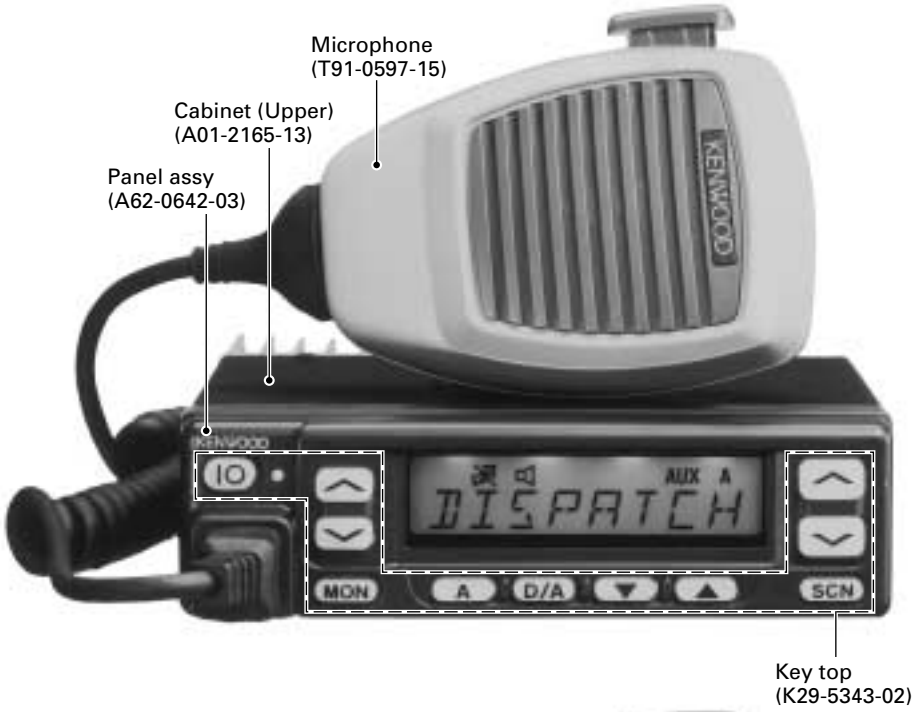
SERVICE MANUAL

REVISED

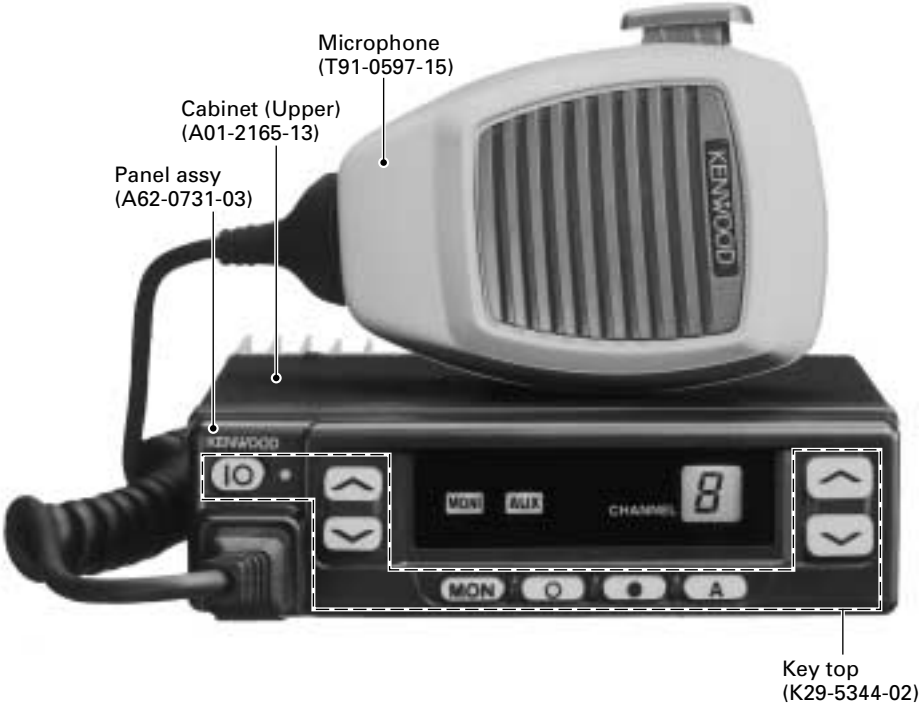
KENWOOD

B51-8497-10 (N) 1269

TK-760G (K)



TK-762G (K)



Please use this manual in place of the service manual (preliminary version), B51-8497-00.
We have added the information on the circuit description, specifications, and K2 version specifications to the service manual (preliminary version), B51-8497-00.

CONTENTS / GENERAL

CONTENTS

GENERAL

INTRODUCTION

SCOPE OF THIS MANUAL

This manual is intended for use by experienced technicians familiar with similar types of commercial grade communications equipment. It contains all required service information for the equipment and is current as of 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.

PERSONNEL SAFETY

The following precautions are recommended for personnel safety :

- DO NOT transmit if someone is within two feet (0.6 meter) of the antenna.
- DO NOT transmit until all RF connectors are 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.
- All equipment should be properly grounded before power-up for safe operation.
- This equipment should be serviced by a qualified technician only.

PRE-INSTALLATION CONSIDERNATIONS

1. UNPACKING

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

2. LICENSING REQUIREMENTS

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

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

GENERAL

3. PRE-INSTALLATION CHECKOUT

3-1. Introduction

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

3-2. Testing

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

4. PLANNING THE INSTALLATION

4-1. General

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

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

4-2. Antenna

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

4-3. Radio

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

4-4. DC Power and wiring

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

5. INSTALLATION PLANNING – CONTROL STATIONS

5-1. Antenna system

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

5-2. Radio location

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

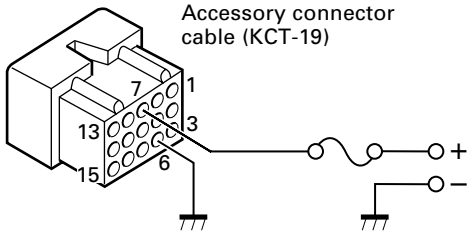
SERVICE

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

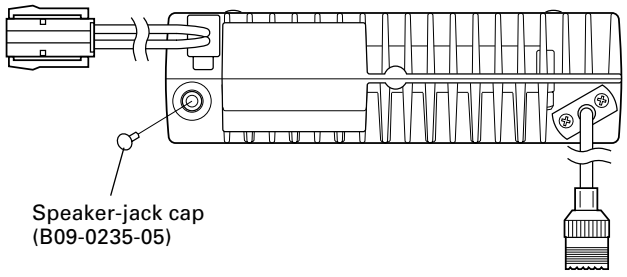
Note

When you modify your radio as described in system set-up, take the following precaution.

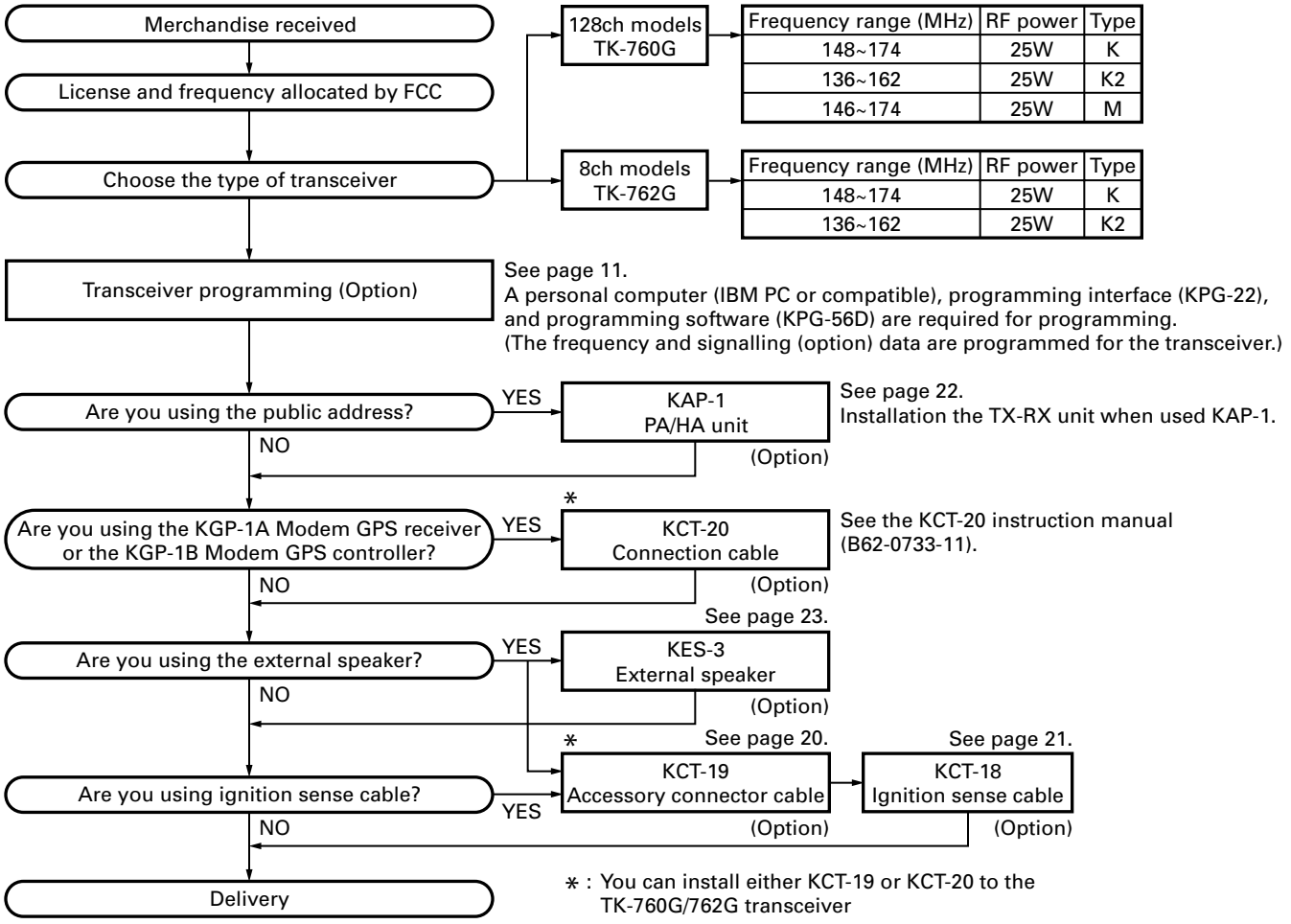
The rating of pin 7 (SB) of the accessory connector cable (KCT-19) on the rear of the radio is 13.6V (1A). Insert a 1A fuse if you use the SB pin for external equipment.



If you do not intend to use the 3.5-mm jack for the external speaker, fit the supplied speaker-jack cap (B09-0235-05) to stop dust and sand getting in.



SYSTEM SET-UP



Frequency range (MHz)	RF power	Type
148~174	25W	K
136~162	25W	K2
146~174	25W	M

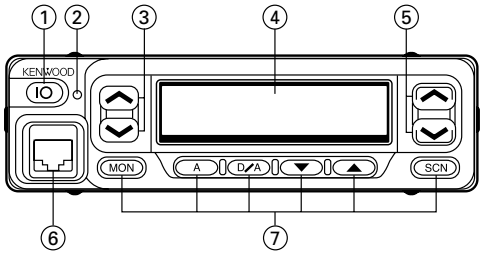
Frequency range (MHz)	RF power	Type
148~174	25W	K
136~162	25W	K2

∗ : You can install either KCT-19 or KCT-20 to the TK-760G/762G transceiver

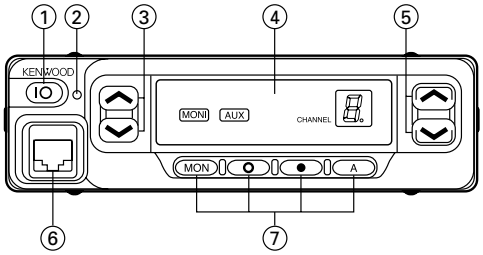
OPERATING FEATURES

1. Controls and Functions

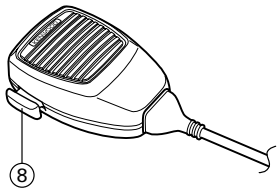
1-1. TK-760G Front Panel



1-2. TK-762G Front Panel



1-3. Microphone



① IO (Power) switch
Press to switch the transceiver ON (or OFF).

② LED indicator
Lights red while transmitting. Lights green while receiving. Flashes orange while receiving a Code Squelch or Selective Call code, or a 2-Tone code that matches the one set up in your transceiver.

③ ∧/∨keys
These are PF (Programmable Function) keys. Press each key to activate its auxiliary function. The default settings are Volume Up and Volume Down.

④ Display
See right.

⑤ ∧/∨keys
These are PF (Programmable Function) keys. Press each key to activate its auxiliary function. The default settings are Channel Up and Channel Down.

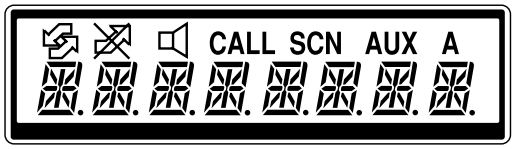
⑥ Microphone jack
Insert the microphone plug into this connector.

⑦ MON, A, D/A, ▼, ▲, and SCN keys (TK-760G)
MON, ○, ●, and A keys (TK-762G)
These are PF (Programmable Function) keys. Press each key to activate its auxiliary function.

⑧ PTT (Push-to-Talk) switch
Press this switch, then speak into the microphone to call a station.

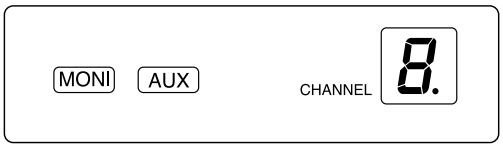
1-4. Display

■ **TK-760G**



Indicator	Description
	Appears while using SmarTrunk.
	Appears when the selected channel in busy.
	Appears when QT, DQT, DTMF, or 2-Tone decoding is deactivated (by pressing the Monitor key).
CALL	Appears when you receive a Code Squelch, Selective Call, 2-Tone code. Also appears when you transmit using Code Squelch or Selective Call.
SCN	Appears while scanning.
AUX	Appears when the AUX port is activated.
A	Appears when the selected channel is included in the scanning sequence.
	Displays the selected channel number (or name), DTMF digits (when entering digits, confirming digits, or making a call), and messages received via Selective Call.

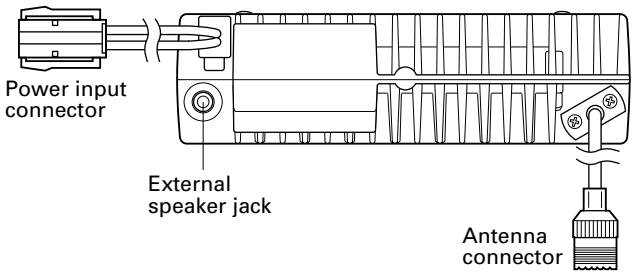
■ **TK-762G**



Indicator	Description
MONI	Appears when QT, DQT, DTMF, or 2-Tone decoding is deactivated (by pressing the Monitor key).
AUX	Appears when the AUX port is activated.
8.	Displays the selected channel number.

OPERATING FEATURES

1-5. Rear panel



1-6. Programmable Auxiliary Functions

The following keys can be programmed with the functions listed below.

TK-760G : ∧/∨ (left side),∧/∨ (right side), MON, A, D/A, ▼, ▲, and SCN.

TK-762G : ∧/∨ (left side),∧/∨ (right side), MON, ○, ●, and A.

- AUX
- Channel Down
- Channel Up
- Display Character (TK-760G only)
- Emergency *1
- Group Down (TK-760G only)
- Group Up (TK-760G only)
- Home Channel
- Horn Alert
- Key Lock
- Monitor A (Monitor Unmute-Momentary)
- Monitor B (Monitor Unmute-Toggle)
- Monitor C (Carrier Squelch-Momentary)
- Monitor D (Carrier Squelch-Toggle)
- None (No function)
- Operator Selectable Tone *2 (TK-760G only)
- Public Address
- Redial
- Scan (TK-760G only)
- Scan Del/Add (TK-760G only)
- Selectable QT *3 (TK-760G only)
- Talk-Around
- Volume Up
- Volume Down
- 2-Tone Encode Select *4

*1 : This function can be used only with a foot switch.
*2 : This function is available for K market models only.
*3 : This function is available for M market models only.
*4 : The code for the TK-762G transceiver is not selectable. You can transmit only one 2-Tone code, which is preprogrammed in the transceiver.

2. Operation Features

The TK-760G/762G is a VHF FM radio designed to operate in conventional format. The programmable features are summarized.

3. Transceiver Controls and Indicators

3-1. Front Panel Controls

All the keys on the front panel are momentary-type push buttons. The functions of these keys are explained below.

- **POWER key**

Transceiver POWER key. When the power is switched off, all the parameters are stored in memory. When the power is switched on again, the transceiver returns to the previous conditions.

- **CHANNEL UP/DOWN key (Programmable)**
- **▲/▼ key (Programmable) : TK-760G only**
- **SCAN key (Programmable) : TK-760G only**
- **MONITOR key (Programmable)**
- **A, D/A key (Programmable) : TK-760G only**
- **○ ,● , A key (Programmable) : TK-762G only**
- **VOLUME UP/DOWN key (Programmable)**
- **BUSY/TX LED**

The BUSY indicator (Green LED) shows that the channel is in use. The TX indicator (Red LED) shows that you are transmitting.

3-2. Programmable Keys

The FPU (KPG-56D) enables programmable keys to select the following functions.

AUX, Channel down, Channel up, Display character *1, Emergency (Only foot key ; M type only), Group down *1, Group up *1, Home channel, Horn alert, Key lock, Monitor A, Monitor B, Monitor C, Monitor D, Operator selectable tone (K type only), Public address, Redial, Scan *1, Scan del/add *1, Talk around, Volume down, Volume up and None.

These functions the FPU programs to the functionkeys and described in the following sections.

*1 : TK-760G only.

- **AUX**

If this key is pressed, "AUX" icon lights on the display and AUX port which is inside of the transceiver turns to the high level. If pressed again, the "AUX" icon goes off and the AUX ports turns to the lower level.

- **Channel up/down**

When the key is pressed each time, the channel number to be selected is incremented/decremented and repeats if held for one second or longer.

OPERATING FEATURES

- **Display character (TK-760G only)**

This key switches the LCD display between the group and channel number and the group and channel name.

- **Emergency (M market models only)**

Pressing this key for longer than 1 second causes the transceiver to enter the emergency mode. The transceiver jumps to the programmed "Emergency the group and channel" and transmits for 25 seconds.

The transceiver disables mic mute while transmitting. After finishing transmission, the transceiver receivers for 5 seconds. The transceiver mutes the speaker while receiving. Following the above sequence, the transceiver continues to transmit and receive.

- **Group up/down (TK-760G only)**

When the key is pressed each time, the group number to be selected is incremented/decremented and repeats if held for one second or longer.

- **Home channel**

Press this key once, the channel switches to the pre-programmed home channel.

- **Horn alert**

If you are called from the base station using 2-tone/DTMF while you are away from your transceiver, you will be alerted by the vehicle horn or some other type of external alert. To turn the horn alert function on , press this key. A confirmation tone sounds, (and the display shows "HA" on the LCD *1).

If this key is pressed again, the horn alert function is turned off.

*1 : TK-760G only.

- **Key lock**

Pressing this key causes the transceiver to accept entry of only the [Vol Up/Down], [Key lock], [PTT], [Monitor A], [Monitor B], [Monitor C], [Monitor D], and [Emergency] keys.

- **Monitor**

Used to release signalling or squelch when operating as a conventional. It is also used to reset option signalling.

- **Operator selectable tone (K market models only)**

This key switches the pre-set decode QT/DQT and encode QT/DQT to OST (Operator Selectable Tone) tone pair.

Press this key, the transceiver enters to OST select mode. In this mode, the display shows "OFF" and the operator can select one of the OST tone pair using the channel up/down key. The display shows "TONE ✳✳" and tone pair No. ✳✳ is selected.

Press OST key again, the transceiver exits from the OST select mode.

16 kinds of tone pair for OST can be programmed by KPG-56D. OST is useful to access the repeater with same radio frequency and different tone (QT/DQT).

- **Public address**

Public address amplifies the microphone audio, and outputs it through a PA speaker. PA is activated by pressing this key. A confirmation tone sounds, (and the display shows "PA" *1). PA can be activated at anytime (scanning or non-scanning).

The RADIO continues to scan & receive calls while in PA mode. Pressing PTT activates PA, and will override an incoming call at anytime; however, no RADIO transmission takes place.

If this key is pressed again, a confirmation tone will sound, (the display will return to the normal channel or SCAN display *1), and the PA function will turn off.

*1 : TK-760G only.

- **Redial**

If you press this key when the group/channel is displayed, the last transmitted DTMF code will appear on the display. Pressing the PTT switch at this time will transmit the displayed DTMF code.

- **Scan (TK-760G only)**

Press this key starts scanning. Pressing this key stops scanning.

- **Scan del/add (TK-760G only)**

This key switches the currently displayed channel between "Delete" and "Add".

The "Add" channel contained in the scan sequence, and "Delete" channel is not contained. In the scan mode, this key switches the channnel delete or add temporarily.

- **Talk around**

Press this key, the transceiver uses the receive frequency and the tone for transmission.

The operator can call the other party directory (without repeater). Press this key again, the talk around function goes off.

- **Volume up/down**

When the key is pressed, the volume level is increased/decreased and repeats if held for 200ms or longer.

- **None**

Sounds error operation beep, and no action will occur. Use this function when the transceiver is required to be more simple operated.

4. Scan Operating (TK-760G only)

■ Scan types

- **Single group scan**

You can scan all valid (ADD) channels in the displayed group that can be selected with the group up/down key.

- **Multiple group scan**

You can scan all valid (ADD) channels in the all valid (ADD) group.

OPERATING FEATURES

■ SCAN start condition

One or more non-priority channels must be added to all channels that can be scanned. The transceiver must be in normal receive mode (PTT off).

When you activate the key programmed to the scan function, the scan starts. The scan icon "SCN" lights and "SCAN" is indicated on alphanumeric display.

■ Scan stop condition

The scan stops temporarily if the following conditions are satisfied.

1) A carrier is detected, then signalling matches on channels for which receive the signalling is set by the programming software.
2) A carrier is detected on the channels for which receiving signalling is not set by the programming software or when the monitor (signalling cancel) function is activated.

■ Scan channel types

1) Priority channel is the most important channel for the scan, and always detects a signal during scan and when the scan stops temporarily.
2) Non-priority channels detects a signal during scan. For the channels that can be selected with the group or channel up/down key when the scan does not occur, adds an indicator "A" lights.

■ Priority channel setting

A priority channel can be set as follows with the programming software (KPG-56D).

1) Specify a priority channel as a fixed priority channel.
2) Make a selected channel, a priority channel.

■ Scan type according to the priority channel

1) When no priority channel is set : Only the non-priority channels are scanned.

If a non-priority channel stops temporarily, it stops until there is no signal on the channel.

2) When priority channel is set : Either priority channel is scanned.

   If a non-priority channel stops temporarily, a priority channel signal is detected at certain intervals.

   If a priority channel stops temporarily, it stops until there is no signal on the priority channel.

■ Revert channel

The revert channel is used to transmit during scanning and set by the programming software (KPG-56D).

1) Priority

   The transceiver reverts to the priority channel.
2) Priority with talkback

   The transceiver reverts to the priority channel.

   If you press PTT during a resume timer (dropout delay time, TX dwell time) or calling, you can transmit on current channel to answer to the call however revert channel is set to priority channel.

   After resume time, scan re-starts and transmission channel is return to priority channel.
3) Selected channel

   The transceiver reverts to the channel before scanning or the channel that you changed during scan.
4) Last called channel

   The transceiver reverts to the last called channel during the scan.
5) Last used channel

   The transceiver reverts to the last used (transmitted) channel during scan. "Last used" revert channel includes talkback function.
6) Selected with talkback

   The transceiver reverts to the channel before scanning or the channel that you changed during scan.

■ Scan end

When you reactivate the key programmed to the scan function during scan mode, the scan ends.

The scan icon "SCN" and "SCAN" display goes off.

■ Temporarily delete/add

It is possible to delete or add channel temporarily during scan. When scan stops on unnecessary channel for example by interference of the other party, activate the delete/add function (for example press the key), then that channel is deleted temporarily and scan re-start immediately.

When you would like to add the deleted channel temporarily to scan sequence, select the desired (deleted) channel during scan, activate the delete/add function (for example press the key) before scan re-start.

That channel is added temporarily to scan sequence. The temporary deleted or added channels are returns to pre-set delete/add, when the transceiver exits from scan mode.

5. Details of Features

■ Time-out timer

The time-out timer can be programmed in 15 seconds increments from 15 seconds to ten minutes. If the transmitter is keyed continuously for longer than the programmed time, the transmitter is disabled and a warning tone sounds while the PTT button is held down. The alert tone stops when the PTT button is released.

■ PTT ID

PTT ID provides a DTMF ANI to be sent with every time PTT (beginning of transmission, end of transmission, or both).

You can program PTT ID "on" or "off" for each group. The contents of ID are programmed for each channel.

The timing that the transceiver sends ID is programmable.

BOT : DTMF ID (BOT)/MSK ID is sent on beginning of transmission.

EOT : DTMF ID (EOT)/MSK ID is sent on end of transmission.

Both : DTMF ID (BOT)/MSK ID is sent on beginning of transmission and DTMF ID (EOT)/MSK ID is sent on end of transmission.

OPERATING FEATURES

■ Off hook decode

If the Off hook decode function has been enabled, removing and replacing the microphone on the hook has no effect for decoding QT/DQT and option signalling.

■ "TOT" pre-alert

The transceiver has "TOT pre-alert timer. This parameter selects the time at which the transceiver generates "TOT" pre-alert tone before "TOT" is expired.

"TOT" will be expired when the selected time passes from a TOT pre-alert tone.

■ "TOT" re-key time

The transceiver has "TOT" re-key timer. This timer is the time you can not transmit after "TOT" exceeded. After "TOT" re-key time expired you can transmit again.

■ "TOT" reset time

The transceiver has "TOT" reset timer. This timer is the minimum wait time allowed during a transmission that will reset the "TOT" count.

"TOT" reset time causes the "TOT" to continue even after PTT is released unless the "TOT" reset timer has expired.

■ OST (Operator Selectable Tone) (TK-760G K market models only)

The transceiver is capable to have "OST" function and 16 tone pair (QT/DQT).

■ Clear to transpond

The transceiver waits the transpond of 2-tone /DTMF if channel is busy until channel open. This feature prevents the interference to other party.

6. Option Signalling (DTMF/2-Tone)

Built-in DTMF decoder is available for option signalling.

Built-in 2-tone decoder is available for option signalling.

It is possible to use individual call, group call, D.B.D. (Dead Beat Disable). D.B.D. is used with DTMF only.

If the option signalling matches, a predetermined action will occur.

If option signalling matches on a group/channel which is set up with option signalling, the option signalling indicator (CALL) will flash and option signalling will be released. The transpond or alert tone will sound.

The orange LED will flash.

While option signalling matches (or if option signalling is deactivated when you are transmitting), you can mute or unmute QT/DQT/Carrier.

■ AND/OR

You can select AND or OR for option signalling match conditions.

	Alert/Transpond
AND	QT/DQT+DTMF (2-tone); Option matches = Action
OR	QT/DQT+DTMF (2-tone); Option matches = Action
	AF mute open
AND	QT/DQT+DTMF (2-tone); Option matches = Action
OR	QT/DQT/ID; Signalling only matches = Action

With OR set up, alert/transpond will not function with only DTMF.

With OR set up, AF mute will not release when only DTMF matches.

With a conventional channel not set up with QT or DQT, only the carrier is considered when signalling matches.

■ Auto Reset

If option signalling matches a group set up with option signalling, option signalling is released. After matching option signalling, option signalling will temporarily reset automatically.

■ Dead Beat Disable

If the D.B.D. code matches, a predetermined action will occur. Whether option signalling is activated or not, when D.B.D. matches on any channel, the transceiver will become TX inhibited or TX/RX inhibited. While D.B.D. is active, if the D.B.D. code + "#" code is received, D.B.D. will disactivate.

When D.B.D. matches, transpond will function. Alert will not be output, and option signalling match icon will not appear.

7. Audible User Feedback Tones

The transceiver outputs various combinations of tones to notify the user of the transceiver operating state. The main tones are listed below.

The high tone is 1477Hz, the mid tone is 941Hz, and the low tone is 770Hz.

■ Power on tone

This tone is output when the transceiver is turned on. (The high tone is output for 500ms.)

■ Alert tone

This tone is output when the transceiver is TX inhibition for TOT, and PLL unlocked. It is output until the PTT button is released.

■ DBD on tone

When a D.B.D. code is received, transpond tone sounds.

■ DBD off tone

When a D.B.D. release code is received, transpond tone sounds.

OPERATING FEATURES / REALIGNMENT

■ **Busy tone**
Sounds in conventional mode, when busy channel lock-out is functioning. You can select yes or no for the optional feature's warning tone.

■ **Group call tone**
Sounds when a group call with the correct DTMF/2-tone option signalling is received, repeats 7 times. You can select yes or no for the optional feature's warning tone.

■ **Individual call tone**
Sounds when an individual call with the correct DTMF/2-tone option signalling is received. You can select yes or no for the optional feature's warning tone.

■ **Key press tone [A]**
Sounds when a key is pressed. For toggle keys, sounds when toggle function is turned on (key press tone [B] sounds when it is turned off). You can select yes or no for the optional feature's control tone.

■ **Key press tone [B]**
Sounds when a key is pressed. For toggle keys, sounds when the toggle function is turned off (key press tone [A] sounds when it is turned on). You can select yes or no for the optional feature's control tone.

■ **Key input error tone**
Sounds when a key is pressed but that key cannot be used. You can select yes or no for the optional feature's warning tone.

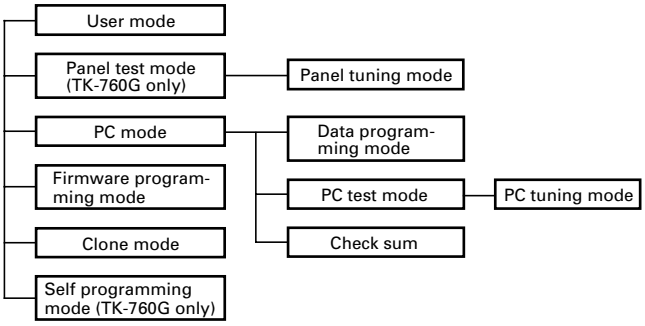
■ **Roll over tone**
Sounds in Conventional format at the smallest group/channel. You can select yes or no for the optional feature's control tone.

■ **Transpond tone**
Sounds when an individual call with the correct DTMF/2-tone option signalling is received. For group calls, only the group tone will sound, not the transpond tone.

■ **Pre alert tone**
Sounds prior to the TOT TX inhibit activation. If TOT pre alert is set, the tone sounds at the amount of time programmed, before the TOT expires (TOT time – TOT pre alert time = Pre alert tone sounding time). You can select yes or no for the optional feature's warning tone.

REALIGNMENT

1. Modes



Mode	Function
User mode	For normal use.
Panel test mode	Used by the dealer to check the fundament characteristics.
Panel tuning mode	Used by the dealer to tune the radio.
PC mode	Used for communication between the radio and PC (IBM compatible).
Data programming mode	Used to read and write frequency data and other features to and from the radio.
PC test mode	Used to check the radio using the PC. This feature is included in the FPU. See panel tuning.
Firmware programming mode	Used when changing the main program of the flash memory.
Clone mode	Used to transfer programming data from one radio to another.
Self programming mode	Frequency, signalling and features write to the radio.

2. How to Enter Each Mode

Mode	Operation
User mode	Power ON
Panel test mode	[SCN]+Power ON (Two seconds)
PC mode	Received commands from PC
Panel tuning mode	[Panel test mode]+[SCN]
Firmware programming mode	[CH▲]+Power ON (Two seconds)
Clone mode	[▼]+Power ON (Two seconds)
Self programming mode	[A]+Power ON (Two seconds)

3. For the Panel Test Mode (TK-760G only)

Setting method refer to ADJUSTMENT.

3-1. For the Panel Tunning Mode

Setting method refer to ADJUSTMENT.

REALIGNMENT

4. Check Sum

Executing this function, "TUNING" apears on the display of the TK-760G while calculation the check sum.

When the calculation is completed, the display returns to normal and PC displays the check sum of the radio.

5. PC Mode

5-1. Preface

The TK-760G/762G transceiver is programmed using a personal computer, a programming interface (KPG-46) and programming software (KPG-56D).

The programming software can be used with an IBM PC or compatible. Figure 1 shows the setup of an IBM PC for programming.

5-2. Connection Procedure

1. Connect the TK-760G/762G to the personal computer with the interface cable.
2. When the Power is switched on, user mode can be entered immediately. When the PC sends a command, the radio enters PC mode.
   When data is transmitted from transceiver, the red LED blink.
   When data is received by the transceiver, the green LED blink.

