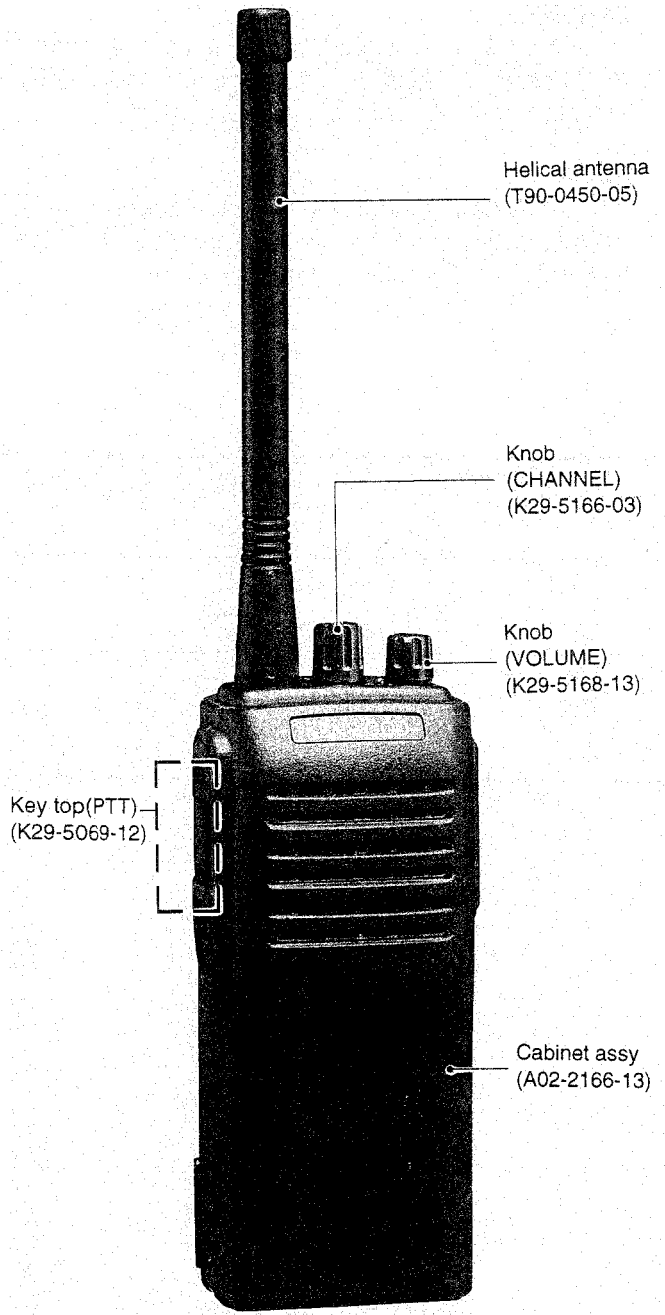
VHF FM TRANSCEIVER

TK-261/(N)

SERVICE MANUAL

KENWOOD

B51-8413-00 (B) 478



CONTENTS

CAUTION:
When using an external power connector, please use with maximum final module protection of 9V.

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

SERVICE

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

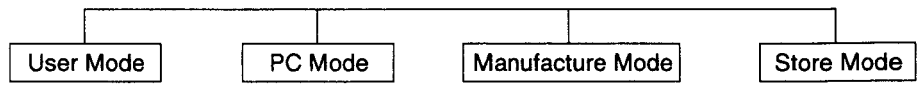
NOTE

WE CANNOT guarantee oscillator stability when using channel element manufactured by other than KENWOOD or its authorized agents.

Destination	Frequency range	Remarks	QT/DQT	Battery	Charger
E3	169.970 MHz 170.010 MHz	IF1 45.05MHz LOC 44.595MHz	○	○	○
(N)E4	149.0250 MHz 149.0375 MHz 149.0500 MHz	IF1 45.05MHz LOC 44.595MHz	○	○	○
(N)E6	154.600 MHz 154.800 MHz 154.825 MHz 154.850 MHz	IF1 45.05MHz LOC 44.595MHz	○	○	○

REALIGNMENT

1 Modes

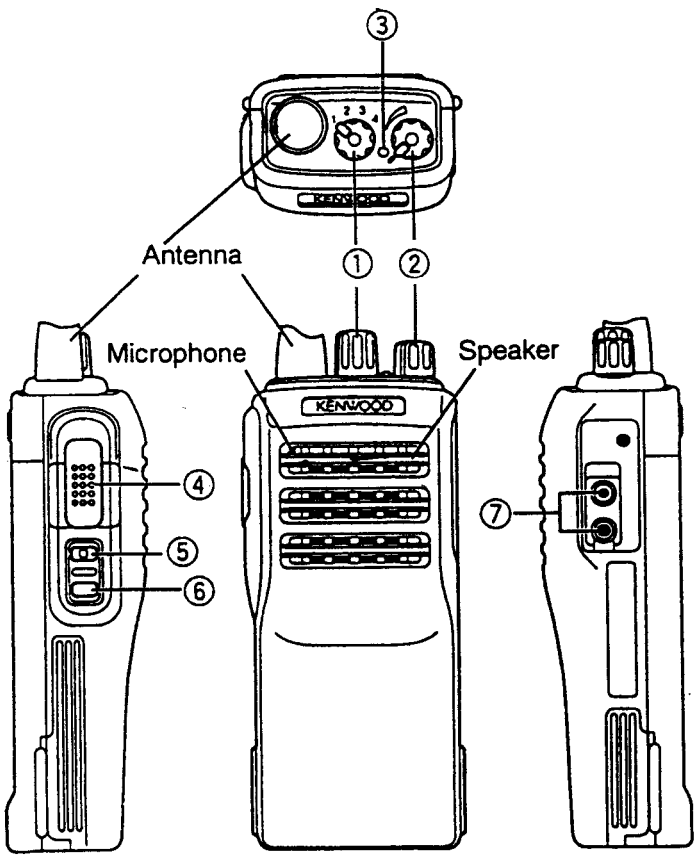


MODE	FUNCTION
User Mode	Use this mode for normal operation.
PC Mode	Use this mode, to make various settings by means of the FPU throughthe RS-232C port.
Store Mode	Use this mode for setting the channel contents.
Manufacture Mode	Use this mode, to realign the various settings through the RS-232C port during manufacture work.

2 How to enter each mode

MODE	PROCEDURE
User Mode	Power ON
PC Mode	Connect to the IBM PC compatible machine and controled by the FPU.
Store Mode	[PTT] + [LOW] + Power ON

Operation key location



The transceiver is shown with the optional KNB-14 battery pack installed.

① CHANNEL
② POWER/VOL
③ LED
④ PTT
⑤ LOW
⑥ MONI
⑦ SP/MIC JACK

Functions

KEY	FUNCTION
CH	Channel switching (4ch)
PTT	Transmit switch (push-to-talk)
MONI	Monitor or Squelch control ON/OFF
POWER/VOL	ON/OFF switch and volume control
LED	Lights red while transmitting. TX : red Flashes red while transmitting if the battery pack voltage is low. Recharge or replace the battery pack at this time. The LED lights green while receiving a station.
LOW	TX Power change

REALIGNMENT

PC MODE

Preface

The TK-261 transceiver is programmed by using a personal computer, programming interface (KPG-22) and programming software (KPG-34D).

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

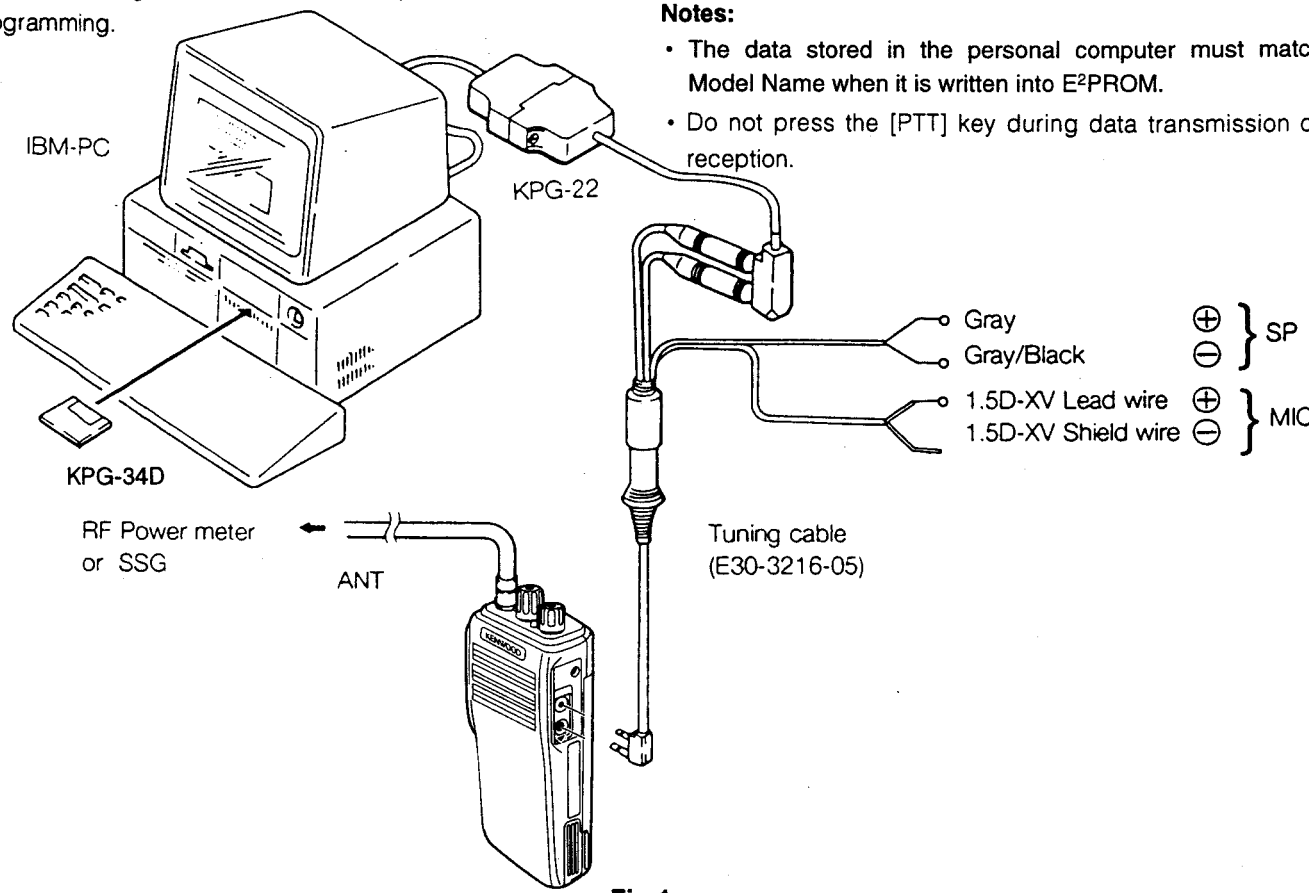


Fig 1

Connenction procedure

1. Connect the TK-261 to the personal computer with the interface cable.
2. When data transmitting from transceiver the red LED goes on.
   When data receiving to transceiver the green LED goes on.

Notes:

- The data stored in the personal computer must match Model Name when it is written into E²PROM.
- Do not press the [PTT] key during data transmission or reception.

- **KPG-22 description**

(P.C programming interface cable: Option)

The KPG-22 is required to interface the TK-261 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-22 connects the side panel jacks of the TK-261 to the computers RS-232C serial port.

- **Programming software description**

The KPG-34D Programming Disk is supplied in "5-1/4 and 3-1/2" disk format. The Software on this disk allows a user to program TK-261 radios via Programming interface cable (KPG-22).

- **Programming with IBM PC**

If data is transferred to the transceiver from an IBM PC with the KPG-34D, 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 E²PROM in RS-232C format via the SP MIC plug.

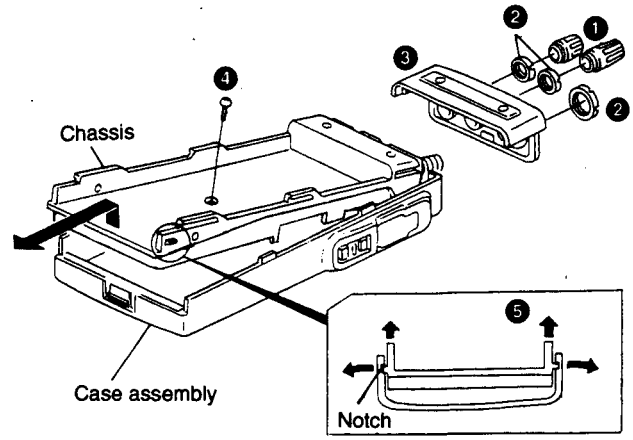
In this mode the PTT line operate as TXD and RXD data lines respectively.

(KPG-34D Instruction Manual
(Please make inquiries to KENWOOD.))

DISASSEMBLY FOR REPAIR

Separating the case assembly from the chassis

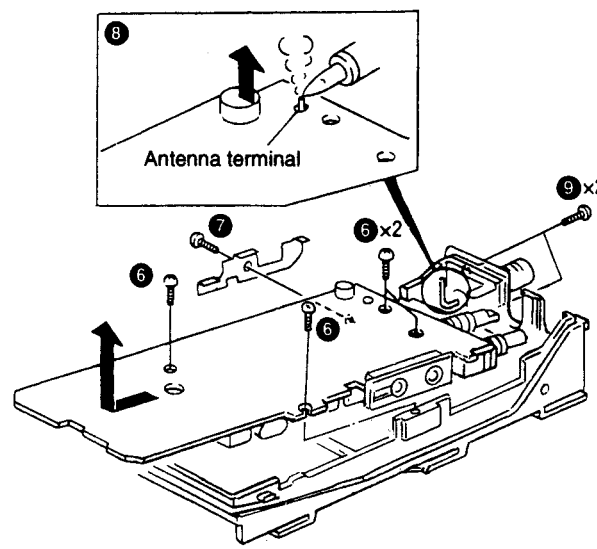
1. Remove the two knobs ❶ and three round nuts ❷, and remove the panel ❸.
2. Remove the one screw ❹.
3. Expand the right and left sides of the bottom of the case assembly, lift the chassis, and remove it from the case assembly ❺.



Separating the chassis from the unit

1. Remove the four screws ❻.
2. Remove the one screw ❼ and the fitting.
3. Remove the solder from the antenna terminal using a soldering iron and lift the unit off ❽.
4. Remove the two screws ❾ and remove the antenna connector.

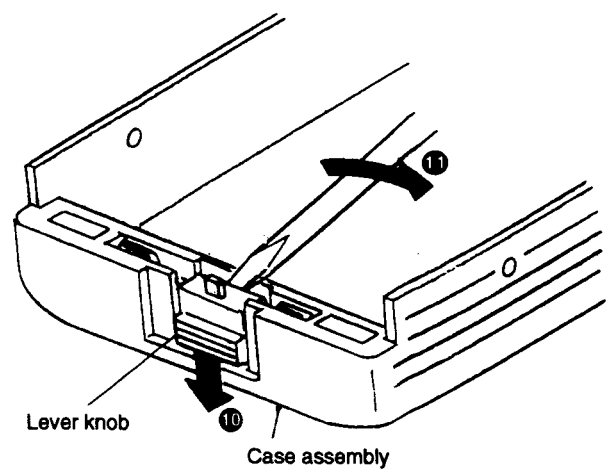
Note :When reassembling the unit in the chassis, be sure to solder the antenna terminal.



Removing the lever

1. Raise the lever on the lower case ❿, insert a small normal screwdriver into the clearance between the case and lever, open the case carefully ⓫, and lift the lever off.

Note :Do not force to separate the case from the lever.

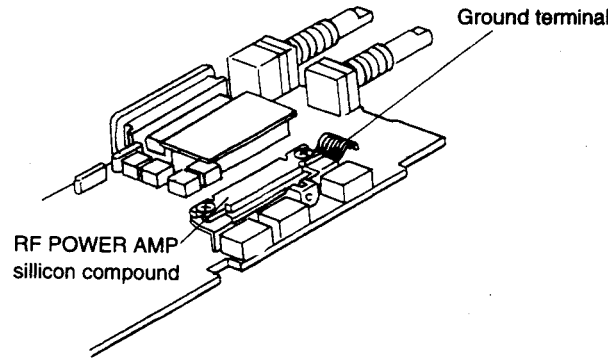


TK-261/(N)

DISASSEMBLY FOR REPAIR

Protecting the ground terminal of the RF power amplifier

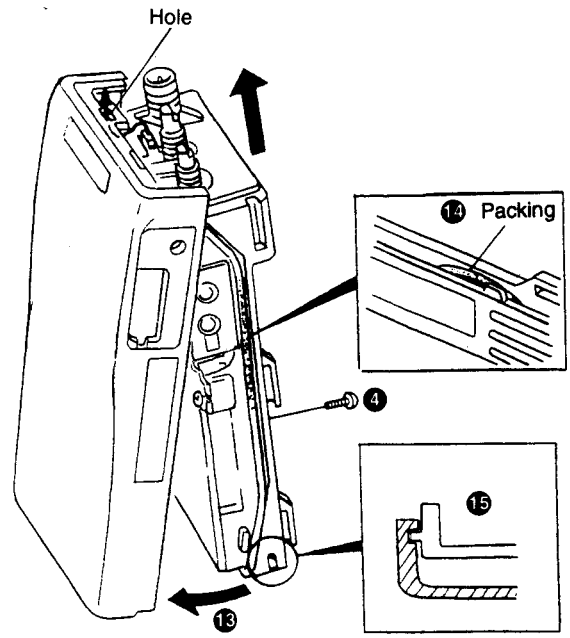
1. Take special care to prevent damage to the ground terminal of the RF power amplifier. Do not attach the silicon compound coated on the RF power amplifier to the ground terminal.



