

VHF FM TRANSCEIVER

TK-760HG/762HG

SERVICE MANUAL

SUPPLEMENT

KENWOOD

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This service manual mainly covers TK-760HG K, M and TK-762HG K.
If information you require is missing from this service manual.
Please refer to the B51-8497-10 service manual.

TK-760HG (K)



TK-762HG (K)



TK-760HG/762HG

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TK-760HG/762HG

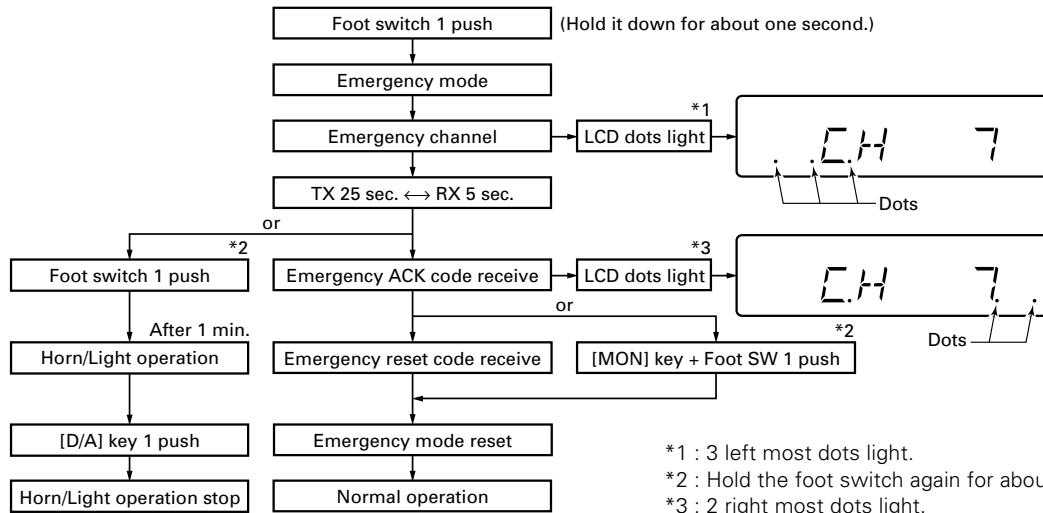
OPERATING FEATURES

Emergency

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 receives for 5 seconds. The transceiver mutes the speaker while receiving. Following the above sequence, the transceiver continues to transmit and receive.

■ Emergency mode system chart (TK-760HG)

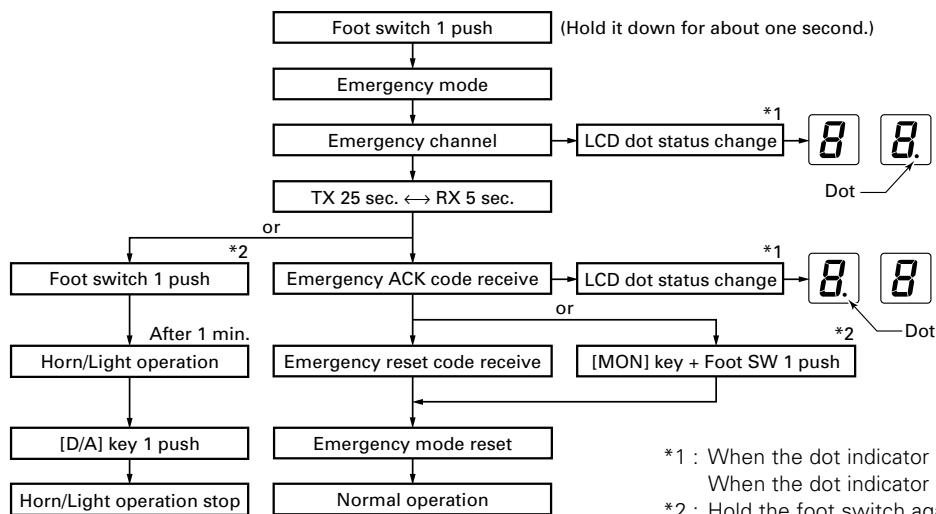


Radio Password (TK-760HG only)

When the password is set in the transceiver, user can not use the transceiver unless enter the correct password.