Notes :

- The data stored in the personal computer must match model type when it is written into the flash memory.
- Change the TK-760G/762G to PC mode, then attach the interface cable.

5-3. KPG-46 Description (PC programming interface cable : Option)

The KPG-46 is required to interface the TK-760G/762G to the computer. It has a circuit in its D-subconnector (25-pin) case that converts the RS-232C logic level to the TTL level.

The KPG-46 connects the modular microphone jack of the TK-760G/762G to the computers RS-232C serial port.

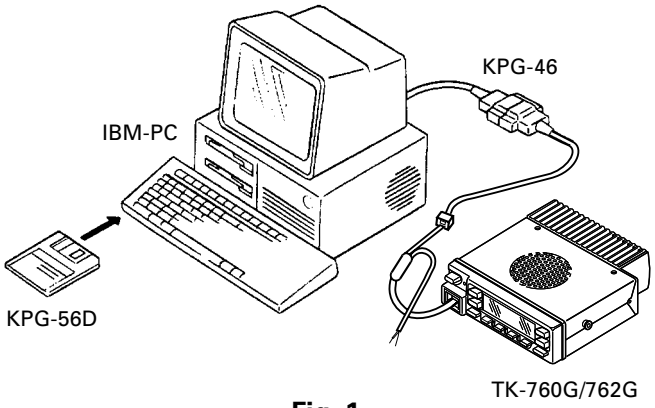


Fig. 1

5-4. Programming Software Description

The KPG-56D programming disk is supplied in 3-1/2" disk format. The software on this disk allows a user to program TK-760G/762G radio via a programming interface cable (KPG-46).

5-5. Programming With IBM PC

If data is transferred to the transceiver from an IBM PC with the KPG-56D, the destination data (basic radio information) for each set can be modified. Normally, it is not necessary to modify the destination data because their values are determined automatically when the frequency range (frequency type) is set.

The values should be modified only if necessary. Data can be programmed into the flash memory in RS-232C format via the modular microphone jack.

6. Firmware Programming Mode

6-1. Preface

Flash memory is mounted on the TK-760G/762G. This allows the TK-760G/762G to be upgraded when new features are released in the future. (For details on how to obtain the firmware, contact Customer Service.)

6-2. Connection Procedure

Connect the TK-760G/762G to the personal computer (IBM PC or compatible) with the interface cable (KPG-46). (Connection is the same as in the PC Mode.)

6-3. Programming

1. Start up the programming software (KPG-56D), select "firmware program" in the "Program" item, and press the Return key on your personal computer. This starts up the firmware programmer.
2. The top screen is displayed. Press any key to advance to the next screen.
3. Set the communications speed (normally, 57600 bps) and communications port in the Setup item.
4. Set the firmware to be updated by File select (=F1).
5. Turn the TK-760G/762G Power ON with the [CH∧] switch held down. Hold the switch down for two seconds until the display changes to "PROG 576", the BUSY/TX LED lights orange. When "PROG 576" appears, release your finger from the switch.
6. Check the connection between the TK-760G/762G and the personal computer, and make sure that the TK-760G/762G is in Program mode.
7. Press F10 on the personal computer. A window opens on the display to indicate the writing progress. When the TK-760G/762G starts to receive data, the BUSY/TX LED lights green.
8. If writing ends successfully, the LED on the TK-760G/762G goes off and the checksum is displayed.
   (Since the TK-762G does not have a display, check the checksum with the FPU (KPG-56D).)
9. If you want to continue programming other TK-760G/762G, repeat steps 5 to 8.

REALIGNMENT

Notes :

- To start the Firmware Programmer from KPG-56D, the FPRO path must be set up by the KPG-56D setup.
- This mode cannot be entered if the Firmware programming mode is set to Disable in the Programming software (KPG-56D).
- When programming the firmware, it is recommend to copy the data from the floppy disk to your hard disk before you update the radio firmware.
  Directly copying from the floppy disk to the radio may not work because the access speed is too slow.

6-4. Function

1. If you press the [MON] switch while "PROG 576" is displayed, the checksum is displayed. If you press the [MON] switch again (while the checksum is displayed), "PROG 576" is redisplayed.
2. If you press the [A] switch while "PROG 576" is displayed, the display changes to "PROG 192" to indicate that the write speed is low speed (19200 bps). If you press the [A] switch again while "PROG 192" is displayed, the display changes to "PROG 384", and the write speed becomes the middle speed (38400 bps). If you press the [A] switch again while "PROG 384" is displayed, the display returns to "PROG 576".

Note :

TK-762G indicate
19200 bps : The LED flashes green and red alternately.
38400 bps : The LED flashes orange.
57600 bps : The LED lights orange.
Normally, write in the high-speed mode.

7. Clone Mode

Programming data can be transferred from one radio to another by connecting them via their modular microphone jacks. The operation is as follows (the transmit radio is the master and the receive radio is the slave).

1. Turn the master TK-760G power ON with the [▼] key held down. The TK-760G displays "CLONE".
2. Power on the slave TK-760G/762G.
3. Connect the cloning cable (No. E30-3382-05) to the modular microphone jacks on the master and slave.
4. Press the [SCN] key on the master while the master displays "CLONE". The data of the master is sent to the slave. While the slave is receiving the data, "–PC–" is displayed. When cloning of data is completed, the master displays "END", and the slave automatically operates in the User mode. The slave can then be operated by the same program as the master.
5. The other slave can be continuously cloned. When the [SCN] key on the master is pressed while the master displays "END", the master displays "CLONE". Carry out the operation in step 2 to 4.

Note :

You can clone the programmed data between the transceiver listed below. Frequency version must be same.

Slave / Master	TK-260G K TK-270G K	TK-260G M TK-270G M	TK-760G K TK-762G K	TK-760G M TK-762G M	TK-760G K2 TK-762G K2	TK-260G K2 TK-270G K2	TK-270G M2
TK-760G K	YES	NO	YES	NO	NO	NO	NO
TK-760G M	NO	YES	NO	YES	NO	NO	NO
TK-760G K2	NO	NO	NO	NO	YES	YES	NO

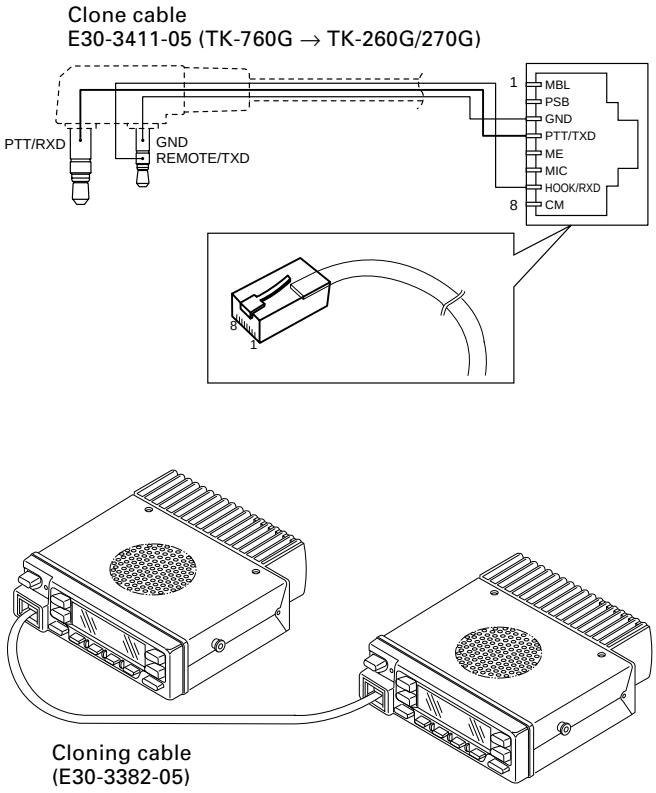


Fig. 2

8. Self Programming Mode (TK-760G only)

Write mode for frequency data and signalling etc. Mainly used by the person maintaining the user equipment.

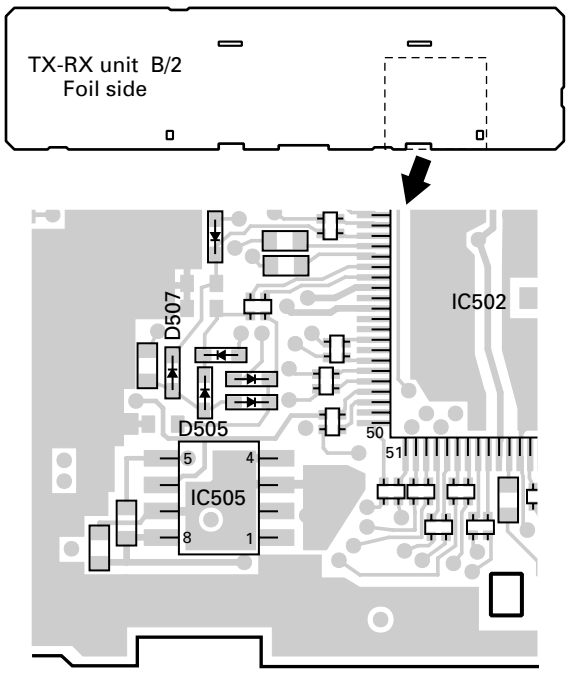
8-1. Enter to the Self Programming Mode

Remove D507 (Figure 3) from the TX-RX unit. Hold down the [A] key and turn the power switch on. When enter the self programming mode, "SELF" is displayed. The mode changes autoically to Model Select Mode in about one second, and set up radio type, radio band & channel type and frequency version.

REALIGNMENT

Note :

This mode (self programming mode) cannot be set when it has been disabled with the FPU.

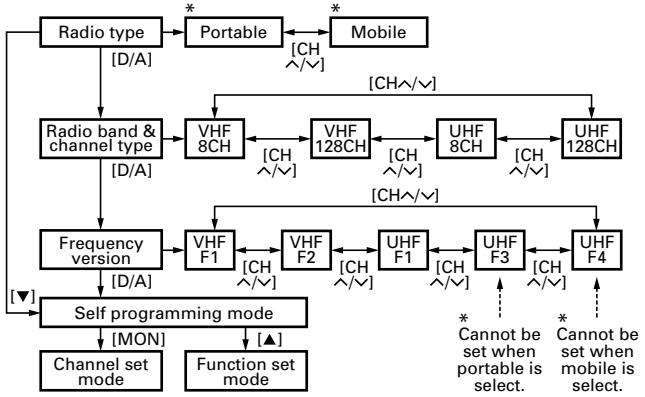


The silk screen of D505 and D507 is reversed on the TX-RX unit PCB (Part No. J72-0677-02). this silk screen will be corrected from the next version, J72-0677-12.

Fig. 3

8-2. Model Select Mode

- **Flow chart**



Note :

If the radio type of TK-760G was temporally set to "Portable" for the cloning purposes, "UNPROG" is displayed (at User mode) when the TK-760G is turned on.

In this case, please set the radio type back to "Mobile" at model select mode menu.

9. Channel Setting Mode

Each channel can be setup in its action mode by using the panel keys.

- Pressing [MON] when "SELF" is diaplyed, sets channel setting mode.
- Select an item set using [▼] then change the selection with the [CH^ /v].
- The data displayed using [D/A] is stored in the memory and then proceeds to the next item.
- Pressing [▼] proceeds to the next item without storing it in the memory.
- Press [MON] to set the display to "SELF" and return to reset (default) status.

The setup items fro channel setting mode are listed below.

No.	Function	Choices	Display	Remarks
	Select channel	1~128	__1-__1._	[▼] : Group selection/ Channel selection change
			__1-128._	
	Select group	1~128	__1.-__1_	
			128.-__1_	
1	RX frequency	Step 2.5kHz~1MHz	STP__250	Display when an item is selected or when a step is changed (about 0.5 seconds) [A] : Step change 2.5, 5.0, 6.25, 7.5kHz, 1MHz step
			STP_1000	
		Blank	- - - - - - - -	[▲] : Frequency on/ blank switching The rightmost dot indicates 50Hz digit (On=5, Off=0)
		100.0000~ 550.0000MHz	R.100.0000	
2	RX signalling	Off	- - - - - - - -	[▲] : Off/QT/DQT switching [A] : Mode switching [SCN] : Normal/ Inverse switching
		QT 67.0~250.3Hz (EIA mode)	QT__67.0_	
			QT_250.3_	
		QT 67.0~250.3Hz (0.1Hz step mode)	QT__67.0*	
			QT_250.3*	
		DQT 000~777 (Normal) (1 step mode)	DQT000N*	
			DQT777N*	
		DQT 023~754 (Normal) (Standard table mode)	DQT023N_	
			DQT754N_	
		DQT 000~777 (Inverse) (1 step mode)	DQT000I*	
			DQT777I*	
		DQT 023~754 (Inverse) (Standard table mode)	DQT023I_	
			DQT754I_	

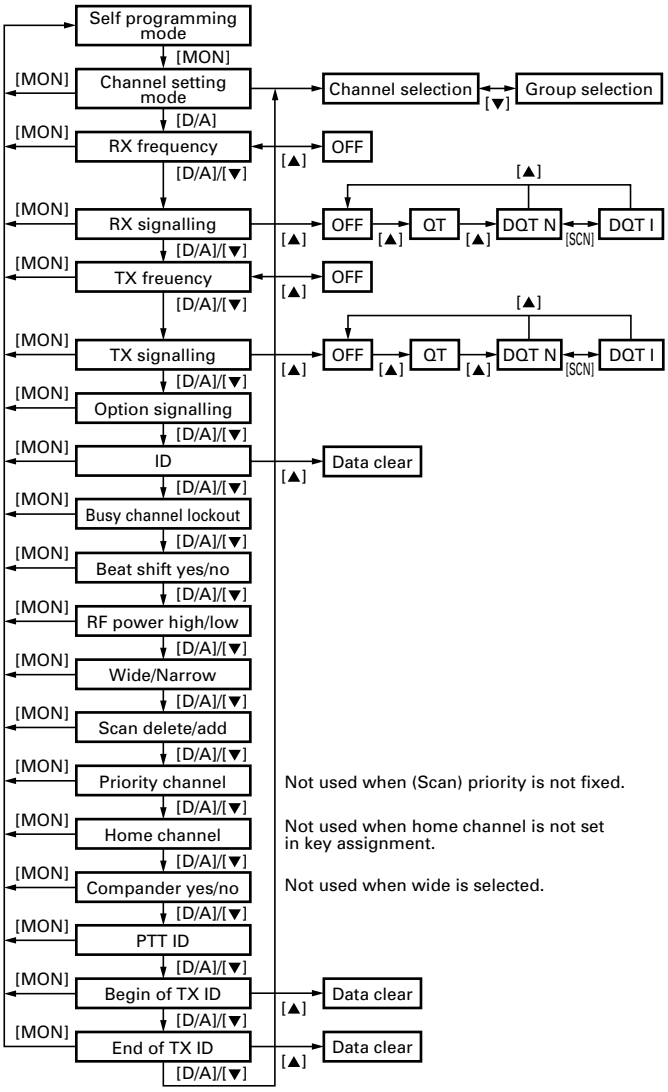
REALIGNMENT

No.	Function	Choices	Display	Remarks
3	TX frequency	Step 2.5kHz~1MHz	STP__250 STP_1000	Display when an item is selected or when a step is changed (about 0.5 seconds) [A] : Step change 2.5, 5.0, 6.25, 7.5kHz, 1MHz step
		Blank	- - - - - - - -	[▲] : Frequency on/ blank switching The rightmost dot indicates 50Hz digit (On=5, Off=0)
		100.0000~ 550.0000MHz	T.100.0000	
4	TX signalling	Off	- - - - - - - -	[▲] : Off/QT/DQT switching [A] : Mode switching [SCN] : Normal/ Inverse switching
		QT 67.0~250.3Hz (EIA mode)	QT__67.0_ QT_250.3_	
		QT 67.0~250.3Hz (0.1Hz step mode)	QT__67.0* QT_250.3*	
		DQT 000~777 (Normal) (1 step mode)	DQT000N* DQT777N*	
		DQT 023~754 (Normal) (Standard table mode)	DQT023N_ DQT754N_	
		DQT 000~777 (Inverse) (1 step mode)	DQT000I* DQT777I*	
		DQT 023~754 (Inverse) (Standard table mode)	DQT023I_ DQT754I_	
5	Option signalling	Off	NONE____	←Default
		DTMF	DTMF____	
		2-TONE	2TONE___	
6	ID	000~ 9999999999	___ID___	Display when an item is selected (about 0.5 seconds)
			12345678	Display of the current setting (If it is 8 or more digits, scroll it)
			- - - - - 987	Display when a code is input (Input it with DTMF key)
		Blank	- - - - - - - -	[▲] : Data clear
7	Busy channel lockout	No	BCL_NO__	←Default
		Type 1	BCL_1___	BCL_YES_ for K type
		Type 2	BCL_2___	Not used for K type
8	Beat shift	No	SHFT_NO_	←Default
		Yes	SHFT_YES	

No.	Function	Choices	Display	Remarks
9	RF power	High power	PWR_H___	←Default
		Low power	PWR_L___	
10	Wide/ Narrow	Wide	WIDE____	
		Narrow	NARROW__	
11	Scan Delete/Add	DELETE	SCAN_DEL	Not used for 8ch
		ADD	SCAN_ADD	←Default
12	Priority channel	No	P.CH_NO__	Not used when (Scan) priority is not fixed
		Yes	P.CH_YES_	
13	Home channel	No	H.CH_NO__	Not used when home channel is not set in key assignment
		Yes	H.CH_YES_	
14	Compander	No	COMP_NO_	Not used when wide is selected
		Yes	COMP_YES	
15	PTT ID	OFF	P.ID_OFF_	
		Begin of TX	P.ID_1___	
		End of TX	P.ID_2___	
		Both	P.ID_3___	
16	Begin of TX ID	000~ 9999999999999999	_BOT_ID_	Not valid if Dial ID= disable and PTT ID= off, or EOT is set Display when an item is selected (about 0.5 seconds)
			12345678	Display of the current setting (If it is 8 or more digits, scroll it)
			- - - - - 987	Display when a code is input (Input it with DTMF key)
		Blank	- - - - - - - -	[▲] : Data clear
17	End of TX ID	000~ 9999999999999999	_EOT_ID_	Not valid of Dial ID= Idisable and PTT ID= off, or BOT is set Display when an item is selected (about 0.5 seconds)
			12345678	Display of the current setting (If it is 8 or more digits, scroll it)
			- - - - - 987	Display when a code is input (Input it with DTMF key)
		Blank	- - - - - - - -	[▲] : Data clear

REALIGNMENT

9-1. Flow Chart



10. Function Setting Mode

All channels can be set up together in the action mode by using the panel keys.

- Pressing [▲] when "SELF" is displayed, sets the function setting mode.
- Select an item set using [▼] then change the selection with the [CH▲/▼].
- The data displayed using [D/A] is stored in the memory and then proceeds to the next item.
- Pressing [▼] proceeds to the next item without storing it in the memory.
- Press [▲] to display "SELF" and return to reset (default) status.

No.	Function	Choices	Display	Remarks
		Function key		
1	[MON]	Not function	MON__OFF	
	(TK-760G	Volume down	MON___1_	
	only)	Volume up	MON___2_	
		Talk around	MON___3_	
		Auxiliary	MON___4_	
		Dispaly character	MON___5_	
		Home channel	MON___7_	
		Channel down	MON___8_	
		Channel up	MON___9_	
		Key lock	MON___10	
		Public address	MON___12	
		Horn alert	MON___14	
		Selectable QT	MON___15	M destination only
		2-tone encode select	MON___16	
		Monitor A	MON___17	←Default
		Monitor B	MON___18	
		Monitor C	MON___19	
		Monitor D	MON___20	
		Scan	MON___22	
		Scan del/add	MON___23	
		Group down	MON___24	
		Group up	MON___25	
2	[A]	No function	KEY1_OFF	←Default (TK-760G)
	(TK-760G)	Volume down	KEY1__1_	
	[MON]	Volume up	KEY1__2_	
	(TK-762G)	Talk around	KEY1__3_	
		Auxiliary	KEY1__4_	
		Dispaly character	KEY1__5_	TK-762G cannot be selected
		Home channel	KEY1__7_	
		Channel down	KEY1__8_	
		Channel up	KEY1__9_	
		Key lock	KEY1__10	
		Public address	KEY1__12	

REALIGNMENT

No.	Function	Choices	Display	Remarks
		Horn alert	KEY1__14	
		Selectable QT	KEY1__15	M destination only
		2-tone encode select	KEY1__16	
		Monitor A	KEY1__17	←Default (TK-762G)
		Monitor B	KEY1__18	
		Monitor C	KEY1__19	
		Monitor D	KEY1__20	
		Scan	KEY1__22	TK-762G cannot be selected
		Scan del/add	KEY1__23	TK-762G cannot be selected
		Group down	KEY1__24	TK-762G cannot be selected
		Group up	KEY1__25	TK-762G cannot be selected
3	[D/A] (TK-760G) [o] (TK-762G)	No function	KEY2_OFF	←Default
		Volume down	KEY2__1_	
		Volume up	KEY2__2_	
		Talk around	KEY2__3_	
		Auxiliary	KEY2__4_	
		Dispaly character	KEY2__5_	TK-762G cannot be selected
		Home channel	KEY2__7_	
		Channel down	KEY2__8_	
		Channel up	KEY2__9_	
		Key lock	KEY2__10	
		Public address	KEY2__12	
		Horn alert	KEY2__14	
		Selectable QT	KEY2__15	M destination only TK-762G cannot be selected
		2-tone encode select	KEY2__16	
		Monitor A	KEY2__17	
		Monitor B	KEY2__18	
		Monitor C	KEY2__19	
		Monitor D	KEY2__20	
		Scan	KEY2__22	TK-762G cannot be selected
		Scan del/add	KEY2__23	TK-762G cannot be selected
		Group down	KEY2__24	TK-762G cannot be selected
		Group up	KEY2__25	TK-762G cannot be selected
4	[▼] (TK-760G) [●] (TK-762G)	No function	KEY3_OFF	←Default
		Volume down	KEY3__1_	
		Volume up	KEY3__2_	
		Talk around	KEY3__3_	
		Auxiliary	KEY3__4_	
		Dispaly character	KEY3__5_	TK-762G cannot be selected
		Home channel	KEY3__7_	
		Channel down	KEY3__8_	
		Channel up	KEY3__9_	
		Key lock	KEY3__10	
		Public address	KEY3__12	

No.	Function	Choices	Display	Remarks
		Horn alert	KEY3__14	
		Selectable QT	KEY3__15	M destination only TK-762G cannot be selected
		2-tone encode select	KEY3__16	
		Monitor A	KEY3__17	
		Monitor B	KEY3__18	
		Monitor C	KEY3__19	
		Monitor D	KEY3__20	
		Scan	KEY3__22	TK-762G cannot be selected
		Scan del/add	KEY3__23	TK-762G cannot be selected
		Group down	KEY3__24	TK-762G cannot be selected
		Group up	KEY3__25	TK-762G cannot be selected
5	[▲] (TK-760G) [A] (TK-762G)	No function	KEY4_OFF	←Default
		Volume down	KEY4__1_	
		Volume up	KEY4__2_	
		Talk around	KEY4__3_	
		Auxiliary	KEY4__4_	
		Dispaly character	KEY4__5_	TK-762G cannot be selected
		Home channel	KEY4__7_	
		Channel down	KEY4__8_	
		Channel up	KEY4__9_	
		Key lock	KEY4__10	
		Public address	KEY4__12	
		Horn alert	KEY4__14	
		Selectable QT	KEY4__15	M destination only TK-762G cannot be selected
		2-tone encode select	KEY4__16	
		Monitor A	KEY4__17	
		Monitor B	KEY4__18	
		Monitor C	KEY4__19	
		Monitor D	KEY4__20	
		Scan	KEY4__22	TK-762G cannot be selected
		Scan del/add	KEY4__23	TK-762G cannot be selected
		Group down	KEY4__24	TK-762G cannot be selected
		Group up	KEY4__25	TK-762G cannot be selected
6	[SCN] (TK-760G only)	No function	SCN__OFF	←Default
		Volume down	SCN___1_	
		Volume up	SCN___2_	
		Talk around	SCN___3_	
		Auxiliary	SCN___4_	
		Dispaly character	SCN___5_	
		Home channel	SCN___7_	
		Channel down	SCN___8_	
		Channel up	SCN___9_	
		Key lock	SCN___10	

REALIGNMENT

No.	Function	Choices	Display	Remarks
		Public address	SCN___12	
		Horn alert	SCN___14	
		Selectable QT	SCN___15	M destination only
		2-tone encode select	SCN___16	
		Monitor A	SCN___17	
		Monitor B	SCN___18	
		Monitor C	SCN___19	
		Monitor D	SCN___20	
		Scan	SCN___22	
		Scan del/add	SCN___23	
		Group down	SCN___24	
		Group up	SCN___25	
7	[FOOT] (FOOT SW)	No function	FSW__OFF	←Default
		Volume down	FSW___1_	
		Volume up	FSW___2_	
		Talk around	FSW___3_	
		Auxiliary	FSW___4_	
		Dispaly character	FSW___5_	
		Emergency	FSW___6_	
		Home channel	FSW___7_	
		Channel down	FSW___8_	
		Channel up	FSW___9_	
		Key lock	FSW___10	
		Public address	FSW___12	
		Horn alert	FSW___14	
		Selectable QT	FSW___15	M destination only
		2-tone encode select	FSW___16	
		Monitor A	FSW___17	
		Monitor B	FSW___18	
		Monitor C	FSW___19	
		Monitor D	FSW___20	
		Scan	FSW___22	
		Scan del/add	FSW___23	
		Group down	FSW___24	
		Group up	FSW___25	
8	[CH∧] (Channel up)	No function	CUP__OFF	
		Volume down	CUP___1_	
		Volume up	CUP___2_	
		Talk around	CUP___3_	
		Auxiliary	CUP___4_	
		Dispaly character	CUP___5_	TK-762G cannot be selected
		Home channel	CUP___7_	
		Channel down	CUP___8_	
		Channel up	CUP___9_	←Default
		Key lock	CUP___10	

No.	Function	Choices	Display	Remarks
		Public address	CUP___12	
		Horn alert	CUP___14	
		Selectable QT	CUP___15	M destination only TK-762G cannot be selected
		2-tone encode select	CUP___16	
		Monitor A	CUP___17	
		Monitor B	CUP___18	
		Monitor C	CUP___19	
		Monitor D	CUP___20	
		Scan	CUP___22	TK-762G cannot be selected
		Scan del/add	CUP___23	TK-762G cannot be selected
		Group down	CUP___24	TK-762G cannot be selected
		Group up	CUP___25	TK-762G cannot be selected
9	[CH∨] (Channel down)	No function	CDN__OFF	
		Volume down	CDN___1_	
		Volume up	CDN___2_	
		Talk around	CDN___3_	
		Auxiliary	CDN___4_	
		Dispaly character	CDN___5_	TK-762G cannot be selected
		Home channel	CDN___7_	
		Channel down	CDN___8_	←Default
		Channel up	CDN___9_	
		Key lock	CDN___10	
		Public address	CDN___12	
		Horn alert	CDN___14	
		Selectable QT	CDN___15	M destination only TK-762G cannot be selected
		2-tone encode select	CDN___16	
		Monitor A	CDN___17	
		Monitor B	CDN___18	
		Monitor C	CDN___19	
		Monitor D	CDN___20	
		Scan	CDN___22	TK-762G cannot be selected
		Scan del/add	CDN___23	TK-762G cannot be selected
		Group down	CDN___24	TK-762G cannot be selected
		Group up	CDN___25	TK-762G cannot be selected
10	[VOL∧] (Volume up)	No function	VUP__OFF	
		Volume down	VUP___1_	
		Volume up	VUP___2_	←Default
		Talk around	VUP___3_	
		Auxiliary	VUP___4_	
		Dispaly character	VUP___5_	TK-762G cannot be selected
		Home channel	VUP___7_	
		Channel down	VUP___8_	
		Channel up	VUP___9_	

REALIGNMENT

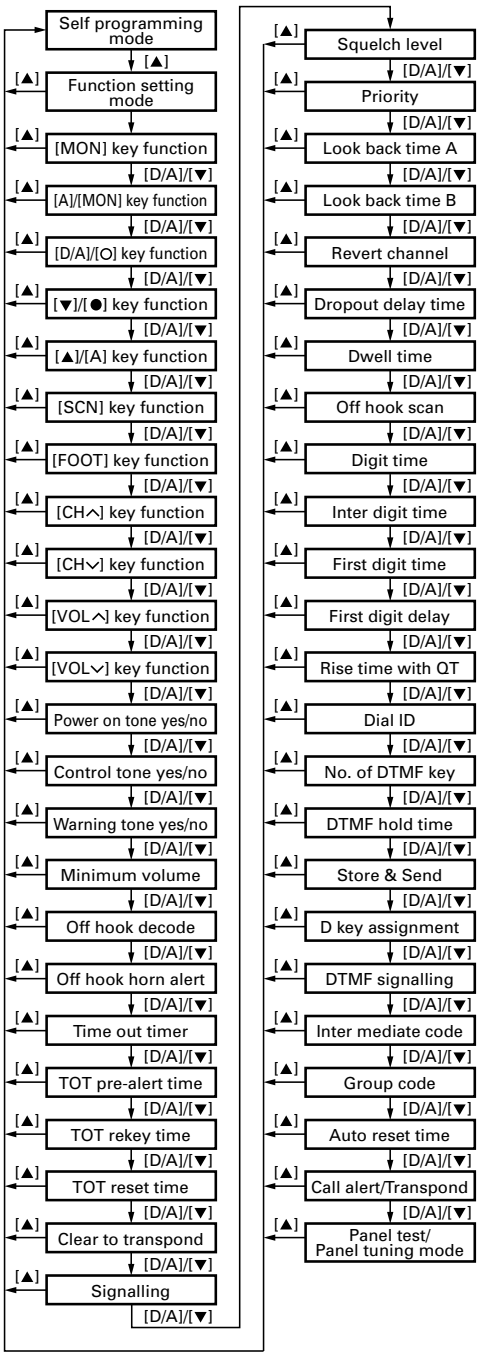
No.	Function	Choices	Display	Remarks
		Key lock	VUP___10	
		Public address	VUP___12	
		Horn alert	VUP___14	
		Selectable QT	VUP___15	M destination only TK-762G cannot be selected
		2-tone encode select	VUP___16	
		Monitor A	VUP___17	
		Monitor B	VUP___18	
		Monitor C	VUP___19	
		Monitor D	VUP___20	
		Scan	VUP___22	TK-762G cannot be selected
		Scan del/add	VUP___23	TK-762G cannot be selected
		Group down	VUP___24	TK-762G cannot be selected
		Group up	VUP___25	TK-762G cannot be selected
11	[VOL❯] (Volume down)	No function	VDN__OFF	
		Volume down	VDN___1_	←Default
		Volume up	VDN___2_	
		Talk around	VDN___3_	
		Auxiliary	VDN___4_	
		Dispaly character	VDN___5_	TK-762G cannot be selected
		Home channel	VDN___7_	
		Channel down	VDN___8_	
		Channel up	VDN___9_	
		Key lock	VDN___10	
		Public address	VDN___12	
		Horn alert	VDN___14	
		Selectable QT	VDN___15	M destination only TK-762G cannot be selected
		2-tone encode select	VDN___16	
		Monitor A	VDN___17	
		Monitor B	VDN___18	
		Monitor C	VDN___19	
		Monitor D	VDN___20	
		Scan	VDN___22	TK-762G cannot be selected
		Scan del/add	VDN___23	TK-762G cannot be selected
		Group down	VDN___24	TK-762G cannot be selected
		Group up	VDN___25	TK-762G cannot be selected
Optional feature				
12	Power on tone	YES/NO	PONT_YES	Default : Yes
13	Control tone	YES/NO	CNTT_YES	Default : Yes
14	Warning tone	YES/NO	WART_YES	Default : Yes

No.	Function	Choices	Display	Remarks
15	Minimum volume	0~31/1 step	MVOL_12_	
16	Off hook decode	Enable	H_D__ENA	
		Disable	H_D__DIS	←Default
17	Off hook horn alert	Enable	H_H__ENA	
		Disable	H_H__DIS	←Default
18	Time out timer	OFF, 15~600/ 15s step	TOT_180_	Default : 180s
19	TOT pre-alert time	OFF, 1~10/ 1s step	TOTP_OFF	Cannot be set when TOT is off Default : Off
20	TOT rekey time	OFF, 1~60/ 1s step	TOTK_OFF	Cannot be set when TOT is off Default : Off
21	TOT reset time	OFF, 1~15/ 1s step	TOTS_OFF	Cannot be set when TOT is off
22	Clear to transpond (BCL for transpond)	YES	CTT_YES_	
		NO	CTT_NO__	←Default
23	Signalling	OR	SIG__OR_	←Default
		AND	SIG__AND	
24	Squelch level	0~9/1 step	SQL__5__	Default : 5
Scan				
25	Priority	None	PRI_NONE	Default : None
		Fixed	PRI_FIX_	
		Selected	PRI_SEL_	
26	Look back time A	0.5~5.0/ 0.05s	LBA__500	Default : 500ms Cannot be set when Priority=none
27	Look back time B	0.5~5.0/ 0.05s	LBB_2000	Default : 2000ms Cannot be set when Priority=none
28	Revert channel	Selected	REV_SEL_	
		Last called	REV_L/C_	←Default
		Last used	REV_L/U_	
		Selected+Talk back	REV_S/T_	
		Priority	REV_PRI_	
		Priority+Talk back	REV_P/T_	
29	Dropout delay time	0~300/1s	DODT___3	Default : 3s
30	Dwell time	0~300/1s	DWL____3	Default : 3s
31	Off hook scan	Enable	H_S__ENA	
		Disable	H_S__DIS	←Default

REALIGNMENT

No.	Function	Choices	Display	Remarks
		DTMF		
32	Digit time	50~200ms/10ms	DIGT__50	Default : 50ms
33	Inter digit time	50~1000ms/50ms	IDT___50	Default : 50ms
34	First digit time	50~200ms/10ms	FDT___50	Default : 50ms
35	First digit delay	50~1000ms/50ms	RIST_100	Default : 100ms
36	Rise time with QT	50~1000ms/50ms	RTWQ_100	Default : 100ms
37	Dial ID	Enable	DID__ENA	
		Disable	DID__DIS	←Default
38	No. of DTMF key	12 key	NODK_12_	←Default
		16 key	NODK_16_	
39	DTMF hold time	ON	DHT__ON_	←Default
		OFF	DHT__OFF	
40	Store and send	Enable	SAS__ENA	
		Disable	SAS__DIS	←Default
41	D key assignment	D code	DKA_D_CD	←Default
		1~16s/1s	DKA_16__	
42	DTMF signalling	Code SQ	DTMS_CSQ	←Default
		SWL CALL	DTMF_SEL	TK-760G only
43	Inter mediate code	0~9, A~D, *, #	IMC__#__	Default : # (Can be set only when DTMF signalling=SEL CALL)
44	Group code	A~D, *, #	GPCD_OFF	Default : OFF
45	Auto reset time	OFF	ART__OFF	
		1~15s/1s	ART__10_	Default : 10s
46	Call alert /transpond	OFF	CA/T_OFF	←Default
		Call alert	CA/T_C/A	
		Transpond	CA/T_T/A	
		(Call alert)		
		Transpond	CA/T_T/I	
		(ID code)		
		Transpond	CA/T_T/T	
		(Transpond code)		
		Others		
47	Panel test/ panel tuning mode	Enable	PTM__ENA	←Default Not used for TK-762G
		Disable	PTM__DIS	

10-1. Flow Chart



11. Memory Reset Mode (TK-760G only)

You can clear all settings you made in self programming mode, or you can return to the original display.