Assembling the case assembly and chassis

1. When assembling the chassis into the case assembly, insert the chassis claw into the hole in the case, and push in the chassis slowly ⑬.
2. Tighten the one screw ④.

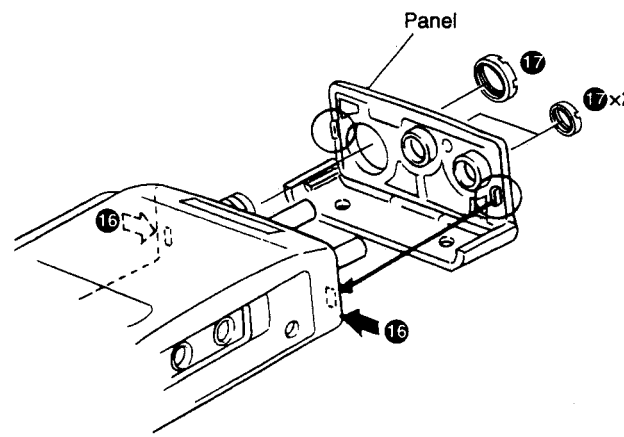
Note :After assembling the chassis, check whether the claw shown in Fig. ⑮ fits into the notch in the case assembly. After installing the chassis, verify that the packing does not protrude to the outside⑭.



Assembling the panel

1. When assembling the panel, push in the both sides of the case assembly with fingers ⑯, fit the claw on the panel into the notch in the case assembly, and tighten the round nut ⑰.

Note :If the claw does not fit into the notch in the case assembly, there will be a gap.



CIRCUIT DESCRIPTION

1. Frequency configuration

The receiver utilizes double conversion. The first IF is 45.05 MHz and the second IF is 455 KHz. The first local oscillator signal is supplied from the PLL circuit.

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

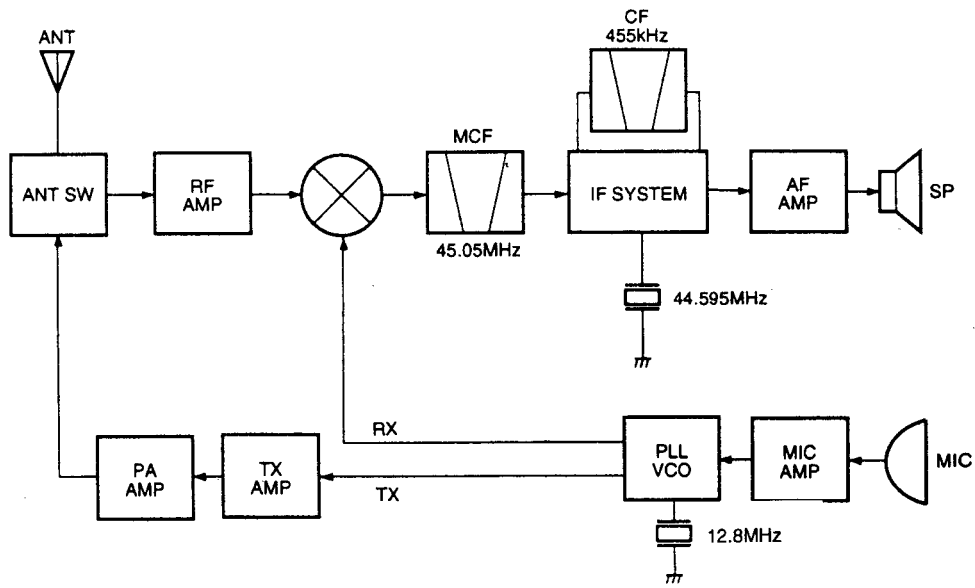


Fig 1 Frequency configuration

2. Receiver

The frequency configuration of the receiver is shown in Fig. 2.

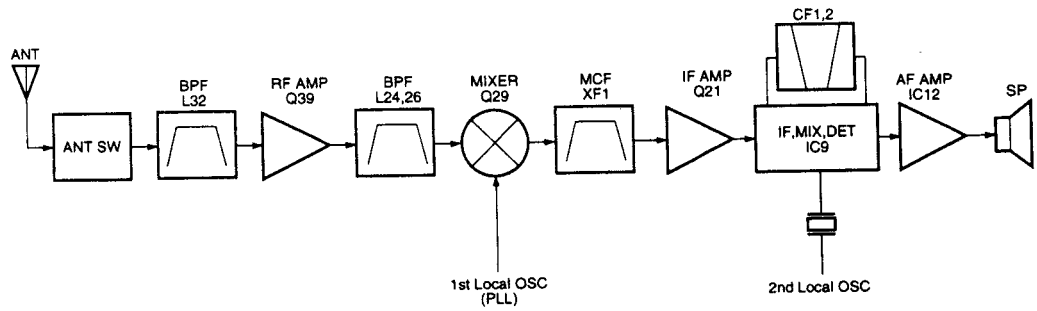


Fig 2 Receiver section cofiguration

1) Front end (RF AMP)

The signal coming from the antenna passes through the transmit/receive switching diode circuit, is passes through a BPF (L32), is amplified by the RF amplifier (Q39). The resulting signal passes through a BPF (L26 and L24) and goes to the mixer.

2) First mixer

The signal from the front end is mixed with the first local oscillator signal generated in the PLL circuit by Q29 to produce a first IF frequency of 45.05 MHz.

The resulting signal passes through the XF1 MCF to cut the adjacent spurious and provide the optimum characteristics, such as adjacent frequency selectivity.

3) IF amplifier

The signal then passes through the first IF (Q21), and is amplified and goes to the IF IC (IC9). IC9 has the functions of the second OSC, second mixer, second IF amplifier, detector, noise amplifier, and noise detector.

The signal input to the IC is mixed with the RF signal of the second OSC to produce a 455kHz second IF signal. The signal is amplified by the IF amplifier. The signal passes through the ceramic filters (CF1 and CF2) to provide the necessary selectivity.

The signal is detected by the IC and output as an AF signal.

CIRCUIT DESCRIPTION

4) AF Amplifier

The AF signal from the IF IC is amplified by IC8 (1/2) and passes through the high-pass filter (Q25 and Q28) to remove 300 Hz and lower frequencies to suppress the sub-audio signal.

The signal then passes through the de-emphasis circuit to restore the audio frequency characteristics. The signal passes through AF VOL and enters the IC12 audio power amplifier to drive the speaker. (See Fig. 3.)

5) Squelch

Part of the AF signal from the IC enters the FM IC again, and the noise component is amplified and rectified by a filter and an amplifier to produce a DC voltage corresponding to the noise level.

The DC signal from the FM IC goes to the analog port of the microprocessor (IC1). IC1 determines whether to output sounds from the speaker by checking whether the input voltage is higher or lower than the preset value.

To output sounds from the speaker, IC1 sends a high signal to the MUTE and AFCO lines and turns IC12 on through Q30, Q35, Q34, Q36, and Q40. (See Fig. 3.)

6) Receive signaling

QT/DQT

300 Hz and higher audio frequencies of the output signal from IF IC are cut by a low-pass filter (IC14). The resulting signal enters the microprocessor (IC1). IC1 determines whether the QT or DQT matches the preset value, and controls the MUTE and AFCO and the speaker output sounds according to the squelch results.

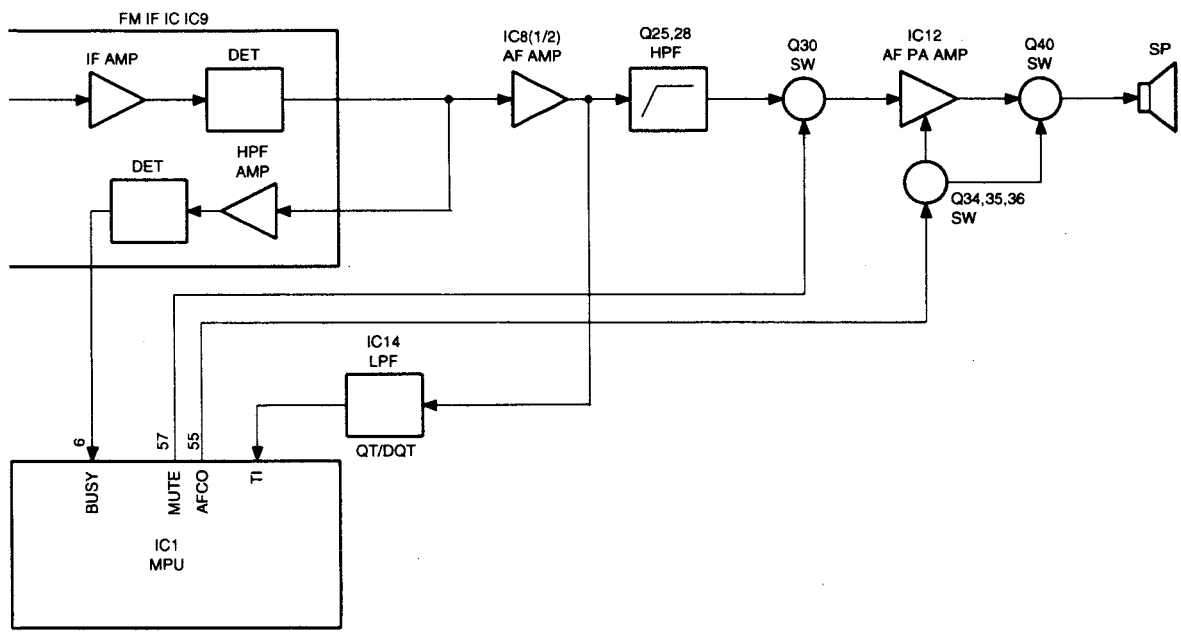


Fig 3 AF Amplifier and Squelch

CIRCUIT DESCRIPTION

3. PLL

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

1) PLL

The receiver has a VCO (Q16), and the transmitter has another VCO (Q18). Figure 1 shows the VCO frequencies. The generated signal passes through the Q20 buffer and Q14 amplifier and enters the IC6 PLL IC. IC6 has the reference oscillation divider and phase comparator functions.

The input signal is divided into a 5 or 6.25 KHz signal according to the divide ratio data from the microcomputer (IC1). This signal and the 5 or 6.25 KHz signal divided from the reference signal enter the phase comparator to produce a differential signal. The frequency control signal is output from the charge pump.

This signal passes through the passive LPF and goes to the varicap to control the VCO frequency. (See Fig. 4.)

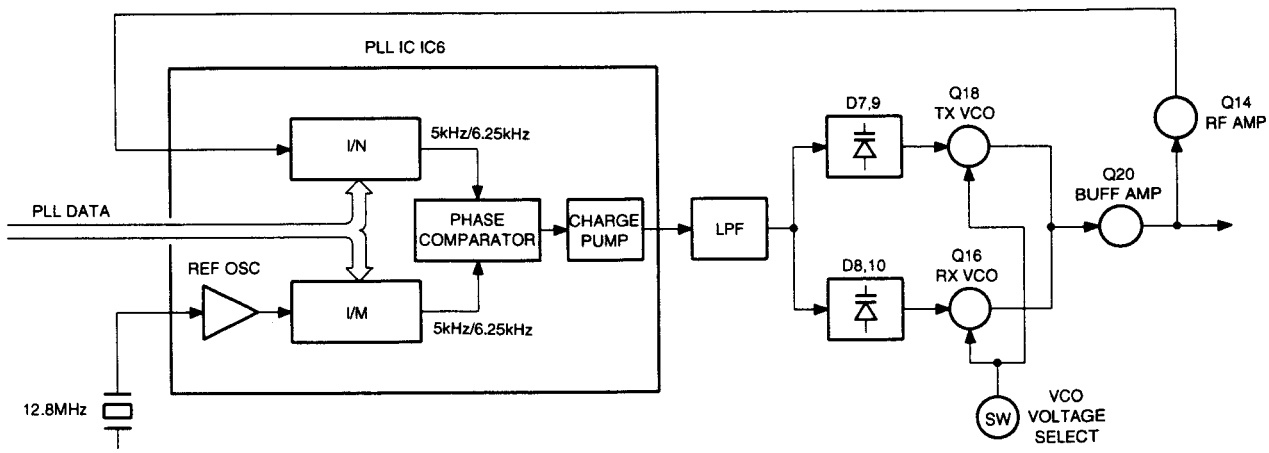


Fig 4 PLL circuit

CIRCUIT DESCRIPTION

2) Reference oscillator circuit

The reference oscillator circuit in the PLL IC produces the 12.8 MHz PLL reference frequency. To stabilize the frequency, the characteristics of the 12.8 MHz crystal oscillator are controlled and the frequency is temperature-compensated.

It is compensated by changing the DC voltage applied to D4. Changes in the ambient temperature are input to the analog port of IC1 using the TH3 thermistor. IC1 judges the temperature and outputs a voltage to the TC1, TC2, or TC3 port.

The temperature compensation value is corrected according to the differences in the characteristics of the thermistors in the TC1, TC2, and TC3 circuits. The temperature compensation is carried out when the temperature is -10°C or less. (See Fig. 5)

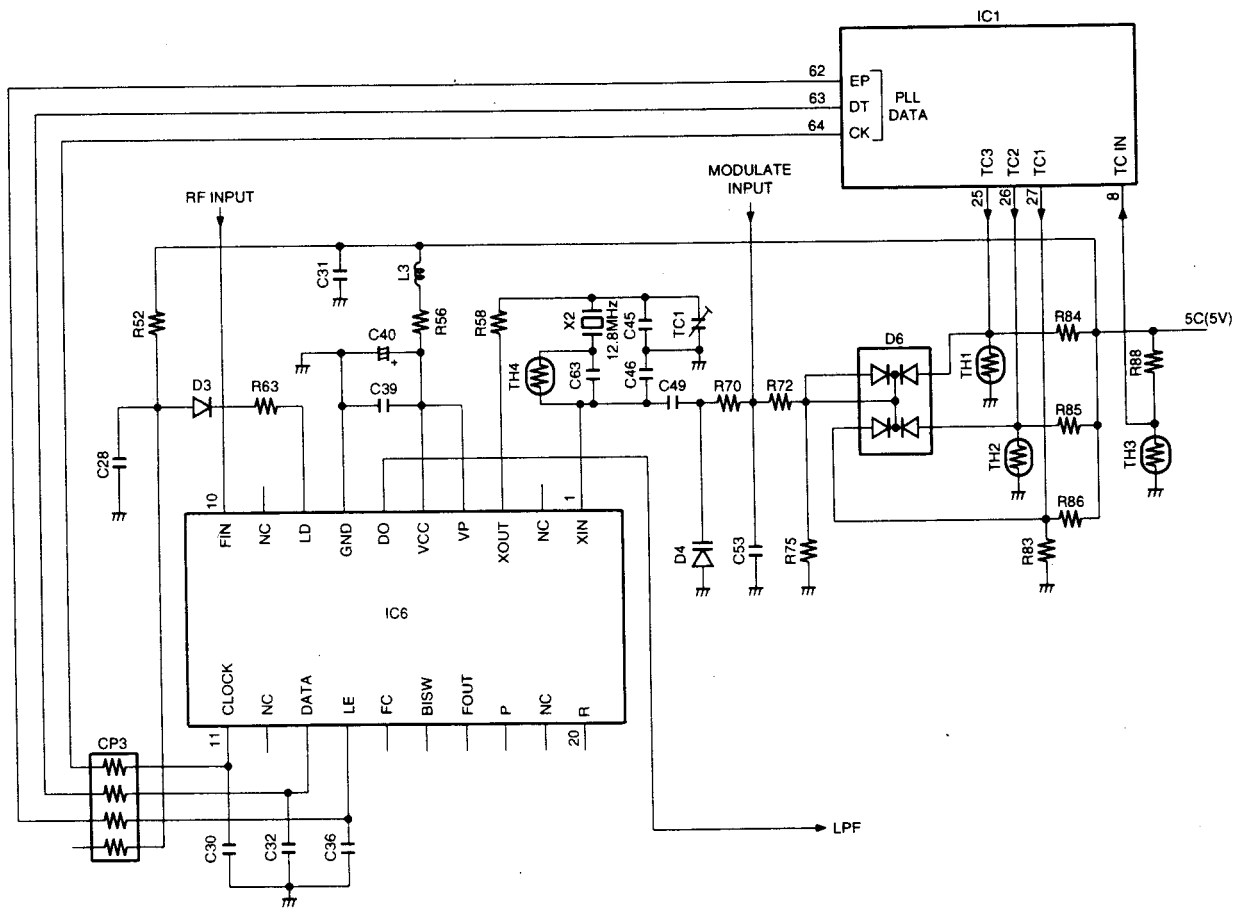


Fig 5 Reference Oscillator circuit

CIRCUIT DESCRIPTION

4. Transmitter

1) Transmit audio

The modulation signal from the microphone is amplified by IC10 (1/2), passes through a preemphasis circuit, and amplified by the other IC10 (1/2) to perform IDC operation. The signal then passes through a low-pass filter (splatter filter) (Q22 and Q17) and cuts 3 KHz and higher frequencies. The resulting signal goes to the VCO through the VCO modulation terminal for direct FM modulation. (See Fig. 6)

2) QT/DQT encoder

A necessary signal for QT/DQT encoding is generated by IC1 and FM-modulated to the PLL reference signal. Since the reference OSC does not modulate the loop characteristic frequency or higher, modulation is performed at the VCO side by adjusting the balance. (See Fig. 6)

3) VCO and RF amplifier

The modulation signal is modulated to VCO by D11. The RF signal from the PLL is amplified by Q26 and Q31 to the sufficient level to drive the power module.

4) Final module

The CMOS type power module (IC11) is used to amplify the transmission power.