- Press [SCN] while "SELF" is displayed will change the display to "CANCEL".
- Press [CH^/v] to change the display between "CANCEL" and "READY".
- When "READY" is displayed, pressing [SCN] will set all data to default, and "CLEAR" will appear on the display. Press [SCN] again to display "SELF".
- When "CANCEL" is displayed, pressing [SCN] will cancel the reset, and "SELF" will be displayed.

INSTALLATION

1. Accessory Connection Cable (KCT-19 : Option)

The KCT-19 is an accessory connection cable for connecting external equipment. The connector has 15 pins and the necessary signal lines are selected for use.

1-1. Installing the KCT-19 in the transceiver

1. Remove the upper and lower halves of the transceiver case, and lift the DC cord bushing (❶) from the chassis.
2. Remove the pad as shown in Figure 1 (❷).
3. Insert the KCT-19 cable (❸) into the chassis (❹). The wire harness band (❺) must be inside the chassis.
4. Replace the DC cord bushing (❻).
5. Connect the KCT-19 to the TX-RX unit (A/2) as shown in Figure 2 (❼).
6. Connect the KCT-19 to the external accessory by inserting the crimp terminal (❽) into the square plug (❾), both of which are supplied with the KCT-19.

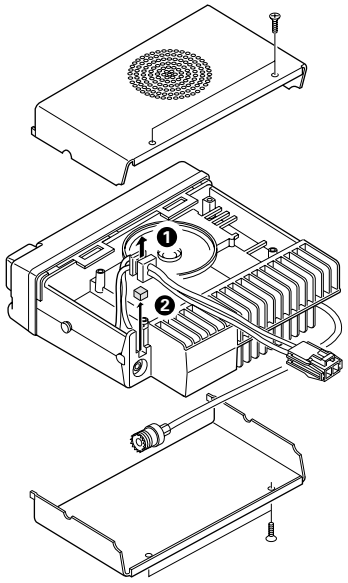


Fig. 1

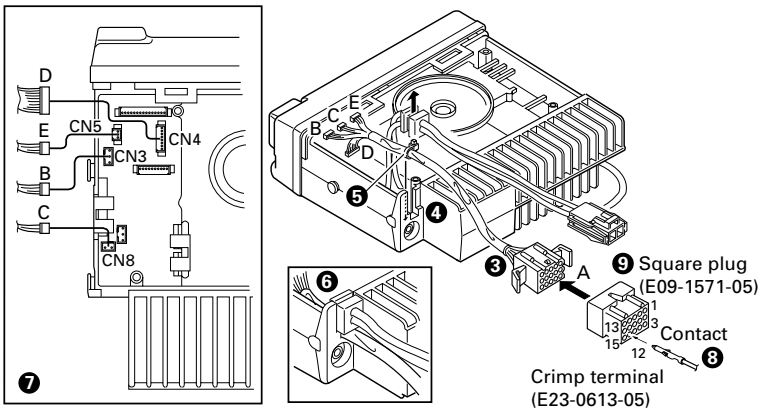


Fig. 2

1-2. KCT-19 Accessory Port Function

No. (A)	No. (B,C,D,E)	Name	Function	Note
1	D-2	RXD	Serial control data input	*1
		DTC	Data channel control/ External hook input	*2
2	D-5	ME	External microphone ground	
3	D-3	IGN	Ignition sense input	
4	D-1	DEO	Receiver detector output	
5	D-6	MI	External microphone input	
6	B-2	E	Ground	
7	B-3	SB	Switched B+, DC 13.6V output. Maximum 1A	
8	D-7	PTT	External PTT input	*2
9	D-4	DI	Data modulation input	
10	B-1	HOR	Horn alert/call output	
11	D-8	SQ	Squelch detect output Busy : H	*2
12	C-1	SP	Speaker audio output.	
13	E-1	AM	Speaker mute input, active high	
14	E-2	MM	MIC mute input, active high	
15	E-3	EMG	Foot switch input, active low	*3
		TXS	Transmitter sense output, active high	

*1 : SmarTrunk OMNI mode
*2 : MDT mode
*3 : Emergency mode

INSTALLATION

2. Accessory Terminal (TX-RX Unit)

2-1. External Connector Accessory Terminal Method

No.		Name	I/O	Description	Note
CN1	1	8C	O	DC 8V output	
	2	5S	O	DC 5V output	
	3	AUX5	O	SMRD : Reset output	*1
	4	AUX6	O	5SC : 5S control (Cannot use)	*1
	5	NC	–	Non-connection	
	6	AUX3	O	SQ : Squelch detect output	*2
	7	AUX1	I	PTT : External PTT input	*2
	8	AUX4	TXD	TXD : Serial control data output	*1
	9	AUX2	RXD	RXD : Serial control data input	*1
			I	DTC : Data channel control/ External hook input	
			I	CHDATA : Channel control serial data input	
	10	ALT	I	Alert tone input	
	11	AFO	O	Receiver audio signal output	
	12	AFI	I	Receiver audio signal input	
	13	MII	I	Transmit audio signal input	
	14	MIO	O	Transmit audio signal output	
	15	GND	–	Ground	
CN3	1	HOR	O	Horn alert/call output	
	2	E	–	Ground	
	3	SB	O	Switched B+, DC 13.6V output, Maximum 1A	
CN4	1	DEO	O	Receiver detector output Level : 0.5Vrms (Standard modulation)	
	2	DTC	I	Data channel control/ External hook input	
	3	IGN	I	Ignition sense input	
	4	DI	I	Data modulation input	
	5	ME	–	External microphone ground	
	6	MI	I	External microphone input	
	7	PTT	I	External PTT input, active low	
	8	SQ	O	Squelch detect output	
CN5	1	AM	I	Speaker mute input, active high	
	2	MM	I	MIC mute input, active high	
	3	EMG/TXS	I	EMG : Foot switch input, active low	*3
CN7	1	PA/LI	O	Relay for PA function KAP-1 control	
			O	PA/LI ON : High, PA/LI OFF : Low	
	2	SPO	O	Audio signal output to KAP-1	
	3	SPI	I	Audio signal input from KAP-1	
CN8	1	SP	O	Audio signal output to internal/external speaker	
	2	E	–	Ground	

*1 : SmarTrunk OMNI mode
*2 : MDT mode
*3 : Emergency mode

3. Ignition Sense Cable (KCT-18 : Option)

The KCT-18 is an optional cable for enabling the ignition function. The ignition function lets you turn the power to the transceiver on and off with the car ignition key.

If you use the Horn Alert function or the Manual Relay function, you can turn the function off while driving with the ignition key.

3-1. Connecting the KCT-18 to the Transceiver

1. Install the KCT-19 in the transceiver. (See the KCT-19 section.)
2. Insert the KCT-18 lead terminal (❷) into pin 3 of the square plug (❶) supplied with the KCT-19, then insert the square plug into the KCT-19 connector (❸).

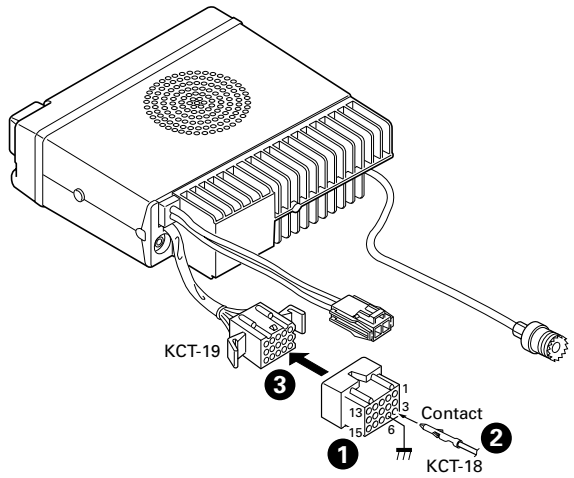


Fig. 3

INSTALLATION

3-2. Modifying the Transceiver

Modify the transceiver as follows to turn the power or the Horn Alert or Manual Relay function on and off with the ignition key.

1. Remove the lower half of the transceiver case.
2. Set jumper resistors (0Ω) R134 and R135 of the TX-RX unit (A/2) as shown in Table 1.

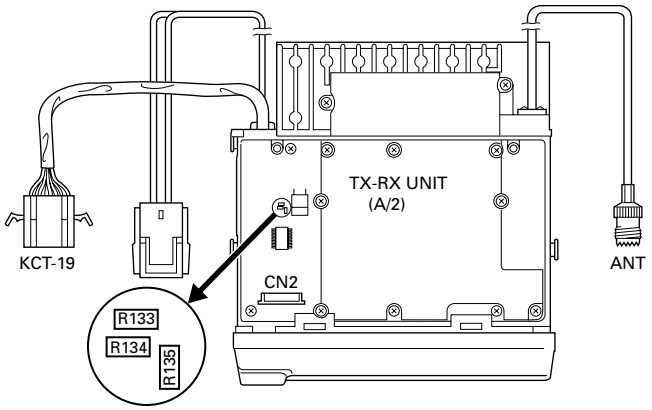


Fig. 4

Operation when KCT-18 is connected	R134	R135	
	Enable	Enable	← **KCT-18 cannot be connected**
Power on/off and Horn Alert or AUX-A on/off	Disable	Enable	
Horn Alert or AUX-A on/off	Enable	Disable	
	Disable	Disable	← **Power cannot be turned on**

Table 1 R134 and R135 setup chart

4. PA/HA Unit (KAP-1 : Option)

4-1. Installing the KAP-1 in the Transceiver

The Horn Alert (max. 2A drive) and Public Address functions are enabled by inserting the KAP-1 W1 (3P; white/black/red) into CN3 on the TX-RX unit, inserting W2 (3P; green) into CN7 on the TX-RX unit, and connecting the KCT-19 (option) to CN2 and CN3 of the KAP-1.

- **Installation procedure**

1. Open the upper case of the transceiver.
2. Insert the two cables (❶) with connectors from the KAP-1 switch unit into the connectors on the transceiver.
3. Secure the switch unit board to the chassis with a screw (❸). The notch (❷) in the board must be placed at the front left side.
4. Attach the cushion on the top of the KAP-1 switch unit.

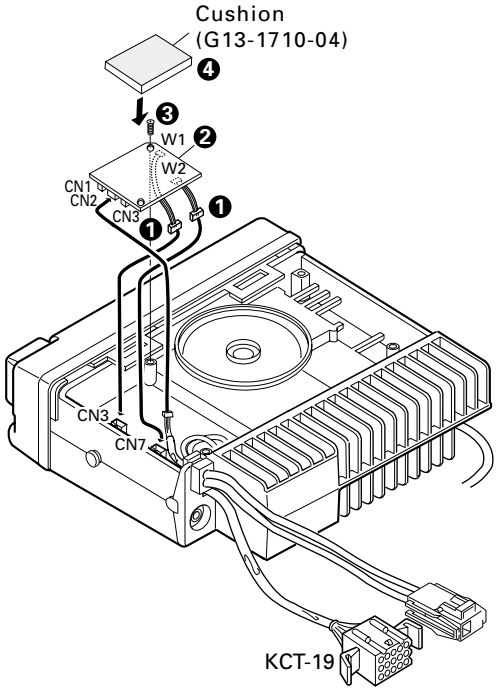


Fig. 5

5. Fitting the Control Panel Upside Down

The TK-760G/762G control panel can be fitted upside down, so the transceiver can be mounted with its internal speaker (in the upper half of the case) facing down in your car.

1. Remove the control panel and the TX-RX unit (B/2) control section. (Fig. 6)

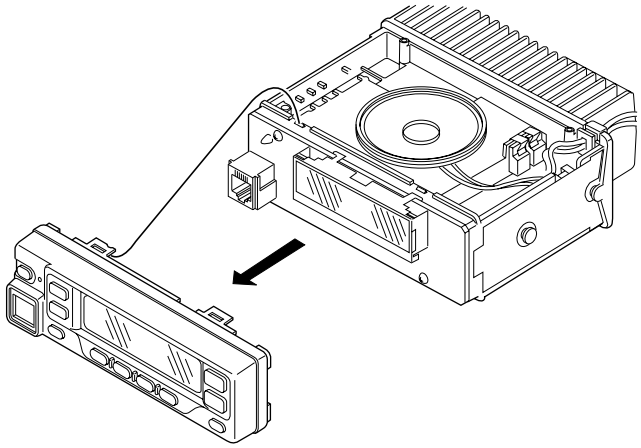


Fig. 6

INSTALLATION

2. Fold the flat cable (❶) in the opposite direction (❷).
3. Rotate the control section (❸) 180 degrees (❹).
4. Insert the flat cable into the control section connector, CN501 (❺).
5. Mount the control section on the transceiver (❻).

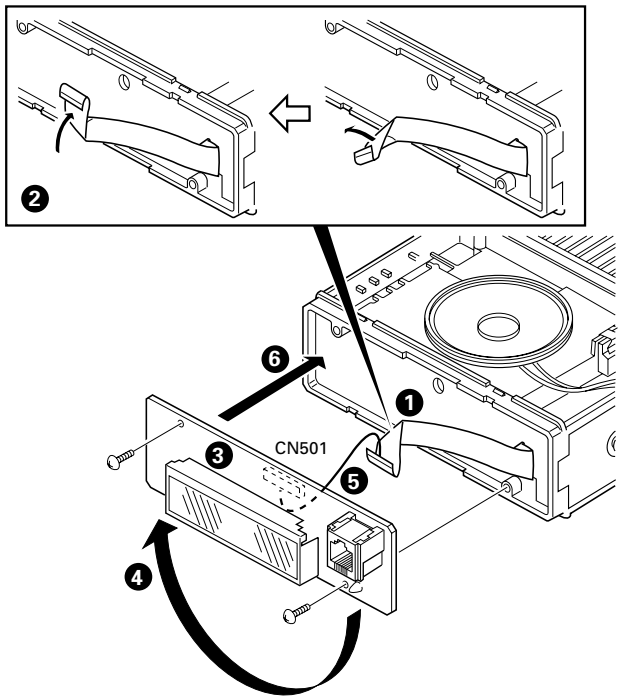


Fig. 7

6. Rotate the control panel 180 degrees and mount it on the transceiver. Refit the two halves of the case to complete installation. (Fig. 8)

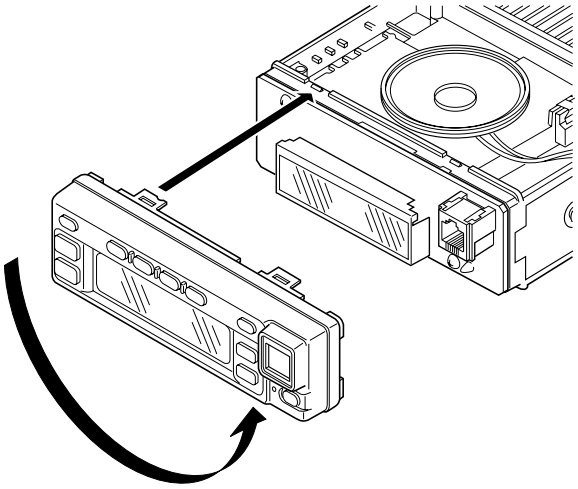


Fig. 8

6. External Speaker

6-1. KES-3 : Option

The KES-3 is an external speaker for the 3.5-mm-diameter speaker jack.

- **Connection procedure**

1. Connect the KES-3 to the 3.5-mm-diameter speaker jack on the rear of the transceiver.

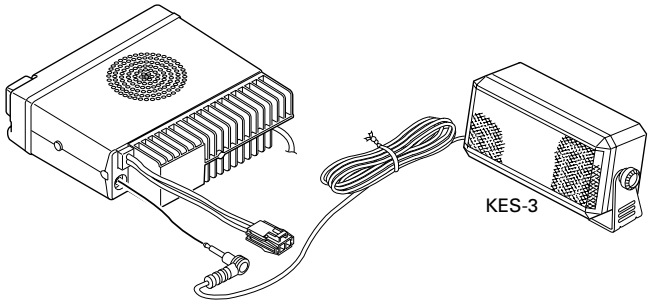


Fig. 9

6-2. KES-4 : Option

The KES-4 is an external speaker used with the accessory connection cable.

- **Connection procedure**

1. Install the KCT-19 in the transceiver. (See the KCT-19 section.)
2. Insert the crimp terminal into the square plug supplied with the KCT-19.
3. Connect CN8 of the transceiver to connector C of the KCT-19 instead of to the internal speaker connector.

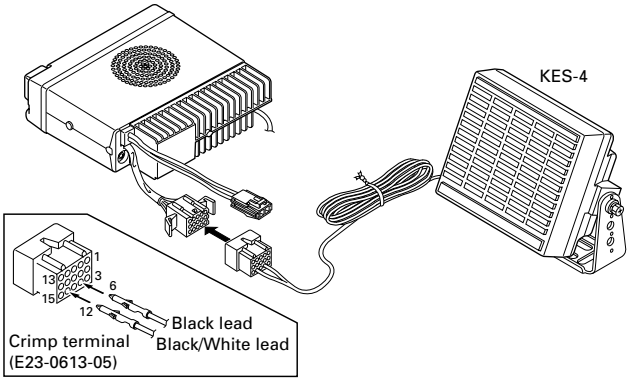


Fig. 10

CIRCUIT DESCRIPTION

Frequency Configuration

The receiver utilizes double conversion. The first IF is 49.95MHz and the second IF is 450kHz. The first local oscillator signal is supplied from the PLL circuit.

The PLL circuit in the transmitter generates the necessary frequencies. Figure 1 shows the frequencies.

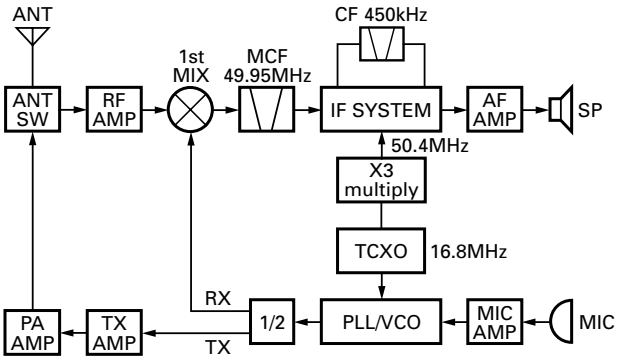


Fig. 1 Frequency configuration

Receiver System

The receiver is double conversion superheterodyne. The frequency configuration is shown in Figure 1.

■ Front-end RF Amplifier

An incoming signal from the antenna is applied to an RF amplifier (Q27) after passing through a transmit/receive switch circuit (D33 and D34 are off) and a band pass filter (L18). After the signal is amplified (Q27), the signal is filtered through a band pass filter (L11, L13 and L15) to eliminate unwanted signals before it is passed to the first mixer. Band pass filters (L18, L11, L13 and L15) have varactor diodes (D30, D31, D18, D23 and D28).

The voltage of these diodes are controlled by to track the CPU (IC502) center frequency of the band pass filter. (See Fig. 2)

■ First Mixer

The signal from the RF amplifier is heterodyned with the first local oscillator signal from the PLL frequency synthesizer circuit at the first mixer (Q15) to create a 49.95MHz first intermediate frequency (1st IF) signal. The first IF signal is then fed through two monolithic crystal filters (MCFs : XF1) to further remove spurious signals.

■ IF Amplifier

The first IF signal is amplified by Q13, and the enters IC5 (FM processing IC). The signal is heterodyned again with a second local oscillator signal within IC5 to create a 450kHz second IF signal. The second IF signal is then fed through a 450kHz ceramic filter (Narrow : CF1, Wide : CF2) to further eliminate unwanted signals before it si amplified and FM detected in IC5.

Item	Rating
Nominal center frequency	49.95MHz
Pass bandwidth	±5.0kHz or more at 3dB
35dB stop bandwidth	±20.0kHz or less
Ripple	1.0dB or less
Insertion loss	5.0dB or less
Guaranteed attenuation	80dB or more at fo±1MHz
	Spurious : 40dB or more within fo±1MHz
Terminal impedance	350Ω±5% / 5.5pF±0.5pF

Table 1 Crystal filter (L71-0551-15) : XF1

Item	Rating
Nominal center frequency	450kHz
6dB bandwidth	±4.5kHz or more
50dB bandwidth	±10.0kHz or less
Ripple	2.0dB or less
Insertion loss	6.0dB or less
Guaranteed attenuation	55.0dB or more within fo±100kHz
Terminal impedance	2.0kΩ

Table 2 Ceramic filter (L71-0959-05) : CF1

Item	Rating
Nominal center frequency	450kHz
6dB bandwidth	±6.0kHz or more
50dB bandwidth	±12.5kHz or less
Ripple	3.0dB or less
Insertion loss	6.0dB or less
Guaranteed attenuation	35.0dB or more within fo±100kHz
Terminal impedance	2.0kΩ

Table 3 Ceramic filter (L72-0973-05) : CF2

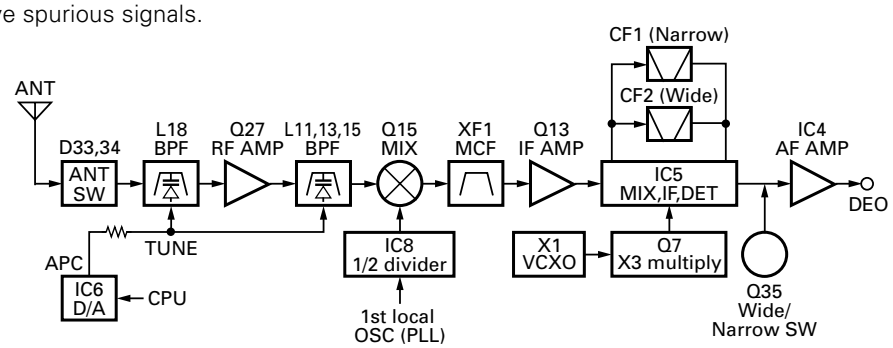


Fig. 2 Receiver system

CIRCUIT DESCRIPTION

■ Wide/Narrow Changeover Circuit

The W/N port (pin 4) of the shift register (IC510) is used to switch between ceramic filters. When the W/N port is high, Q4 turns on and the ceramic filter SW diode (D8, D10) CF1 turns on to receive a Narrow signal. At the same time, Q35 turns on and one of the filters is selected so that the wide and narrow audio output levels are equal.

When the W/N port is low, Q3 turns on and the ceramic filter SW diode (D8, D10) CF2 turns on to receive a Wide signal.

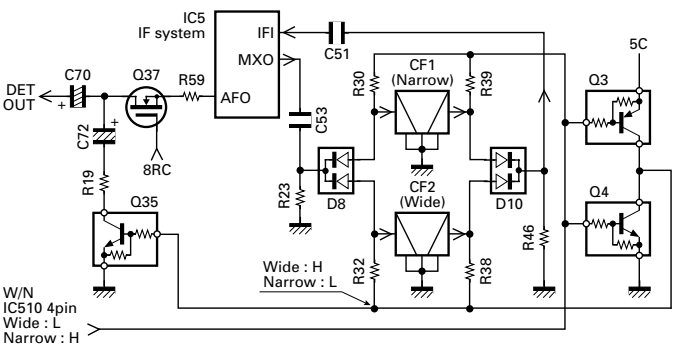
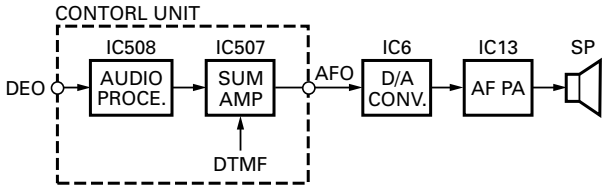


Fig. 3 Wide/Narrow changeover circuit

■ AF Signal System

The detection signal (DEO) from the TX-RX unit goes to the audio processor (IC508) of the control unit. The signal passes through a filter in the audio processor to adjust the gain, and is output to IC507. IC507 sums the AF signal and the DTMF signal, BEEP signal and returns the resulting signal to the TX-RX unit. The signal (AFO) sent to the TX-RX unit is input to the D/A converter (IC6). The AFO output level is adjusted by the D/A converter. The signal output from the D/A converter is input to the audio power amplifier (IC13). The AF signal from IC13 switches between the internal speaker and speaker jack (J1) output.



Flg. 4 AF signal system

■ Squelch Circuit

The detection output from the FM IF IC (IC5) passes through a band-pass filter and a noise amplifier (Q10) in the control unit to detect noise. A voltage is applied to the CPU (IC502). The CPU controls squelch according to the voltage (ASQ) level. The signal from the RSSI pin of IC5 is monitored. The electric field strength of the receive signal can be known before the ASQ voltage is input to the CPU, and the scan stop speed is improved.

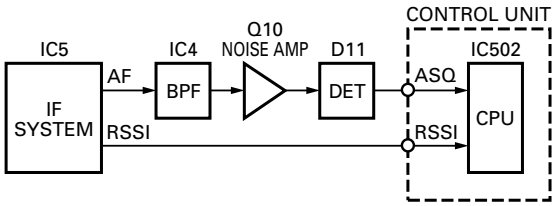


Fig. 5 Squelch circuit

PLL Frequency Synthesizer

The PLL circuit generates the first local oscillator signal for reception and the RF signal for transmission.

■ PLL

The frequency step of the PLL circuit is 5 or 6.25kHz. A 16.8MHz reference oscillator signal is divided at IC3 by a fixed counter to produce the 5 or 6.25kHz reference frequency. The voltage controlled oscillator (VCO) output signal is buffer amplified by Q106 (Sub-unit), then divided in IC3 by a dual-module programmable counter. The divided signal is compared in phase with the 5 or 6.25kHz reference signal in the phase comparator in IC3. The output signal from the phase comparator is filtered through a low-pass filter and passed to the VCO to control the oscillator frequency. (See Fig. 6)

■ VCO

The TK-760G/762G has VCO in a Sub-unit (A1) housed in a solid shielded case and connected to the TX-RX unit through CN101.

The operating frequency is generated by Q103 in transmit mode and Q101 in receive mode. The oscillator frequency is controlled by applying the VCO control voltage, obtained from the phase comparator, to the varactor diodes (D102 and D104 in transmit mode and D101 and D103 in receive mode). The RX (ST) pin is set low in receive mode causing Q102 to turn Q103 off, and turn Q101 on. The RX (ST) pin is set low in transmit mode. The outputs from Q101 and Q103 are amplified by Q106 and sent to the buffer amplifiers.

CIRCUIT DESCRIPTION

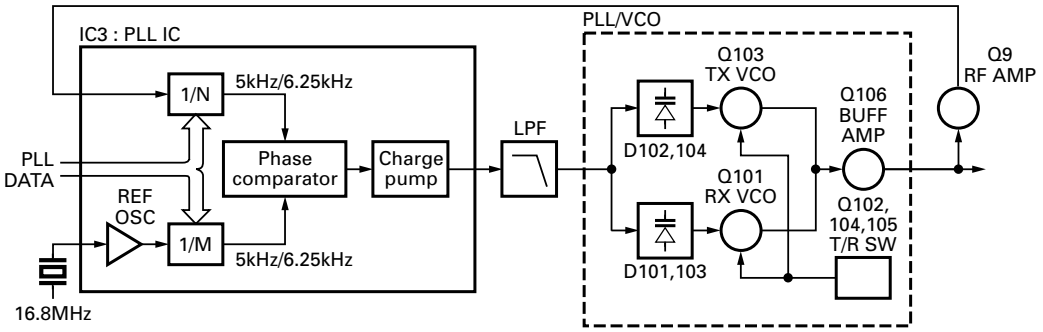


Fig. 6 PLL circuit

■ Unlock Circuit

During reception, the 8RC signal goes high, the 8TC signal goes low, and Q16 turns on. Q18 turns on and a voltage is applied to the collector (8R). During transmission, the 8RC signal goes low, the 8TC signal goes high and Q29 turns on. Q28 turns on and a voltage is applied to 8T.

The CPU in the control unit monitors the PLL (IC3) LD signal directly. When the PLL is unlocked during transmission, the PLL LD signal goes low. The CPU detects this signal and makes the 8TC signal low. When the 8TC signal goes low, no voltage is applied to 8T, and no signal is transmitted.

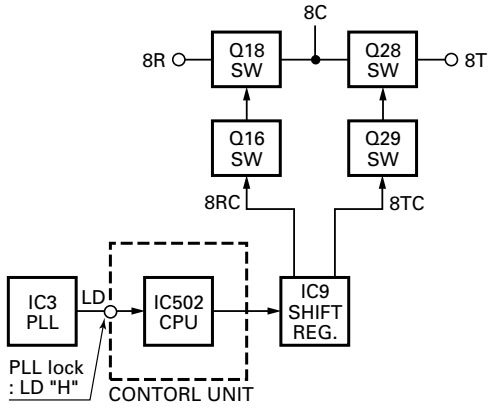


Fig. 7 Unlock circuit

Transmitter System

■ Outline

The transmitter circuit produces and amplifies the desired frequency directly. It FM-modulates the carrier signal by means of a varicap diode

■ Power Amplifier Circuit

The transmit output signal from the VCO is amplified to a specified level of the power module (IC400) by the drive block (Q22 and Q25). The amplified signal passes through the transmission/reception selection diode (D16) and goes to a low-pass filter. The low-pass filter removes unwanted high-frequency harmonic components, and the resulting signal is goes the antenna terminal.

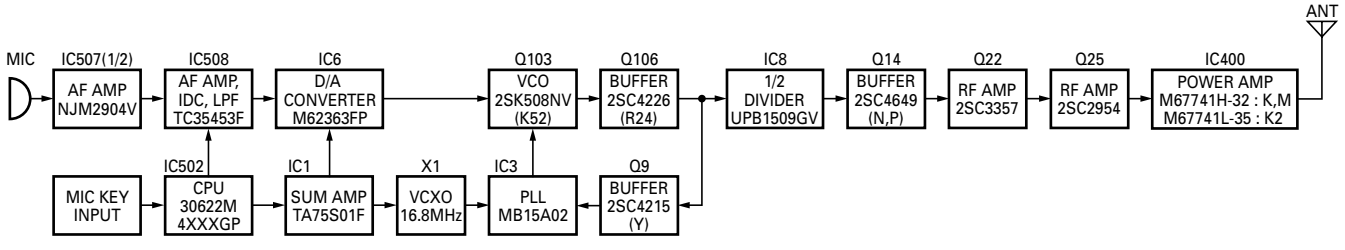


Fig. 8 Transmitter system

CIRCUIT DESCRIPTION

■ APC Circuit

The automatic transmission power control (APC) circuit detects part of a power module output with a diode (D35, D36) and applies a voltage to IC15. IC15 compares the APC control voltage (PC) generated by the D/A converter (IC6) and DC amplifier (IC7) with the detection output voltage to control Q31 and Q32, generates DB voltage from B voltage, and stabilizes transmission output.