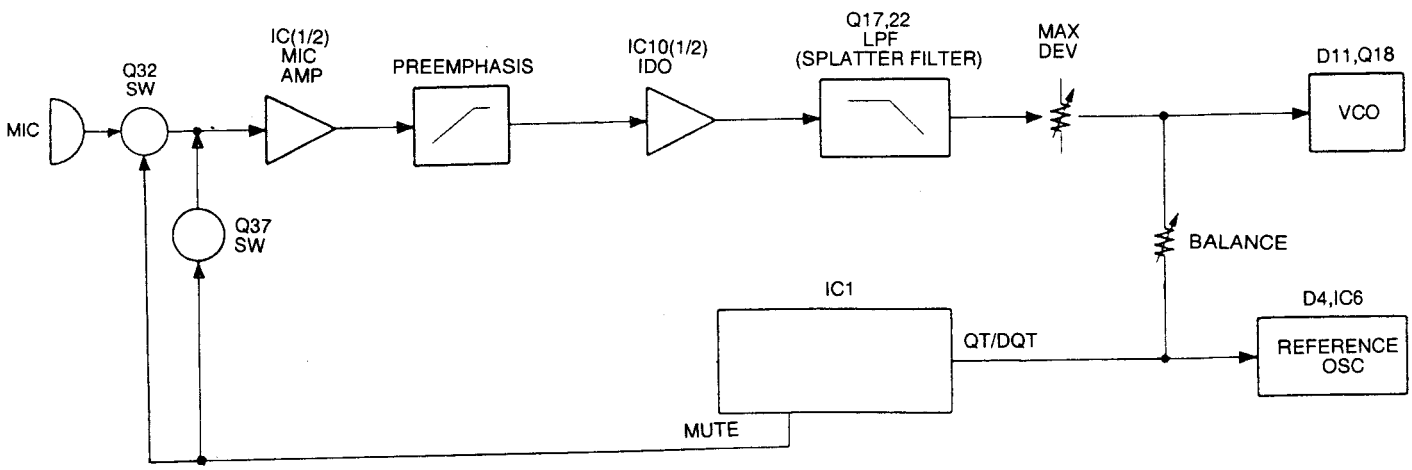


Fig 6 Transmit audio and QT/DQT

CIRCUIT DESCRIPTION

5) ANT switch and LPF

The signal from the module passes through the D22 SW and L31 LPF and is output from the ANT terminal. D22 and D23 are used to switch between transmission and reception. The chip-type LPF is used to provide required attenuation.

6) APC

The APC keeps the current to the final module constant. The current to the final module is output as a voltage by detecting the potential difference between R215, R217, and R218 by IC13 (1/2). IC13 (1/2) compares the signal with the APC voltage from IC1 and controls the voltage so that they have the same value. The output becomes the IC11 power control voltage, and the current is kept constant in this loop. The APC voltage from IC1 has the preset high or low power level. (See Fig. 7.)

5. Power supply

There are five 5V power supplies for microcomputer: 5V, 5M, 5C, 5R, and 5T. 5V for microcomputer is always output while the power is on. 5M is always output, but turns off when the power is turned off to prevent malfunction of the microcomputer.

5C is common 5V and output when SAVE is not set at OFF.

5R is 5V for reception and output during reception.

5T is 5V for transmission and output during transmission.

6. Control system

The IC1 CPU operates at 8.38MHz clocks. This oscillator has a circuit that shifts the frequency according to EEPROM data.

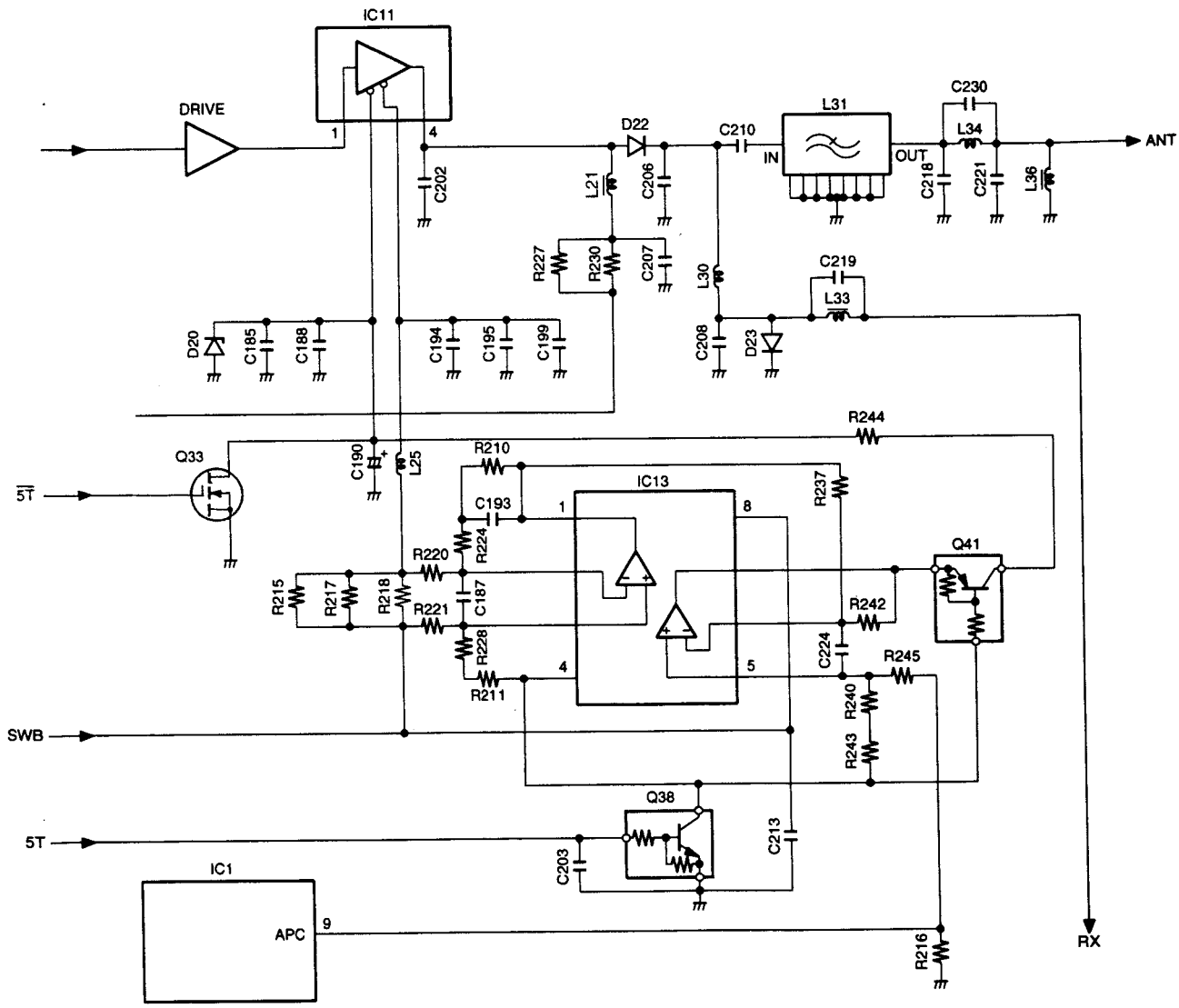
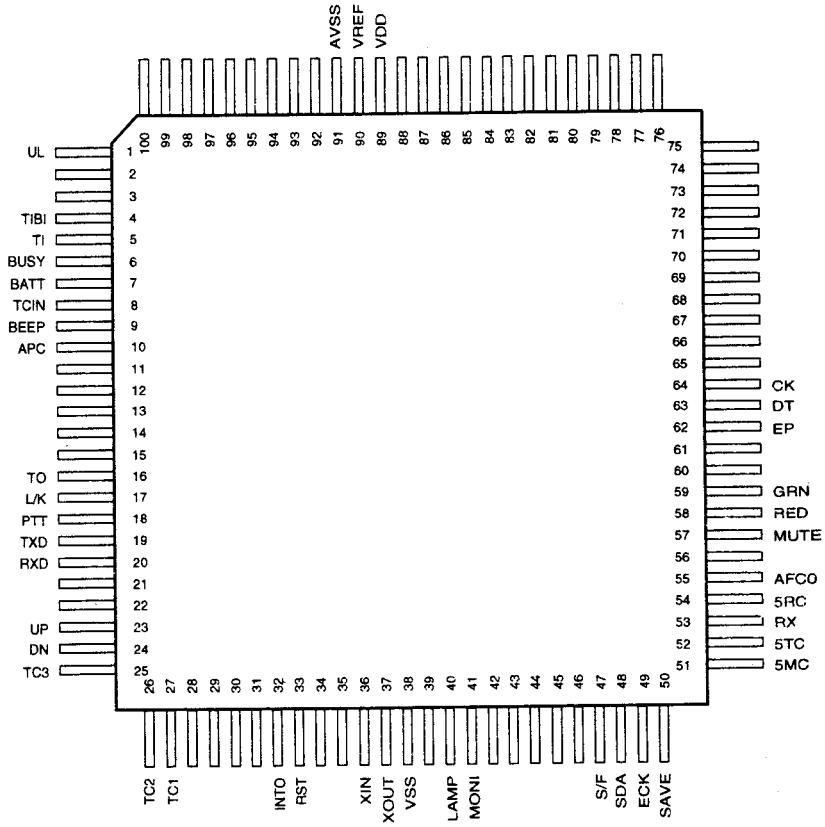


Fig 7 APC

SEMICONDUCTOR DATA

Microprocessor : M38267M8L190GP (IC1)

- **Pin connection diagam**



- **Pin function**

Pin No.	Port name	I/O	Function
1	UL	I	PLL unlock detection pin
2	Not used	I	
3	Not used	I	
4	TIBI	I	QT/DQT external circuit center point input
5	TI	I	QT / DQT signal input
6	BUSY	I	Busy input
7	BATT	I	Battery voltage detection
8	TCIN	I	TCXO voltage input
9	BEEP	O	Beep output
10	APC	O	Auto power control D/A output
11	Not used	I	
12	Not used	I	
13	Not used	I	
14	Not used	I	
15	Not used	O	
16	TO	O	QT / DQT output
17	L/K	I	
18	PTT	I	[PTT] key input Connected to RXD
19	TXD	O	RX-232C output Connected to SP/mic test (REM)
20	RXD	I	RS-232C input Connected to [PTT] line
21	Not used	I	
22	Not used	I	
23	UP	I	Encoder input
24	DN	I	Encoder input
25	TC3	O	TCXO voltage control
26	TC2	O	TCXO voltage control

SEMICONDUCTOR DATA

Pin No.	Port name	I/O	Function
27	TC1	O	TCXO voltage control
28	Not used	I	
29	Not used	I	
30	Not used	I	
31	Not used	I	
32	INTO	I	Power detection input
33	RESET	I	Reset input
34	Not used	I	
35	Not used	O	
36	XIN	I	8.388608 MHz oscillator
37	XOUT	O	
38	VSS		Ground
39	BS	I	Not used
40	LAMP	I	[LOW] key input
41	MONI	I	[MONI] key input
42	Not used	I	
43	Not used	I	
44	Not used	I	
45	Not used	I	
46	Not used	I	
47	S/F	I	
48	SDA	I/O	EEPROM data line
49	ECK	O	EEPROM clock line
50	SAVE	O	Save control H : Save OFF L : Save ON
51	5MC	O	Control of power supply (5M) for other than microcomputer and EEPROM L : Power supply ON
52	5TC	O	Transmission power supply (5T) control H : Power supply ON
53	RX	O	TX/RX VCO select H : RX L : TX
54	5RC	O	Reception power supply control L : ON H : OFF
55	AFC0	O	AF amp power supply H : ON L : OFF
56	Not used	O	
57	MUTE	O	Mute control H : Mic mute L : AF mute
58	RED	O	Red LED control H : Lit L : OFF
59	GRN	O	Green LED control H : Lit L : OFF
60	Not used	O	
61	Not used	O	
62	EP	O	PLL IC enabled H : latches
63	DT	O	Common data output
64	CK	O	Common clock output
65 ~ 88	Not used	O	
89	VDD		Microcomputer power supply, 5V input
90	VREF		A/D conversion reference voltage; connected to Vcc
91	AVSS		A/D converter power supply; connected to Vss
92	Not used	O	
93	Not used	O	
94	Not used	O	
95	Not used	O	
96	Not used	O	
97	Not used	O	
98	Not used	I	
99	Not used	I	
100	Not used	I	

DESCRIPTION OF COMPONENTS

TX-RX UNIT (X57-5522-XX)

Ref. No.	Parts No.	Description
IC1	M38267M8L190GP	IC, MICRO PROCESSOR
IC2	PST9140NR	IC, RESET SWITCH
IC4	AT2402N10SI2.5	IC, EEPROM
IC5	RN5VL45C	IC, VOLTAGE DETECT
IC6	LMX1511TMX	IC, PHASE LOCKED LOOP SYSTEM
IC7	S-81350HG-KD	IC, VOLTAGE REGURATER
IC8	TA75W01FU	IC, AUDIO AMP ACTIVE FILTER
IC9	TA31136FN	IC, IF SYSTEM
IC10	NJM2100V	IC, AUDIO AMP
IC11	PF0314-03	IC, RF POWER AMP
IC12	TA7368F	IC, AUDIO POWER AMP
IC13	NJM2904V	IC, APC
IC14	TA75W01FU	IC, ACTIVE FILTER
Q2, Q3	DTC114EE	TRANSISTOR, DC SWITCH
Q5	UMG3N	TRANSISTOR, DC SWITCH
Q6	UPA572T	FET, DC SWITCH
Q7	DTA114YE	TRANSISTOR, DC SWITCH
Q8	MP5A02	TRANSISTOR, DC SWITCH
Q9	UMG3N	TRANSISTOR, DC SWITCH
Q12	DTA114YE	TRANSISTOR, DC SWITCH
Q14	2SC4619	TRANSISTOR, RF AMP
Q15	DTA114EE	TRANSISTOR, AF MUTE SWITCH
Q16	2SK1875(V)	FET, VCO RX
Q17	2SC4617(S)	TRANSISTOR, ACTIVE FILTER
Q18	2SK1875(V)	FET, VCO TX
Q19	2SJ243	FET, DC SWITCH
Q20	2SC5108(Y)	TRANSISTOR, RF BUFFER AMP
Q21	2SC5108(Y)	TRANSISTOR, IF AMP
Q22	2SC4617(S)	TRANSISTOR, ACTIVE FILTER
Q23	UMC4	TRANSISTOR, DC SWITCH
Q24	2SC4617(S)	TRANSISTOR, RIPPLE FILTER
Q25	2SC4617(S)	TRANSISTOR, ACTIVE FILTER
Q26	2SC5108(Y)	TRANSISTOR, RF AMP
Q28	2SC4617(S)	TRASISTOR, ACTIVE FILTER
Q29	SGM2014M	FET, MIXER
Q30	2SK1824	FET, AUDIO MUTE SWITCH
Q31	2SC4988	TRANSISTOR, TX DRIVE
Q32	DTA144EE	TRANSISTOR, AUDIO MUTE SWITCH
Q33	2SK1824	TRANSISTOR, DC SWITCH
Q34	2SA1362(GR)	TRANSISTOR, DC SWITCH
Q35, Q36	DTC144EE	TRANSISTOR, DC SWITCH
Q37	2SC4919	TRANSISTOR, AUDIO MUTE SWITCH
Q38	DTC144EE	TRANSISTOR, DC SWITCH
Q39	2SK1215(E)	FET, RF AMP
Q40	2SK1588	FET, AUDIO MUTE SWITCH
Q41	DTA144EE	TRANSISTOR, DC SWITCH
D2	B30-2019-05	LED, TX BUSY LED
D3	MA2S111	DIODE, UNLOCK DETECT
D4	1SV269	VARIABLE CAPACITANCE DIODE, FREQUENCY CON
D5	1SS373	DIODE, REVERSE-FLOW PREVENTION
D6	UMN1N	DIODE, DC CUT

DESCRIPTION OF COMPONENTS

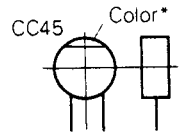
Ref. No.	Parts No.	Description
D7 ~ D10	1SV283	VARIABLE CAPACITANCE DIODE, FREQUENCY CON
D11	1SV214	VARIABLE CAPACITANCE DIODE, TX MODULATION
D14	MA2S111	DIODE, CUEERNT STEERING
D15	DA221	DIODE, LIMITTER
D16, D17	MA2S077	DIODE, RF SWITCH
D19	1SS372	DIODE, AGC DETECT
D20	MA8062	ZENER DIODE, VOLTAGE PROTECTION
D21	DAN222	DIODE, REVERCE PROTECTION
D22	HVU131	DIODE, ANT SWITCH
D23	MA2S077	DIODE, ANT SWITCH
D24	1SR154-400	DIODE, REVERCE PROTECTION

PARTS LIST

CAPACITORS

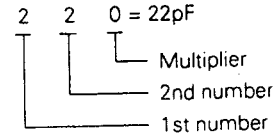
CC 45 TH 1H 220 J
1 2 3 4 5 6

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

RESISTORS

• Chip resistor (Carbon)

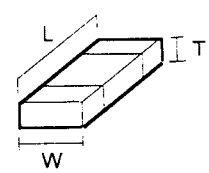
(EX) R K 7 3 E B 2 B 0 0 0 J
1 2 3 4 5 6 7
(Chip) (B,F)

• 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
2 = Shape
3 = Dimension
4 = Temp. coefficient
5 = Rating wattage
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

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-261/(N)

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-261/(N)
TX-RX UNIT (X57-5522-XX)