The APC circuit is configured to protect over current of the power module due to fluctuations of the load at the antenna end and to stabilize transmission output at voltage and temperature variations.

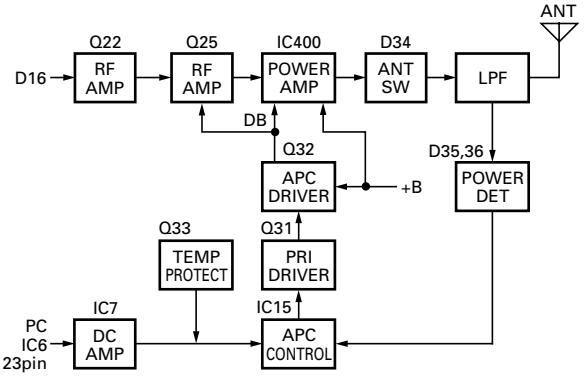


Fig. 9 APC circuit

Control Circuit

The CPU carries out the following tasks:

1) Controls the shift register (IC9, IC510) AF MUTE, WIDE/NARROW, T/R KEY outputs.
2) Adjusts the AF signal level of the audio processor (IC508) and turns the filter select compounder on or off.
3) Controls the DTMF decoder (IC511).
4) Controls the LCD assembly display data.
5) Controls the PLL (IC3).
6) Controls the D/A converter (IC6) and adjusts the volume, modulation and transmission power.

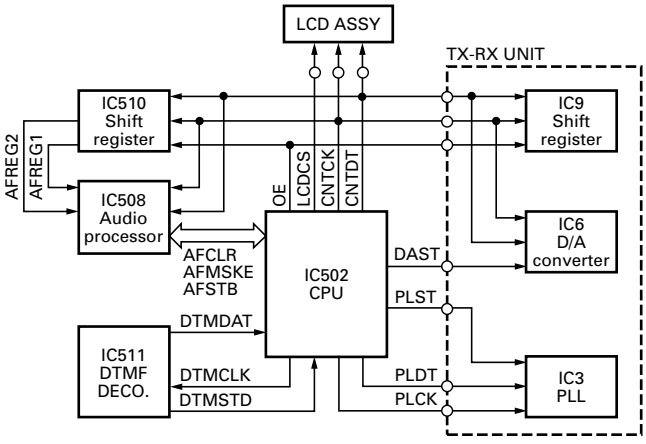


Fig. 10 Control circuit

■ Memory Circuit

The transceiver has a 2M-bit (256k x 8) flash ROM (IC501) and an 8k-bit EEPROM (IC505). The flash ROM contains firmware programs, data and user data which is programmed with the FPU. The EEPROM contains adjustment data. The CPU (IC502) controls the flash ROM through an external address bus and an external data bus. The CPU controls the EEPROM through two serial data lines.

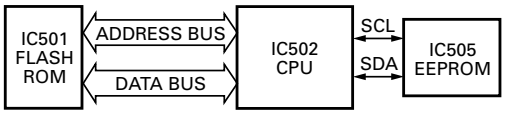


Fig. 11 Memory circuit

■ Display Circuit

The CPU (IC502) controls the shift register (IC510) and display LEDs. When the LED1 line goes high when the transceiver is busy, Q508 turns on and the green LED on D521 lights. In transmit mode, the LED0 line goes high, Q504 turns on and the red light lights. Backlighting LEDs for the key operation unit (D509~D514) and LCD are provided.

When the MBL line goes high, Q506 turns on, then Q505 turns on, and the key illumination LED lights. A voltage is applied to the MBL line to turn on the LCD backlight.

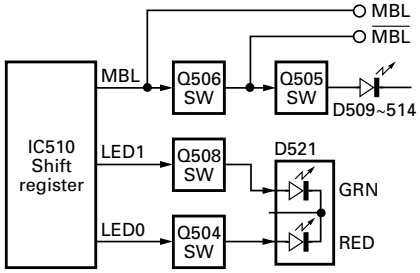


Fig. 12 Display circuit

■ Key Matrix Circuit

The TK-760G/762G front panel has function keys. Each of them is connected to a cross point of a matrix of the KIN0 to KOUT2 ports of the microprocessor. The KOUT0 to KOUT2 ports are always high, while the KIN0 to KIN2 ports are always low.

The microprocessor monitors the status of the KIN0 to KOUT2 ports. If the state of one of the ports changes, the microprocessor assumes that the key at the matrix point corresponding to that port has been pressed.

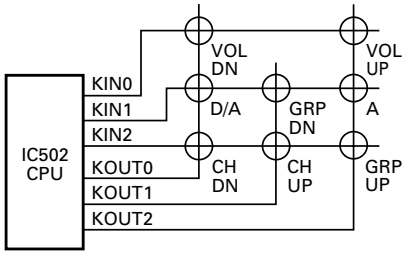


Fig. 13 Key matrix circuit

CIRCUIT DESCRIPTION

■ Encode

The QT and DQT signals are output from TO of the CPU (IC502) and summed with the external pin DI line by the summing amplifier (IC2) and the resulting signal goes to the D/A converter (IC6) of the TX-RX unit. The DTMF and 2-TONE signals are output from DTMF of the CPU and goes to the audio processor (IC508). The signal is summed with a MIC signal by the audio processor (IC508), and the resulting signal passes through an analog switch (IC509) and goes to the TX-RX unit (MO).

The D/A converter (IC6) adjusts the MO level and the balance between the MO and TO levels. Part of a TO signal is summed with MO and the resulting signal goes to the MD pin of the VCO. This signal is applied to a varicap diode in the VCO for direct FM modulation.

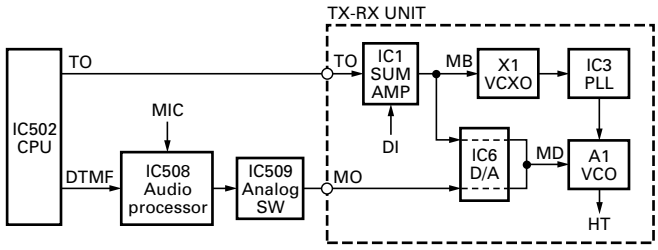


Fig. 14 Encode

■ Decode

• QT/DQT/DTMF

The signal (DEO) detected by the TX-RX unit passes through two low-pass filters of IC513, goes to TOI of the CPU (IC502) to decode QT, DQT. The DTMF signal is decoded by a dedicated IC (IC511) and the resulting signal is sent to the CPU (IC502) as serial data.

• 2-tone

The detected signal passes through audio processor (IC508) RX OUT. Then it is filtered through IC504 2-stage low-pass filtered to enter CPU (IC502) to decode 2-tone signalling.

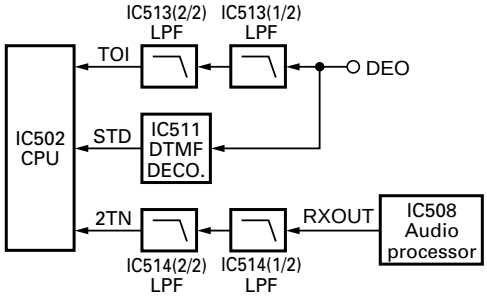


Fig. 15 Decode

■ D/A Converter

The D/A converter (IC6) is used to adjust TONE and MO modulation, AF volume, TV voltage, FC reference voltage, and PC POWER CONTROL voltage level.

Adjustment values are sent from the CPU as serial data. The D/A converter has a resolution of 256 and the following relationship is valid:

D/A output = (Vin – VDAref) / 256 x n + VDAref
Vin: Analog input
VDAref: D/A reference voltage
n: Serial data value from the microprocessor (CPU)

Power Supply Circuit

When the POWER switch on the control unit is pressed, the PSW signal goes low. This signal is inverted by Q26 and sent to a flip-flop IC (IC14). This IC outputs a control signal when the PSW goes low. When the power turns on, pin 1 of IC14 outputs a low signal and Q20 turns on. The base of Q19 goes high, Q19 turns on, SB SW (Q23) turns on and power (SB) is supplied to the set.

This circuit has an overvoltage protection circuit. If a DC voltage of 20 V or higher is applied to the power cable, D21 turns on and a voltage is applied to the base of Q21. This voltage turns Q21 on and turns Q19 and SBSW off.

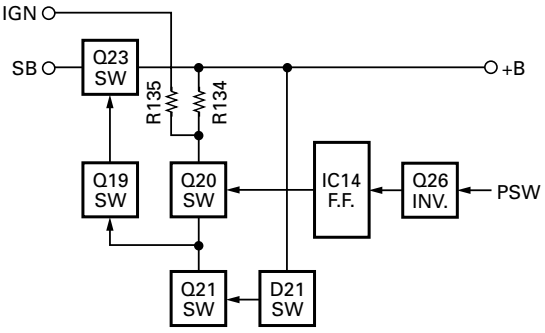


Fig. 16 Power supply circuit

SEMICONDUCTOR DATA

Microprocessor : 30622M4102GP (TX-RX Unit IC502)

■ Terminal function

Pin No.	Name	I/O	Function
1	EMGT	O	External MIC control. Mobile MIC : H
2	DTMF	O	DTMF/2TONE/BEEP output.
3	2TN	I	2TONE decode pulse input.
4	DTMSTD	I	DTMF decode detect. Detect : H
5	SIM	I	Destination select.
6	BYTE	I	+5V (5C).
7	CNVSS	I	GND.
8	AFSTB	O	Base band IC strobe/reset output.
9	AFFCLK	O	Base band IC frame detect reset/ system reset output.
10	RESET	I	Reset.
11	XOUT	O	Clock output.
12	VSS	–	GND.
13	XIN	I	Clock input.
14	VCC	–	+5V.
15	NC	I	Pull up.
16	MICDAT	I/O	MIC data input/output.
17	AUX3	I/O	Option board port 3. SmarTrunk : Clock output.
18	NC	–	NC.
19	OE	I	Output enable control sift register.
20	NC	–	NC.
21	EEPDAT	I/O	EEPROM data input/output.
22	TO	O	QT/DQT modulation output.
23	AUX1	I	Option board port 1. SmarTrunk : Req/Ack input.
24	SFTSTB1	O	Shift register strobe output.
25	DACSTB	O	D/A converter enable output.
26	PTT	I	PTT. PTT on : L
27	NC	–	NC.
28	NC	–	NC.
29	AUX4	O	Option board port 4. SmarTrunk : Data output.
30	AUX2	I/O	Option board port 2. SmartTrunk : Data input.
31	PA	O	MIC audio line sw control. PA : H
32	KOUT2	O	Key scan output 2.
33	TXD	O	Serial data. PTT on : L
34	HOOK	I	HOOK/RXD. On hook : L
35	KOUT1	O	Key scan output 1.
36	KOUT0	O	Key scan output 0.

Pin No.	Name	I/O	Function
37	RDY	I	Pull up.
38	NC	–	NC.
39	HOLD	I	Not used.
40,41	NC	–	NC.
42	RD	O	READ signal.
43	NC	–	NC.
44	WR	O	WRITE signal.
45	LCDCS	O	LCD chip enable output.
46	CNTDAT	O	Common data output. (LCD, SHIFT REG, VOL, Audio processor)
47	CNTCLK	O	Common clock output. (EEPROM, LCD, SHIFT REG, VOL, Audio processor)
48	CSO	–	Chip select signal.
49	A19	–	Not used.
50~59	A18~A9	–	Flash memory address bus.
60	ACC	–	+5V.
61	A8	–	Flash memory address bus.
62	VSS	–	GND.
63~70	A7~A0	–	Flash memory address bus.
71~73	KIN0~KIN2	I	Key scan input.
74	MON	I	[MON] key input. On : L
75	SCN	I	[SCN] key input. On : L
76	PLLUL	I	PLL unlock detect input. Unlock : L
77	PLLSTB	O	PLL strobe output. Latch : H
78	MUTE	I	RX audio mute. Mute : H
79~86	D7~D0	–	Flash memory data bus.
87	PWR (EMG)	I	[PWR] key input (key interrupt). On : L
88	EMG/TXS	I	Emergency input (key interrupt). On : L
89	RFDAT	O	PLL data output.
90	RFCLK	O	PLL clock output.
91	NC	–	NC.
92	RSSQL	I	Receive signal strength indicator input.
93	ANLSQL	I	Analog squelch level input.
94	AVSS	–	GND.
95	TOI	I	QT/DQT signal input.
96	VREF	–	Reference voltage input.
97	AVCC	–	+5V.
98	DTMPD	O	DTMF IC power control. Power down : H
99	DTMCLK	O	DTMF IC decode clock output.
100	DTMDAT	I	DTMF IC decode data input.

SEMICONDUCTOR DATA

Shift Register : BU4094BCFV

■ Terminal function (TX-RX unit IC510)

Pin No.	Port	Name	Function
4	Q1	W/N	Wide/Narrow SW. Narrow : H
5	Q2	MUTE	MIC mute (M models only). Mute : H
6	Q3	MBL	MIC/LCD backlight control. Backlight on : H
7	Q4	LED0	Red LED. LED lights : H
11	Q8	BSHIFT	Beat shift. Shift on : H
12	Q7	AFREG2	Base band IC inter register select 2.
13	Q6	AFREG1	Base band IC inter register select 1.
14	Q5	LED1	Green LED. LED lights : H

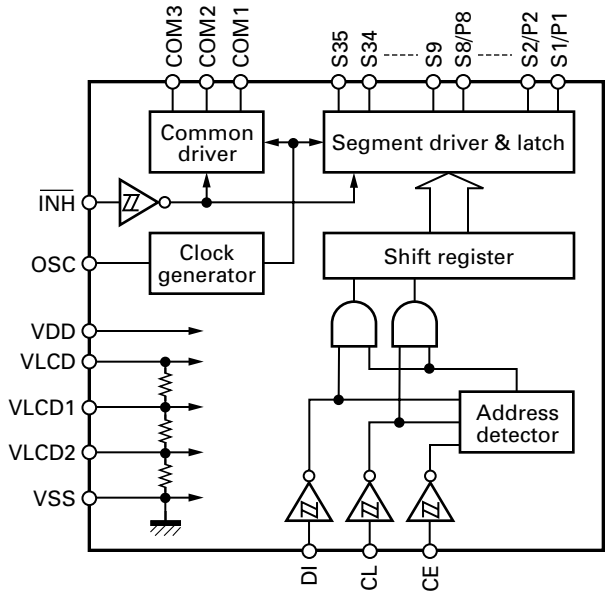
■ Terminal function (TX-RX unit IC9)

Pin No.	Port	Name	Function
4	Q1	HNC	Horn alert control. Horn alert on : H
5	Q2	8RC	8R control. RX : H
6	Q3	8TC	8T control. TX : H
7	Q4	SPMUTE	Speaker mute control. Mute on : H
11	Q8	AUX6	Option board port 6 (AUX6). AUX on : H
12	Q7	AUX5	Option board port 5 (AUX5).
13	Q6	PA/LI	PA/LIGHT control. PA/LIGHT on : H
14	Q5	RX	TX/RX VCO switch. RX : L

LCD Driver : LC75833W

(Display Unit IC801 : TK-762G only)

■ Block diagram



■ Terminal function

Pin No.	Name	I/O	Function
1~8	S1/P1~S8/P8	O	Segment output for displaying data transferred from serial data.
9~35	S9~S35		
36~38	COM1~COM3	O	Common driver output. Frame frequency fo=(fosc/384)Hz
39	VDD	–	Power supply for logic section (2.7V~6.0V).
40	VLCD	–	Power supply for LCD driver section (2.7V~6.0V).
41	VLCD1	I	Apply 2/3 the LCD drive bias voltage from outside. If 1/2 the bias is applied, connect to VLCD2.
42	VCLD2	I	Apply 1/3 the LCD drive bias voltage from outside. If 1/2 the bias is applied, connect to VLCD1.
43	VSS	–	GND.
44	OSC	I/O	Oscillation terminal.
45	$\overline{INH}$	I	Force the display to turn off regardless of internal data. Serial data can be input regardless of whether it is "H" or "L".
46	CE	I	Chip enable. Serial data transfer terminal. Connected to the microprocessor.
47	CL	I	Synchronizing clock. Serial data transfer terminal. Connected to the microprocessor.
48	DI	I	Transfer data. Serial data transfer terminal. Connected to the microprocessor.

DESCRIPTION OF COMPONENTS

Display Unit (X54-3270-10) : TK-760G

Ref. No.	Use/Function	Operation/Condition
D801	Reverse current prevention	
D802~805	Light emission	
D808	Current stability	
IC801	LCD driver	
Q801	DC switch (LED)	

Display Unit (X54-3280-10) : TK-762G

Ref. No.	Use/Function	Operation/Condition
D801	Light emission	
D802	Reverse current prevention	
D803,804	Light emission	
IC801	LCD driver	
Q801~809	DC switch (LED)	

TX-RX Unit (X57-5950-XX)

-10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2
-13 : TK-762G K2 -21 : TK-760G M

Ref. No.	Use/Function	Operation/Condition
D1	Surge absorption	
D2	Voltage reference	
D3~5	Surge absorption	
D8	IF switch (Wide/narrow)	
D9	DC switch	
D10	IF switch (Wide/narrow)	
D11	Noise amp detect	
D14	Surge absorption	
D15	OR gate	SP mute, AM
D16	RF switch (TX/RX)	Heterodyne
D17	Temperature compensation	Drive
D18	RF BPF tuning	
D19	Surge absorption	
D20	Reverse current prevention	
D21	Voltage reference	
D22	Temperature compensation	Drive
D23	RF BPF tuning	
D24	Voltage reference	
D25	Surge absorption	
D27	Reverse current prevention	
D28	RF BPF tuning	
D29	Reverse current prevention	
D30,31	RF BPF tuning	
D33,34	ANT switch	
D35,36	APC voltage detect	
D39	Voltage reference	Power protection
D40	Charge	DEO
D41	Voltage drop	Charge pump
D501	Reverse current prevention	KOUT 0
D502	Reverse current prevention	KOUT 1
D503	Reverse current prevention	KOUT 2
D504	Reverse current prevention	KOUT 0
D505	Reverse current prevention	KOUT 1
D506	Voltage discharger	When powering down
D507	Reverse current prevention	KOUT 2
D508	Limiter	MIC
D509~514	Key backlight	Active while MBL is H
D521	Busy/TX LED	Lights green while busy, red while TX
D523	OR gate	MIC mute, MM, MM2
D524	Surge absorption	HOOK/RXD
D525	Surge absorption	PTT/TXD
D526	Current protection	
D527	Surge absorption	CM
D528	Surge absorption	MBL
D529	Limiter	QT/DQT decode limiter
IC1	Sum amplifier	DI, TO mixer
IC2	DC amplifier	FC, TCXO control
IC3	PLL synthesizer	Reference 16.8MHz, PLL lock : LD H
IC4	Amplifier	DEO
IC5	FM demodulation	Quadrature detector, 2nd mixer, OSC, IF amplifier, RSSI
IC6	D/A converter	
IC7	DC amplifier	PC/TV control
IC8	Prescaler	1/2 prescaler

DESCRIPTION OF COMPONENTS

Ref. No.	Use/Function	Operation/Condition
IC9	Shift/Store register	HNC, 8RC, 8TC, SPMUTE, RX, PA/LI, AUX5, AUX6
IC10	5V AVR	5C (TX/RX)
IC11	9V AVR	9C
IC12	8V AVR	8C
IC13	AF amplifier	
IC14	Power supply logic circuit control	
IC15	DC amplifier	APC control
IC400	Power module	
IC501	Flash ROM	
IC502	CPU	
IC503	Reset IC	Low voltage output when powering up
IC505	EEPROM	
IC507	Amplifier	MIC, AFO
IC508	Audio processor	Compander, MIC amplifier, ALC, AF filter, IDC
IC509	Analog switch	MO, DEO, EMG, MI switch
IC510	Shift/Store register	W/N, MM2, MBL, LED0, LED1, AFREG1, AFREG2, BSHIFT
IC511	DTMF decode	
IC512	5V AVR	5C (control)
IC513	Amplifier	QT/DQT decode
IC514	Amplifier	2-Tone decode
Q1	DC switch	HOR
Q2	DC switch	5S
Q3	DC switch (W/N)	Active while it is narrow
Q4	DC switch (W/N)	Active while it is wide
Q5	DC switch	HNC
Q6	DC switch	IGN
Q7	Buffer amplifier	16.8MHz x 3
Q8	Lipple filter	8CL
Q9	Buffer amplifier	PLL fin
Q10	Noise amplifier	Squelch
Q11	Charge pump	øP
Q12	Charge pump	øR
Q13	IF amplifier	49.95MHz
Q14	Buffer amplifier	Hetetodyne
Q15	Mixer	
Q16	DC switch	8R cont, active while RX
Q17	AF mute	Active while AF mute
Q18	DC switch	8R, active while RX
Q19,20	DC switch	SB switch, active when powering up

Ref. No.	Use/Function	Operation/Condition
Q21	DC switch	Active while PS voltage is more than 20V
Q22	RF amplifier	Predrive
Q23	DC switch	SB switch, active when powering up
Q24	AF mute	Active while power switch is off
Q25	RF amplifier	Drive
Q26	Inverter	Active while power switch is low
Q27	L.N.A.	
Q28	DC switch	8T, active while TX
Q29	DC switch	8T cont, active while TX
Q31	APC controller	
Q32	APC controller	DB
Q33	APC controller	Power protection
Q35	W/N switch	Active on narrow
Q36	DC switch	Power protection
Q37	AF mute switch	Inactive on mute
Q38	DC switch	5S
Q39	DC switch	Output enable
Q501	Clock switch shift	Clock shift is on while BSHIFT is H
Q502	AF mute	Active while MUTE is H
Q503	Inverter	Active while PA2 is H, active while public address
Q504	LED switch (Red)	Active while LED0 is H, active while TX
Q505,506	Key backlight switch	Active while MBL is H
Q508	LED switch (Green)	Active while LED1 is H, active while RX
Q509	MIC mute	Active while MM is H and MM2 is H

PLL/VCO (X58-4670-XX) -10 : K,M -11 : K2

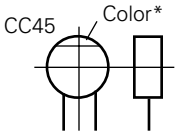
Ref. No.	Use/Function	Operation/Condition
D101	RX VCO	
D102	TX VCO	
D103	RX VCO	
D104	TX VCO	
D105	Modulation	
Q101	Oscillator	RX
Q102	Inverter	Active while ST is H
Q103	Oscillator	TX
Q104	TX/RX switch (TX)	Active while ST is H
Q105	TX/RX switch (RX)	Active while Q102 is off
Q106	Buffer amplifier	

PARTS LIST

CAPACITORS

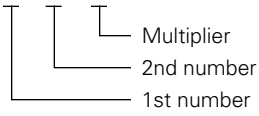
CC	45	TH	1H	220	J
1	2	3	4	5	6

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



• Capacitor value

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



• Temperature coefficient

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

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

Example : CC45TH = –470 ± 60ppm/°C

• Tolerance (More than 10pF)

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

(Less than 10pF)

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

• Voltage rating

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

• Chip capacitors

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

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

Refer to the table above.
1 = Type
2 = Shape
3 = Dimension
4 = Temp. coefficient
5 = Voltage rating
6 = Value
7 = Tolerance

Dimension (Chip capacitors)

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

RESISTORS

• Chip resistor (Carbon)

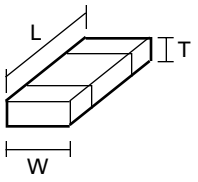
(EX) R D 7 3 E B 2 B 0 0 0 J
1 2 3 4 5 6 7
(Chip) (B,F)

• Carbon resistor (Normal type)

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

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

Dimension



Dimension (Chip resistor)

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

Rating wattage

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

TK-760G/762G

PARTS LIST

⁎New Parts. ⚠ indicates safety critical components.
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

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

TK-760G/762G
DISPLAY UNIT (X54-3270-10) : TK-760G, DISPLAY UNIT (X54-3280-10) : TK-762G

Ref. No.	Address	New parts	Parts No.	Description	Destination
TK-760G/762G					
1	1B,1E		A01-2165-13	CABINET UPPER	
2	2A,2D		A01-2166-13	CABINET LOWER	
3	2A		A62-0642-03	PANEL ASSY	760
3	2D		A62-0731-03	PANEL ASSY	762
5	1G		B09-0235-05	CAP	
6	2B		B11-1226-03	ILLUMINATION GUIDE	760
6	2E		B11-1230-03	ILLUMINATION GUIDE	762
7	2A		B38-0824-05	LCD	760
7	2E		B38-0825-05	LCD	762
8	2G	*	B62-1257-10	INSTRUCTION MANUAL	M
8	2G		B62-1258-00	INSTRUCTION MANUAL	K,K2
9	1C		B72-1690-04	MODEL NAME PLATE	760K
9	1C		B72-1691-04	MODEL NAME PLATE	760M
9	1F		B72-1694-04	MODEL NAME PLATE	762K
9	1C		B72-1742-04	MODEL NAME PLATE	760K2
9	1F		B72-1744-04	MODEL NAME PLATE	762K2
11	2B		E29-1179-04	INTER CONNECTOR	760
11	2E		E29-1183-04	INTER CONNECTOR	762
12	1C		E30-2145-15	ANTENNA CABLE	
13	1G		E30-3339-05	DC CORD ACC	
14	1C,1F		E30-3340-05	DC CORD RADIO	
-	-		E30-3404-05	TRUNK CABLE	
16	1C,1F		E37-0790-15	LEAD WIRE WITH CONNECTOR (SP)	
17	2B,2E		E37-0815-05	FLAT CABLE	
19	1G		F51-0016-05	FUSE (6*30) 10A	
21	1C,1F		G02-0791-04	FLAT SPRING AF,APC	
22	1B,1E		G10-1221-04	FIBROUS SHEET SIDE	
23	1B,1E		G10-1222-14	FIBROUS SHEET UP,DOWN	
24	1A,1D		G10-1223-14	FIBROUS SHEET SHIELD	
25	1C,1F		G13-1468-04	CUSHION DC CORD	
26	1B,1E		G13-1759-04	CUSHION SP	
27	2C,2F		G53-0796-04	PACKING PHONE JACK	
28	2E		G53-0889-04	PACKING DISPLAY UNIT	762
30	3G		H10-6618-12	POLYSTYRENE FOAMED FIXTURE (F)	
31	2H		H10-6619-12	POLYSTYRENE FOAMED FIXTURE (R)	
32	1G		H12-1391-03	INNER PACKING CASE	
33	1H,2H		H25-0720-04	PROTECTION BAG (200X350)	
34	3H		H52-1519-02	ITEM CARTON CASE	
36	2G		J19-1584-05	HOLDER ACC	
37	2A,2D		J21-8382-03	HARDWARE FIXTURE	
38	1G		J29-0627-23	BRACKET	
40	2A		K29-5343-02	KEY TOP	760
40	2D		K29-5344-02	KEY TOP	762
A	2A,2D		N33-2606-45	OVAL HEAD MACHINE SCREW	
B	2C,2F		N67-3008-46	PAN HEAD SEMS SCREW W	
C	2B,2E		N87-2606-46	BRAZIER HEAD TAPTITE SCREW	
D	2B,2E		N87-2612-46	BRAZIER HEAD TAPTITE SCREW	
42	2G		N99-0395-05	SCREW SET	
44	1B,1E		T07-0368-05	SPEAKER	
45	1G		T91-0597-15	MICROPHONE	K,K2

Ref. No.	Address	New parts	Parts No.	Description	Destination
DISPLAY UNIT (X54-3270-10) : TK-760G					
D802-805		*	B30-2220-05	LED (2P/YELLOW)	
C801-803			CC73GCH1H101J	CHIP C 100PF J	
C804			CK73GF1A105Z	CHIP C 1.0UF Z	
C805			CK73GB1H102K	CHIP C 1000PF K	
C806,807			CK73GB1H471K	CHIP C 470PF K	
CN801			E40-6020-05	PIN ASSY	
L801			L92-0138-05	FERRITE CHIP	
R801-803			RK73GB1J103J	CHIP R 10K J 1/16W	
R804			RK73GB1J473J	CHIP R 47K J 1/16W	
R805			RK73GB1J474J	CHIP R 470K J 1/16W	
R806			R92-1252-05	CHIP R 0 OHM	
R808			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R809			RK73FB2A270J	CHIP R 27 J 1/10W	
D801			MA2S111	DIODE	
D808			HSB123	DIODE	
IC801			LC75823W	IC (MOS-IC)	
Q801			2SB1132(Q,R)	TRANSISTOR	
DISPLAY UNIT (X54-3280-10) : TK-762G					
D801			B30-2204-05	LED (RED/YELLOW)	
D803			B30-2220-05	LED (2P/YELLOW)	
D804			B30-2204-05	LED (RED/YELLOW)	
C801			CK73GB1H471K	CHIP C 470PF K	
C802-804			CC73GCH1H101J	CHIP C 100PF J	
C805			CK73GF1A105Z	CHIP C 1.0UF Z	
C806			CK73GB1H471K	CHIP C 470PF K	
C807			CK73GB1H102K	CHIP C 1000PF K	
C808			CK73GB1H471K	CHIP C 470PF K	
C812			CK73GB1H471K	CHIP C 470PF K	
CN801			E40-6020-05	PIN ASSY	
L801			L92-0138-05	FERRITE CHIP	
R801,802			RK73GB1J103J	CHIP R 10K J 1/16W	
R803			RK73FB2A123J	CHIP R 12K J 1/10W	
R804			RK73GB1J103J	CHIP R 10K J 1/16W	
R805			RK73FB2A332J	CHIP R 3.3K J 1/10W	
R806			RK73GB1J474J	CHIP R 470K J 1/16W	
R807			R92-1252-05	CHIP R 0 OHM	
R808			RK73GB1J393J	CHIP R 39K J 1/16W	
R809			RK73FB2A123J	CHIP R 12K J 1/10W	
R810			RK73FB2A332J	CHIP R 3.3K J 1/10W	
R812			RK73FB2A561J	CHIP R 560 J 1/10W	
R813-816			RK73GB1J473J	CHIP R 47K J 1/16W	
D802			MA2S111	DIODE	
IC801			LC75833W	IC (LCD DRIVER)	
Q801-803			DTA114EKA	DIGITAL TRANSISTOR	
Q804			KRA225S	TRANSISTOR	
Q805			DTA114EKA	DIGITAL TRANSISTOR	
Q806-809			2SK1824	FET	

PARTS LIST

Ref. No.	Address	New parts	Parts No.	Description			Destination
TX-RX UNIT (X57-5950-XX) -10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2 -13 : TK-762G K2 -21 : TK-760G M							
D509-514			B30-2050-05	LED			
D521			B30-2151-05	LED (RED/GRN)			
C1-19			CK73GB1H102K	CHIP C	1000PF	K	
C20			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C21			CK73GB1H102K	CHIP C	1000PF	K	
C22			CK73GB1C104K	CHIP C	0.10UF	K	
C23,24			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C26			CK73GB1H102K	CHIP C	1000PF	K	
C29			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C30			CC73GCH1H050C	CHIP C	5.0PF	C	
C31			CK73GB1H102K	CHIP C	1000PF	K	
C32			C92-0662-05	CHIP-TAN	15UF	6.3WV	
C33			CC73GCH1H220J	CHIP C	22PF	J	
C35			CK73GB1C104K	CHIP C	0.10UF	K	
C36			CK73GB1H102K	CHIP C	1000PF	K	
C37			CK73FB1C334K	CHIP C	0.33UF	K	
C40,41			CK73GB1H103K	CHIP C	0.010UF	K	
C43			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C44			CK73GB1H331K	CHIP C	330PF	K	
C45			CK73GB1H102K	CHIP C	1000PF	K	
C46			CK73GB1H103K	CHIP C	0.010UF	K	
C47			C92-0561-05	CHIP-ELE	22UF	16WV	
C49			CK73GB1H102K	CHIP C	1000PF	K	
C50			CC73GCH1H220J	CHIP C	22PF	J	
C51			CK73GB1C104K	CHIP C	0.10UF	K	
C52			CC73GCH1H680J	CHIP C	68PF	J	
C53			CK73GB1C104K	CHIP C	0.10UF	K	
C54			CK73GB1H103K	CHIP C	0.010UF	K	
C56			CC73GCH1H220J	CHIP C	22PF	J	
C58			CK73GB1E223K	CHIP C	0.022UF	K	
C60,61			CK73GB1H102K	CHIP C	1000PF	K	
C62			CC73GCH1H101J	CHIP C	100PF	J	
C63			CK73GB1C104K	CHIP C	0.10UF	K	
C64			CK73GB1H103K	CHIP C	0.010UF	K	
C66,67			CK73GB1H102K	CHIP C	1000PF	K	
C69			CK73GB1E223K	CHIP C	0.022UF	K	
C70			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C72			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C74,75			CK73GB1H102K	CHIP C	1000PF	K	
C77			C90-2046-05	ELECTRO	22UF	10WV	
C78			CK73GB1H102K	CHIP C	1000PF	K	
C79,80			CK73GB1H221K	CHIP C	220PF	K	
C81			CK73GB1H102K	CHIP C	1000PF	K	
C82			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C83			CC73GCH1H270J	CHIP C	27PF	J	
C84			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C86			C92-0662-05	CHIP-TAN	15UF	6.3WV	
C87			CC73GCH1H330J	CHIP C	33PF	J	
C88			CK73GB1H103K	CHIP C	0.010UF	K	
C91			CC73GCH1H050C	CHIP C	5.0PF	C	
C92			CK73GB1H102K	CHIP C	1000PF	K	
C93			C92-0555-05	CHIP-TAN	0.047UF	35WV	
C94			CK73GB1H102K	CHIP C	1000PF	K	
C95			CC73GCH1H020B	CHIP C	2.0PF	B	
C96			CK73GB1H102K	CHIP C	1000PF	K	
C97			C92-0546-05	CHIP-TAN	68UF	6.3WV	
C98			CK73GB1H103K	CHIP C	0.010UF	K	
C99			C92-0004-05	CHIP-TAN	1.0UF	16WV	
C100			CK73GB1H102K	CHIP C	1000PF	K	
C101			CC73GCH1H040C	CHIP C	4.0PF	C	
C102,103			CK73GB1H102K	CHIP C	1000PF	K	
C104			C92-0002-05	CHIP-TAN	0.22UF	35WV	
C105			CK73GB1H102K	CHIP C	1000PF	K	
C106			CC73GCH1H180J	CHIP C	18PF	J	
C107			CK73GB1H102K	CHIP C	1000PF	K	
C110			CC73GCH1H180J	CHIP C	18PF	J	
C111			CC73GCH1H040C	CHIP C	4.0PF	C	
C112			CK73GB1H102K	CHIP C	1000PF	K	
C113			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C114			C92-0697-05	CHIP-TAN	3.3UF	16WV	
C115			CK73GB1H102K	CHIP C	1000PF	K	
C116			CK73GB1H103K	CHIP C	0.010UF	K	
C117			CK73GB1H102K	CHIP C	1000PF	K	
C118			CC73GCH1H100D	CHIP C	10PF	D	
C119			CK73GB1H103K	CHIP C	0.010UF	K	
C120			CC73GCH1H220J	CHIP C	22PF	J	K,M
C120			CC73GCH1H330J	CHIP C	33PF	J	K2
C121			CK73GB1H102K	CHIP C	1000PF	K	
C122,123			CK73GB1C104K	CHIP C	0.10UF	K	
C124			CC73GCH1H101J	CHIP C	100PF	J	
C125			C92-0004-05	CHIP-TAN	1.0UF	16WV	
C126			CC73GCH1H180J	CHIP C	18PF	J	
C127			CK73GB1H103K	CHIP C	0.010UF	K	
C128			C92-0543-05	CHIP-TAN	3.3UF	10WV	
C129			CK73FF1C105Z	CHIP C	1.0UF	Z	
C130			CK73GB1H103K	CHIP C	0.010UF	K	
C131-133			CK73GB1H102K	CHIP C	1000PF	K	
C134			CK73FB1E104K	CHIP C	0.10UF	K	
C135			CC73GCH1H090D	CHIP C	9.0PF	D	K,M
C135			CC73GCH1H120J	CHIP C	12PF	J	K2
C136			CK73GB1C104K	CHIP C	0.10UF	K	
C137			CC73GCH1H101J	CHIP C	100PF	J	
C138			CK73FB1E104K	CHIP C	0.10UF	K	
C139			CK73GB1H102K	CHIP C	1000PF	K	
C141			C92-0719-05	ELECTRO	47UF	25WV	
C142-144			CK73GB1H102K	CHIP C	1000PF	K	
C146-149			CK73GB1H102K	CHIP C	1000PF	K	
C150			CK73FF1C105Z	CHIP C	1.0UF	Z	
C151			CK73GB1H102K	CHIP C	1000PF	K	
C152			CC73GCH1H030C	CHIP C	3.0PF	C	K,M
C152			CC73GCH1H050C	CHIP C	5.0PF	C	K2
C153			CC73GCH1H330J	CHIP C	33PF	J	
C154			CK73GB1H102K	CHIP C	1000PF	K	
C155			CC73GCH1H220J	CHIP C	22PF	J	
C156,157			CK73GB1H102K	CHIP C	1000PF	K	
C158			CC73GCH1H390J	CHIP C	39PF	J	
C159			CC73GCH1H180J	CHIP C	18PF	J	
C160,161			C92-0719-05	ELECTRO	47UF	25WV	
C162			CK73GB1H102K	CHIP C	1000PF	K	
C163			CC73GCH1H010B	CHIP C	1.0PF	B	
C164			CK73GB1H102K	CHIP C	1000PF	K	
C165			C92-0719-05	ELECTRO	47UF	25WV	
C166			CE04EW1E471M	ELECTRO	470UF	25WV	
C167			CC73GCH1H150J	CHIP C	15PF	J	
C168-170			CK73GB1H102K	CHIP C	1000PF	K	
C171			CC73GCH1H020B	CHIP C	2.0PF	B	

PARTS LIST

TX-RX UNIT (X57-5950-XX)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C172			CE04EW1E471M	ELECTRO	470UF	25WV	
C173			CK73GB1C104K	CHIP C	0.10UF	K	
C174			CK73GB1H102K	CHIP C	1000PF	K	
C175			CC73GCH1H080D	CHIP C	8.0PF	D	K,M
C175			CC73GCH1H100D	CHIP C	10PF	D	K2
C177			CK73GB1H102K	CHIP C	1000PF	K	
C179			CK73GB1H102K	CHIP C	1000PF	K	
C180			CK73GB1H103K	CHIP C	0.010UF	K	
C181			CC73FCH1H120J	CHIP C	12PF	J	
C183			CK73GB1H102K	CHIP C	1000PF	K	
C185			CK73GB1C104K	CHIP C	0.10UF	K	
C186,187			CK73GB1H102K	CHIP C	1000PF	K	
C189,190			CK73GB1H102K	CHIP C	1000PF	K	
C192			CK73GB1H102K	CHIP C	1000PF	K	
C194			CK73GB1C104K	CHIP C	0.10UF	K	
C195			C92-0719-05	ELECTRO	47UF	25WV	
C196			CK73GB1H102K	CHIP C	1000PF	K	
C198			CK73GB1H102K	CHIP C	1000PF	K	
C200			CK73GB1H102K	CHIP C	1000PF	K	
C201			CK73GB1C104K	CHIP C	0.10UF	K	
C203			CK73GB1H102K	CHIP C	1000PF	K	
C204			C92-0004-05	CHIP-TAN	1.0UF	16WV	
C205			C93-0558-05	CHIP C	8.0PF	D	K2
C205			C93-0560-05	CHIP C	10PF	D	K,M
C207			CK73GB1H103K	CHIP C	0.010UF	K	
C208			CC73FCH1H030C	CHIP C	3.0PF	C	K,M
C208			CC73FCH1H040C	CHIP C	4.0PF	C	K2
C209			C93-0563-05	CHIP C	18PF	J	K2
C209			C93-0564-05	CHIP C	22PF	J	K,M
C210			CK73GB1H103K	CHIP C	0.010UF	K	
C211			C93-0564-05	CHIP C	22PF	J	
C212			CK73GB1H102K	CHIP C	1000PF	K	
C213			C93-0563-05	CHIP C	18PF	J	
C214			C93-0603-05	CHIP C	1000PF	K	
C215			C93-0561-05	CHIP C	12PF	J	
C216			CC73GCH1H0R5B	CHIP C	0.5PF	B	
C217			CC73GCH1H010B	CHIP C	1.0PF	B	
C218			CK73GB1C104K	CHIP C	0.10UF	K	K,M
C219			C93-0565-05	CHIP C	27PF	J	
C220			CK73GB1H102K	CHIP C	1000PF	K	
C221			C93-0563-05	CHIP C	18PF	J	K,M
C221			C93-0565-05	CHIP C	27PF	J	K2
C222			CC73GCH1H0R5B	CHIP C	0.5PF	B	
C223			CC73GCH1H010B	CHIP C	1.0PF	B	K,M
C223			CC73GCH1H020B	CHIP C	2.0PF	B	K2
C224			CK73GB1H102K	CHIP C	1000PF	K	
C230,231			CK73GB1C104K	CHIP C	0.10UF	K	
C241			C93-0554-05	CHIP C	4.0PF	C	K,M
C241			C93-0555-05	CHIP C	5.0PF	C	K2
C248			C92-0585-05	CHIP-TAN	4.7UF	16WV	
C259			CK73GB1C104K	CHIP C	0.10UF	K	
C260			CK73GB1H103K	CHIP C	0.010UF	K	
C261			CK73FF1C105Z	CHIP C	1.0UF	Z	
C270			CK73GB1C104K	CHIP C	0.10UF	K	
C271			CK73GB1H472K	CHIP C	4700PF	K	
C272			CS15E1C010M	TANTAL	1.0UF	16WV	
C274			CK73GB1C104K	CHIP C	0.10UF	K	
C275			C92-0004-05	CHIP-TAN	1.0UF	16WV	K2
C501			CK73GB1H102K	CHIP C	1000PF	K	
C502			CK73GB1C104K	CHIP C	0.10UF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C503			CK73GB1H471K	CHIP C	470PF	K	
C504			CK73GB1H103K	CHIP C	0.010UF	K	
C505			CK73GB1C104K	CHIP C	0.10UF	K	
C506,507			CK73GB1H103K	CHIP C	0.010UF	K	
C508			CK73GB1H472K	CHIP C	4700PF	K	
C509			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C514			CC73GCH1H680J	CHIP C	68PF	J	
C515			CK73GB1H103K	CHIP C	0.010UF	K	
C516			CC73GCH1H270J	CHIP C	27PF	J	
C517			CK73GB1C683K	CHIP C	0.068UF	K	
C518			CC73GCH1H270J	CHIP C	27PF	J	
C519			CK73GB1H102K	CHIP C	1000PF	K	
C520			CK73GB1C104K	CHIP C	0.10UF	K	
C521			CK73GB1H102K	CHIP C	1000PF	K	
C522			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C523			CC73GCH1H221J	CHIP C	220PF	J	
C524			CK73GB1H103K	CHIP C	0.010UF	K	
C525			CK73GB1E123K	CHIP C	0.012UF	K	
C526			CK73GB1C683K	CHIP C	0.068UF	K	
C527			CK73GB1H222K	CHIP C	2200PF	K	
C528			CK73GB1H103K	CHIP C	0.010UF	K	
C529			CK73GB1H272K	CHIP C	2700PF	K	
C530			CK73GB1H152K	CHIP C	1500PF	K	
C531			CK73GB1H272K	CHIP C	2700PF	K	
C532,533			CK73GB1C104K	CHIP C	0.10UF	K	
C534,535			CK73GB1H103K	CHIP C	0.010UF	K	
C536,537			CK73GB1C104K	CHIP C	0.10UF	K	
C538			C92-0566-05	CHIP-TAN	10UF	6.3WV	
C539			CK73GB1H103K	CHIP C	0.010UF	K	
C540,541			CK73GB1C104K	CHIP C	0.10UF	K	
C542			CC73GCH1H331J	CHIP C	330PF	J	
C543			CK73GB1H102K	CHIP C	1000PF	K	
C544-546			CK73GB1H562K	CHIP C	5600PF	K	
C547			CC73GCH1H030C	CHIP C	3.0PF	C	
C548-550			CK73GB1H272K	CHIP C	2700PF	K	
C551			CC73GCH1H151J	CHIP C	150PF	J	
C552			CC73GCH1H030C	CHIP C	3.0PF	C	
C553			CK73GB1H102K	CHIP C	1000PF	K	
C554			CK73GB1H122K	CHIP C	1200PF	K	
C555			C92-0566-05	CHIP-TAN	10UF	6.3WV	
C556			CK73GB1C333K	CHIP C	0.033UF	K	
C557			CK73GB1C104K	CHIP C	0.10UF	K	
C558			CC73GCH1H101J	CHIP C	100PF	J	
C559			CK73GB1H102K	CHIP C	1000PF	K	
C560-563			CK73GB1C104K	CHIP C	0.10UF	K	
C564			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C565,566			CK73GB1H472K	CHIP C	4700PF	K	
C567			CC73GCH1H101J	CHIP C	100PF	J	
C568			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C569			CK73GB1E223K	CHIP C	0.022UF	K	
C570			CK73FF1C105Z	CHIP C	1.0UF	Z	
C571,572			CK73GB1H102K	CHIP C	1000PF	K	
C573			CK73FB1H563K	CHIP C	0.056UF	K	
C574			CC73GCH1H470J	CHIP C	47PF	J	
C575			CK73GB1H102K	CHIP C	1000PF	K	
C576			CK73GB1C104K	CHIP C	0.10UF	K	
C577,578			CK73GB1H103K	CHIP C	0.010UF	K	
C579			CC73GCH1H101J	CHIP C	100PF	J	
C580			CK73GB1C104K	CHIP C	0.10UF	K	
C581			CK73GB1H102K	CHIP C	1000PF	K	

PARTS LIST

TX-RX UNIT (X57-5950-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
C582			CK73GB1C473K	CHIP C 0.047UF K	
C583			C92-0566-05	CHIP-TAN 10UF 6.3WV	
C584			CK73GB1H103K	CHIP C 0.010UF K	
C585			CC73GCH1H101J	CHIP C 100PF J	
C587			CK73GB1H103K	CHIP C 0.010UF K	
C589			C92-0606-05	CHIP-TAN 4.7UF 10WV	
C590			CK73GB1H102K	CHIP C 1000PF K	
C594			CK73GB1H102K	CHIP C 1000PF K	
C596			CK73GB1H102K	CHIP C 1000PF K	
C597			CC73GCH1H101J	CHIP C 100PF J	
C598			CK73GB1H102K	CHIP C 1000PF K	
C599			CC73GCH1H101J	CHIP C 100PF J	
C600			CK73GB1H102K	CHIP C 1000PF K	
C601,602			CC73GCH1H101J	CHIP C 100PF J	
C603			CK73GB1H102K	CHIP C 1000PF K	
C604-606			CC73GCH1H101J	CHIP C 100PF J	
C608-610			CC73GCH1H101J	CHIP C 100PF J	
C611,612			CK73GB1H471K	CHIP C 470PF K	
C613			CC73GCH1H101J	CHIP C 100PF J	
C615			CK73GB1H471K	CHIP C 470PF K	
C616			CC73GCH1H101J	CHIP C 100PF J	
C618			CK73GB1H102K	CHIP C 1000PF K	
C620			CK73GB1H471K	CHIP C 470PF K	
C621			CK73GB1H102K	CHIP C 1000PF K	
C623			CK73GB1H102K	CHIP C 1000PF K	
C626			CK73GB1C104K	CHIP C 0.10UF K	
C628			CK73GB1C104K	CHIP C 0.10UF K	
C629			CC73GCH1H470J	CHIP C 47PF J	
C630			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C631			CK73GB1H103K	CHIP C 0.010UF K	
C632			CK73GB0J105K	CHIP C 1.0UF K	
C633			CK73GB1C104K	CHIP C 0.10UF K	
C720			C92-0566-05	CHIP-TAN 10UF 6.3WV	
CN1			E40-6047-05	PIN ASSY	
CN2			E40-6021-05	FLAT CABLE CONNECTOR	
CN3			E40-3247-05	PIN ASSY	
CN4			E40-5737-05	PIN ASSY	
CN5			E40-5738-05	PIN ASSY	
CN7			E40-3247-05	PIN ASSY	
CN8			E40-3246-05	PIN ASSY	
CN501			E40-6021-05	FLAT CABLE CONNECTOR	
J1			E11-0442-05	3.5D PHONE JACK (3P)	
J501			E08-0877-05	MODULAR JACK	
W1		*	E37-0856-05	PROCESSED LEAD WIRE	
F1			F53-0108-05	FUSE	
-			J31-0543-05	COLLAR (LH-5-1.5)	
CF1			L72-0959-05	CERAMIC FILTER	
CF2			L72-0973-05	CERAMIC FILTER	
L1			L40-1005-34	SMALL FIXED INDUCTOR (10UH/8)	
L2-4			L40-3381-86	SMALL FIXED INDUCTOR (0.33U/160)	
L5			L34-4530-05	COIL	
L6			L40-1581-86	SMALL FIXED INDUCTOR (0.15U/160)	
L7			L40-4785-85	SMALL FIXED INDUCTOR (0.47U/252)	
L8			L40-8285-85	SMALL FIXED INDUCTOR (0.82U/252)	
L9			L40-1085-77	SMALL FIXED INDUCTOR (100NH/160)	
L10			L40-6875-77	SMALL FIXED INDUCTOR (68NH/1608)	
L11			L34-4472-05	COIL	

Ref. No.	Address	New parts	Parts No.	Description	Destination
L12			L40-3375-34	SMALL FIXED INDUCTOR (33NH/8)	
L13			L34-4473-05	COIL	
L14			L40-6875-34	SMALL FIXED INDUCTOR (68NH/8)	
L15			L34-4473-05	COIL	
L17			L92-0179-05	FERRITE CHIP	
L18			L34-4472-05	COIL	
L20			L34-4480-05	AIR-CORE COIL	K2
L20			L34-4481-05	AIR-CORE COIL	K,M
L21			L34-4478-05	AIR-CORE COIL	
L22			L34-4480-05	AIR-CORE COIL	
L23			L34-0742-05	AIR-CORE COIL	
L24			L34-4481-05	AIR-CORE COIL	
L25			L34-4478-05	AIR-CORE COIL	
L26			L40-4775-77	SMALL FIXED INDUCTOR (47NH/1608)	
L27			L40-1581-86	SMALL FIXED INDUCTOR (0.15U/160)	
L33			L92-0179-05	FERRITE CHIP	
L501			L92-0138-05	FERRITE CHIP	
L503,504			L92-0138-05	FERRITE CHIP	
L510			L92-0138-05	FERRITE CHIP	
X1			L77-1826-05	TCXO (16.8M)	
X501			L77-1708-05	CRYSTAL RESONATOR (3.579545MHZ)	
X502			L78-0462-05	RESONATOR (9.8304M/8*2.5)	
XF1			L71-0551-15	MCF (49.95MHZ/5.0K)	
CP501-505			R90-0741-05	MULTIPLE RESISTOR	
CP508-514			R90-0741-05	MULTIPLE RESISTOR	
CP516-524			R90-0741-05	MULTIPLE RESISTOR	
CP526,527			R90-0741-05	MULTIPLE RESISTOR	
CP529-536			R90-0741-05	MULTIPLE RESISTOR	
CP538			R90-0741-05	MULTIPLE RESISTOR	
CP539			R90-0724-05	MULTI-COMP 1K X4	
R1			R92-1252-05	CHIP R 0 OHM	
R2			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R3			R92-1252-05	CHIP R 0 OHM	
R4			RK73GB1J333J	CHIP R 33K J 1/16W	
R5,6			R92-1252-05	CHIP R 0 OHM	
R7,8			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R9,10			R92-1252-05	CHIP R 0 OHM	
R11			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R12			RK73GB1J104J	CHIP R 100K J 1/16W	
R13			RK73GB1J473J	CHIP R 47K J 1/16W	
R14			RK73GB1J474J	CHIP R 470K J 1/16W	
R15			RK73GB1J104J	CHIP R 100K J 1/16W	
R16			RK73GB1J220J	CHIP R 22 J 1/16W	
R17			RK73GB1J154J	CHIP R 150K J 1/16W	
R18			RK73GB1J104J	CHIP R 100K J 1/16W	
R19			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R20			RK73GB1J224J	CHIP R 220K J 1/16W	
R21			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R22			RK73GB1J474J	CHIP R 470K J 1/16W	
R23			RK73GB1J223J	CHIP R 22K J 1/16W	
R24			RK73GB1J183J	CHIP R 18K J 1/16W	
R25,26			R92-1252-05	CHIP R 0 OHM	
R29			R92-1252-05	CHIP R 0 OHM	
R30			RK73GB1J103J	CHIP R 10K J 1/16W	
R31			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R32			RK73GB1J103J	CHIP R 10K J 1/16W	
R33			R92-1252-05	CHIP R 0 OHM	
R34			RK73GB1J104J	CHIP R 100K J 1/16W	
R35			RK73GB1J224J	CHIP R 220K J 1/16W	

PARTS LIST

TX-RX UNIT (X57-5950-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
R36			RK73GB1J223J	CHIP R 22K J 1/16W	
R37			RK73GB1J220J	CHIP R 22 J 1/16W	
R38-40			RK73GB1J103J	CHIP R 10K J 1/16W	
R41			RK73GB1J224J	CHIP R 220K J 1/16W	
R42			RK73GB1J473J	CHIP R 47K J 1/16W	
R43			RK73GB1J683J	CHIP R 68K J 1/16W	
R44			RK73GB1J153J	CHIP R 15K J 1/16W	
R46			RK73GB1J223J	CHIP R 22K J 1/16W	
R47			RK73GB1J101J	CHIP R 100 J 1/16W	
R48			RK73GB1J334J	CHIP R 330K J 1/16W	
R49			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R50			RK73GB1J473J	CHIP R 47K J 1/16W	
R51-53			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R54			R92-1252-05	CHIP R 0 OHM	
R55			RK73GB1J104J	CHIP R 100K J 1/16W	
R56			RK73GB1J101J	CHIP R 100 J 1/16W	
R57			RK73GB1J471J	CHIP R 470 J 1/16W	
R58			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R59			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R60			RK73GB1J334J	CHIP R 330K J 1/16W	
R61			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R62			RK73GB1J224J	CHIP R 220K J 1/16W	
R63			RK73GB1J474J	CHIP R 470K J 1/16W	
R64			RK73GB1J223J	CHIP R 22K J 1/16W	
R65			RK73GB1J183J	CHIP R 18K J 1/16W	
R66			RK73GB1J101J	CHIP R 100 J 1/16W	
R67			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R68			RK73GB1J182J	CHIP R 1.8K J 1/16W	
R69			R92-1252-05	CHIP R 0 OHM	
R70			RK73GB1J562J	CHIP R 5.6K J 1/16W	
R71			RK73GB1J103J	CHIP R 10K J 1/16W	
R72			R92-1252-05	CHIP R 0 OHM	
R73			RK73GB1J223J	CHIP R 22K J 1/16W	
R75			RK73GB1J471J	CHIP R 470 J 1/16W	
R76			RK73GB1J223J	CHIP R 22K J 1/16W	
R77			RK73GB1J154J	CHIP R 150K J 1/16W	K,M
R77			RK73GB1J184J	CHIP R 180K J 1/16W	K2
R78			RK73GB1J104J	CHIP R 100K J 1/16W	
R79			RK73GB1J681J	CHIP R 680 J 1/16W	
R80			RK73GB1J471J	CHIP R 470 J 1/16W	
R81			RK73GB1J101J	CHIP R 100 J 1/16W	
R82			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R83			RK73GB1J684J	CHIP R 680K J 1/16W	
R85			RK73GB1J272J	CHIP R 2.7K J 1/16W	
R86			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R87			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R88			RK73GB1J271J	CHIP R 270 J 1/16W	
R89			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R90,91			RK73GB1J104J	CHIP R 100K J 1/16W	
R92			R92-1252-05	CHIP R 0 OHM	
R93			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R94			R92-1252-05	CHIP R 0 OHM	
R95			RK73GB1J103J	CHIP R 10K J 1/16W	
R97			RK73GB1J473J	CHIP R 47K J 1/16W	
R98			RK73GB1J223J	CHIP R 22K J 1/16W	
R99			RK73GB1J271J	CHIP R 270 J 1/16W	
R100,101			RK73GB1J101J	CHIP R 100 J 1/16W	
R103			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R105			RK73GB1J470J	CHIP R 47 J 1/16W	
R106			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R107			RK73GB1J473J	CHIP R 47K J 1/16W	
R108			RK73GB1J271J	CHIP R 270 J 1/16W	
R109			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R110			RK73GB1J220J	CHIP R 22 J 1/16W	
R111			RK73GB1J180J	CHIP R 18 J 1/16W	
R112			RK73GB1J333J	CHIP R 33K J 1/16W	
R113			RK73GB1J271J	CHIP R 270 J 1/16W	
R114			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R115			RK73GB1J103J	CHIP R 10K J 1/16W	
R116			RK73GB1J473J	CHIP R 47K J 1/16W	
R117			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R118			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R119			RK73GB1J103J	CHIP R 10K J 1/16W	
R120			R92-1252-05	CHIP R 0 OHM	
R121			RK73GB1J100J	CHIP R 10 J 1/16W	
R122			R92-1215-05	CHIP R 470 J 1/2W	
R123			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R124			RK73GB1J103J	CHIP R 10K J 1/16W	
R125			RK73GB1J333J	CHIP R 33K J 1/16W	
R126			RK73GB1J471J	CHIP R 470 J 1/16W	
R127			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R128			RK73GB1J220J	CHIP R 22 J 1/16W	
R129			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R130			RK73GB1J103J	CHIP R 10K J 1/16W	
R131			RK73GB1J681J	CHIP R 680 J 1/16W	
R132			RK73FB2A470J	CHIP R 47 J 1/10W	
R133-136			R92-1252-05	CHIP R 0 OHM	
R137			RK73FB2A100J	CHIP R 10 J 1/10W	
R138			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R139			RK73GB1J103J	CHIP R 10K J 1/16W	
R140			RK73FB2A2R2J	CHIP R 2.2 J 1/10W	
R141			RK73GB1J103J	CHIP R 10K J 1/16W	
R142			RK73GB1J473J	CHIP R 47K J 1/16W	
R144			R92-0685-05	CHIP R 22 J 1/2W	
R145,146			RK73GB1J473J	CHIP R 47K J 1/16W	
R147			RK73GB1J102J	CHIP R 1.0K J 1/16W	K,M
R147			RK73GB1J152J	CHIP R 1.5K J 1/16W	K2
R148			RK73GB1J104J	CHIP R 100K J 1/16W	
R149			RK73GB1J470J	CHIP R 47 J 1/16W	
R150			RK73GB1J104J	CHIP R 100K J 1/16W	
R151			RK73FB2A331J	CHIP R 330 J 1/10W	
R152			R92-1252-05	CHIP R 0 OHM	
R153			R92-0670-05	CHIP R 0 OHM	
R154			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R155			RK73FB2A150J	CHIP R 15 J 1/10W	
R157			RK73GB1J271J	CHIP R 270 J 1/16W	
R159			RK73GB1J473J	CHIP R 47K J 1/16W	
R160			RK73FB2A331J	CHIP R 330 J 1/10W	
R161			RK73GB1J334J	CHIP R 330K J 1/16W	
R162			RK73GB1J333J	CHIP R 33K J 1/16W	
R163			R92-0670-05	CHIP R 0 OHM	
R164			R92-1213-05	CHIP R 100 J 1/2W	
R166			RK73GB1J181J	CHIP R 180 J 1/16W	
R167			R92-1252-05	CHIP R 0 OHM	
R168,169			RK73GB1J103J	CHIP R 10K J 1/16W	
R170			RK73FB2A222J	CHIP R 2.2K J 1/10W	
R171			RK73GB1J153J	CHIP R 15K J 1/16W	
R172			RK73GB1J334J	CHIP R 330K J 1/16W	
R173			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R174			RK73GB1J103J	CHIP R 10K J 1/16W	

PARTS LIST

TX-RX UNIT (X57-5950-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
R175			RK73GB1J682J	CHIP R 6.8K J 1/16W	
R176			RK73GB1J104J	CHIP R 100K J 1/16W	
R177			R92-1261-05	CHIP R 150 J 1/2W	
R178			RK73GB1J103J	CHIP R 10K J 1/16W	
R179-181			RK73GB1J223J	CHIP R 22K J 1/16W	
R182			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R183			R92-0670-05	CHIP R 0 OHM	
R184			R92-1252-05	CHIP R 0 OHM	
R185			RK73GB1J473J	CHIP R 47K J 1/16W	
R186			R92-1252-05	CHIP R 0 OHM	
R188			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R189			RK73GB1J101J	CHIP R 100 J 1/16W	
R190			RK73GB1J473J	CHIP R 47K J 1/16W	
R192			RK73GB1J103J	CHIP R 10K J 1/16W	
R193			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R194			RK73GB1J473J	CHIP R 47K J 1/16W	
R195			RK73GB1J154J	CHIP R 150K J 1/16W	
R196			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R197			R92-1252-05	CHIP R 0 OHM	
R208			R92-0670-05	CHIP R 0 OHM	
R210			RK73GB1J223J	CHIP R 22K J 1/16W	
R501			RK73GB1J473J	CHIP R 47K J 1/16W	
R502			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R503			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R504-507			RK73GB1J473J	CHIP R 47K J 1/16W	
R508			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R509,510			R92-1252-05	CHIP R 0 OHM	
R511			RK73GB1J473J	CHIP R 47K J 1/16W	
R512			RK73GB1J104J	CHIP R 100K J 1/16W	
R513			RK73GB1J223J	CHIP R 22K J 1/16W	
R514			RK73GB1J473J	CHIP R 47K J 1/16W	
R515,516			RK73GB1J223J	CHIP R 22K J 1/16W	
R517			RK73GB1J473J	CHIP R 47K J 1/16W	
R518			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R519			RK73GB1J103J	CHIP R 10K J 1/16W	
R520-523			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R526			RK73GB1J154J	CHIP R 150K J 1/16W	
R527			R92-1252-05	CHIP R 0 OHM	
R528			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R529			RK73GB1J154J	CHIP R 150K J 1/16W	
R530			RK73GB1J473J	CHIP R 47K J 1/16W	
R531			RK73GB1J394J	CHIP R 390K J 1/16W	
R532			RK73GB1J103J	CHIP R 10K J 1/16W	
R533			RK73GB1J104J	CHIP R 100K J 1/16W	
R534			RK73GB1J823J	CHIP R 82K J 1/16W	
R535			RK73GB1J103J	CHIP R 10K J 1/16W	
R536			RK73GB1J153J	CHIP R 15K J 1/16W	
R537			RK73GB1J105J	CHIP R 1.0M J 1/16W	
R538			RK73GB1J103J	CHIP R 10K J 1/16W	
R539			R92-1252-05	CHIP R 0 OHM	
R540			RK73GB1J223J	CHIP R 22K J 1/16W	
R541			RK73GB1J184J	CHIP R 180K J 1/16W	
R542			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R543			RK73GB1J184J	CHIP R 180K J 1/16W	
R544			RK73GB1J103J	CHIP R 10K J 1/16W	
R545			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R546			RN73GH1J913D	CHIP R 91K D 1/16W	
R547			RK73GB1J103J	CHIP R 10K J 1/16W	
R548			RN73GH1J333D	CHIP R 33K D 1/16W	
R549			RN73GH1J913D	CHIP R 91K D 1/16W	

Ref. No.	Address	New parts	Parts No.	Description	Destination
R550			RN73GH1J683D	CHIP R 68K D 1/16W	
R551,552			RK73GB1J223J	CHIP R 22K J 1/16W	
R553			RK73GB1J105J	CHIP R 1.0M J 1/16W	
R554			RN73GH1J913D	CHIP R 91K D 1/16W	
R555,556			RK73GB1J104J	CHIP R 100K J 1/16W	
R557			RN73GH1J274D	CHIP R 270K D 1/16W	
R558			R92-1252-05	CHIP R 0 OHM	
R559			RK73GB1J333J	CHIP R 33K J 1/16W	
R560			RK73GB1J474J	CHIP R 470K J 1/16W	
R561			RK73GB1J273J	CHIP R 27K J 1/16W	
R562			R92-1252-05	CHIP R 0 OHM	
R563			RK73GB1J473J	CHIP R 47K J 1/16W	
R564			RK73GB1J223J	CHIP R 22K J 1/16W	
R565			R92-1252-05	CHIP R 0 OHM	
R566			RK73GB1J563J	CHIP R 56K J 1/16W	
R567			RK73GB1J334J	CHIP R 330K J 1/16W	
R568			RK73GB1J473J	CHIP R 47K J 1/16W	
R569			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R570			RK73GB1J155J	CHIP R 1.5M J 1/16W	
R571			RN73GH1J682D	CHIP R 6.8K D 1/16W	
R572			RK73GB1J473J	CHIP R 47K J 1/16W	
R573			RK73GB1J474J	CHIP R 470K J 1/16W	
R574			RN73GH1J683D	CHIP R 68K D 1/16W	
R575			RK73GB1J101J	CHIP R 100 J 1/16W	
R576			RK73GB1J224J	CHIP R 220K J 1/16W	
R577			RK73GB1J103J	CHIP R 10K J 1/16W	
R578			RN73GH1J682D	CHIP R 6.8K D 1/16W	
R579			RK73GB1J223J	CHIP R 22K J 1/16W	
R580			R92-1252-05	CHIP R 0 OHM	
R581			RK73GB1J394J	CHIP R 390K J 1/16W	
R582			RK73GB1J273J	CHIP R 27K J 1/16W	
R583			RK73GB1J470J	CHIP R 47 J 1/16W	
R584			RK73GB1J220J	CHIP R 22 J 1/16W	
R585			R92-1252-05	CHIP R 0 OHM	
R586			RK73GB1J473J	CHIP R 47K J 1/16W	
R587			R92-1252-05	CHIP R 0 OHM	
R588			RK73GB1J103J	CHIP R 10K J 1/16W	
R590			RK73GB1J333J	CHIP R 33K J 1/16W	
R591			R92-1252-05	CHIP R 0 OHM	
R592			RK73GB1J103J	CHIP R 10K J 1/16W	
R593			RK73GB1J181J	CHIP R 180 J 1/16W	
R594			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R595			RK73GB1J181J	CHIP R 180 J 1/16W	
R598			RK73GB1J473J	CHIP R 47K J 1/16W	
R599			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R600			R92-1252-05	CHIP R 0 OHM	
R602			RK73GB1J473J	CHIP R 47K J 1/16W	
R603			RK73GB1J101J	CHIP R 100 J 1/16W	
R604			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R605			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R606			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R607			RK73GB1J101J	CHIP R 100 J 1/16W	
R608			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R610,611			RK73GB1J473J	CHIP R 47K J 1/16W	
R612			RC05GF2H221J	RC 220 J 1/2W	
R613			RK73GB1J103J	CHIP R 10K J 1/16W	
R614,615			R92-1252-05	CHIP R 0 OHM	
R616			RK73GB1J474J	CHIP R 470K J 1/16W	
R617			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R618			RK73GB1J683J	CHIP R 68K J 1/16W	