Ref. No.	Adrress	New parts	Parts No.	Description	Destination
TK-261/(N)					
1	1A	*	A02-2166-13	CABINET ASSY	
2	3A		A10-1378-01	CHASSIS	
3	2B		A62-0428-14	PANEL	
4	1A		B01-0682-02	ESCUTCHEON (PTT)	
5	1B		B09-0351-03	CAP (SP/MIC JACKS) ACSY	
6	3B		B11-1142-14	REFLECTOR	
7	3A		B42-5650-04	S/No LABEL	
8	3A		B42-5656-04	STICKER	
9	1A	*	B43-1112-04	BADGE (KENWOOD)	
10	-		B46-0337-03	WARRNTY CARD ACSY	E3,NE4
11	-	*	B62-0772-10	INSTRUCTION MANUAL ACSY	NE6
11	-	*	B62-0855-00	INSTRUCTION MANUAL ACSY	NE4
11	-	*	B62-0859-00	INSTRUCTION MANUAL ACSY	E3
12	3A	*	B72-1335-04	MODEL NAME PLATE (F1)	NE4
12	3A	*	B72-1335-04	MODEL NAME PLATE (F1)	NE6
12	3A	*	B72-1329-04	MODEL NAME PLATE	E3
13	3B		E04-0198-05	RF COAXIAL CONNECTOR (ANT)	
14	3A		E23-1006-04	RELAY TERMINAL (BATT -)	
15	2B		E37-0575-15	LEAD WIRE WITH CONNECTOR (SP)	
16	2A		F20-1167-04	INSULATING SHEET	
17	2A		F20-1170-04	INSULATING SHEET	
18	1A		G01-0881-04	COIL SPRING (RELEASE)	
19	2B		G09-0418-05	KNOB SPRING	
20	3A		G11-0769-04	SHEET (CHASSIS)	
21	3B		G11-0770-04	SHEET (CHASSIS)	
22	3A		G11-0775-04	SHEET (CHASSIS VCO)	
23	1A		G13-1584-04	CUSHION (CABINET)	
24	3B		G53-0808-02	PACKING (TOP)	
25	2B		G53-0791-03	PACKING (PLUG)	
26	3A		G53-0792-04	PACKING	
27	-		H12-1487-02	PACKING FIXTURE	
28	-		H12-3015-03	PACKING FIXTURE	
29	-		H25-0085-04	BAG (BODY)	
30	-		H25-2012-04	BAG (ACSY)	
31	-	*	H52-1059-02	ITEM CARTON CASE	
32	1A		J19-1572-04	HOLDER (RELEASE)	
33	1B		J21-4493-04	HARDWARE FIXTURE (SP/MIC) ACSY	
34	3A		J21-8307-14	HARDWARE FIXTURE (CHASSIS)	
35	3B		J29-0624-03	BELT HOOK ACSY	
-	-		J30-1217-14	SPACER (CASE)	
37	1A		J39-0609-04	SPACER (SP/MIC)	
38	1A		K29-5068-03	LEVER KNOB (RELEASE)	
39	1A		K29-5069-12	KEY TOP (PTT)	
40	2B		K29-5168-13	KNOB (VOL)	
41	2B		K29-5166-03	KNOB (CH)	
A	3B		N30-2604-46	PAN HEAD SCREW (ANT)	
B	2B		N14-0567-04	CIRCULAR NUT (ANT)	
C	2B		N14-0569-04	CIRCULAR NUT (VOL/CH)	
D	3A		N32-2005-46	PAN HEAD TAPTINE SCREW CHASSIS	
E	3A		N35-2610-45	BINDING HEAD MACHINE SCREW	
F	3A		N79-2035-46	SCREW (- BATT TERMINAL)	
G	2A		N83-2005-46	BINDING HEAD TAPTITE SCREW	
H	1B,3B		N99-0396-05	SCREW SET ACSY	
SP	2A		T07-0327-05	SPEAKER	
ANT	-		T90-0450-05	HELICAL ANTENNA ACSY	
42	-		W08-0480-05	AC ADAPTER ACSY	
43	-		W08-0488-05	CHARGER (KSC-15) ACSY	
44	-		W09-0882-05	BATTERY ASSY (KNB-14) ACSY	

Ref. No.	Adrress	New parts	Parts No.	Description	Destination
TX-RX UNIT (X57-5522-XX)-70:(N)E4,-71:E3,-72:(N)E6					
C1,2			CK73GB1C273K	CHIP C 0.027UF K	
C4,5			CK73GB1H103K	CHIP C 0.010UF K	
C6			CK73GB1H102K	CHIP C 1000PF K	
C8			CC73GCH1H100D	CHIP C 10PF D	
C12			CK73GB1H102K	CHIP C 1000PF K	
C16			CC73GCH1H100D	CHIP C 10PF D	
C18			CK73GB1C104K	CHIP C 0.10UF K	
C19,20			CK73GB1H102K	CHIP C 1000PF K	
C25			CK73GB1H102K	CHIP C 1000PF K	
C27			CK73GB1H102K	CHIP C 1000PF K	
C28			CK73GB1C104K	CHIP C 0.10UF K	
C30			CC73GCH1H101J	CHIP C 100PF J	
C31			CK73GB1H102K	CHIP C 1000PF K	
C32			CC73GCH1H101J	CHIP C 100PF J	
C33			CK73GB1H102K	CHIP C 1000PF K	
C34			CK73GB1H103K	CHIP C 0.010UF K	
C35			CK73GB1H102K	CHIP C 1000PF K	
C36			CC73GCH1H101J	CHIP C 100PF J	
C37			CK73FB0J105K	CHIP C 1.0UF K	
C38			C92-0662-05	CHIP-TAN 15UF 6.3WV	
C39			CK73GB1C104K	CHIP C 0.10UF K	
C40			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C41			CK73GB1H102K	CHIP C 1000PF K	
C42			C92-0662-05	CHIP-TAN 15UF 6.3WV	
C43,44			CK73GB1H102K	CHIP C 1000PF K	
C45			CC73GCH1H130J	CHIP C 13PF J	
C46			CC73GCH1H200J	CHIP C 20PF J	
C47,48			CK73GB1H102K	CHIP C 1000PF K	
C49			CC73GCH1H101J	CHIP C 100PF J	
C50			C92-0576-05	CHIP-TAN 1.0UF 6.3WV	
C51			CK73GB1H102K	CHIP C 1000PF K	
C52			CK73FB0J105K	CHIP C 1.0UF K	
C53			CK73GB1H102K	CHIP C 1000PF K	
C55			CK73EF1C105Z	CHIP C 1.0UF Z	
C56			CK73FB1C224K	CHIP C 0.22UF K	
C57			CK73GB1H392K	CHIP C 3900PF K	
C58			CK73GB1H102K	CHIP C 1000PF K	
C59			C92-0659-05	CHIP-TAN 10UF 6.3WV	
C62			CK73GB1C333K	CHIP C 0.033UF K	
C63			CC73GCH1H181J	CHIP C 180PF J	
C64			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C65,66			C92-0653-05	CHIP-TAN 0.68UF 10WV	
C67			CK73GB1H471K	CHIP C 470PF K	

PARTS LIST

TX-RX UNIT (X57-5522-XX)

Ref. No.	Adrress	New parts	Parts No.	Description	Destination
C68			CK73GB1H681K	CHIP C 680PF K	
C69,70			CK73GB1H102K	CHIP C 1000PF K	
C71			CC73GCH1H821J	CHIP C 82PF J	
C74			CK73GB1H472K	CHIP C 4700PF K	
C76			CK73GB1H182K	CHIP C 1800PF K	
C77			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C78,79			CK73GB1H102K	CHIP C 1000PF K	
C80			CC73GCH1H391J	CHIP C 390PF J	
C81			CK73GB1E223K	CHIP C 0.022UF K	
C82			CK73GB1H103K	CHIP C 0.010UF K	
C83			C92-0576-05	CHIP-TAN 1.0UF 6.3WV	
C86			CC73GCH1H391J	CHIP C 390PF J	
C88			CK73GB1H103K	CHIP C 0.010UF K	
C89			CK73GB1H471K	CHIP C 470PF K	
C91			CC73GCH1HR75B	CHIP C 0.75PF B	
C92			CK73GB1C104K	CHIP C 0.10UF K	
C93			CC73GCH1H221J	CHIP C 220PF J	
C94			CC73GCH1H820J	CHIP C 82PF J	
C95			CK73GB1C104K	CHIP C 0.10UF K	
C96			CC73GCH1H470J	CHIP C 47PF J	
C99			CC73GCH1H050C	CHIP C 5.0PF C	
C100			CC73GCH1H150J	CHIP C 15PF J	
C101			C92-0587-05	CHIP-TAN 2.2UF 4WV	
C102			CK73FB1E104K	CHIP C 0.10UF K	
C103			CK73GB1H103K	CHIP C 0.010UF K	
C104			CC73GCH1H090D	CHIP C 9.0PF D	
C105			CC73GCH1H200J	CHIP C 20PF J	
C106			CK73GB1H103K	CHIP C 0.010UF K	
C108,109			CK73GB1H102K	CHIP C 1000PF K	
C110			CC73GCH1H270J	CHIP C 27PF J	
C111			CK73GB1H102K	CHIP C 1000PF K	
C112			CK73GB1H471K	CHIP C 470PF K	
C113			CK73GB1H103K	CHIP C 0.010UF K	
C114			CC73GCH1H150J	CHIP C 15PF J	
C115			CK73GB1H103K	CHIP C 0.010UF K	
C116,117			CK73GB1C104K	CHIP C 0.10UF K	
C118			CK73GB1H332K	CHIP C 3300PF K	
C119			CK73GB1H471K	CHIP C 470PF K	
C120			CC73GCH1H0R5B	CHIP C 0.5PF B	
C121			CC73GCH1H150J	CHIP C 15PF J	
C122			CK73GB1C104K	CHIP C 0.10UF K	
C123			CC73GCH1H0R5B	CHIP C 0.5PF B	
C125			CK73GB1C104K	CHIP C 0.10UF K	
C126			CK73GB1H102K	CHIP C 1000PF K	
C127			CK73GB1C473K	CHIP C 0.047UF K	
C128			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C129			CK73GB1H102K	CHIP C 1000PF K	
C130			CK73GB1C104K	CHIP C 0.10UF K	
C132			CK73GB1C333J	CHIP C 0.033UF J	
C133			CC73GCH1H330J	CHIP C 33PF J	
C134			CK73GB1C273J	CHIP C 0.027UF J	
C135			CC73GCH1H100D	CHIP C 10PF D	
C136			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C137			CK73GB1H272K	CHIP C 2700PF K	
C138			CC73GCH1H150J	CHIP C 15PF J	
C139			CK73GB1H561K	CHIP C 560PF K	
C140			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C141			CK73GB1C273K	CHIP C 0.027UF K	
C142,143			CK73GB1H102K	CHIP C 1000PF K	

Ref. No.	Adrress	New parts	Parts No.	Description	Destinatio
C144			CC73GCH1H120J	CHIP C 12PF J	E3
C144			CC73GCH1H240J	CHIP C 24PF J	NE4
C144			CC73GCH1H240J	CHIP C 24PF J	NE6
C145			CK73GB1C333J	CHIP C 0.033UF J	
C146			CC73GCH1H120J	CHIP C 12PF J	NE4
C146			CC73GCH1H120J	CHIP C 12PF J	NE6
C146			CC73GCH1H050B	CHIP C 5.0PF B	E3
C147			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C148			CK73GB1C473K	CHIP C 0.047UF K	
C149			CK73GB1H102K	CHIP C 1000PF K	
C150			CK73GB1C473K	CHIP C 0.047UF K	
C151			CK73GB1C333K	CHIP C 0.033UF K	
C152			CK73GB1H103K	CHIP C 0.010UF K	
C153,154			CK73GB1H102K	CHIP C 1000PF K	
C155			CK73GB1H103K	CHIP C 0.010UF K	
C156			CC73GCH1H220J	CHIP C 22PF J	
C157,158			CK73GB1H102K	CHIP C 1000PF K	
C159,160			CK73GB1H103K	CHIP C 0.010UF K	
C161			CC73GCH1H150J	CHIP C 15PF J	
C162			CC73GCH1H100D	CHIP C 10PF D	
C163			CK73GB1C473K	CHIP C 0.047UF K	
C164,165			CK73GB1C104K	CHIP C 0.10UF K	
C166			CK73GB1H102K	CHIP C 1000PF K	
C167			CK73GB1E223K	CHIP C 0.022UF K	
C168			CK73GB1H102K	CHIP C 1000PF K	
C169			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C170			CC73GCH1H020C	CHIP C 2.0PF C	
C171			CK73GB1H102K	CHIP C 1000PF K	
C172			CK73GB1H222K	CHIP C 2200PF K	
C173			CK73GB1C104K	CHIP C 0.10UF K	
C174			CK73GB1H102K	CHIP C 1000PF K	
C175			CK73GB1H682K	CHIP C 6800PF K	
C176			CK73GB1H102K	CHIP C 1000PF K	
C177			CK73GB1E223K	CHIP C 0.022UF K	
C178			CK73GB1C473K	CHIP C 0.047UF K	
C179			CK73GB1H102K	CHIP C 1000PF K	
C180			C92-0576-05	CHIP-TAN 1.0UF 6.3WV	
C181			CK73GB1C393K	CHIP C 0.039UF K	
C182			CC73GCH1H180J	CHIP C 18PF J	
C183			CK73FB1C474K	CHIP C 0.47UF K	
C184-186			CK73GB1H102K	CHIP C 1000PF K	
C187			CK73GB1H471K	CHIP C 470PF K	
C188			CK73FB1C474K	CHIP C 0.47UF K	
C189			CC73GCH1H040C	CHIP C 4.0PF C	NE4
C189			CC73GCH1H040C	CHIP C 4.0PF C	NE6
C189			CC73GCH1H010B	CHIP C 1.0PF B	E3
C190			C92-0565-05	CHIP-TAN 6.8UF 10WV	
C191			CK73GB1H332K	CHIP C 3300PF K	
C192			CC73GCH1H010B	CHIP C 1.0PF B	
C193			CC73GCH1H101J	CHIP C 100PF J	
C194			CK73GB1H102K	CHIP C 1000PF K	
C195			CK73GB1H103K	CHIP C 0.010UF K	
C196			CK73GB1H102K	CHIP C 1000PF K	
C197,198			CK73GB1C104K	CHIP C 0.10UF K	
C199			CK73FB1C474K	CHIP C 0.47UF K	
C200			CK73GB1H102K	CHIP C 1000PF K	
C201			CC73GCH1H101J	CHIP C 100PF J	
C202			CC73GCH1H070D	CHIP C 7.0PF D	
C203			CK73GB1H102K	CHIP C 1000PF K	

TK-261 : **E3**
TK-261/(N) : **NE4, NE6**

TK-261/(N)

PARTS LIST

TX-RX UNIT (X57-5522-XX)

Ref. No.	Adrress	New parts	Parts No.	Description	Destination
C204			CC73GCH1H030B	CHIP C 3.0PF B	E3
C204		*	CC73GCH1H060B	CHIP C 6.0PF B	NE4
C204		*	CC73GCH1H060B	CHIP C 6.0PF B	NE6
C205			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C206			CC73GCH1H030C	CHIP C 3.0PF C	
C207			CC73GCH1H330J	CHIP C 33PF J	
C208			CC73GCH1H101J	CHIP C 100PF J	NE4
C208			CC73GCH1H101J	CHIP C 100PF J	NE6
C208			CC73GCH1H680J	CHIP C 68PF J	E3
C209			CK73GB1C104K	CHIP C 0.10UF K	
C210			CC73GCH1H470J	CHIP C 47PF J	
C211			CK73GB1H102K	CHIP C 1000PF K	
C212			CK73GB1C473K	CHIP C 0.047UF K	
C213			CK73GB1H102K	CHIP C 1000PF K	
C214			C92-0567-05	CHIP-TAN 68UF 6.3WV	
C215			CC73GCH1H080B	CHIP C 8.0PF B	NE4
C215			CC73GCH1H080B	CHIP C 8.0PF B	NE6
C215			CC73GCH1H050B	CHIP C 5.0PF B	E3
C216			C92-0560-05	CHIP-TAN 10UF 6.3WV	
C217			CK73GB1H103K	CHIP C 0.010UF K	
C218			CC73GCH1H070D	CHIP C 7.0PF D	
C219			CC73GCH1H120J	CHIP C 12PF J	E3,NE4
C219			CC73GCH1H080B	CHIP C 8.0PF B	NE6
C220			CK73GB1H102K	CHIP C 1000PF K	
C221			CC73GCH1H010B	CHIP C 1.0PF B	
C222			CC73GCH1H030B	CHIP C 3PF B	
C223			CC73GCH1H120J	CHIP C 12PF J	E3
C223			CC73GCH1H220J	CHIP C 22PF J	NE4
C223			CC73GCH1H220J	CHIP C 22PF J	NE6
C224			CK73GB1H471K	CHIP C 470PF K	
C225			CK73GB1H102K	CHIP C 1000PF K	
C226			CK73GB1H471K	CHIP C 470PF K	
C228,229			CK73GB1H102K	CHIP C 1000PF K	
C230			CC73GCH1H020C	CHIP C 2.0PF C	
TC1			C05-0380-15	TRIMMER CAPACITOR	
TC2,3			C05-0383-05	TRIMMER CAPACITOR (6PF)	
45	2A		E23-1005-04	TERMINAL (+ BATT)	
46	2A		E23-1020-04	GROUND TERMINAL (PA MODULE)	
CN2			E40-5662-05	PIN ASSY SOCKET (SP)	
J1	-		E11-0457-05	PHONE JACK (SP/MIC)	
F1	-		F53-0130-05	FUSE (3A)	
-			G13-1303-04	CUSHION (X'TAL)	
47	2A		J19-1571-04	HOLDER (BATT +)	
48	2A		J21-4495-14	HARDWARE FIXTURE (PA MODULE)	
CD1			L79-1072-05	TUNING COIL	
CF1,2			L72-0916-05	CERAMIC FILTER (455KHZ)	E3
CF1,2			L72-0939-05	CERAMIC FILTER (455KHZ)	NE4
CF1,2			L72-0939-05	CERAMIC FILTER (455KHZ)	NE6
L1,2			L40-2281-37	SMALL FIXED INDUCTOR (0.22UH)	
L3			L92-0138-05	FERRITE CHIP	
L4			L40-2281-37	SMALL FIXED INDUCTOR (0.22UH)	
L5			L92-0138-05	FERRITE CHIP	
L6-8			L40-6891-37	SMALL FIXED INDUCTOR (6.8UH)	
L9			L33-0744-05	SMALL FIXED INDUCTOR (23NH)	
L10			L33-1267-05	SMALL FIXED IMDUCTOR (27NH)	
L11			L40-1091-37	SMALL FIXED INDUCTOR (1UH)	