PARTS LIST

TX-RX UNIT (X57-5950-XX)
PLL/VCO (X58-4670-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
R619			RK73GB1J104J	CHIP R 100K J 1/16W	
R620,621			RK73GB1J103J	CHIP R 10K J 1/16W	
R622			RK73GB1J473J	CHIP R 47K J 1/16W	
R701			RD14BB2C473J	RD 47K J 1/6W	
R704			RK73GB1J223J	CHIP R 22K J 1/16W	
D1			HSB123	DIODE	
D2			02DZ20(Y,Z)	ZENER DIODE	
D3-5			HSB123	DIODE	
D8			DAN235K	DIODE	
D9			1SS355	DIODE	
D10			DAN235K	DIODE	
D11			MA742	DIODE	
D14			1SS355	DIODE	
D15			DAN202K	DIODE	
D16			DAN235K	DIODE	
D17			1SS355	DIODE	
D18			HVC350B	VARIABLE CAPACITANCE DIODE	
D19,20			1SS355	DIODE	
D21			02DZ18(X,Y)	ZENER DIODE	
D22			HSB123	DIODE	
D23			HVC350B	VARIABLE CAPACITANCE DIODE	
D24			02DZ15(X,Y)	ZENER DIODE	
D25			22ZR-10D	SURGE ABSORBER	
D27			1SS355	DIODE	
D28			HVC350B	VARIABLE CAPACITANCE DIODE	
D29			DSM3MA1	DIODE	
D30,31			HVC350B	VARIABLE CAPACITANCE DIODE	
D33		*	XB15A709	DIODE	
D34			MA4PH633	DIODE	
D35,36			MA742	DIODE	
D39			UDZ4.7(B)	ZENER DIODE	
D40			MA742	DIODE	
D41			HZU5ALL	DIODE	
D501-504			MA2S111	DIODE	
D505			MA2S111	DIODE	762
D506,507			MA2S111	DIODE	
D508			MA742	DIODE	
D523			DAN202U	DIODE	
D524,525			HSB123	DIODE	
D526			1812L075PR	VARISTOR	
D527,528			HSB123	DIODE	
D529			MA742	DIODE	
IC1,2			TA75S01F	IC (OP AMP)	
IC3			MB15A02	IC	
IC4			NJM4558M	IC (OP AMP X2)	
IC5			TA31136FN	IC (FM IF DETECTOR)	
IC6			M62363FP	IC (8bit D/A CONVERTER)	
IC7			NJM2904M	IC (OP AMP X2)	
IC8			UPB1509GV	IC	
IC9			BU4094BCF	IC (8-STAGE SHIFT/STORE REGISTE	
IC10			NJM78L05UA	IC (VOLTAGE REGULATOR/ +5V)	
IC11			AN8009M	IC (REGULATOR)	
IC12			TA7808S	IC (REGULATOR)	
IC13			LA4422	IC (AF POWER AMP/ 5.8W)	
IC14			TC4013BF(N)	IC (MEMORY)	
IC15			TA75S01F	IC (OP AMP)	
IC400	2C,2F		M67741H-32	IC (POWER MODULE)	K,M
IC400	2C,2F		M67741L-35	IC (POWER MODULE)	K2
IC501			AT29C020-90TI	IC	
IC502			30622M4102GP	MPU	

Ref. No.	Address	New parts	Parts No.	Description	Destination
IC503			RH5VL42C	IC (REGULATOR)	
IC505			AT2408N10SI2.5	IC (8kbit SERIAL EEPROM)	
IC507			NJM2904V	IC (APC)	
IC508			TC35453F	IC (AUDIO PROCESSOR)	
IC509			BU4066BCFV	IC (ANALOG SWITCH X4)	
IC510			BU4094BCFV	IC (8bit SHIFT/STORE REGISTER)	
IC511			LC73872M	IC (DTMF RECEIVER)	
IC512			S-81350HG-KD	IC (VOLTAGE REGULATOR)	
IC513			TA75W558FU	IC (OP AMP X2)	
IC514			TC75W51FU	IC (OP AMP X2)	
Q1			DTD114EK	DIGITAL TRANSISTOR	
Q2,3			DTA114EKA	DIGITAL TRANSISTOR	
Q4-6			DTC114EKA	DIGITAL TRANSISTOR	
Q7			2SC4649(N,P)	TRANSISTOR	
Q8			2SC2412K	TRANSISTOR	
Q9			2SC4215(Y)	TRANSISTOR	
Q10			2SC2412K	TRANSISTOR	
Q11			2SA1832(GR)	TRANSISTOR	
Q12			2SC4738(GR)	TRANSISTOR	
Q13,14			2SC4649(N,P)	TRANSISTOR	
Q15			3SK228	FET	
Q16			DTC114EKA	DIGITAL TRANSISTOR	
Q17			DTC363EU	DIGITAL TRANSISTOR	
Q18			2SA1745(6,7)	TRANSISTOR	
Q19			DTC114EKA	DIGITAL TRANSISTOR	
Q20			DTA114EKA	DIGITAL TRANSISTOR	
Q21			DTC114EKA	DIGITAL TRANSISTOR	
Q22			2SC3357	TRANSISTOR	
Q23			2SA1641(S,T)	TRANSISTOR	
Q24			DTA114EKA	DIGITAL TRANSISTOR	
Q25			2SC2954	TRANSISTOR	
Q26			DTA114EKA	DIGITAL TRANSISTOR	
Q27			3SK241(R)	FET	
Q28			2SB1132(Q,R)	TRANSISTOR	
Q29			DTC114EKA	DIGITAL TRANSISTOR	
Q31			2SC2412K	TRANSISTOR	
Q32			2SB1565(E,F)	TRANSISTOR	
Q33			DTC114EKA	DIGITAL TRANSISTOR	
Q35			DTC144EKA	DIGITAL TRANSISTOR	
Q36			2SC2412K	TRANSISTOR	
Q37-39			2SK1824	FET	
Q501			2SC4619	TRANSISTOR	
Q502,503			DTC114EE	DIGITAL TRANSISTOR	
Q504			2SC4617(S)	TRANSISTOR	
Q505			2SB1132(Q,R)	TRANSISTOR	
Q506			DTC114EE	DIGITAL TRANSISTOR	
Q508			2SC4617(S)	TRANSISTOR	
Q509			DTC363EU	DIGITAL TRANSISTOR	
TH1			157-153-65001	THERMISTOR	
-			212-2013-05	INSULATING TUBE	

PLL/VCO (X58-4670-XX) -10 : K,M -11 : K2

C102			CK73GB1H471K	CHIP C	470PF	K	
C104			CC73GCH1H150J	CHIP C	15PF	J	K2
C104,105			CC73GCH1H150J	CHIP C	15PF	J	K,M
C105			CC73GCH1H270J	CHIP C	27PF	J	K2
C107			CC73GCH1H060D	CHIP C	6.0PF	D	K2

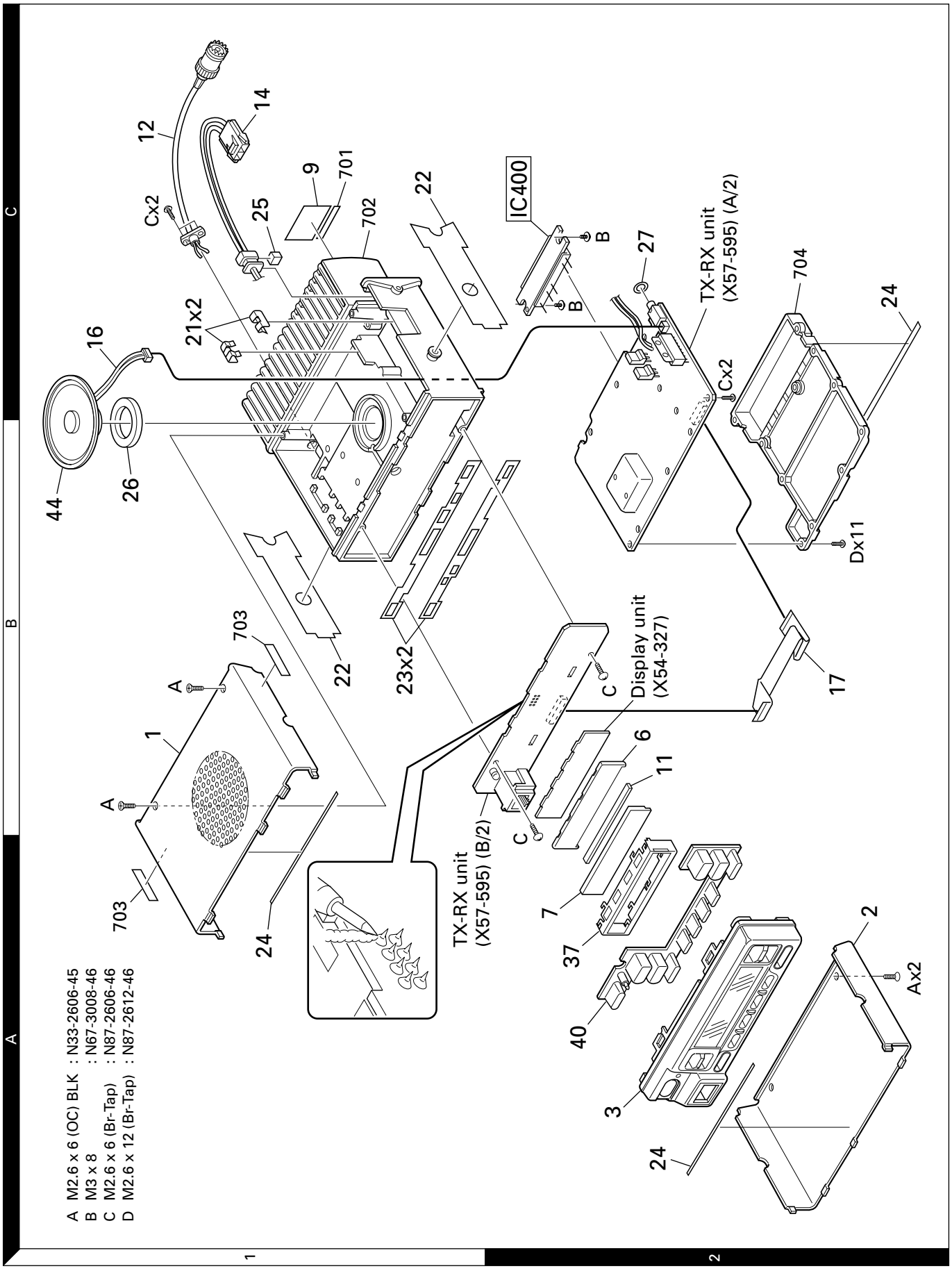
PARTS LIST

PLL/VCO (X58-4670-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
C107			CC73GCH1H080D	CHIP C 8.0PF D	K,M
C110			CC73GCH1H040B	CHIP C 4.0PF B	K,M
C110			CC73GCH1H120J	CHIP C 12PF J	K2
C111			CC73GCH1H040B	CHIP C 4.0PF B	K2
C111			CC73GCH1H050B	CHIP C 5.0PF B	K,M
C112,113			CC73GCH1H020B	CHIP C 2.0PF B	
C114			CC73GCH1H070D	CHIP C 7.0PF D	K2
C114,115			CC73GCH1H060D	CHIP C 6.0PF D	K,M
C115			CC73GCH1H050B	CHIP C 5.0PF B	K2
C116			CC73GCH1H120J	CHIP C 12PF J	
C117			CK73GB1H471K	CHIP C 470PF K	
C118			CC73GCH1H050B	CHIP C 5.0PF B	
C119,120			CK73GB1H471K	CHIP C 470PF K	
C121			CC73GCH1H090D	CHIP C 9.0PF D	
C122			CC73GCH1H0R5B	CHIP C 0.5PF B	
C123			CK73GB1H471K	CHIP C 470PF K	
C124			CC73GCH1H0R5B	CHIP C 0.5PF B	
C125			CK73GB1H102K	CHIP C 1000PF K	
C126			CK73GB1H471K	CHIP C 470PF K	
C127			CC73GCH1H100D	CHIP C 10PF D	
TC106			C05-0384-05	CERAMIC TRIMMER CAP (10P/8)	
TC109			C05-0384-05	CERAMIC TRIMMER CAP (10P/8)	
CN101			E40-6019-05	PIN ASSY	
-			F10-2279-04	SHIELDING CASE	
L101-104			L40-1595-34	SMALL FIXED INDUCTOR (1.5UH/8)	
L105			L40-3975-34	SMALL FIXED INDUCTOR (39NH/8)	
L106			L40-2775-34	SMALL FIXED INDUCTOR (27NH/8)	
L107,108			L40-1098-76	SMALL FIXED INDUCTOR (1UH/2522)	
L109,110			L40-1595-34	SMALL FIXED INDUCTOR (1.5UH/8)	
L111			L34-4547-05	AIR-CORE COIL	K,M
L112			L34-4548-05	AIR-CORE COIL	K2
L116			L34-4549-05	AIR-CORE COIL	
R101,102			RK73GB1J101J	CHIP R 100 J 1/16W	
R103			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R104			RK73GB1J470J	CHIP R 47 J 1/16W	
R105			RK73GB1J154J	CHIP R 150K J 1/16W	
R106			RK73GB1J470J	CHIP R 47 J 1/16W	
R107-110			RK73GB1J103J	CHIP R 10K J 1/16W	
R111			RK73GB1J331J	CHIP R 330 J 1/16W	
R112,113			RK73GB1J181J	CHIP R 180 J 1/16W	
R114			RK73GB1J470J	CHIP R 47 J 1/16W	
R115			RK73GB1J103J	CHIP R 10K J 1/16W	
R116			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R117			RK73GB1J101J	CHIP R 100 J 1/16W	
D101-104			1SV283	VARIABLE CAPACITANCE DIODE	
D105			HVU363A	DIODE	
Q101			2SK508NV(K52)	FET	
Q102			DTC114EUA	DIGITAL TRANSISTOR	
Q103			2SK508NV(K52)	FET	
Q104,105			2SC4081	TRANSISTOR	
Q106			2SC4226(R24)	TRANSISTOR	

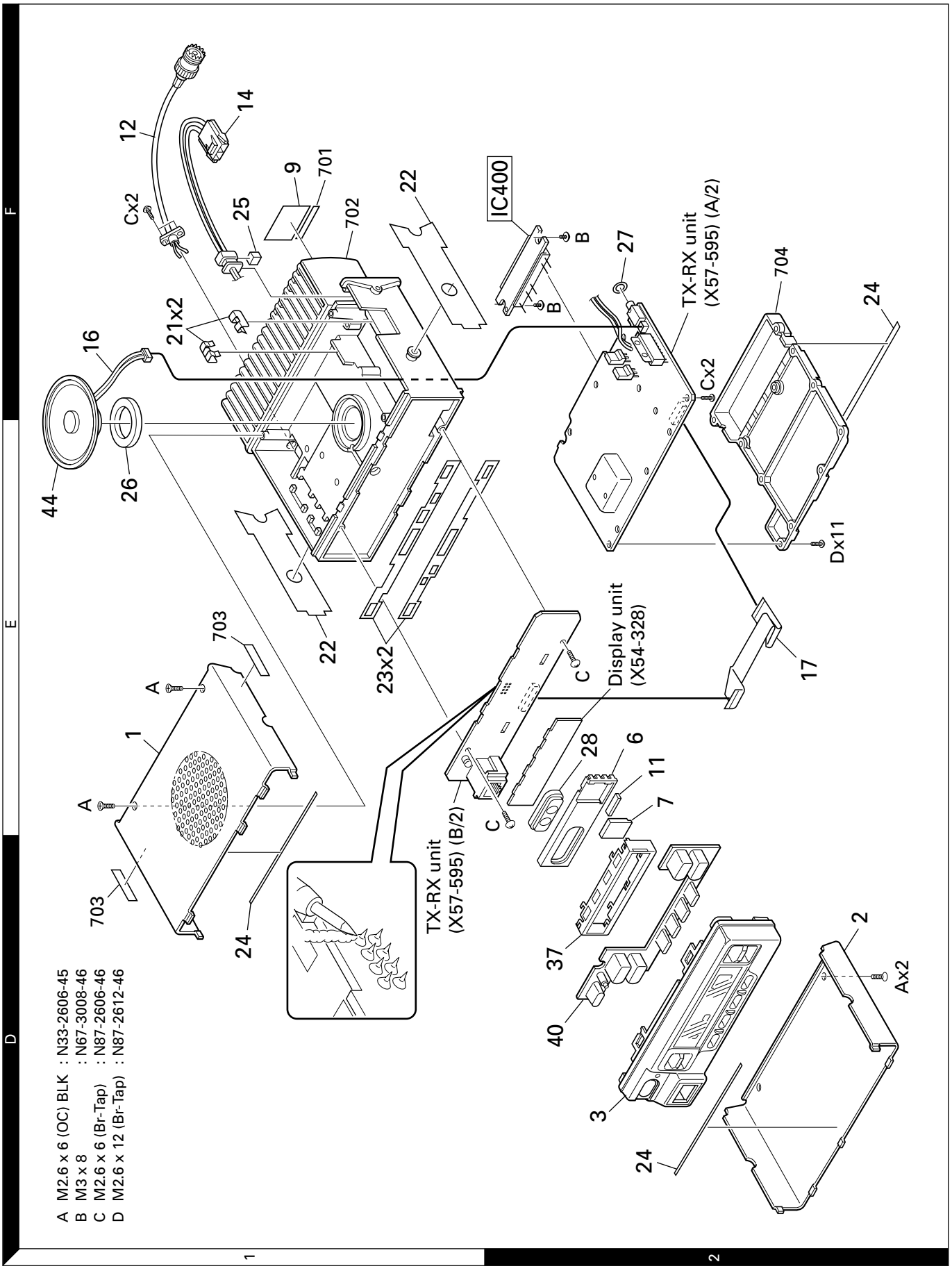
Ref. No.	Address	New parts	Parts No.	Description	Destination

EXPLODED VIEW (TK-760G)



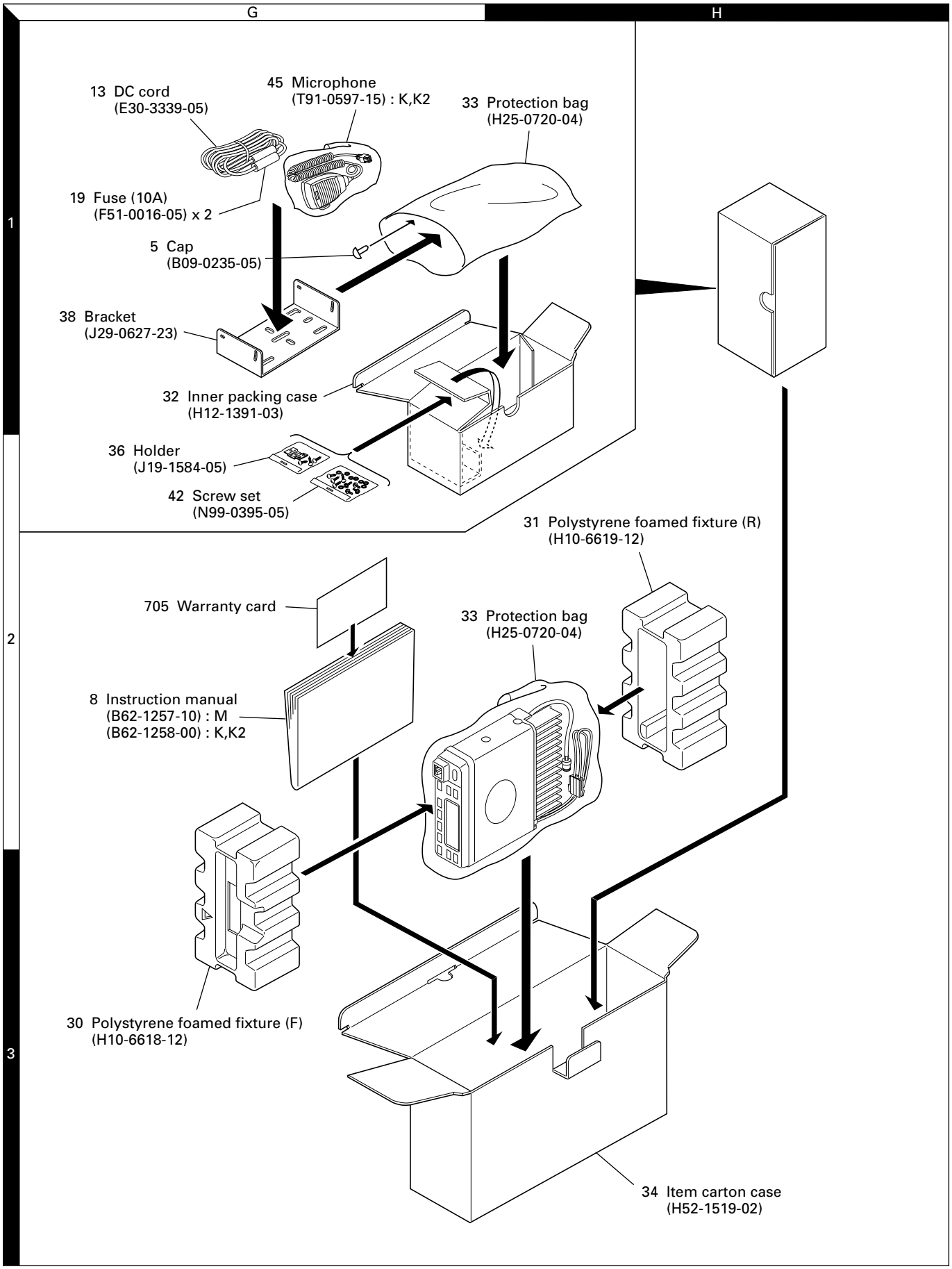
Parts with the exploded numbers larger than 700 are not supplied.

EXPLODED VIEW (TK-762G)



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

PACKING



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

ADJUSTMENT

Test Mode (TK-760G Only)

■ Test Mode Operating Features

This transceiver has a test mode. ***To enter test mode, press [SCN] key and turn power on. Hold [SCN] key until test channel No. and test signalling No. appears on LCD.*** Test mode can be inhibited by programming. To exit test mode, switch the power on again. The following functions are available in test mode.

- **Controls**

[PTT]	Used when making a transmission.
[MON]	Monitor on and off.
[SCN]	Sets to the tuning mode.
[A]	Function on.
[D/A]	RF power high and low.
[▼]	Changes signalling.
[▲]	Changes wide and narrow
[CH▲/▼]	Changes channel.
[Volume▲/▼]	Volume up/down.

- **LCD indicator**

"SCN"	Unused.
"AUX"	Lights at RF power low.
"MON"	Lights at monitor on.
"Right side dot"	Lights at narrow.

- **LED indicator**

Red LED	Lights during transmission.
Green LED	Lights when there is a carrier.

■ 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)**

Channel No.	TK-760G/762G (K)		TK-760G/762G (K2)		TK-760G (M)	
	RX	TX	RX	TX	RX	TX
1 (Center)	161.050	161.100	149.050	149.100	160.050	160.100
2 (Low)	148.050	148.100	136.050	136.100	146.050	146.100
3 (High)	173.950	173.900	161.950	161.900	173.950	173.900
4	161.000	161.000	149.000	149.000	160.000	160.000
5	161.200	161.200	149.200	149.200	160.200	160.200
6	161.400	161.400	149.400	149.400	160.400	160.400
7~16	–	–	–	–	–	–

- **Signalling**

Signalling No.	RX	TX
1	None	None
2	None	100Hz square
3	QT 67.0Hz	QT 67.0Hz
4	QT 151.4Hz	QT 151.4Hz
5	QT 210.7Hz	QT 210.7Hz
6	QT 250.3Hz	QT 250.3Hz
7	DQT D023N	DQT D023N
8	DQT D754I	DQT D754I
9	DTMF DEC, (159D)	DTMF ENC, (159D)
10	None	DTMF tone (9)
11	2-tone 321.7/928.1Hz	None
12	Single tone 1200Hz	Single tone 1200Hz

- **Preparations for tuning the transceiver**

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

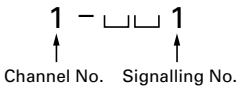
Whenever the transmitter is turned, the unit must be connected to a suitable dummy load (i.e. power meter).

The speaker output connector must be terminated with a 4Ω dummy load and connected to an AC voltmeter and an audio distortion meter or a SINAD measurement meter at all times during tuning.

- **Transceiver tuning**
  (To place transceiver in tuning mode)

Channel appears on LCD. Set channel according to tuning requirements.

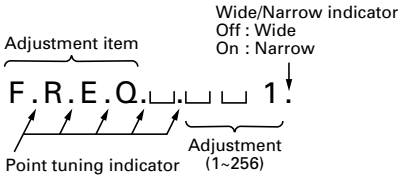
LCD display (Test mode)



Press [SCN], now in tuning mode. Use [D/A] button to write tuning data through tuning modes, and [CH▲/▼] to adjust tuning requirements (1 to 256 appears on LCD).

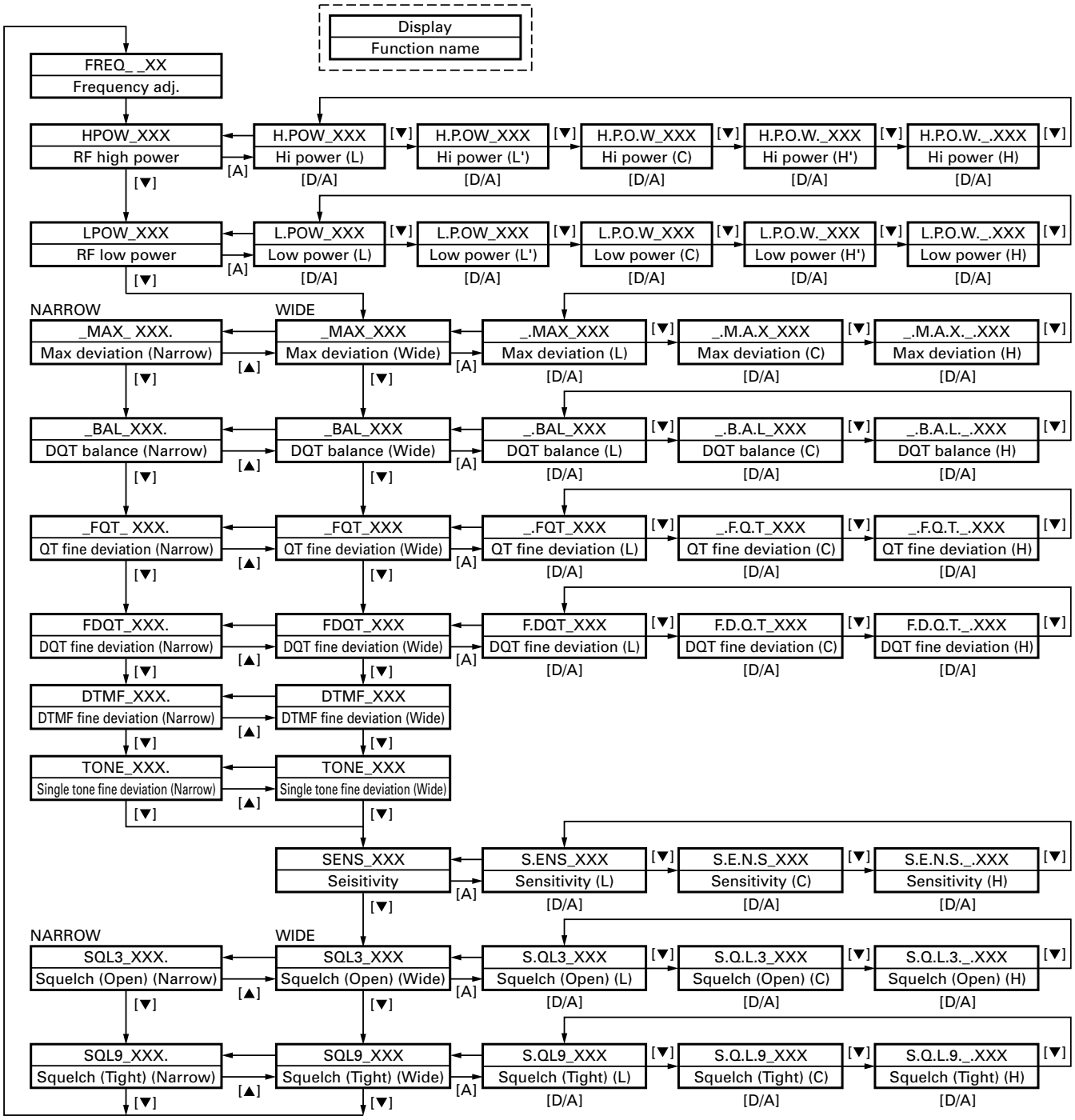
Use [▼] button to select the adjustment item through tuning modes. Use [A] button to adjust 3-point or 5-point tuning, and use [▲] button to switch between wide/narrow.

LCD display (Tuning mode)



ADJUSTMENT

■ Tuning Mode



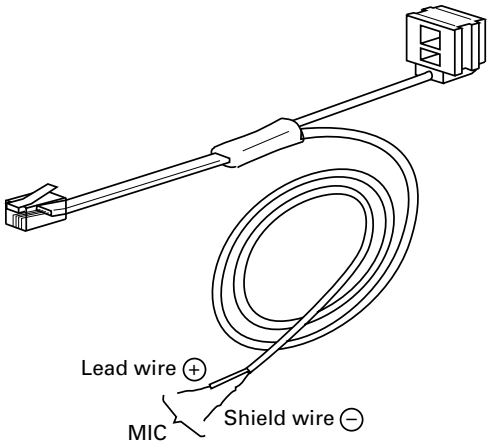
ADJUSTMENT

Test Equipment Required for Alignment

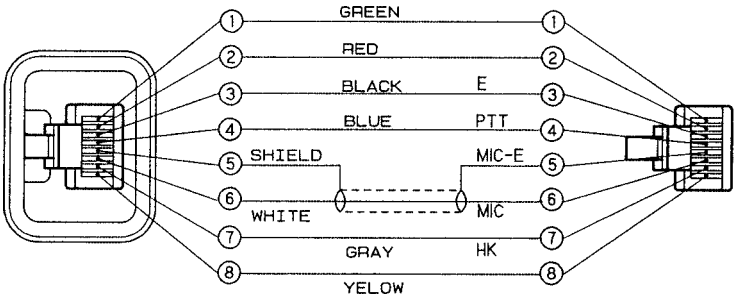
Test Equipment	Major Specifications	
1. Standard Signal Generator (SSG)	Frequency Range Modulation Output	136 to 174MHz Frequency modulation and external modulation –127dBm/0.1μV to greater than –7dBm/100mV
2. Power Meter	Input Impedance Operation Frequency Measurement Capability	50Ω 136 to 174MHz or more Vicinity of 100W
3. Deviation Meter	Frequency Range	136 to 174MHz
4. Digital Volt Meter (DVM)	Measuring Range Accuracy	1 to 20V DC High input impedance for minimum circuit loading
5. Oscilloscope		DC through 30MHz
6. High Sensitivity Frequency Counter	Frequency Range Frequency Stability	10Hz to 1000MHz 0.2ppm or less
7. Ammeter		20A
8. AF Volt Meter (AF VTVM)	Frequency Range Voltage Range	50Hz to 10kHz 1mV to 10V
9. Audio Generator (AG)	Frequency Range Output	20Hz to 20kHz or more 0 to 1V
10. Distortion Meter	Capability Input Level	3% or less at 1kHz 50mV to 10Vrms
11. 4Ω Dummy Load		Approx. 4Ω, 10W or more
12. Regulated Power Supply		13.6V, approx. 20A (adjustable from 9 to 20V) Useful if ammeter requipped

Tuning cable (E30-3383-05)

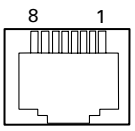
Adapter cable (E30-3383-05) is required for injecting an audio if PC tuning is used.
See "PC Mode" section for the connection.



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



MIC connector (Front view)

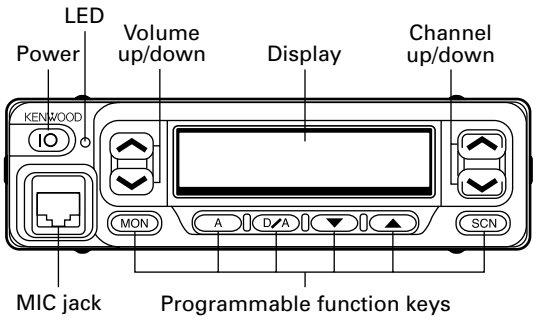


1 : BLC
2 : PSB
3 : E
4 : PTT
5 : ME
6 : MIC
7 : HOOK
8 : CM

ADJUSTMENT

Adjustment Location

■ **Switch (TK-760G)**



■ **Note**

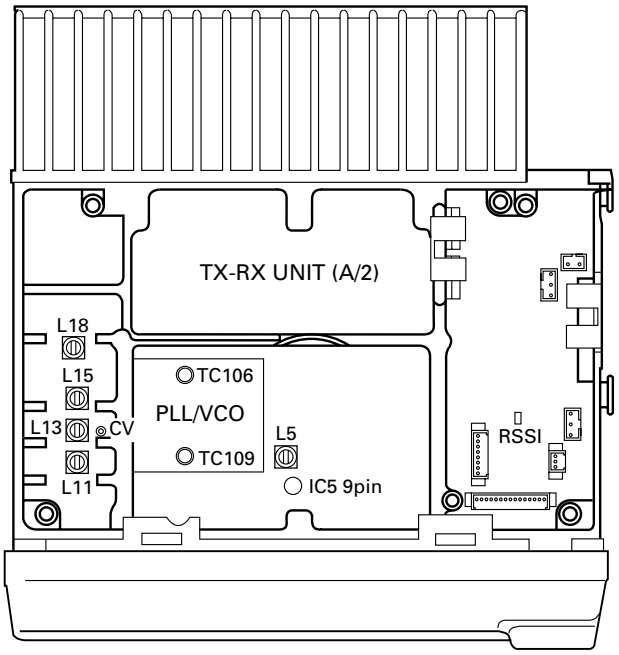
• **Flash memory**

The firmware program (User mode, Test mode, Tuning mode, etc.) and the data programmed by the FPU (KPG-56D) for the flash memory, is stored in memory. When parts are changed, program the data again.

• **EEPROM**

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

■ **Adjustment Point**



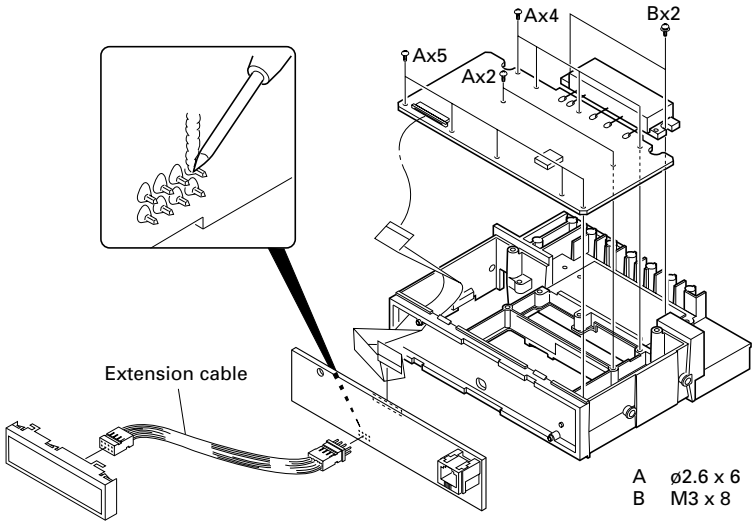
■ **Repair Jig**

• **Chassis**

Use jig (Part No. : A10-4010-02) for repairing the TK-760G/762G. The jig facilitates the voltage check when the voltage on the component side TX-RX unit is checked during repairs.

• **Extension cable**

Part No. : E30-3404-05



ADJUSTMENT

Common Section

Since the TK-762G cannot be tuned from the panel, the FPU (KPG-56D) should be used for adjustment.

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. PLL lock voltage RX	1) Set test mode CH : CH3 - Sig1	DVM Power meter F. conter	TX-RX (A/2)	CV	PLL	TC106	7.5V **K,M** 7.0V **K2**	±0.1V
TX	2) PTT : ON (Transmit)					TC109	7.5V	
RX	3) CH : CH2 - Sig1 AUX : ON (talk-around mode)						Check	1.0V or more **K,M** 0.9V or more **K2**
TX	4) PTT : ON (Transmit)							0.5V or more **K,M** 1.0V or more **K2**

Receiver Section

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Discriminator • Wide	1) Set test mode CH : CH1 - Sig1 SSG output : –53dBm/501µV SSG MOD : 3kHz AF : 1.4V/4Ω	SSG AF VTVM Oscilloscope	Rear panel	ANT ACC (EXT.SP)	TX-RX (A/2)	L5	AF output maximum.	
	2) SSG MOD : OFF	DVM	TX-RX (A/2)	IC5 9pin			0.7V DC	
2. Sensitivity • Wide	1) Set test mode Select "SENS" in tuning mode. "S.E.N.S" Adjust [120] **K,M** Adjust [110] **K2** SSG freq' : 161.050MHz **K** : 149.050MHz **K2** : 160.050MHz **M** SSG output : –118dBm/0.28µV SSG MOD : 3kHz AF output : 1V/4Ω	SSG AF VTVM Distortion meter Oscilloscope AG DVM	Rear panel TX-RX (A/2)	ANT ACC (EXT.SP) RSSI	TX-RX (A/2)	L11 L13 L15 L18	RSSI voltage maximum.	
	2) "S.ENS" Adjust [∗∗∗] SSG freq' : 148.050MHz **K** : 136.050MHz **K2** : 146.050MHz **M**				Front panel	CH∧/∨	.	
	3) "S.E.N.S._." Adjust [∗∗∗] SSG freq' : 173.950MHz **K,M** : 161.950MHz **K2**							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
3. Squelch 3 • Wide	1) Set test mode Select "SQL3" in tuning mode. "S.QL3" Adjust [∗∗∗] SSG freq' : 148.050MHz **K** : 136.050MHz **K2** : 146.050MHz **M** SSG output : –127dBm/0.1μV SSG MOD : 3kHz (Wide) 1.5kHz (Narrow)	SSG AF VTVM Distortion meter Oscilloscope AG	Rear panel	ANT ACC (EXT.SP)	Front panel	CH∧/∨	Adjust to the squelch threshold point.	
	2) "S.Q.L.3" Adjust [∗∗∗] SSG freq' : 161.050MHz **K** : 149.050MHz **K2** : 160.050MHz **M**							
	3) "S.Q.L..3._." Adjust [∗∗∗] SSG freq' : 173.950MHz **K,M** : 161.950MHz **K2**							
• Narrow	4) "SQL3∗∗∗." Adjust [∗∗∗] SSG freq' : 161.050MHz **K** : 149.050MHz **K2** : 160.050MHz **M**							
4. Squelch 9 • Wide	1) Set test mode Select "SQL9" in tuning mode. "S.QL9" Adjust [∗∗∗] SSG freq' : 148.050MHz **K** : 136.050MHz **K2** : 146.050MHz **M** SSG output : –114dBm/0.44μV SSG MOD : 3kHz (Wide) 1.5kHz (Narrow)							
	2) "S.Q.L.9" Adjust [∗∗∗] SSG freq' : 161.050MHz **K** : 149.050MHz **K2** : 160.050MHz **M**							
	3) "S.Q.L.9._." Adjust [∗∗∗] SSG freq' : 173.950MHz **K,M** : 161.950MHz **K2**							
• Narrow	4) "SQL9∗∗∗." Adjust [∗∗∗] SSG freq' : 161.050MHz **K** : 149.050MHz **K2** : 160.050MHz **M**							
5. Squelch check	1) Set test mode CH : CH1 - Sig1~CH3 - Sig1 SSG output : –118dBm/0.28μV						Check	Squelch must be opened. (Wide/Narrow)
	2) SSG output : OFF							Squelch must be closed. (Wide/Narrow)

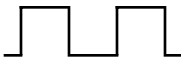
ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
6. QT check	1) Set test mode CH : CH1 - Sig4 SSG MOD INT : 3kHz (Wide), 1.5kHz (Narrow) EXT : 151.4Hz SSG system MOD DEV : ±3.75kHz (Wide), ±1.85kHz (Narrow) SSG output : 10dB SINAD level	SSG AF VTVM Distortion meter Oscilloscope AG	Rear panel	ANT ACC (EXT.SP)				
	2) CH : CH1 - Sig3 CH1 - Sig5 CH1 - Sig6						Check	Squelch must be opened.

Transmitter Section

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Frequency	1) Set test mode Select "FREQ" in tuning mode. PTT : ON Adjust [_**]	Power meter F. counter	Rear panel	ANT	Front panel	CH∧/∨	Check	161.100MHz±50Hz **K** 149.100MHz±50Hz **K2** 160.100MHz±50Hz **M**
2. Power output	1) Maximum power Set test mode Select "HPOW" in tuning mode. "H.POW" Adjust [256] PTT : ON						Check	More than 28.0W
3. High power	1) Set test mode Select "HPOW" in tuning mode. "H.POW" PTT : ON Adjust [***]						25.0W	±1.0W
	2) "H.P.OW" PTT : ON Adjust [***]							
	3) "H.P.O.W" PTT : ON Adjust [***]							
	4) "H.P.O.W." PTT : ON Adjust [***]							
	5) "H.P.O.W._." PTT : ON Adjust [***]							
4. Low power	1) Set test mode Select "LPOW" in tuning mode. "L.POW" PTT : ON Adjust [***]	Power mete					5.0W	±0.5W
	2) "L.P.OW" PTT : ON Adjust [***]							

ADJUSTMENT

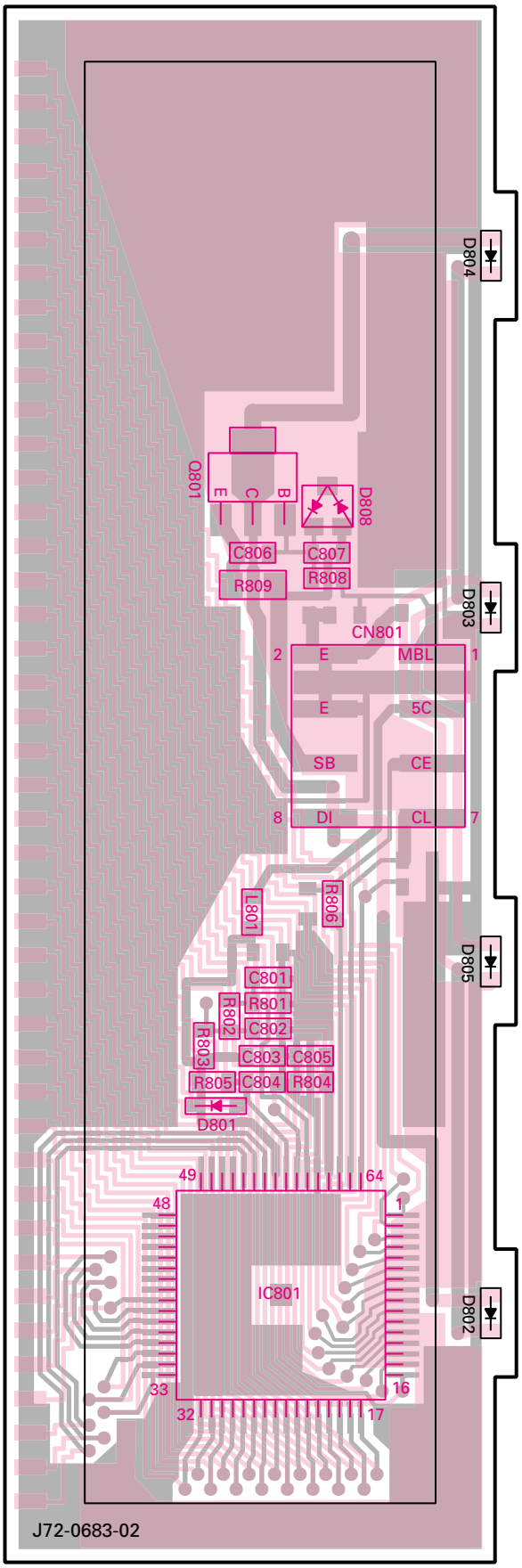
Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
	3) "L.P.O.W" PTT : ON Adjust [∗∗∗]	Power meter	Rear panel	ANT	Front panel	CH∧/∨	5.0W	±0.5W
	4) "L.P.O.W." PTT : ON Adjust [∗∗∗]							
	5) "L.P.O.W._." PTT : ON Adjust [∗∗∗]							
5. Power check	1) Set test mode CH : CH1 - Sig1 CH2 - Sig1 CH3 - Sig1 PTT : ON	Power meter Ammeter	Rear panel	ANT DC IN			Check	25W±1W, 8A or less
6. Modulation balanced • Wide	1) Set test mode MIC input : OFF Select "BAL" in tuning mode. "_.BAL" Deviation meter filter LPF : 3kHz, HPF : OFF De-emphasis : OFF PTT : ON Adjust [∗∗∗]	Power meter Deviation meter Oscilloscope AF VTVM AG	Rear panel Front panel	ANT MIC	Front panel	CH∧/∨	Make the de-modulation waveform neat.	(Wide/Narrow) 
	2) "_.B.A.L" PTT : ON Adjust [∗∗∗]							
	3) "_.B.A.L._." PTT : ON Adjust [∗∗∗]							
• Narrow	4) "_BAL∗∗∗." PTT : ON Adjust [∗∗∗]							
7. Maximum deviation • Wide	1) Set test mode Connect AG to the MIC terminal. Select "MAX" in tuning mode. "_.MAX" AG : 1kHz/50mV Deviation meter filter LPF : 15kHz, HPF : OFF De-emphasis : OFF PTT : ON Adjust [∗∗∗]						3.95kHz (Wide) 1.95kHz (Narrow) (According to the larger +, –)	±50Hz (Wide/Narrow)
	2) "_.M.A.X" PTT : ON Adjust [∗∗∗]							
	3) "_.M.A.X._." PTT : ON Adjust [∗∗∗]							
• Narrow	4) "_MAX∗∗∗." PTT : ON Adjust [∗∗∗]							

ADJUSTMENT

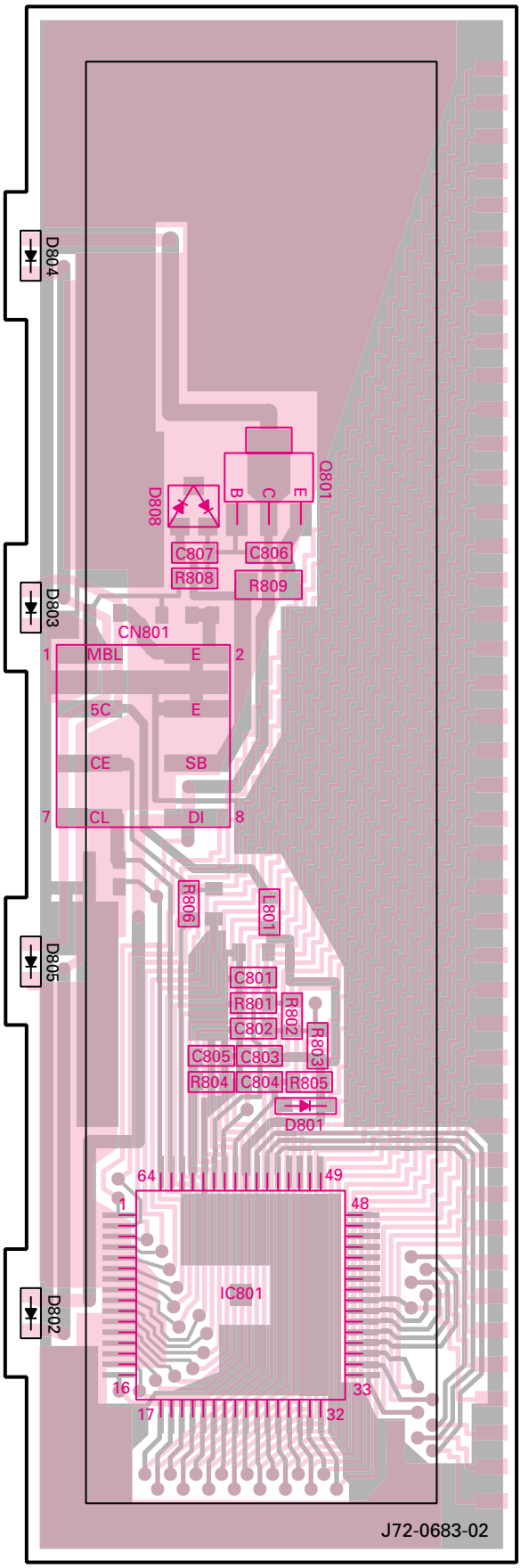
Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
8. MIC seisitivity check	1) Set test mode CH : CH1 - Sig1 AG : 1kHz/5mV PTT : ON Adjust [∗∗∗]	Power meter Deviation meter Oscilloscope AF VTVM AG	Rear panel Front panel	ANT MIC				Check ±3kHz±0.2kHz (Wide) ±1.5kHz±0.05kHz (Narrow)
9. QT deviation • Wide	1) Set test mode Select "FQT" in tuning mode. "_.FQT" Deviation meter filter LPF : 3kHz, HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	0.75kHz	±50Hz (Wide/Narrow)
	2) "_.F.Q.T" PTT : ON Adjust [∗∗∗]							
	3) "_.F.Q.T._." PTT : ON Adjust [∗∗∗]							
• Narrow	4) "_FQT∗∗∗." PTT : ON Adjust [∗∗∗]						0.35kHz	
10. DQT deviation • Wide	1) Set test mode Select "FDQT" in tuning mode. "F.DQT" Deviation meter filter LPF : 3kHz, HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	0.75kHz	±50Hz (Wide/Narrow)
	2) "F.D.Q.T" PTT : ON Adjust [∗∗∗]							
	3) "F.D.Q.T._." PTT : ON Adjust [∗∗∗]							
• Narrow	4) "FDQT∗∗∗." PTT : ON Adjust [∗∗∗]						0.35kHz	
11. DTMF deviation • Wide	1) Set test mode Select "DTMF" in tuning mode. Deviation meter filter LPF : 15kHz, HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	3.0kHz	±0.2kHz
• Narrow	2) "DTMF∗∗∗." PTT : ON Adjust [∗∗∗]						1.5kHz	±0.1kHz
12. TONE deviation • Wide	1) Set test mode Select "TONE" in tuning mode. Deviation meter filter LPF : 15kHz, HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	3.0kHz	±0.1kHz (Wide/Narrow)
• Narrow	2) "TONE∗∗∗." PTT : ON Adjust [∗∗∗]						1.5kHz	

TK-760G/762G PC BOARD VIEWS

DISPLAY UNIT (X54-3270-10) : TK-760G
Component side view

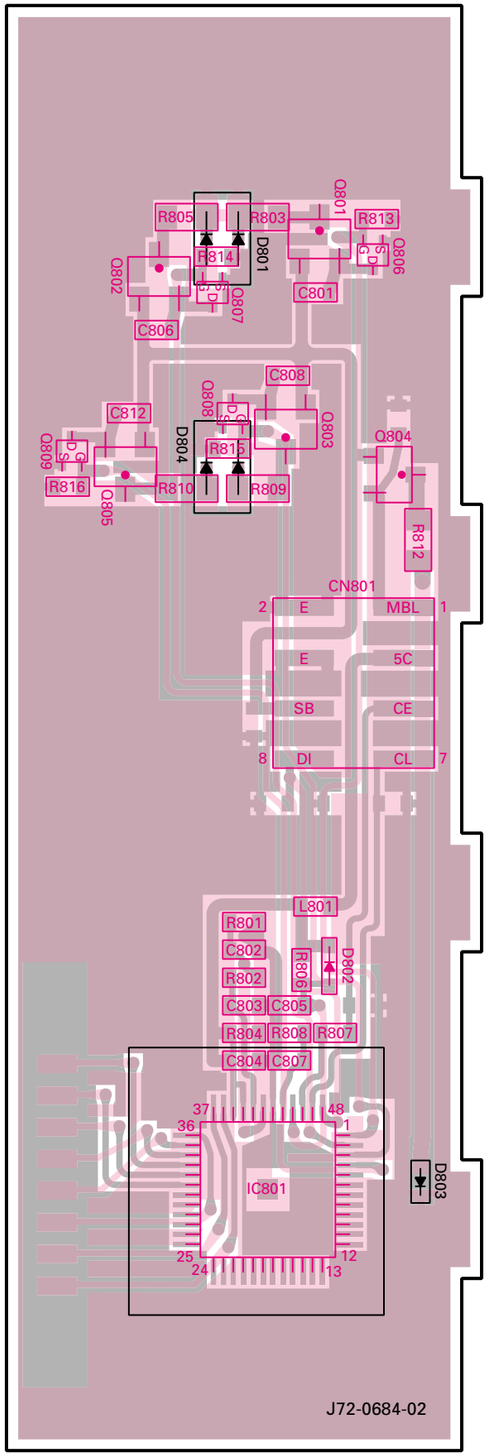


DISPLAY UNIT (X54-3270-10) : TK-760G
Foil side view

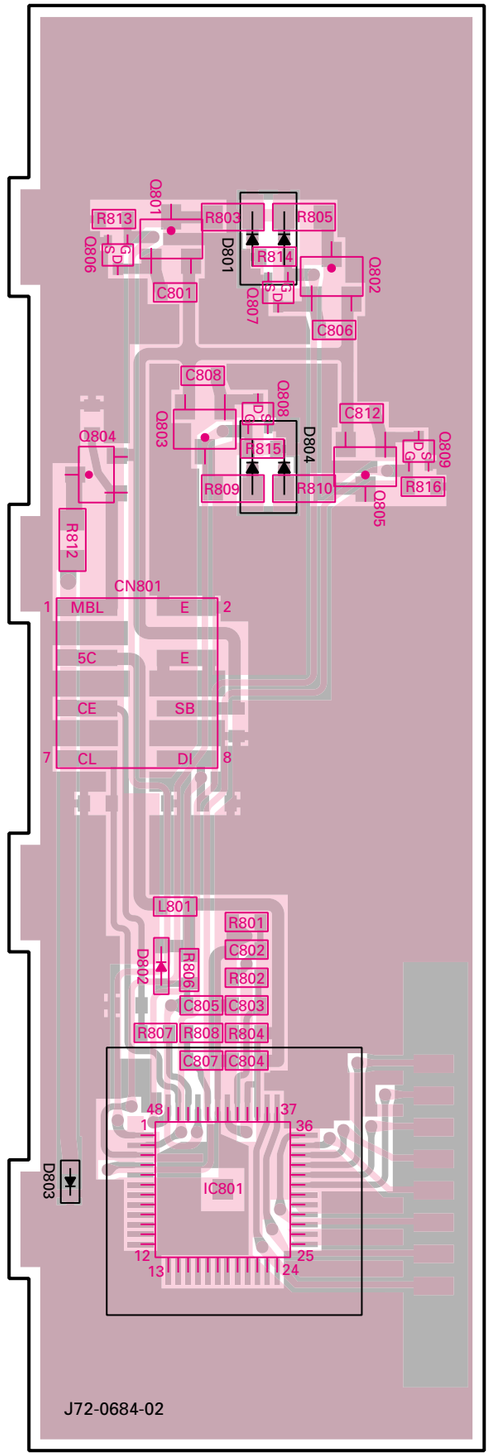


Component side Foil side

DISPLAY UNIT (X54-3280-10) : TK-762G
Component side view

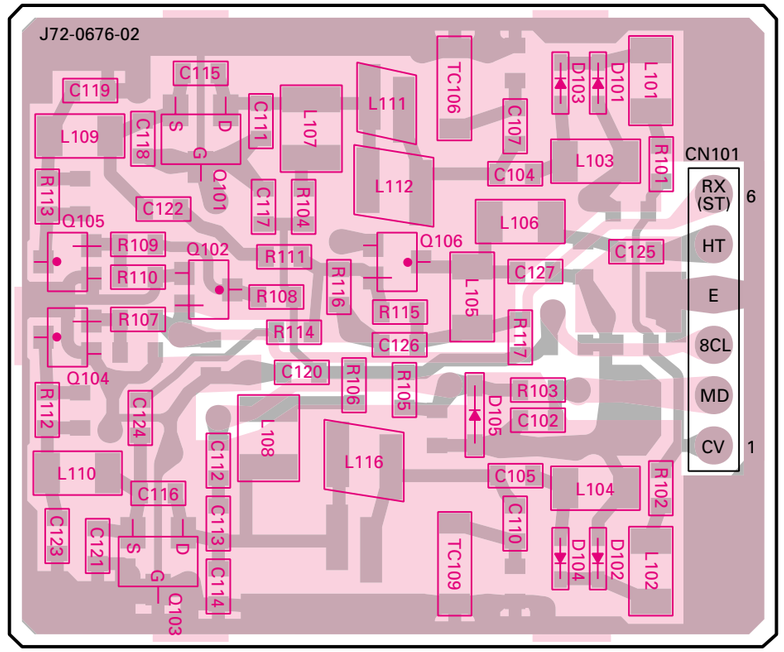


DISPLAY UNIT (X54-3280-10) : TK-762G
Foil side view

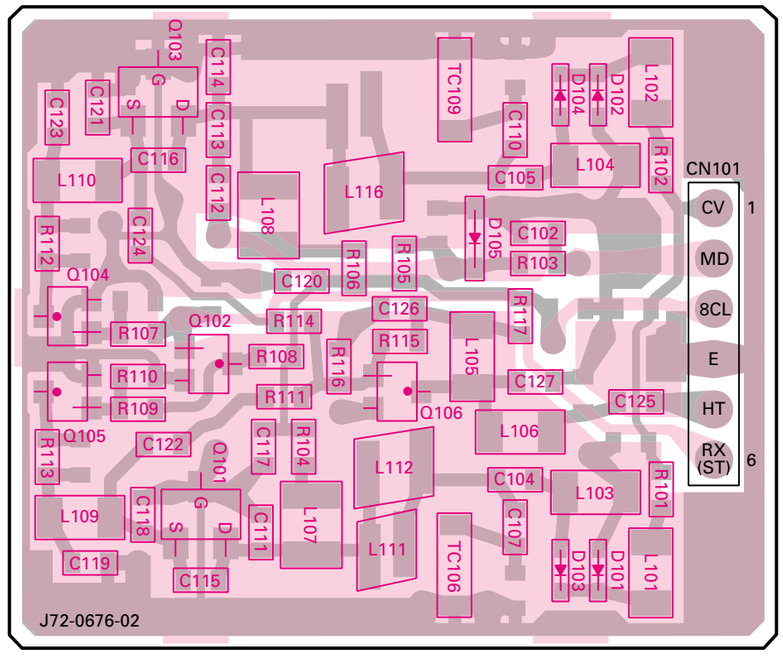


Component side Foil side

PLL/VCO (X58-4670-XX) -10 : K,M -11 : K2 Component side view



PLL/VCO (X58-4670-XX) -10 : K,M -11 : K2 Foil side view

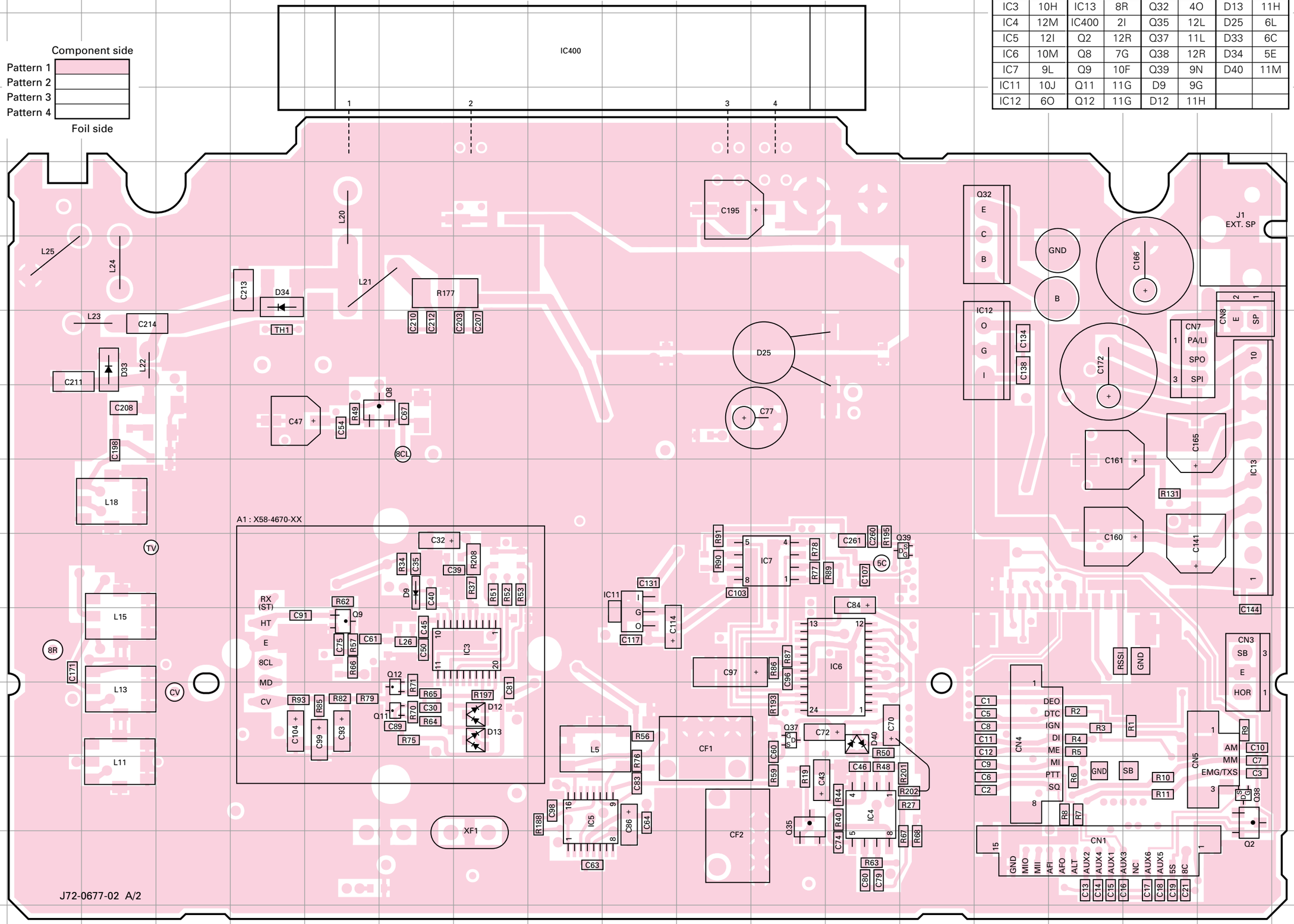


Component side
Foil side

TK-760G/762G PC BOARD VIEW

TX-RX UNIT (X57-5950-XX) (A/2) Component side view
-10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2
-13 : TK-762G K2 -21 : TK-760G M

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC3	10H	IC13	8R	Q32	4O	D13	11H
IC4	12M	IC400	2I	Q35	12L	D25	6L
IC5	12I	Q2	12R	Q37	11L	D33	6C
IC6	10M	Q8	7G	Q38	12R	D34	5E
IC7	9L	Q9	10F	Q39	9N	D40	11M
IC11	10J	Q11	11G	D9	9G		
IC12	6O	Q12	11G	D12	11H		



PC BOARD VIEW TK-760G/762G

TX-RX UNIT (X57-5950-XX) (A/2) Foil side view
-10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2
-13 : TK-762G K2 -21 : TK-760G M

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	11E	Q3	12H	Q16	13M	Q25	6J	D2	12B	D16	11N	D27	8D
IC2	9J	Q4	12H	Q17	9B	Q26	8C	D3	13C	D17	7L	D28	10Q
IC8	9N	Q5	11B	Q18	13N	Q27	9Q	D4	13C	D18	12Q	D29	5D
IC9	9G	Q6	11B	Q19	7C	Q28	7I	D5	13D	D19	8B	D30	8Q
IC10	8E	Q7	11K	Q20	8C	Q29	7G	D8	12J	D20	8D	D31	8Q
IC14	9D	Q10	13G	Q21	7C	Q31	6H	D10	12I	D21	7C	D35	7Q
IC15	7O	Q13	13K	Q22	7L	Q33	7N	D11	12G	D22	7J	D36	6R
IC400	2K	Q14	10N	Q23	7E	Q36	9K	D14	10H	D23	10Q	D39	8L
Q1	11B	Q15	13O	Q24	8B	D1	13D	D15	10B	D24	8D		

Component side
Pattern 1
Pattern 2
Pattern 3
Pattern 4
Foil side

J72-0677-02 A/2

TK-760G/762G PC BOARD VIEW

TX-RX UNIT (X57-5950-XX) (A/2)
Component side view + Foil side

-10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2 -13 : TK-762G K2 -21 : TK-760G M