Ref. No.	Adrress	New parts	Parts No.	Description	Destination
L12			L40-6891-37	SMALL FIXED INDUCTOR (6.8UH)	
L13			L40-1085-35	SMALL FIXED INDUCTOR (100NH)	
L14			L92-0138-05	FERRITE CHIP	
L15			L40-1085-35	SMALL FIXED INDUCTOR (100NH)	
L16			L40-4781-37	SMALL FIXED INDUCTOR (0.470UH)	E3
L16			L40-3981-37	SMALL FIXED INDUCTOR (0.390UH)	NE4
L16			L40-3981-37	SMALL FIXED INDUCTOR (0.390UH)	NE6
L17		*	L40-3975-36	SMALL FIXED INDUCTOR (39NH)	
L18			L92-0138-05	FERRITE CHIP	
L19			L40-1281-37	SMALL FIXED INDUCTOR (0.120UH)	
L21			L40-2285-54	SMALL FIXED INDUCTOR (220NH)	
L22			L40-5671-35	SMALL FIXED INDUCTOR (56NH)	
L23			L92-0138-05	FERRITE CHIP	
L24			L34-4447-05	COIL	
L25			L92-0149-05	FERRITE CHIP	
L26			L34-4447-05	COIL	
L27		*	L40-7588-76	SMALL FIXED INDUCTOR (0.75UH)	
L29			L92-0131-05	FERRITE CHIP	
L30			L33-0765-05	SMALL FIXED INDUCTOR (50NH)	
L31			L79-1157-05	FILTER MODULE	
L32			L34-4446-05	COIL	
L33			L33-0745-05	SMALL FIXED INDUCTOR	
L34			L33-0765-05	SMALL FIXED INDUCTOR (50NH)	
L35			L92-0149-05	FERRITE CHIP	
L36			L40-1092-81	SMALL FIXED INDUCTOR	
L37			L40-2281-37	SMALL FIXED INDUCTOR (0.220UH)	NE4
L37			L40-2281-37	SMALL FIXED INDUCTOR (0.220UH)	NE6
L37			L40-2781-37	SMALL FIXED INDUCTOR (0.270UH)	E3
X1			L77-1630-05	CRYSTAL RESONATOR (8.388608MHZ)	
X2			L77-1725-05	CRYSTAL RESONATOR (12.8MHZ)	
X3			L77-1661-05	CRYSTAL RESONATOR (44.595MHZ)	
XF1			L71-0476-05	MCF (45.050MHZ)	E3
XF1			L71-0461-05	CRYSTAL FILTER (45.05MHZ)	NE4
XF1			L71-0461-05	CRYSTAL FILTER (45.05MHZ)	NE6
I	3A		N38-2640-46	SCREW (PA MODULE)	
J	3A		N78-2640-46	SCREW (+ BATT TERMINAL)	
CP3			R90-0714-05	MULTI-COMP 10K X4	
R4			R92-1252-05	CHIP R 0 OHM	
R11			RK73GB1J103J	CHIP R 10K J 1/16W	
R16,17			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R18,19			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R20			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R23,24			RK73GB1J473J	CHIP R 47K J 1/16W	
R26,27			RK73GB1J104J	CHIP R 100K J 1/16W	
R28			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R30			RK73GB1J391J	CHIP R 390 J 1/16W	
R32			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R33			R92-1252-05	CHIP R 0 OHM	
R34			RK73GB1J100J	CHIP R 10 J 1/16W	
R42			RK73GB1J334J	CHIP R 330K J 1/16W	
R43			RK73GB1J103J	CHIP R 10K J 1/16W	
R48			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R49			R92-1252-05	CHIP R 0 OHM	
R50			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R51			RK73GB1J104J	CHIP R 100K J 1/16W	
R52			RK73GB1J154J	CHIP R 150K J 1/16W	
R53			RK73GB1J473J	CHIP R 47K J 1/16W	
R54			RK73GB1J102J	CHIP R 1.0K J 1/16W	

TK-261 : **E3**
TK-261/(N) : **NE4, NE6**

PARTS LIST

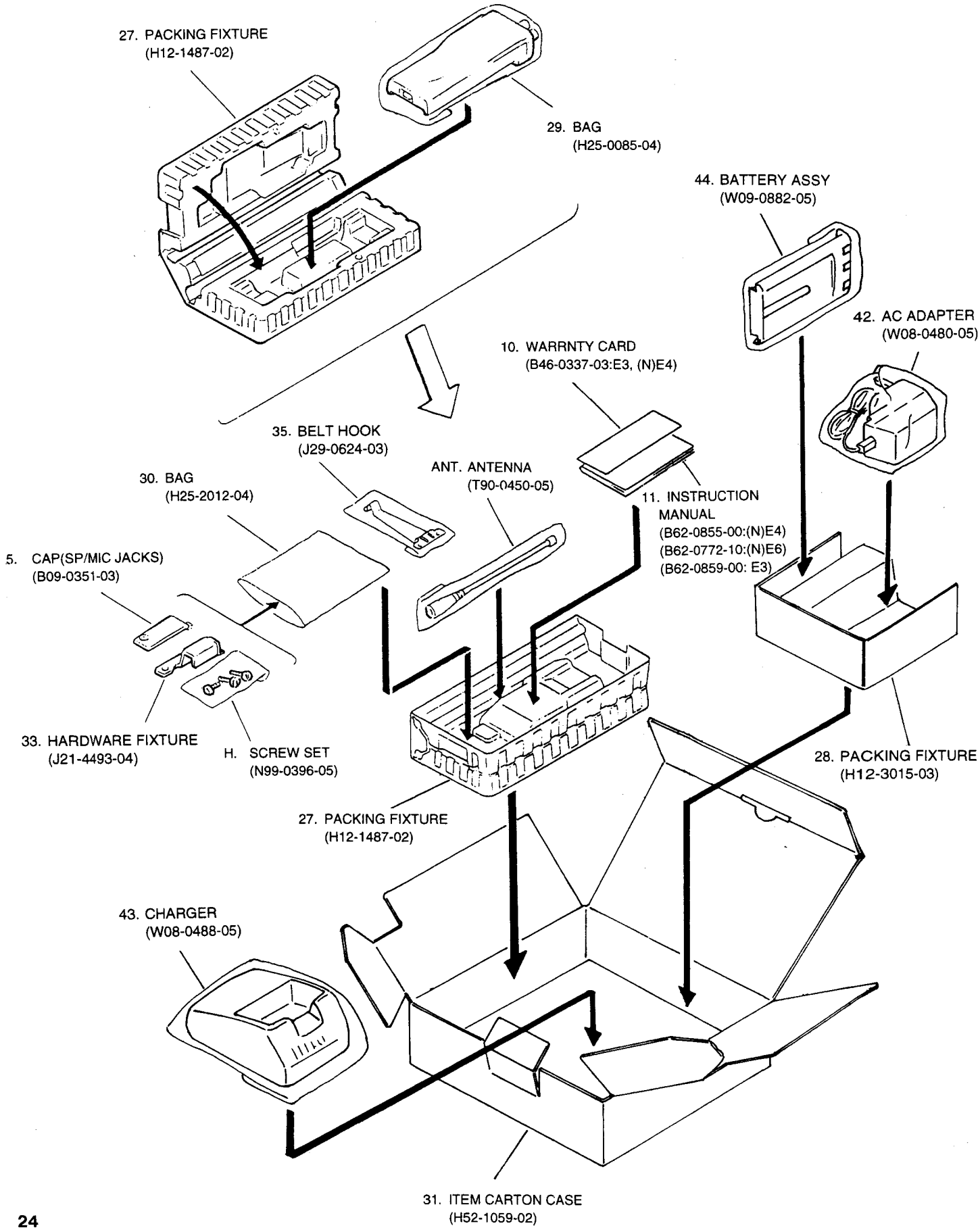
TX-RX UNIT (X57-5522-XX)

Ref. No.	Adrress	New parts	Parts No.	Description	Destination
R55			RK73GB1J272J	CHIP R 2.7K J 1/16W	
R56			RK73GB1J150J	CHIP R 15 J 1/16W	
R57			RK73GB1J104J	CHIP R 100K J 1/16W	
R58			RK73GB1J223J	CHIP R 22K J 1/16W	
R59			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R60			RK73GB1J224J	CHIP R 220K J 1/16W	
R61			RK73GB1J103J	CHIP R 10K J 1/16W	
R62			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R63			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R65			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R68			RK73GB1J272J	CHIP R 2.7K J 1/16W	
R69			RK73GB1J821J	CHIP R 820 J 1/16W	
R70			RK73GB1J473J	CHIP R 47K J 1/16W	
R71			RK73GB1J124J	CHIP R 120K J 1/16W	
R72			RK73GB1J104J	CHIP R 100K J 1/16W	
R73			RK73GB1J333J	CHIP R 33K J 1/16W	
R74			RK73GB1J103J	CHIP R 10K J 1/16W	
R75			RK73GB1J474J	CHIP R 470K J 1/16W	
R76			RK73GB1J154J	CHIP R 150K J 1/16W	
R79			RK73GB1J391J	CHIP R 390 J 1/16W	
R80,81			RK73GB1J151J	CHIP R 150 J 1/16W	
R83			RN73GH1J333D	METAL FILM R 33K D 1/16W	
R84,85			RN73GH1J243D	METAL FILM R 24K D 1/16W	
R86			RN73GH1J393D	METAL FILM R 39K D 1/16W	
R87			RK73GB1J103J	CHIP R 10K J 1/16W	
R88			RN73GH1J103D	METAL FILM R 10K D 1/16W	
R92			R92-1252-05	CHIP R 0 OHM	
R94			RK73GB1J683J	CHIP R 68K J 1/16W	
R97			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R98			RK73GB1J682J	CHIP R 6.8K J 1/16W	
R99			RK73GB1J103J	CHIP R 10K J 1/16W	
R100			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R104			RK73GB1J104J	CHIP R 100K J 1/16W	
R106			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R109			RK73GB1J563J	CHIP R 56K J 1/16W	
R110			RK73GB1J473J	CHIP R 47K J 1/16W	
R111			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R114			RK73GB1J333J	CHIP R 33K J 1/16W	
R116			RK73GB1J184J	CHIP R 180K J 1/16W	
R117			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R118			RK73GB1J124J	CHIP R 120K J 1/16W	
R120			RK73GB1J684J	CHIP R 680K J 1/16W	
R121			RK73GB1J104J	CHIP R 100K J 1/16W	
R122			RN73GH1J183D	METAL FILM R 18K D 1/16W	
R123			RN73GH1J103D	METAL FILM R 10K D 1/16W	
R124			RK73GB1J183J	CHIP R 18K J 1/16W	
R125			RK73GB1J473J	CHIP R 47K J 1/16W	
R128			RK73GB1J104J	CHIP R 100K J 1/16W	
R129			RK73GB1J271J	CHIP R 270 J 1/16W	
R130			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R131			RK73GB1J154J	CHIP R 150K J 1/16W	
R132			RK73GB1J103J	CHIP R 10K J 1/16W	
R135			RK73GB1J271J	CHIP R 270 J 1/16W	
R136			RK73GB1J185J	CHIP R 1.8M J 1/16W	
R137			RK73GB1J183J	CHIP R 18K J 1/16W	
R138			RK73GB1J333J	CHIP R 33K J 1/16W	
R139			RK73GB1J103J	CHIP R 10K J 1/16W	
R141			RK73GB1J104J	CHIP R 100K J 1/16W	
R142			RK73GB1J393J	CHIP R 39K J 1/16W	

Ref. No.	Adrress	New parts	Parts No.	Description	Destinati
R143			RK73GB1J124J	CHIP R 120K J 1/16W	
R145,146			RK73GB1J104J	CHIP R 100K J 1/16W	
R147			RK73GB1J103J	CHIP R 10K J 1/16W	
R148			RK73GB1J681J	CHIP R 680 J 1/16W	
R149			RK73GB1J564J	CHIP R 560K J 1/16W	
R150			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R151			RK73GB1J104J	CHIP R 100K J 1/16W	
R153			RK73GB1J185J	CHIP R 1.8M J 1/16W	
R155			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R156			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R157			RK73GB1J561J	CHIP R 560 J 1/16W	E3
R157			RK73GB1J390J	CHIP R 39 J 1/16W	NE4
R157			RK73GB1J390J	CHIP R 39 J 1/16W	NE6
R158			RK73GB1J333J	CHIP R 33K J 1/16W	
R159,160			RK73GB1J154J	CHIP R 150K J 1/16W	
R161			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R162			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R163			RK73GB1J104J	CHIP R 100K J 1/16W	
R164			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R165			RK73GB1J123J	CHIP R 12K J 1/16W	
R166			RK73GB1J393J	CHIP R 39K J 1/16W	
R167			RK73GB1J184J	CHIP R 180K J 1/16W	
R168			RK73GB1J104J	CHIP R 100K J 1/16W	
R169			RK73GB1J471J	CHIP R 470 J 1/16W	
R170			RK73GB1J390J	CHIP R 39 J 1/16W	NE4
R170			RK73GB1J390J	CHIP R 39 J 1/16W	NE6
R170			R92-1252-05	CHIP R 0 OHM	E3
R171			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R172			RK73GB1J562J	CHIP R 5.6K J 1/16W	
R174			RK73GB1J473J	CHIP R 47K J 1/16W	
R175,176			RK73GB1J154J	CHIP R 150K J 1/16W	
R177			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R178			RK73GB1J101J	CHIP R 100 J 1/16W	
R179			RK73GB1J330J	CHIP R 33 J 1/16W	
R180			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R182			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R185			RK73GB1J562J	CHIP R 5.6K J 1/16W	
R186			RK73GB1J334J	CHIP R 330K J 1/16W	
R188			RK73GB1J470J	CHIP R 47 J 1/16W	
R190			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R191			RK73GB1J103J	CHIP R 10K J 1/16W	
R192			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R193			RK73GB1J180J	CHIP R 18 J 1/16W	
R194			R92-1252-05	CHIP R 0 OHM	
R195			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R196			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R197			RK73GB1J331J	CHIP R 330 J 1/16W	
R198			RK73GB1J102J	CHIP R 1.0K J 1/16W	NE4
R198			RK73GB1J102J	CHIP R 1.0K J 1/16W	NE6
R198			RK73GB1J123J	CHIP R 12K J 1/16W	E3
R199,200			RK73GB1J103J	CHIP R 10K J 1/16W	
R201			RK73GB1J330J	CHIP R 33 J 1/16W	
R202			RK73GB1J101J	CHIP R 100 J 1/16W	
R203			R92-1252-05	CHIP R 0 OHM	
R204			RK73GB1J153J	CHIP R 15K J 1/16W	
R207			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R208			RK73GB1J473J	CHIP R 47K J 1/16W	
R209			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R210,211			RN73GH1J154D	METAL FILM R 150K D 1/16W	

TK-261 : **E3**
TK-261/(N) : **NE4, NE6**

PACKING


27. PACKING FIXTURE
(H12-1487-02)
29. BAG
(H25-0085-04)
44. BATTERY ASSY
(W09-0882-05)
42. AC ADAPTER
(W08-0480-05)
10. WARRNTY CARD
(B46-0337-03:E3, (N)E4)
35. BELT HOOK
(J29-0624-03)
ANT. ANTENNA
(T90-0450-05)
30. BAG
(H25-2012-04)
11. INSTRUCTION
MANUAL
(B62-0855-00:(N)E4)
(B62-0772-10:(N)E6)
(B62-0859-00: E3)
5. CAP(SP/MIC JACKS)
(B09-0351-03)
33. HARDWARE FIXTURE
(J21-4493-04)
H. SCREW SET
(N99-0396-05)
28. PACKING FIXTURE
(H12-3015-03)
27. PACKING FIXTURE
(H12-1487-02)
43. CHARGER
(W08-0488-05)
31. ITEM CARTON CASE
(H52-1059-02)

ADJUSTMENT

Required Test Equipment

1. Stabilized Power supply
1. The supply voltage can be changed between 5V and 18V, and the current is 3A or more.
2. The standard voltage is 7.5V.

2. DC Ammeter
1. Class 1 ammeter (17 ranges and other features).
2. The full scale can be set to either 300mA or 3A.
3. A cable of less internal loss must be used.

3. Frequency Counter (f. counter)
1. Frequencies of up to 1GHz or so can be measured.
2. The sensitivity can be changed to 500MHz or below, and measurements are highly stable and accurate (0.2ppm or so).

4. Power Meter
1. Measurable frequency : Up to 500MHz
2. Impedance : 50Ω, unbalanced
3. Measuring range : Full scale of 10W or so
4. A standard cable (5D2W 1m) must be used.

5. RF Voltmeter(RF V.M)
1. Measurable frequency : Up to 500MHz or so.

6. Linear Detector
1. Measurable frequency : Up to 500MHz or so
2. Characteristics are flat, and CN is 60dB or more.

7. Digital Voltmeter
1. Voltage range : FS = 18V or so
2. Input resistance : 1MΩ or more

8. Oscilloscope
1. Measuring range : DC to 30MHz
2. Provides highly accurate measurements for 5 to 25MHz.

9. AF Voltmeter (AF V.M)
1. Measurable frequency : 50Hz to 1MHz
2. Maximum sensitivity : 1mV or more

10. Spectrum Analyzer
1. Measuring range : DC to 1GHz or more

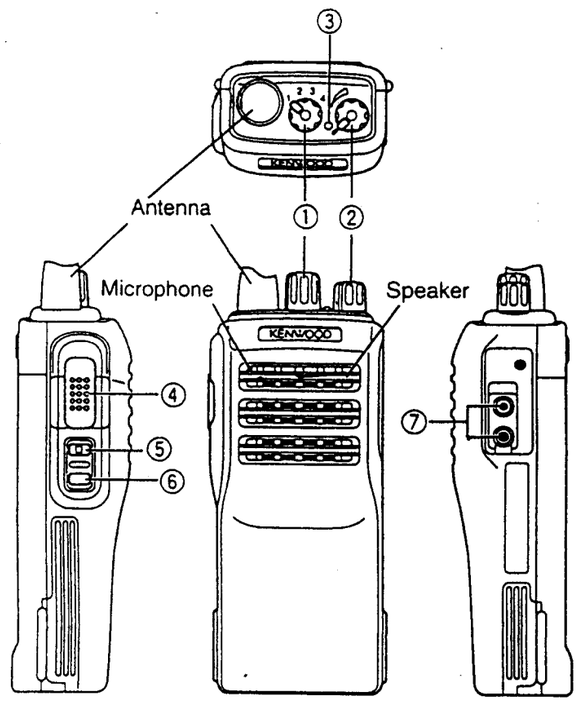
11. Standard Signal Generator (SSG)
1. Maximum frequency : 500MHz or more
2. Output : -133dBm/0.05μv to 7dBm/501mV
3. Output impedance :50Ω

12. Tracking Generator
1. Center frequency : 50kHz to500MHz
2. Frequency deviation : ±35MHz
3. Output voltage : 100mV or more

13. Dummy Load
1. 8Ω, 3W or more.

14. AF Generator(AG)
1. Frequncy range : 100Hz to 100kHz
2. Output : 0.5mV to 1V

15. Distortion Meter
1. Measuable frequency : 30Hz to 100kHz
2. Imput level : 50mV to 10Vrms



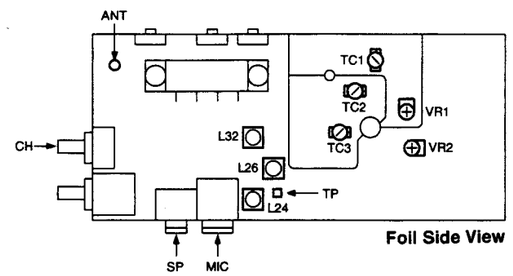
① CHANNEL
② POWER/VOL
③ LED
④ PTT
⑤ Not used
⑥ MONI
⑦ SP/MIC JACK

- Use a non-conductive rod such as a Bakelite rod for adjustment (especially of trimmers and coils).
- To protect the SSG,do not send out signals while adjusting the receiving unit.
- The indicateed SSG output levels are for maximum output.

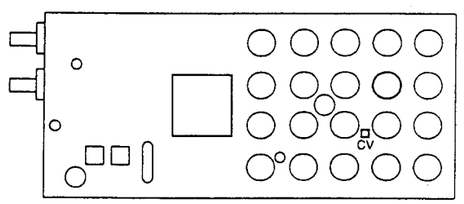
TK-261/(N)

ADJUSTMENT

Adjustment points



Foil Side View



Component Side View

TC1: Frequency adjustment
TC2: Receive lock voltage adjustment
TC3: Transmit lock voltage adjustment
VR1: DQT waveform adjustment
VR2: DEV adjustment
L24:
L26: } Band-pass filter waveform adjustment
L32:
ANT: Antenna connector
SP : Speaker jack
MIC: Microphone jack
TP : Band-pass filter test point
CH : Channel selector

CV : Lock voltage adjustment terminal

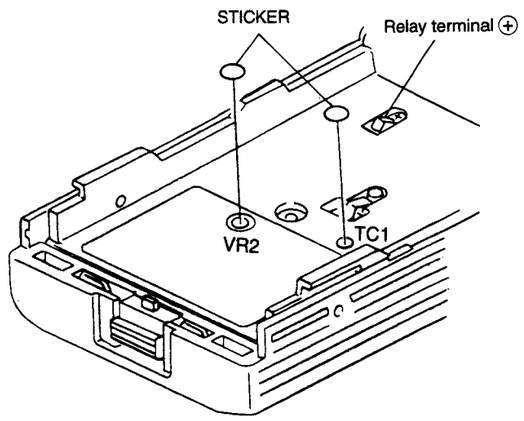
ADJUSTMENT FREQUENCY LIST

CH	E3		(N)E4		(N)E6	
	TX f (MHz)	RX f (MHz)	TX f (MHz)	RX f (MHz)	TX f (MHz)	RX f (MHz)
Center	170.010		149.0375		154.800	
Low	169.970		149.0250		154.600	
Hi			149.0500		154.850	

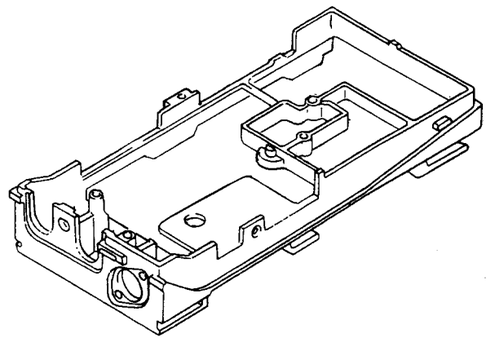
ADJUSTMENT

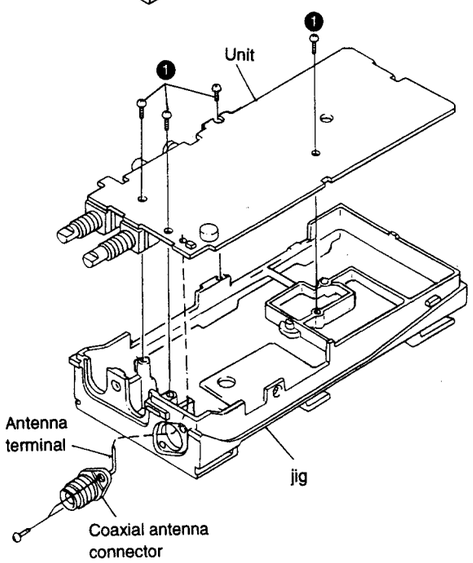
Use the jig(chassis) for adjustment to stabilize electrical operations. The frequency (TC1) and deviation (VR2) can be adjusted without using the jig.

Remove the STICKER (B42-5656-04) on the chassis.



1. Jig (chassis) for adjustment (part number A10-1368-03)





2. Use the jig as follows:

1. Insert the coaxial antenna connector into the jig.
2. Place the unit on the jig and fix it with four screws. ❶
3. Solder the antenna terminal to the terminal of the unit.

Notes: 1. Do not install the Ni-Cd battery when using the jig for adjustment, repair, or checking.
If the Ni-Cd battery is installed, the relay terminal (+) may be damaged.

Notes: 2. Supply power from an external power supply.

(Relay terminal : +
jig (chassis) : −)

TK-261/(N)

ADJUSTMENT

Use the KPG-34D programming software for adjustment of the next item in PC MODE (see page 4).
Squelch Level DQT Balance RF Power QT Deviation DQT Deviation Battery Level
Please refer to the KPG-34D Instruction Manual (Please make inquiries to KENWOOD) for information on operating procedures.

Section common to the transmitter and receiver (VCO)

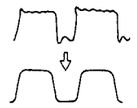
Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
1. Setting	1) Power supply voltage Battery terminal:7.5 V					
2. VCO lock voltage	1) TX:CH center	Digital voltmeter	CV	TC3	2.0 V (E3), 1.5V (NE4, NE6)	± 0.1 V
	2) RX:CH center	Digital voltmeter	CV	TC2	2.0 V (E3), 1.5V (NE4, NE6)	± 0.1 V

Receiver Section

Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
1. Band-pass filter	1) Given frequency 2) Tra generator output -40 dBm Connect the spectrum analyzer to the TP terminal.	Tra generator Spectrum analyzer	ANT TP	L24 L26 L32	Adjust the frequency so that it becomes the spectrum waveform shown in Fig. 1.	
2. Sensitivity	1) CH:RX center CH:RX LO CH:RX Hi At each frequency: SSG output: -116 dBm MOD:1kHz DEV :±2.4kHz (E3) :±1.5kHz (NE4,NE6)	SSG Oscilloscope AF. V.M Distortion meter	ANT SP		Check	SINAD:12 dB or higher
3. Squelch Level (PC MODE)	1) CH: RX center MONI: ON	SSG Oscilloscope AF. V.M Distortion meter	ANT SP	Channel selector	Level 9 Adjust to close the squelch.	The squelch must be closed.
	2) Level 9 SSG output: -110 dBm (NE4) : -115 dBm (E3) : -110 dBm (NE6) MONI: ON					
	3) Level 3 SSG output: -120 dBm (NE4) : -125 dBm (E3) : -125 dBm (NE6) MONI: ON				Level 3 Adjust to close the squelch.	The squelch must be closed.

ADJUSTMENT

Transmitter Section

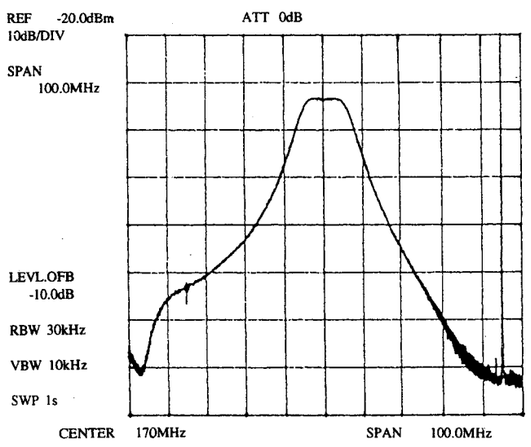
Item	Condition	Measurement		Adjustment		Specifications/ Remarks
		Test equipment	Terminal	Parts	Method	
1. Transmit frequency	1) CH:TX center PTT:ON	Frequency counter	ANT	TC1	Adjust to center frequency	Within ± 250 Hz
2. DQT/ QT Balance	1) CH:TX center	Modulation analyzer or linear detector (LPF:3kHz) Oscilloscope	ANT	VR1	Rectify the waveform to square wave	
3. Full power (PC MODE)	1) CH:TX center Battery terminal: 7.5 V PTT: ON	Power meter Ammeter	ANT		Verify that it is 2.0W or higher	2.0W or higher
4. High power (PC MODE)	1) CH:TX center Battery terminal: 7.5 V PTT: ON	Power meter Ammeter	ANT		Adjust it to 1.0 W	±0.1W 1.0A or lower
5. MAX DEV	1) CH:TX center AG: 1 kHz/130 mV PTT: ON	Modulation analyzer or linear detector (LPF:15kHz) Oscilloscope AG	ANT MIC	VR2	Adjust it to ± 2.0 kHz (NE4.NE6) Adjust it to ± 3.2 kHz (E3) (+, - Peak whichever is Maximum)	±100Hz ±100Hz
6. MIC SENS	1) CH:TX center AG: 1 kHz/13 mV	AF. V.M.			Check (+, - Peak whichever is Maximum)	±1.1kHz ~ 1.9kHz: (NE4.NE6) ±2.0kHz ~ 2.8kHz: (E3)
7. QT DEV (PC MODE)	1) CH:TX center QT: 250.3 Hz	Modulation analyzer or linear detector (LPF:3 kHz) Oscilloscope AG AF. V.M.	ANT		Adjust it to 0.35 kHz. (NE4.NE6) Adjust it to 0.56 kHz (E3)	± 50Hz ± 50Hz
8. DQT DEV (PC MODE)	1) CH:TX center	Modulation analyzer or linear detector (LPF:3 kHz) Oscilloscope	ANT		Adjust it to 0.35 kHz. (NE4.NE6) Adjust it to 0.56 kHz (E3)	± 50Hz ± 50Hz
9. Battery Level (PC MODE)	1) Battery terminal: 5.85 V 2) Battery terminal: 6.3 V	Digital voltmeter	BATT		Adjust so that the LED flashes. Verify that the LED lights.	The LED must flash. Check

TK-261/(N)

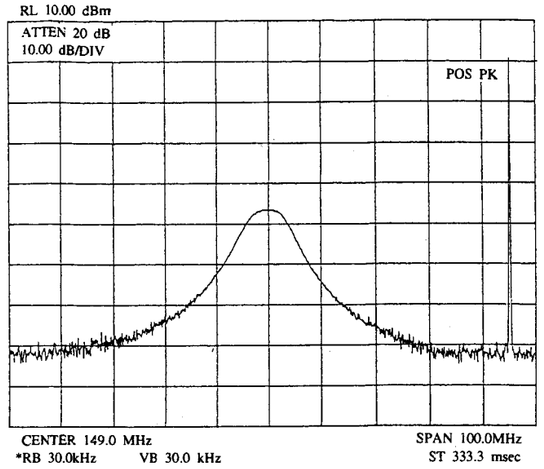
ADJUSTMENT

BPF-Wave

E3



(N)E4



(N)E6

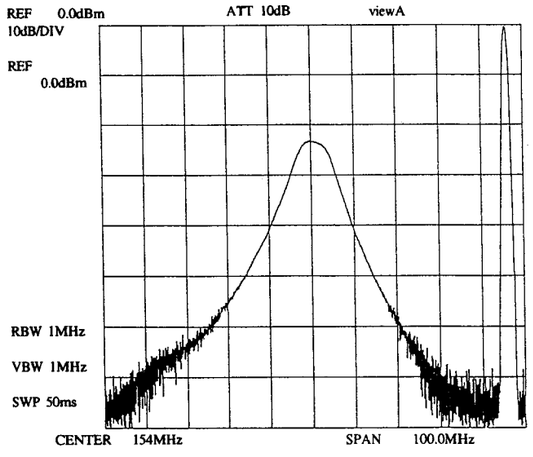


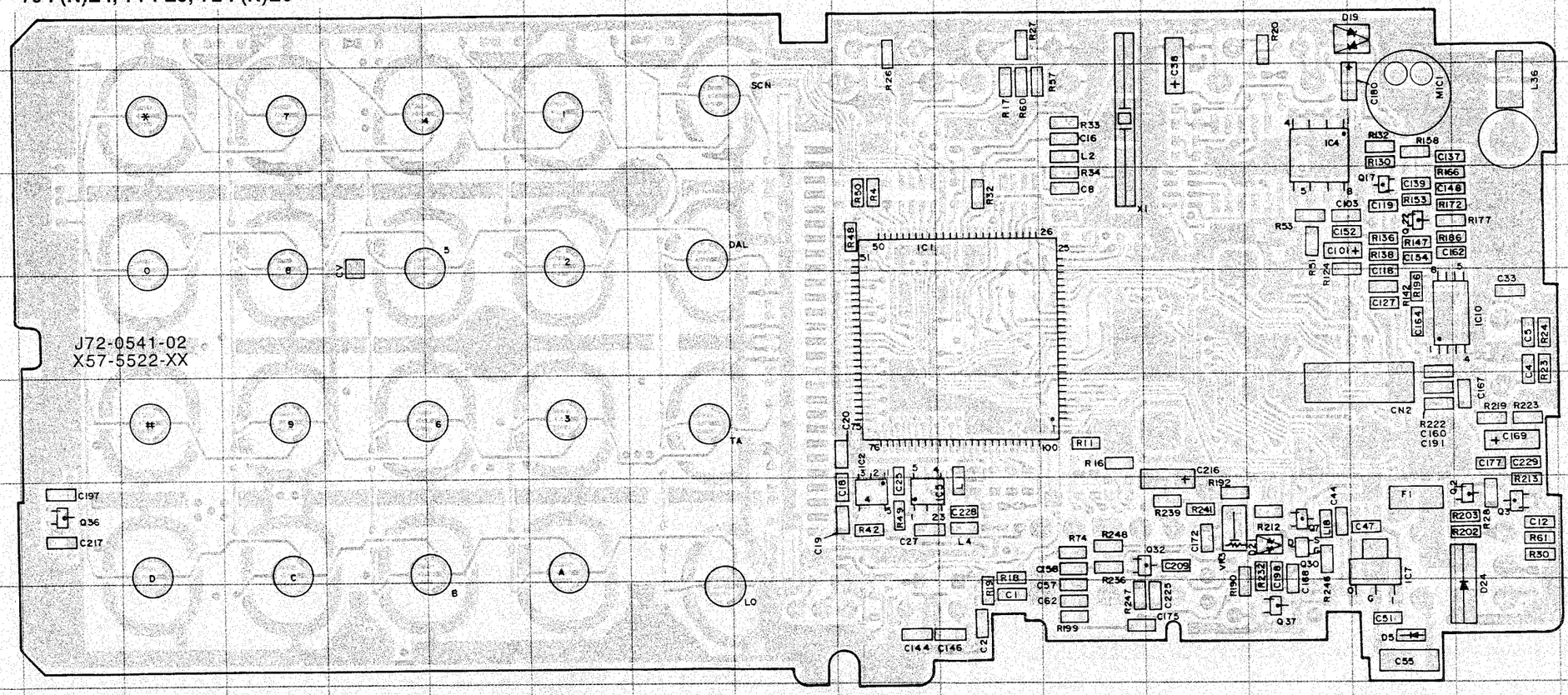
Fig.1

TK-261/(N) PC BOARD VIEWS

TX-RX UNIT(X57-5522-XX)
(Component side)