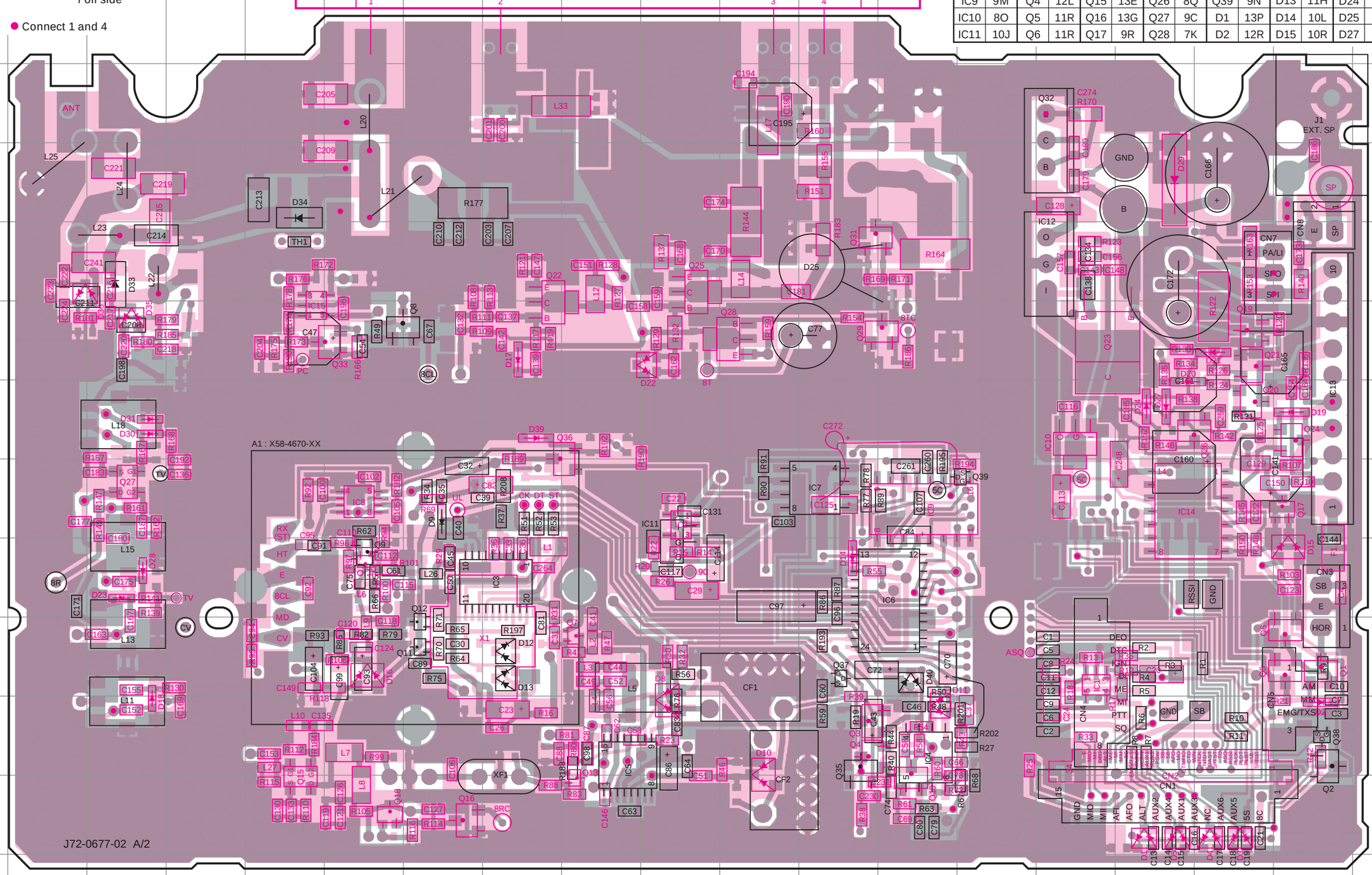
Component side

Pattern 1	🟪
Pattern 2	☐
Pattern 3	☐
Pattern 4	▨

Foil side

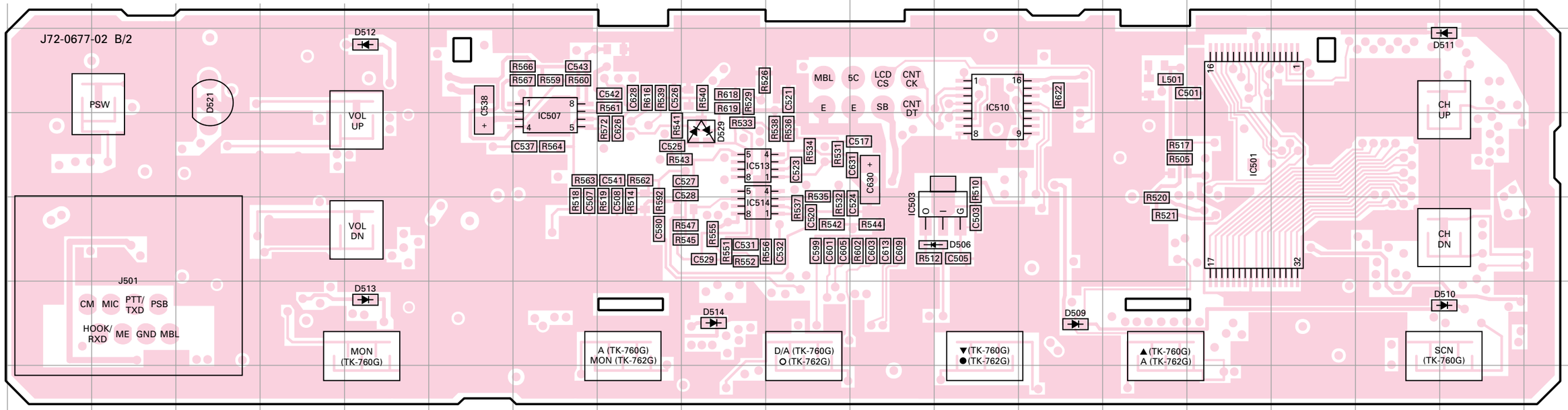
● Connect 1 and 4

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	11O	IC12	6O	Q7	11I	Q18	13F	Q29	7M	D3	13Q	D16	11F	D28	10C
IC2	9J	IC13	8R	Q8	7G	Q19	7Q	Q31	6L	D4	13Q	D17	7H	D29	5P
IC3	10H	IC14	9P	Q9	10F	Q20	8Q	Q32	4O	D5	13P	D18	12C	D30	8C
IC4	12M	IC15	7E	Q10	13M	Q21	7Q	Q33	7F	D8	12J	D19	8R	D31	8C
IC5	12I	IC400	2I	Q11	11G	Q22	7H	Q35	12L	D9	9G	D20	8P	D33	6C
IC6	10M	Q1	11R	Q12	11G	Q23	7O	Q36	9I	D10	12K	D21	7Q	D34	5E
IC7	9L	Q2	12R	Q13	13I	Q24	8R	Q37	11L	D11	12M	D22	7J	D35	7C
IC8	9F	Q3	12L	Q14	10F	Q25	6J	Q38	12R	D12	11H	D23	10C	D36	6B
IC9	9M	Q4	12L	Q15	13E	Q26	8Q	Q39	9N	D13	11H	D24	8P	D39	8H
IC10	8O	Q5	11R	Q16	13G	Q27	9C	D1	13P	D14	10L	D25	6L	D40	11M
IC11	10J	Q6	11R	Q17	9R	Q28	7K	D2	12R	D15	10R	D27	8P		



TX-RX UNIT (X57-5950-XX) (B/2) Component side view

-10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2 -13 : TK-762G K2 -21 : TK-760G M

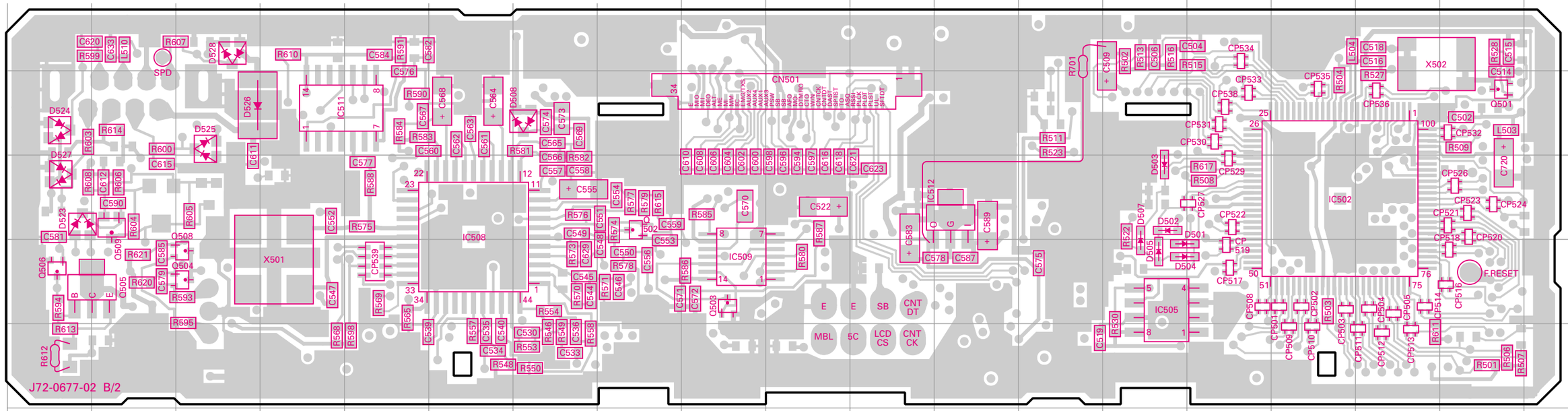


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC501	3O	IC510	2L	D506	4L	D511	2R	D514	5I
IC503	4L	IC513	3I	D509	5M	D512	2E	D521	2C
IC507	3G	IC514	4I	D510	5R	D513	5E	D529	3I

Component side
Pattern 1
Pattern 2
Pattern 3
Pattern 4
Foil side

TX-RX UNIT (X57-5950-XX) (B/2) Foil side view

-10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2 -13 : TK-762G K2 -21 : TK-760G M



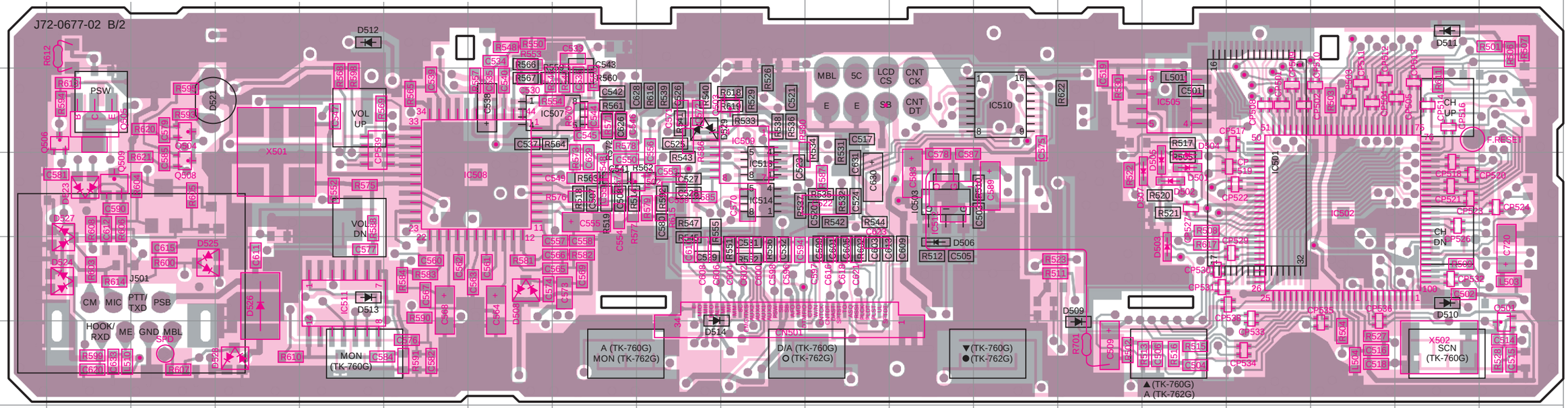
Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC502	10P	IC509	11I	Q501	9R	Q504	11C	Q508	11C	D502	10N	D505	11N	D523	10A	D526	9C
IC505	11N	IC511	9D	Q502	10H	Q505	11B	Q509	10B	D503	10N	D507	10N	D524	9A	D527	10A
IC508	10F	IC512	10L	Q503	11I	Q506	11A	D501	11N	D504	11N	D508	9G	D525	9C	D528	8C

Component side
Pattern 1
Pattern 2
Pattern 3
Pattern 4
Foil side

TK-760G/762G PC BOARD VIEW

TX-RX UNIT (X57-5950-XX) (B/2) Component side view + Foil side

-10 : TK-760G K -11 : TK-762G K -12 : TK-760G K2 -13 : TK-762G K2 -21 : TK-760G M



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC501	4P	IC510	3M	Q503	3J	D502	4O	D509	5N	D523	4B
IC502	4Q	IC511	5E	Q504	3C	D503	5O	D510	5R	D524	5B
IC503	4L	IC512	4L	Q505	3B	D504	4O	D511	2R	D525	5C
IC505	3O	IC513	4J	Q506	3B	D505	4O	D512	2E	D526	5D
IC507	3H	IC514	4J	Q508	4C	D506	5L	D513	5E	D527	4B
IC508	4G	Q501	5S	Q509	4B	D507	4O	D514	5I	D528	6D
IC509	3J	Q502	4I	D501	4O	D508	5G	D521	3C	D529	3I

Component side

Pattern 1
Pattern 2
Pattern 3
Pattern 4

Foil side

● Connect 1 and 4

2SB1565

DTC114EE
2SA1745
2SA1832
2SC2412K
2SC4215
2SC4226

2SC4617
2SC4619
2SC4738

2SB1132
2SC2954
2SC3357

2SA1641

2SC4081

DTC363EU

DTA114EKA
DTC114EKA
DTC114EUA
DTC144EKA
DTD114EK
KRA225S

2SC4649

LA4422

NJM2904M
NJM4558M
TA75W558FU
TC75W51FU

DAN202K
DAN202U
DAN235K

MA742

2SK508NV

3SK241

3SK228

2SK1824

BU4094BCF

TC4013BF

BU4066BCFV

M62363FP

LC75823W

AN8009M

AT29C020-90TI

AT2408N10SI2.5

TC35453F

M67741H-32
M67741L-35

M B15A02

NJM78L05UA
RH5VL42C
S-81350HG-KD

BU4094BCFV

TA7808S

NJM2904V
U PB1509GV

TA75S01F

TA31136FN

LC73872M

LC75833W

30622M4102GP

SCHEMATIC DIAGRAM TK-760G

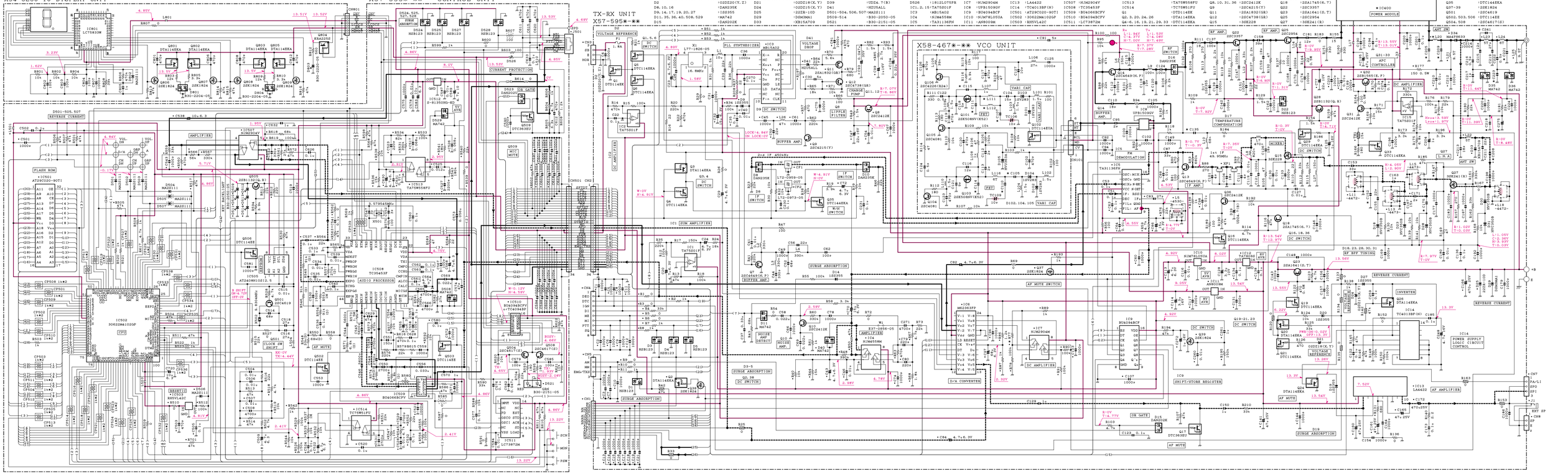
Note : Components marked with a dot (·) are parts of patterun 1.

X57-595*-**		IC400	C120	C135	C152	C175	C205	C208	C209	C218	C221	C223	C241	C275	R77	R147	L20
TK-760G(K)	0-10	M67741H-32	22p	9p	3p	8p	10p	3p	22p	0.1u	18p	1p	4p	NO	150k	1k	-4481- (6T)
TK-760G(K2)	0-12	M67741L-35	33p	12p	5p	10p	8p	4p	18p	NO	27p	2p	5p	1u	180k	1.5k	-4480- (5T)
TK-760G(M)	0-21	M67741H-32	22p	9p	3p	8p	10p	3p	22p	0.1u	18p	1p	4p	NO	150k	1k	-4481- (6T)

X58-467*-**(VCO UNIT)		C105	C107	C110	C111	C114	C115	L111	L112
TK-760G(K)(M)	0-10	15p	8p	4p	5p	6p	6p	-4547- (4T)	NO
TK-760G(K2)	0-11	27p	6p	12p	4p	7p	5p	NO	-4548-(5T)

TK-762G SCHEMATIC DIAGRAM

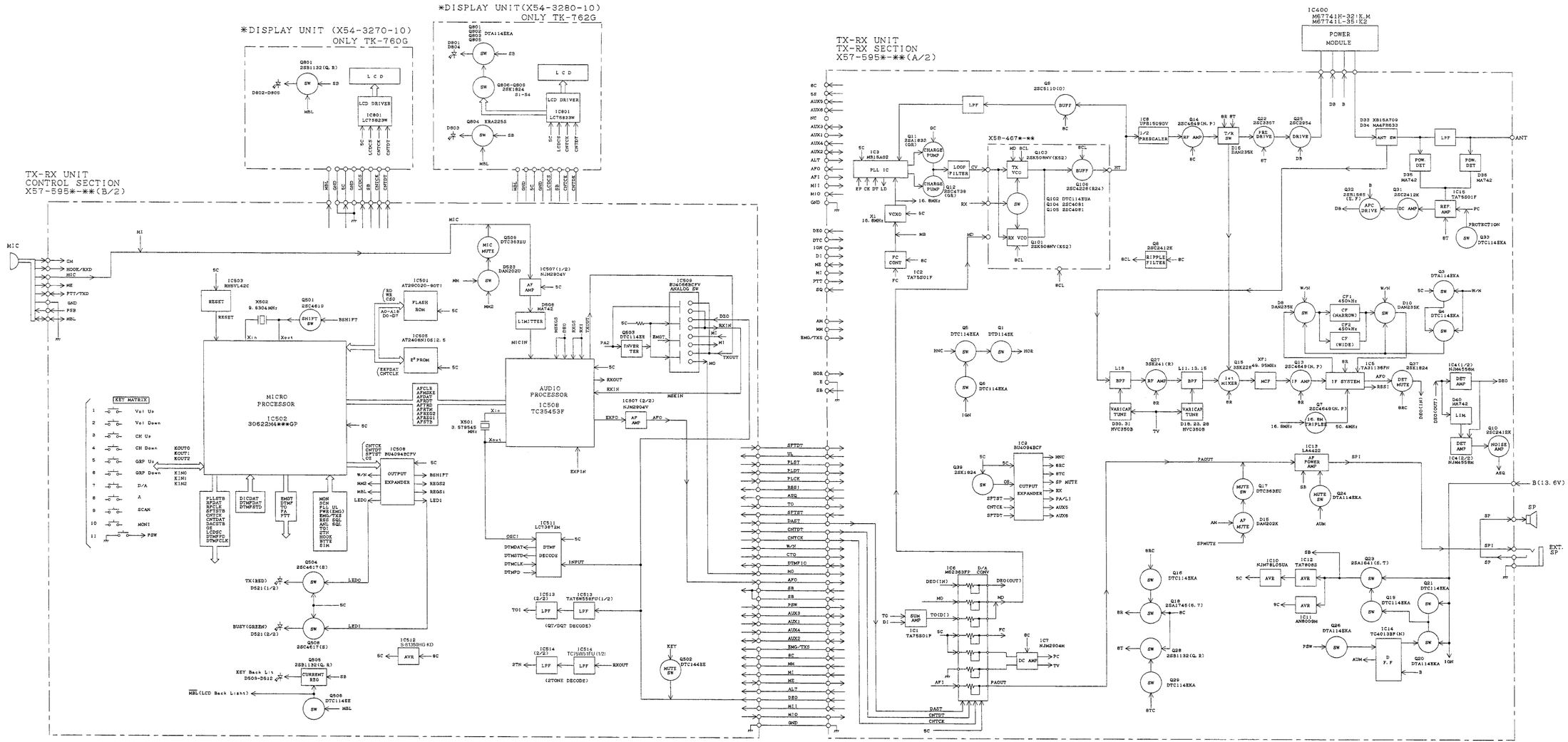
Note : Components marked with a dot (·) are parts of patterun 1.



X57-595*-**	C120	C135	C152	C175	C205	C208	C209	C218	C221	C223	C241	C276	S77	R147	L20
TK-762G(K) [0-11]	M67741M-32	22s	8s	3s	8s	10s	3s	22s	0.1s	18s	1s	4s	NO	150k	1k	-4481- (6T)
TK-762G(K2) [0-13]	M67741L-35	33s	12s	5s	10s	8s	4s	18s	NO	27s	2s	5s	1s	180k	1.5k	-4480- (5T)

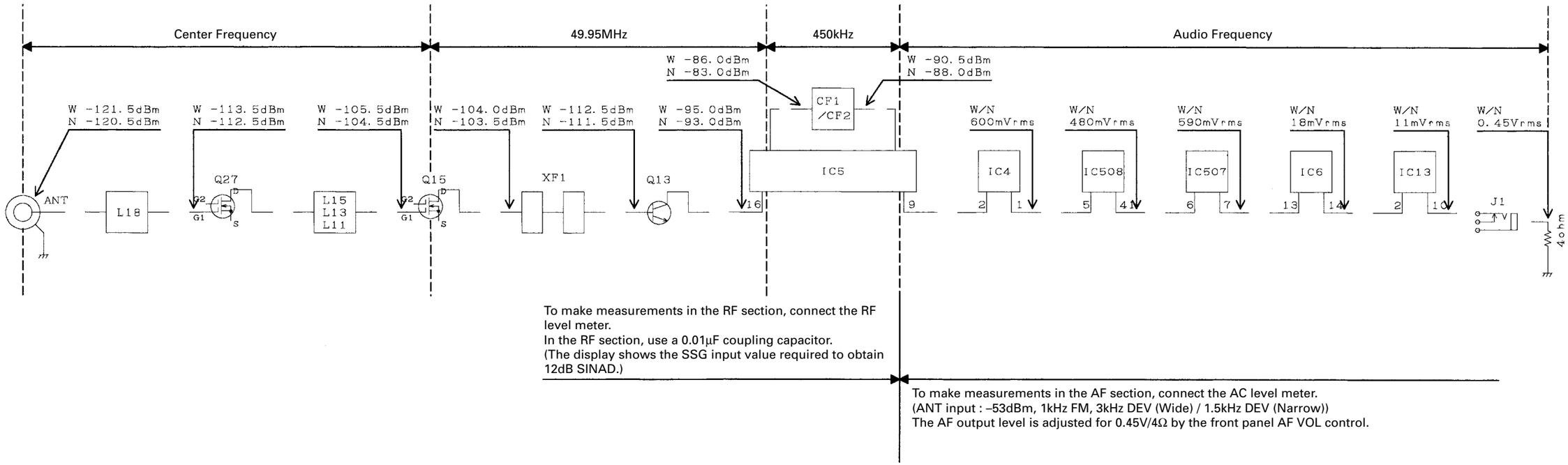
X58-467*-**(VCO UNIT)	C105	C107	C110	C111	C114	C115	L111	L112
TK-762G(K)	0-10	15s	8s	4s	5s	6s	-4547- (4T)	NO
TK-762G(K2)	0-11	27s	6s	12s	4s	7s	5s	NO	-4548- (5T)

BLOCK DIAGRAM

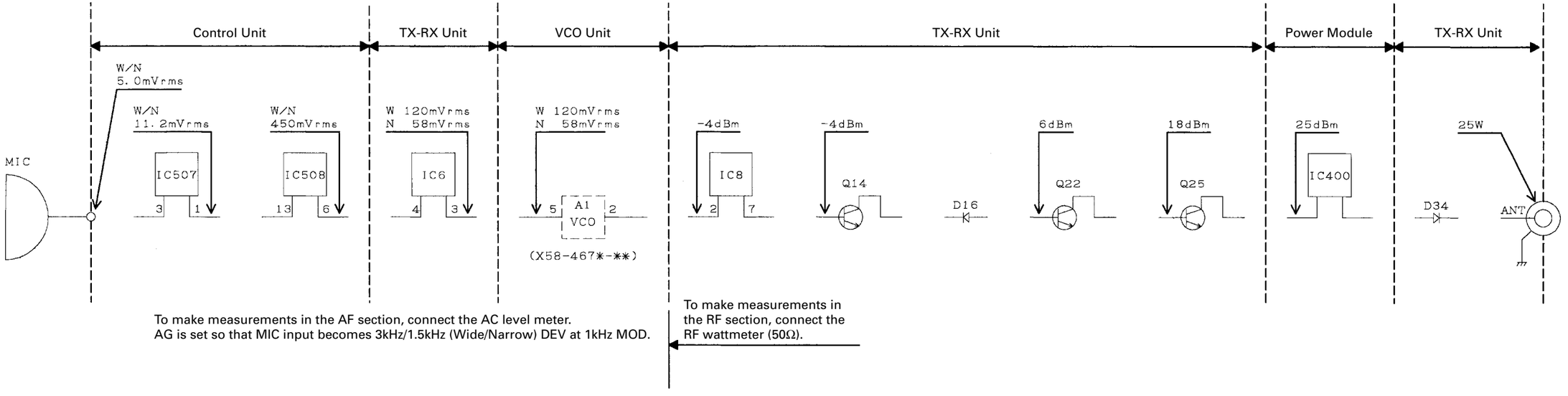


LEVEL DIAGRAM

Receiver Section



Transmitter Section



TERMINAL FUNCTION

CN1 (TX-RX Unit)

Pin No.	Name	Function
1	8C	DC 8V output.
2	5S	DC 5V output.
3	AUX5	SMRD : Reset output. *1
4	AUX6	5SC : 5S control (Cannot use). *1
5	NC	Non-connection
6	AUX3	SMCK : Clock pulse output. *1
		SQ : Squelch detect output. *2
7	AUX1	SMRQ : Ack Req input. *1
		PTT : External PTT input. *2
8	AUX4	TXD : Serial control data output. *1
9	AUX2	RXD : Serial control data input. *1
		DTC : Data channel control/External hook input.
		CHDATA : Channel control serial data input.
10	ALT	Alert tone input.
11	AFO	Receiver audio signal output.
12	AFI	Reseiver audio signal input.
13	MII	Transmit audio signal input.
14	MIO	Transmit audio signal output.
15	GND	Ground

.

CN2 (TX-RX Unit) ⟷ CN501 (Control Unit)

Pin No.	Name	Function
1	SFTDT	Serial data for IC9 (Shift register).
2	UL	Lock detect.
3	PLST	Strobe signal for IC3 (PLL IC).
4	PLDT	Serial data for IC3 (PLL IC).
5	PLCK	Clock pulse for IC3 (PLL IC).
6	RSSI	Receive signal strength indicator.
7	ASQ	Analog squelch.
8	TO	Transmit sub-tone signal output.
9	SFTST	Strobe signal for IC9 (Shift register).
10	DAST	Strobe signal for IC6 (Shift register).
11	CNTDT	Control serial data for IC6.
12	CNTCK	Control clock pulse for IC6.
13	W/N	Change signal of wide or narrow.
14	CTO	Received sub-tone signal.
15	DTMFIO	DTMF signal.
16	MO	Modulation signal.
17	AFO	Receiver audio signal.
18	SB	Switched B.
19	SB	Switched B.
20	PSW	Power switch.
21	AUX3	Optional unit control signal.
22	AUX1	Optional unit control signal.
23	AUX4	Optional unit control singal.
24	AUX2	Optional unit control signal.
25	EMG/TXS	Foot switch input signal.
26	8C	DC 8V.
27	MM	MIC mute.
28	MI	External MIC input signal.
29	ME	MIC ground.
30	ALT	Alert tone signal.
31	DEO	Receiver detector output.
32	MII	Transmit audio signal input.
33	MIO	Transmit audio signal output.
34	GND	Grond.

*1 : SmarTrunk OMNI mode
*2 : MDT mode
*3 : Emergency mode

CN3 (TX-RX Unit)

Pin No.	Name	Function
1	HOR	Horn alert/call output.
2	E	Ground.
3	SB	Switched B+, DC 13.6V output, Maximum 1A.

CN4 (TX-RX Unit)

Pin No.	Name	Function
1	DEO	Receiver detector output. Level : 0.5Vrms (Atandard modulation)
2	DTC	Data channel control/External hook input.
3	IGN	Ignition sense input.
4	DI	Data modulation input.
5	ME	External microphone ground.
6	MI	EXternal microphone input.
7	PTT	External PTT input, active low.
8	SQ	Squelch detect output.

CN5 (TX-RX Unit)

Pin No.	Name	Function
1	AM	Speaker mute input, active high.
2	MM	MIC mute input, active high
3	EMG/TXS	EMG : Foot switch input, active low. *3

CN7 (TX-RX Unit)

Pin No.	Name	Function
1	PA/LI	Relay for PA function KAP-1 control. "H" : PA/LI on, "L" : PA/LI off
2	SPO	Audio signal output to KAP-1
3	SPI	Audio signal inpt from KAP-1

CN8 (TX-RX Unit)

Pin No.	Name	Function
1	SP	Audio signal output to internal/external speaker.
2	E	Ground

J501 (Control Unit)

Pin No.	Name	Function
1	MBL	MIC backlight control.
2	PSB	13.6V.
3	GND	Ground.
4	PTT/TXD	PTT.
5	ME	MIC ground.
6	MIC	MIC signal input.
7	HOOK/RXD	Hook detection
8	CM	MIC data detection.

CN101 (PLL/VCO) ⟷ TX-RX Unit

Pin No.	Name	Function
1	CV	Control voltage input.
2	MD	Modulation input.
3	8CL	8V input.
4	E	Ground.
5	HT	Signal output.
6	RX (ST)	Switched transmit input. H : Transmit

SPECIFICATIONS

GENERAL

Frequency Range	K : 148 to 174MHz K2 : 136 to 162MHz M : 146 to 174MHz
Number of Channels	TK-762G : Maximum 8 channels TK-760G : Maximum 128 channels
Number of Groups	TK-760G : Maximum 128 groups
Channel Spacing	Wide : 25, 30kHz Narrow : 12.5, 15kHz
PLL Channel Stepping	2.5, 3.75, 5, 6.25, 7.5kHz
Operating Voltage	13.6V DC ±15%
Current Drain	Less than 0.4A on standby Less than 1.0A on receive Less than 8.0A on transmit
Operating Temperature Range	–30°C to +60°C (–22°F to +140°F)
Dimensions & Weight	140 (5-33/64) W x 40 (1-37/64) H x 145 (5-45/64) D mm (inch), 940g (2.07 lbs)
Channel Frequency Spread	K : 26MHz M : 28MHz

RECEIVER (Measurements made per EIA standard EIA/TIA-204-D)

Sensitivity (12dB SINAD)	Wide : 0.25µV Narrow : 0.33µV
Selectivity	Wide : 85dB Narrow : 75dB
Intermodulation	Wide : 75dB Narrow : 65dB
Spurious Responce	90dB
Audio Power Output	4.0W
Frequency Stability	±2.5ppm

TRANSMITTER (Measurements made per EIA standard EIA-152-C)

RF Power Output	25W
Spurious and Harmonics	70dB
Modulation	Wide : 16K0F3E Narrow : 11K0F3E
FM Noise	Wide : 50dB Narrow : 45dB
Audio Distortion	Less than 3%
Frequency Stability	±2.5ppm

TK-760G/762G

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