Ref. NO.	Address
IC1	6K
IC2	9J
IC4	5N
IC5	9K
IC7	10O
IC10	7P
Q2	9P
Q3	9P
Q7	9N
Q17	6O
Q22	6O
Q30	9N
Q32	9N
Q36	9B
Q37	10N
D5	10O
D19	4O
D21	9N
D24	10P

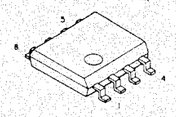
TX-RX UNIT (X57-5522-XX) Component Side View
-70 : (N)E4,-71 : E3,-72 : (N)E6



Component side

Pattern1	
Pattern2	
Pattern3	
Pattern4	
Pattern5	
Pattern6	

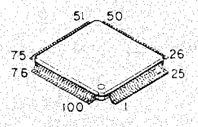
Foil side



NJM2100V

DTA114YE
DTC114EE
DTC144EE
2SC4617(S)

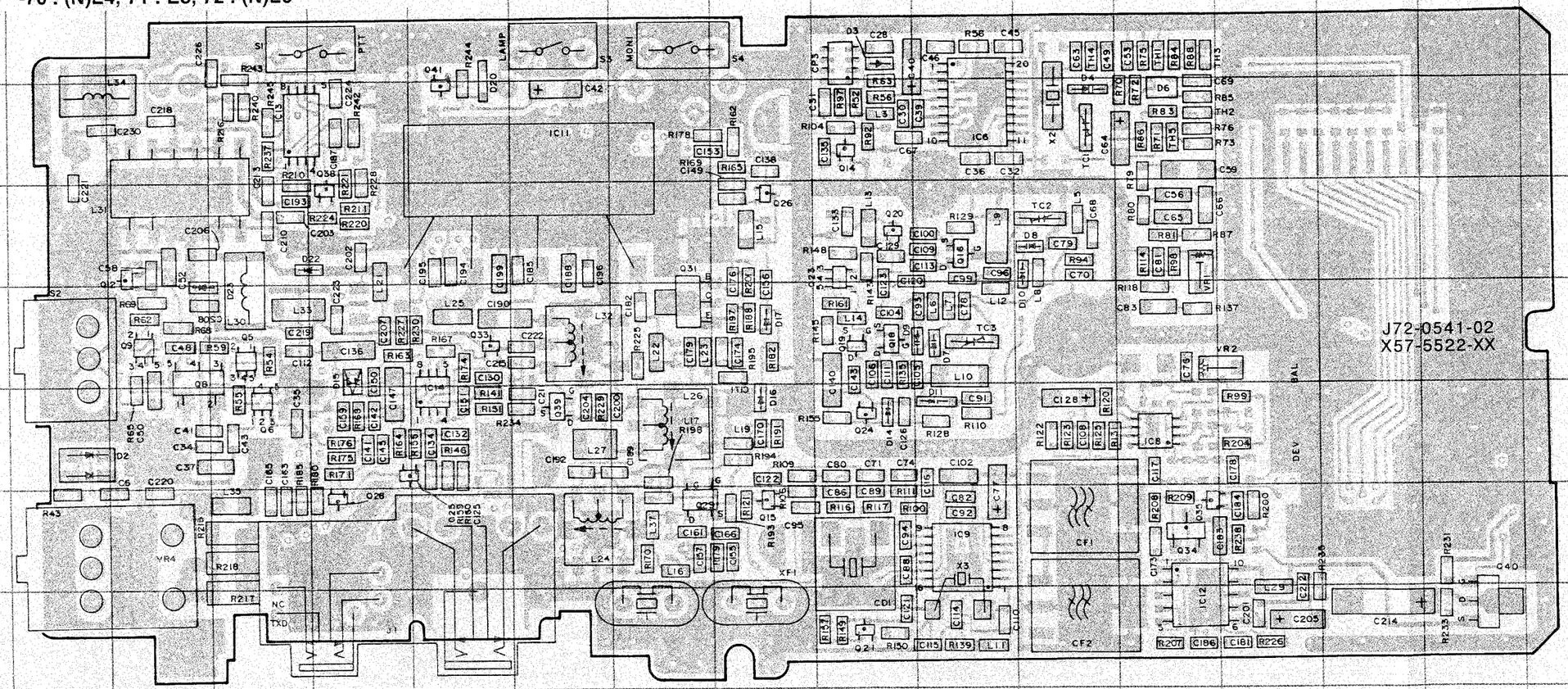
2SK1824



M38267M8L190GP

PC BOARD VIEWS TK-261/(N)

TX-RX UNIT (X57-5522-XX) Foil Side View
-70 : (N)E4,-71 : E3,-72 : (N)E6



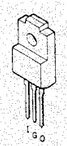
TX-RX UNIT(X57-5522-XX)
(Foil side)

Ref. NO.	Address
IC6	5K
IC8	8M
IC9	9K
IC11	5G
IC12	10M
IC13	5D
IC14	8F
Q5	7D
Q6	8D
Q8	7C
Q9	7C
Q12	6C
Q14	5J
Q15	9I
Q16	6K
Q18	7J
Q19	7J
Q20	6J
Q21	10J
Q23	6J
Q24	8J
Q25	8E
Q26	7I
Q28	9E
Q29	9H
Q31	7H
Q33	7F
Q34	9M
Q35	9M
Q38	6E
Q39	8G
Q40	10P
Q41	5F
D3	4J
D4	5L
D6	5M
D7	7K
D8	6L
D9	7J
D10	6L
D11	8K
D14	8J
D15	7E
D16	8I
D17	7I
D20	5F
D22	6D

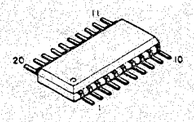
Component side

Pattern1	
Pattern2	
Pattern3	
Pattern4	
Pattern5	
Pattern6	

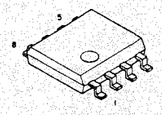
Foil side



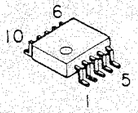
S-81350HG-KD



LMX1511TMX

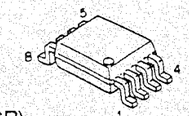


TA75W01FU

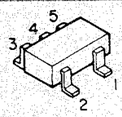


TA7368F

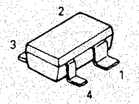
DTA114EE DTC144EE
DTA114YE 2SA1362(GR)
DTA144EE 2SC4617(S)
DTC114EE 2SC4619



NJM2904V

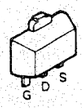


UMC4



SGM2014M

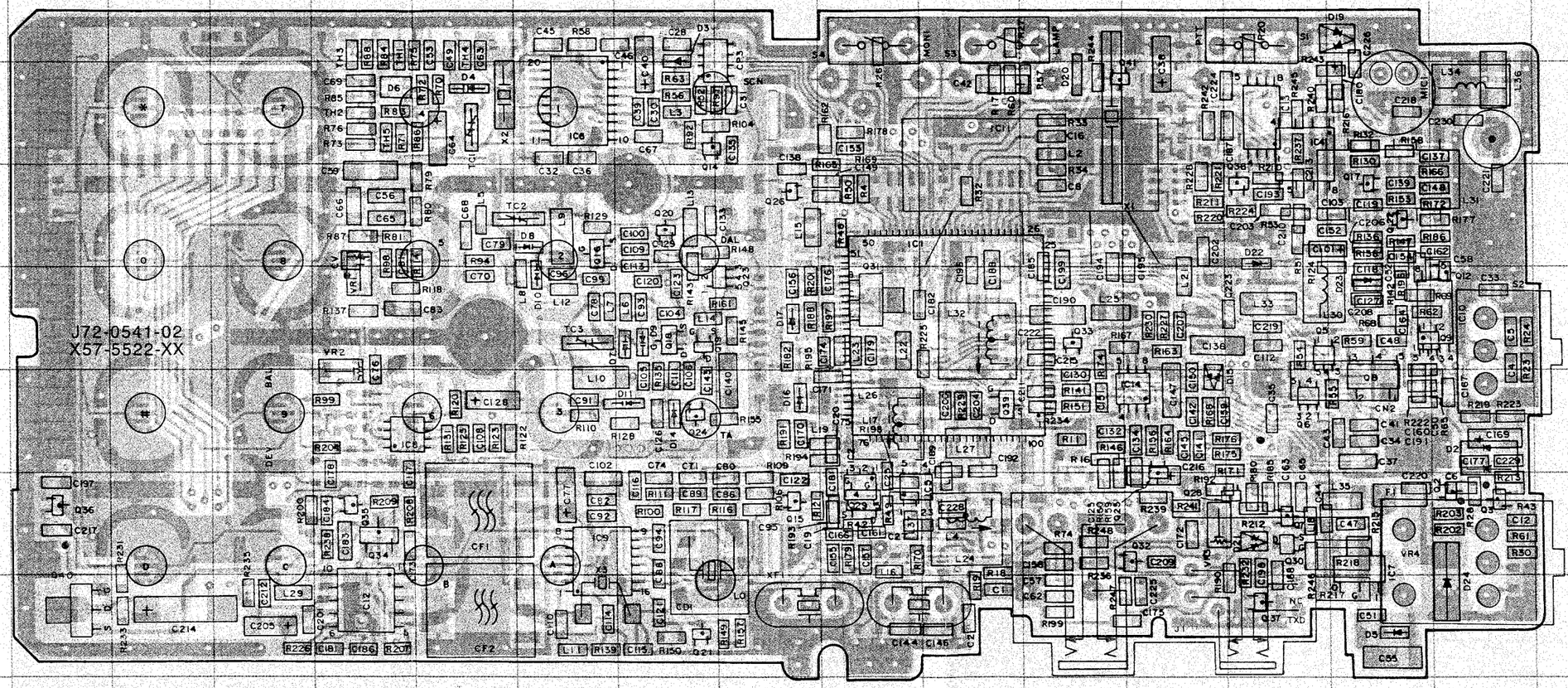
2SJ243
2SK1824



2SK1588

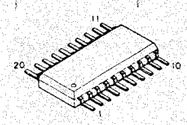
TK-261/(N) PC BOARD VIEWS

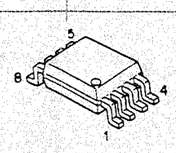
TX-RX UNIT (X57-5522-XX) Component Side + Foil Side View
-70 : (N)E4,-71 : E3,-72 : (N)E6

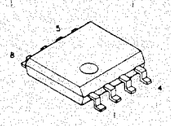


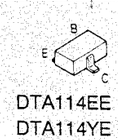
● Connect 1 and 6

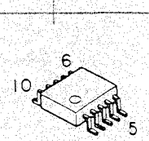
Component side
Pattern1
Pattern2
Pattern3
Pattern4
Pattern5
Pattern6
Foil side

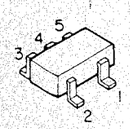

LMX1511TMX

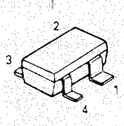

NJM2904V

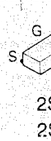

TA75W01FU
NJM2100V

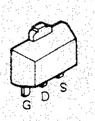

DTA114EE
DTA114YE
DTA144EE
DTC114EE
DTC144EE
2SA1362(GR)
2SC4617(S)
2SC4619

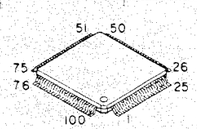

TA7368F

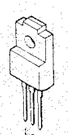

UMC4


SGM2014M


2SJ243
2SK1824


2SK1588

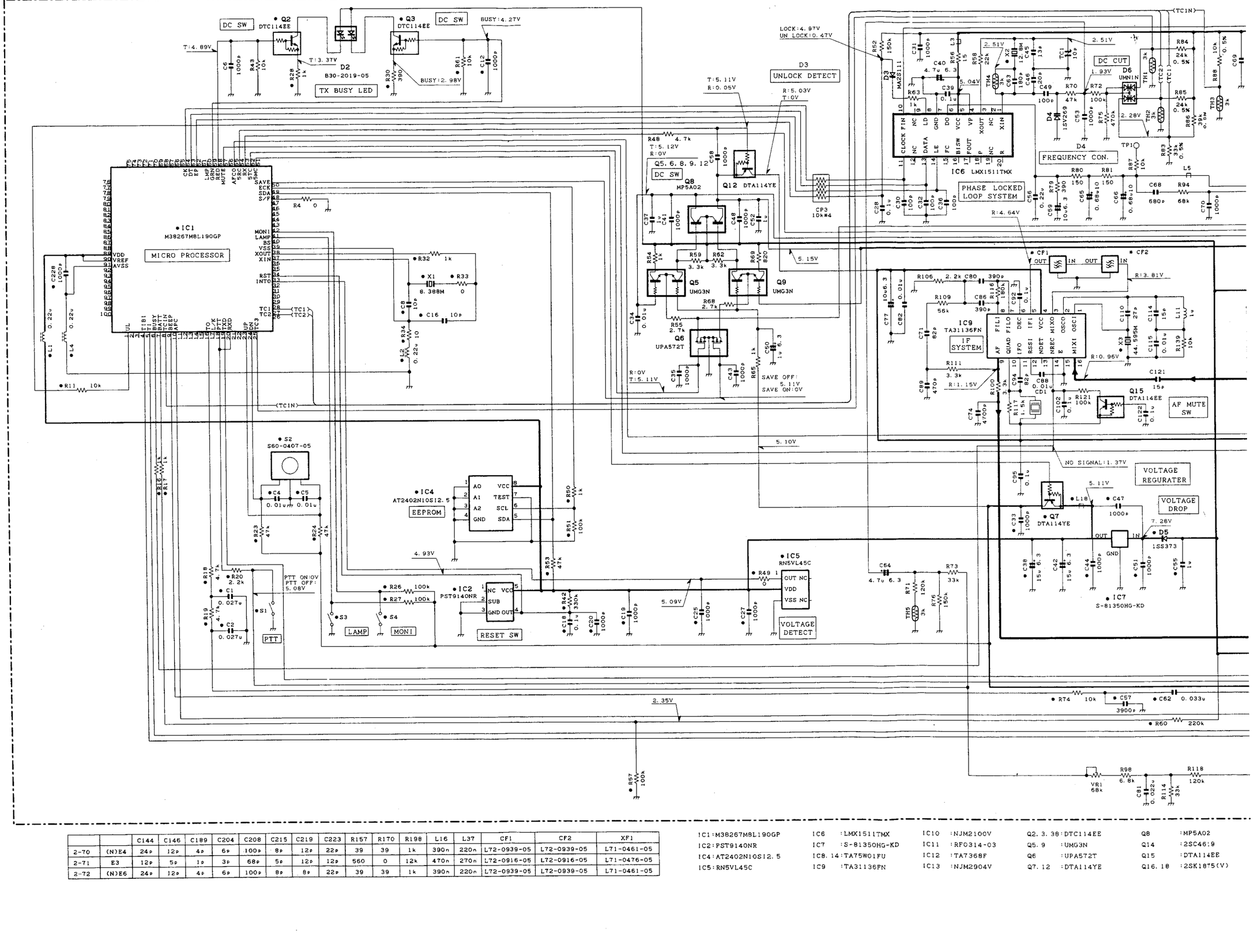

M38267M8L190GP


S-81350HG-KD

TX-RX UNIT(X57-5522-XX)
(Component side) + (Foil side)

Ref. NO.	Address
IC1	6K
IC2	9J
IC4	5N
IC5	9K
IC6	5G
IC7	10O
IC8	8E
IC9	9G
IC10	7P
IC11	5K
IC12	10E
IC13	5N
IC14	8M
Q2	9P
Q3	9P
Q5	7N
Q6	8N
Q7	9N
Q8	8O
Q9	7P
Q12	7P
Q14	5H
Q15	9I
Q16	6G
Q17	6O
Q18	7H
Q19	7H
Q20	6H
Q21	10H
Q22	6O
Q23	7I
Q24	8H
Q25	9M
Q26	6I
Q28	9N
Q29	9J
Q30	9N
Q31	7J
Q32	9M
Q33	7L
Q34	9E
Q35	9E
Q36	9B
Q37	10N
Q38	6N
Q39	8K
Q40	10B
Q41	5M
D2	8P
D3	4H
D4	5F
D5	10O
D6	5E
D7	7H
D8	6G
D9	7H
D10	7G
D11	8H
D14	8H
D15	8M
D16	8I
D17	7I
D19	4O
D20	5L
D21	9N
D22	6N
D23	7O
D24	10P

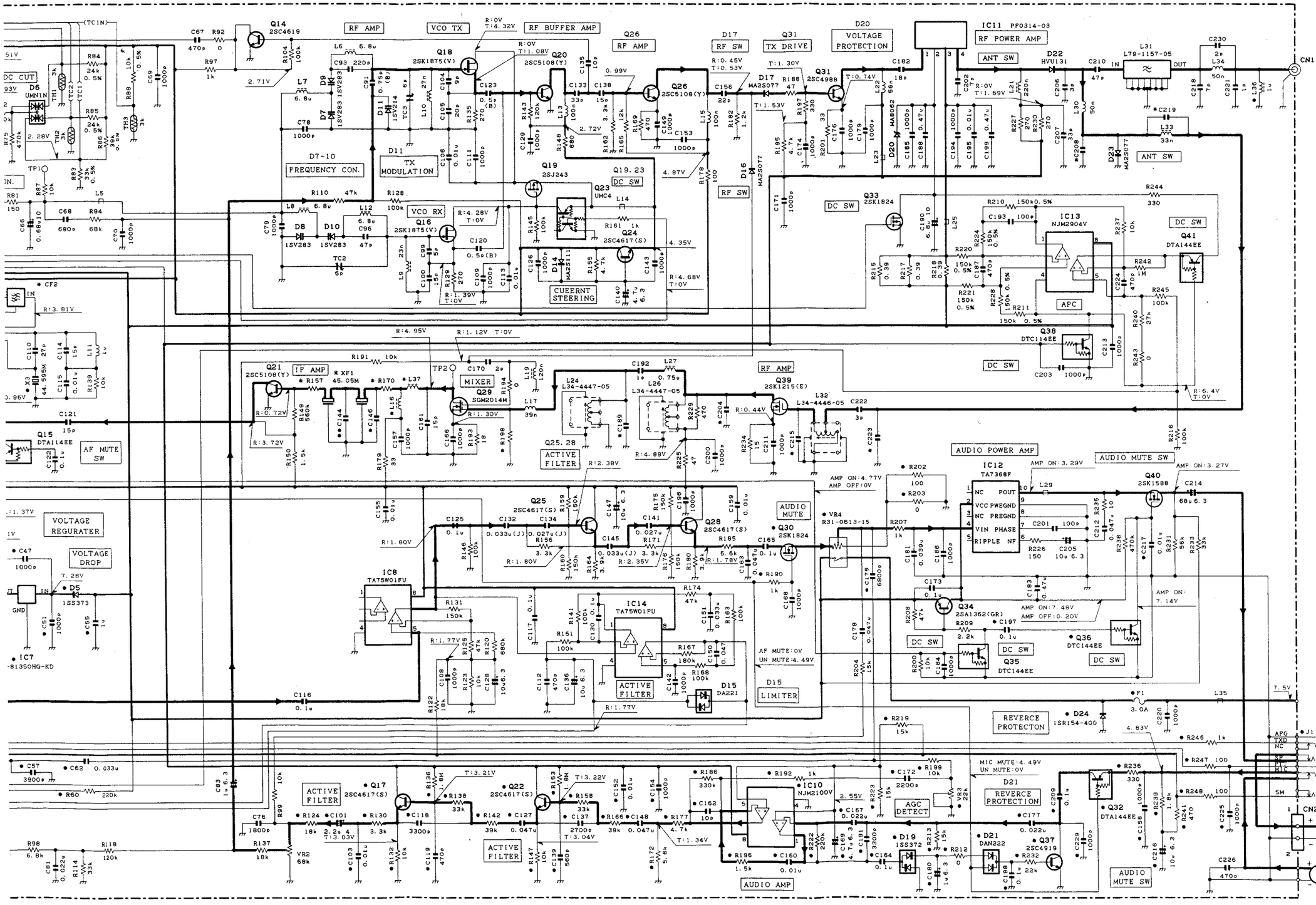
X57-5522-XX



		C144	C146	C189	C204	C208	C215	C219	C223	R157	R170	R198	L16	L37	CF1	CF2	XF1
2-70	(N)E4	24p	12p	4p	6p	100p	8p	12p	22p	39	39	1k	390n	220n	L72-0939-05	L72-0939-05	L71-0461-05
2-71	E3	12p	5p	1p	3p	68p	5p	12p	12p	560	0	12k	470n	270n	L72-0916-05	L72-0916-05	L71-0476-05
2-72	(N)E6	24p	12p	4p	6p	100p	8p	8p	22p	39	39	1k	390n	220n	L72-0939-05	L72-0939-05	L71-0461-05

IC1:M38267M8L190GP	IC6	:LMX1511TMX	IC10	:NJM2100V	Q2. 3. 36	:DTC114EE	Q8	:MP5A02
IC2:PST9140NR	IC7	:S-81350HG-KD	IC11	:RF0314-03	Q5. 9	:UMG3N	Q14	:2SC4619
IC4:AT2402N10SI2.5	IC8.14	:TA75W01FU	IC12	:TA7368F	Q6	:UPA572T	Q15	:DTA114EE
IC5:RN5VL45C	IC9	:TA31136FN	IC13	:NJM2904V	Q7. 12	:DTA114YE	Q16. 18	:2SK1875(V)

SCHEMATIC DIAGRAM TK-261/(N)

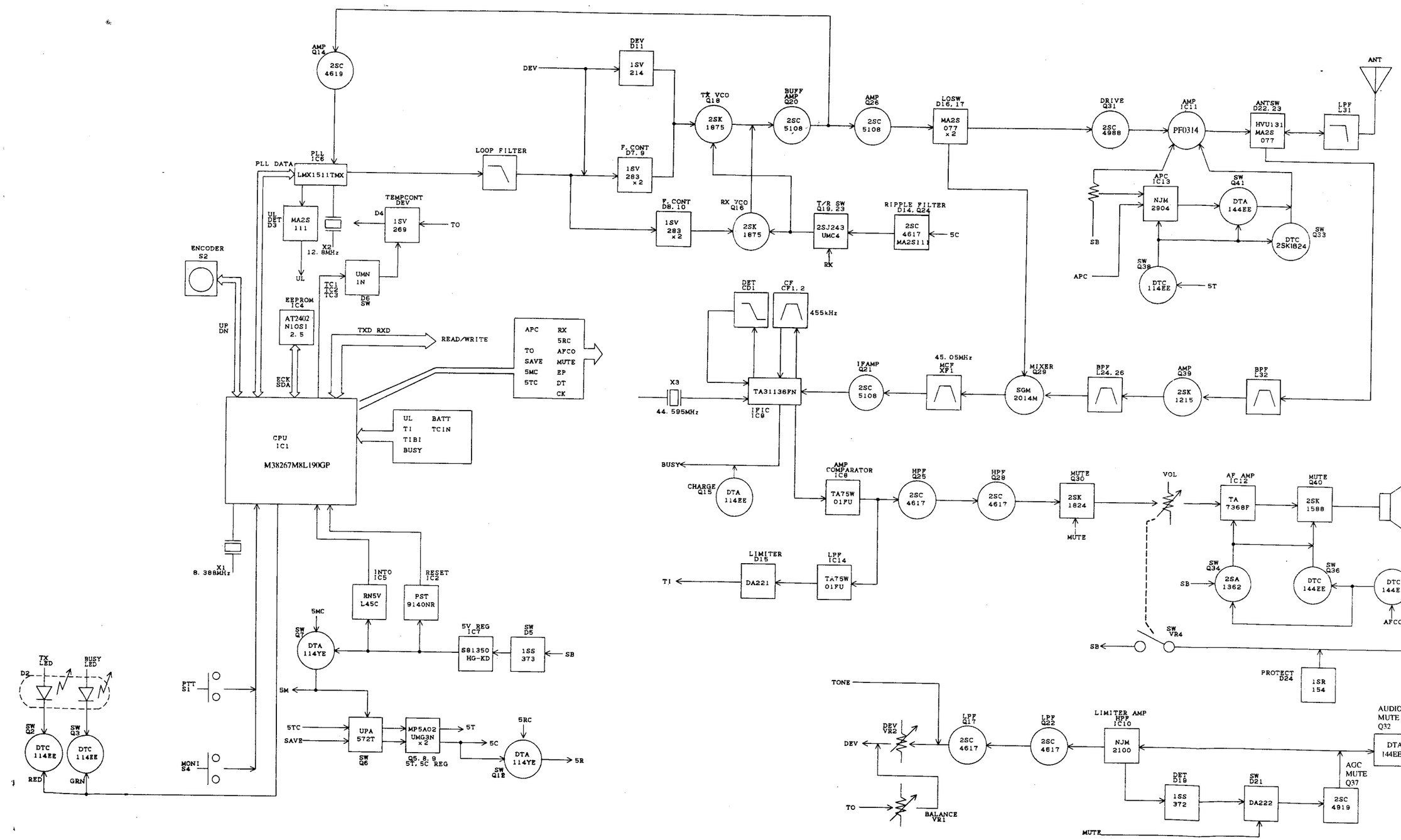


Q8	:MP5A02	Q17. 22. 24. 25. 28	:2SC4617(S)	Q29	:SGM2014M	Q33	:2SK1824	Q39	:2SK1215(E)	D2	:B30-2019-05	D6	:UMN1N	D16. 17. 23	:MA2S077	D22	:HVU131
Q14	:2SC4619	Q19	:2SJ243	Q30	:2SK1824	Q34	:2SA1362(GR)	Q40	:2SK1588	D3. 14	:MA2S111	D7-10	:1SV283	D19	:1SS372	D24	:1SR154-400
Q15	:DTA114EE	Q20. 21. 26	:2SC5108(Y)	Q31	:2SC4988	Q35. 36	:DTC144EE	Q41	:DTA144EE	D4	:1SV269	D11	:1SV214	D20	:MA8062		
Q16. 18	:2SK1875(V)	Q23	:UMC4	Q32	:DTA144EE	Q37	:2SC4919			D5	:1SS373	D15	:DA221	D21	:DAN222		

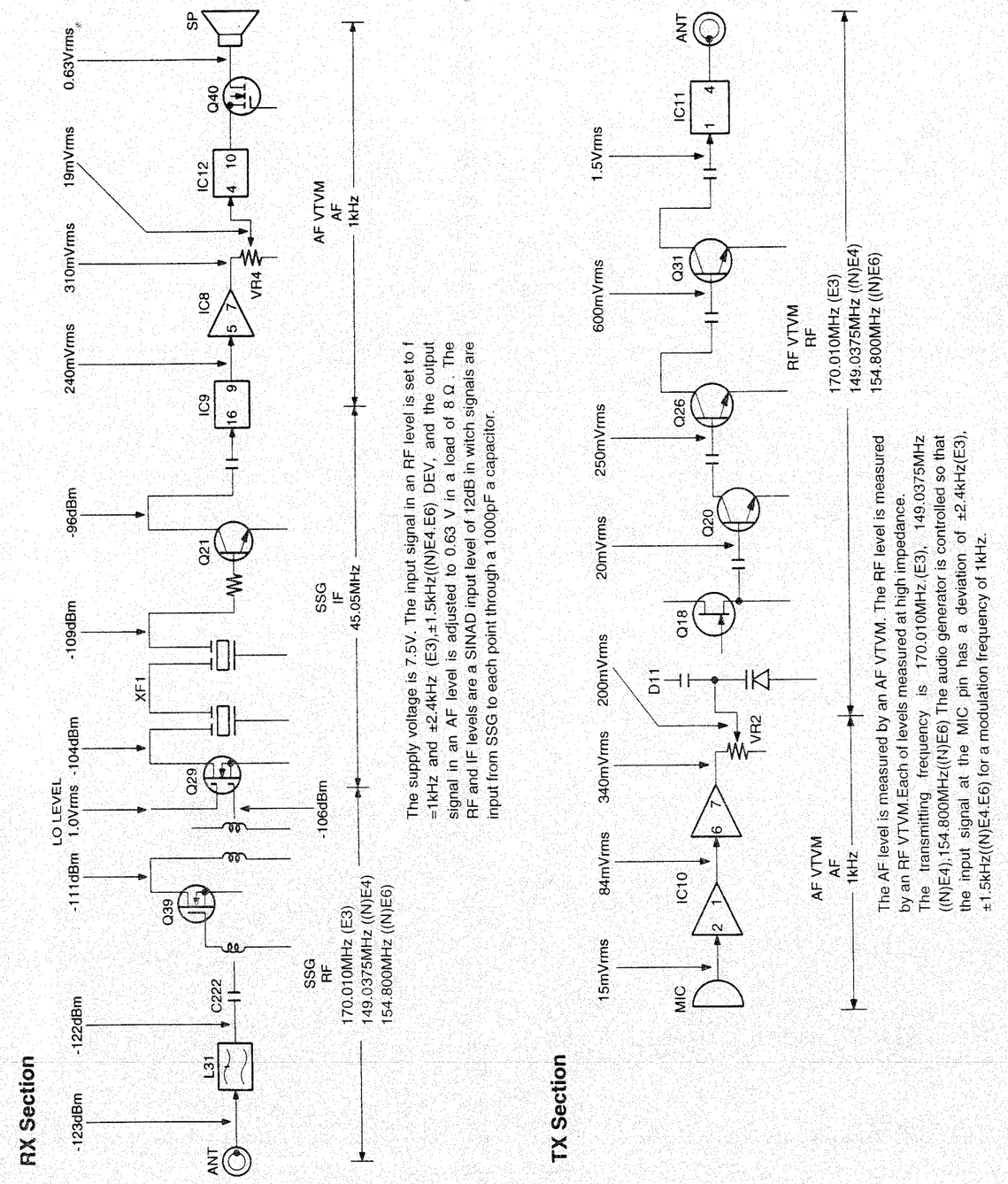
Note) • Ref.NO : Parts of pattem1.

TK-261/(N) TK-261/(N)

BLOCK DIAGRAM



LEVEL DIAGRAM

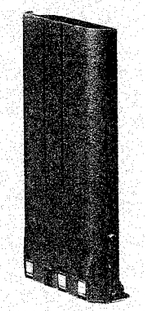


The supply voltage is 7.5V. The input signal in an RF level is set to f =1kHz and ±2.4kHz (E3),±1.5kHz((N)E4.E6) DEV, and the output signal in an AF level is adjusted to 0.63 V in a load of 8 Ω . The RF and IF levels are a SINAD input level of 12dB in witch signals are input from SSG to each point through a 1000pF a capacitor.

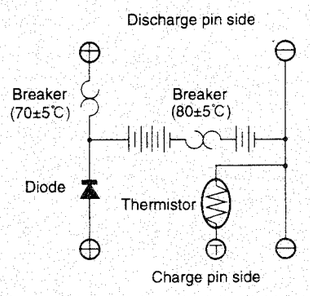
The AF level is measured by an AF VTVM. The RF level is measured by an RF VTVM.Each of levels measured at high impedance. The transmitting frequency is 170.010MHz.(E3), 149.0375MHz ((N)E4),154.800MHz((N)E6) The audio generator is controlled so that the input signal at the MIC pin has a deviation of ±2.4kHz(E3), ±1.5kHz((N)E4.E6) for a modulation frequency of 1kHz.

KNB-14/KNB-15A (Ni-Cd BATTERY)

KNB-14



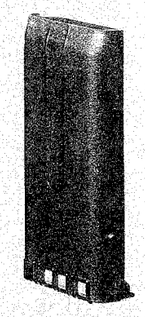
CIRCUITDIAGRAM



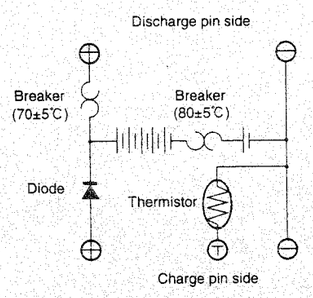
SPECIFICATIONS

Voltage : 7.2V(1.2V×6)
Charging current : 600mAh
Dimensions : 60.8W×110.8H×17.3D(mm)
(projections included)
Charger and charging time:
KSC-15 (normal charger), approximately 8 hours
Weight : 165g

KNB-15A



CIRCUITDIAGRAM

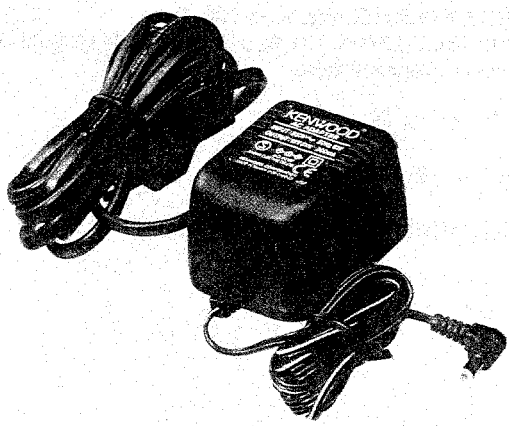


SPECIFICATIONS

Voltage : 7.2V(1.2V×6)
Charging current : 1100mAh
Dimensions : 60.8W×110.8H×20.3D(mm)
(projections included)
Charger and charging time:
KSC-15 (normal charger), approximately 8 hours
Weight : 210g

CHARGER / AC ADAPTER

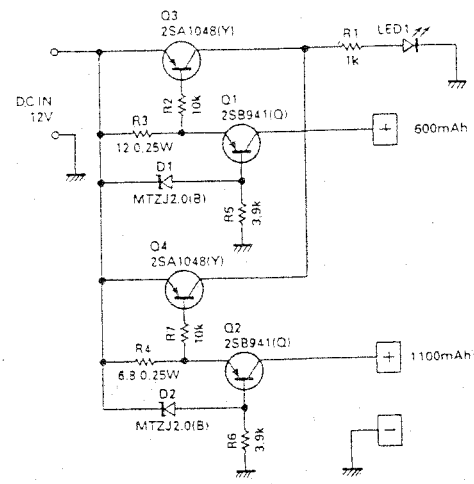
• AC ADAPTER



INPUT : 230V - 240V ~ 50Hz 8W
OUTPUT : 12V ⎓ 300mA

• CHARGER (KSC-15)

CIRCUIT DIAGRAM



CHARGING

The charging time for each pack is shown in the table.

Battery Pack	Voltage (Volts)	Battery Capacity (mAh)	Charging Time (hours)
KNB-14	7.2	600	Approx. 8
KNB-15A	7.2	1100	Approx. 8

TK-261/(N)

SPECIFICATIONS

GENERAL

Frequency Range	TK-261 : 169.970MHz,170.010MHz	E3
	: 149.0250MHz,149.0375MHz,149.0500MHz	(N)E4
	: 154.600MHz,154.800MHz,154.825MHz,154.850MHz	(N)E6
Number of channels	4 (3different frequencies programmale)	
Operating Voltage	7.5 VDC±20%	
Temperature Range	-30℃ to +60℃ (-22 °F to +140 °F)	
Dimensions and Weight		
With KNB-14 (7.2V 600mAh battery)	58 (2-5/16) W x 135 (5-5/16) H x 32 (1-1/4) D mm (in)	
	400g (0.88lbs)	
With KNB-15A (7.2V 1100mAh battery)	58 (2-5/16) W x 135 (5-5/16) H x 35 (1-3/8) D mm (in)	
	440g (0.97lbs)	