This code can be up to 6 digits from 0 to 9 and input with the key, and "SCN" key.

■ Emergency mode system chart (TK-762HG)



*1 : When the dot indicator is on, it turns off.
When the dot indicator is off, it turns on.

*2 : Hold the foot switch again for about one second.

TK-760HG/762HG

REALIGNMENT

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-760HG power ON with the [\blacktriangledown] key held down. If the password is set to the TK-760HG, the TK-760HG displays "CLN LOCK". If the password is not set, the TK-760HG displays "CLONE".
2. When "CLN LOCK" is displayed, only the [CH \blacktriangleleft / \blacktriangleright] key and [SCN], and [0] to [9] keys can be accepted. When you enter the correct password, and "CLONE" is displayed, the TK-760HG can be used as the cloning master. The following describes how to enter the password.
3. How to enter the password with the microphone keypad; If you press a key while "CLN LOCK" is displayed, the number that was pressed is displayed on the TK-760HG. Each press of the key shifts the display in order to the left. When you enter the password and press the [SCN] key, "CLONE" is displayed if the entered password is correct. If the password is incorrect, "CLN LOCK" is redisplayed.
How to enter the password with the [CH \blacktriangleleft / \blacktriangleright] key;
If the [CH \blacktriangleleft / \blacktriangleright] key is pressed while "CLN LOCK" is displayed, numbers (0 to 9) are displayed flashing. When you press the [SCN] key, the correctly selected number is determined, and the display shifts to the left. If you press the [SCN] key after entering the password in this procedure, "CLONE" is displayed if the entered password is correct. If the password is incorrect, "CLN LOCK" is redisplayed.
4. Power on the slave TK-760HG/762HG.
5. Connect the cloning cable (No. E30-3382-05) to the modular microphone jacks on the master and slave.
6. 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.
7. 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 4 to 6.

Note :

You can clone the programmed data between the transceiver frequency version must be same.

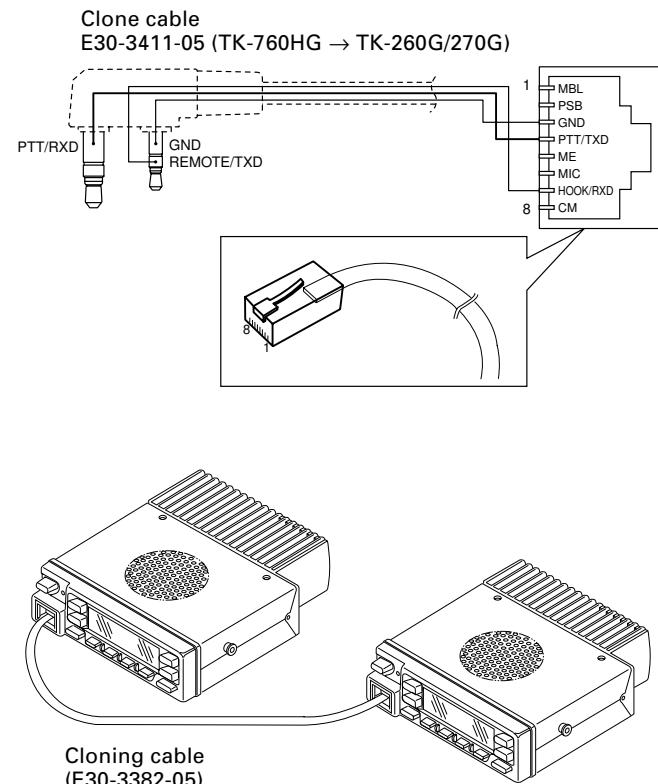


Fig. 1

INSTALLATION

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.

■ Connecting the KCT-18 to the Transceiver

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

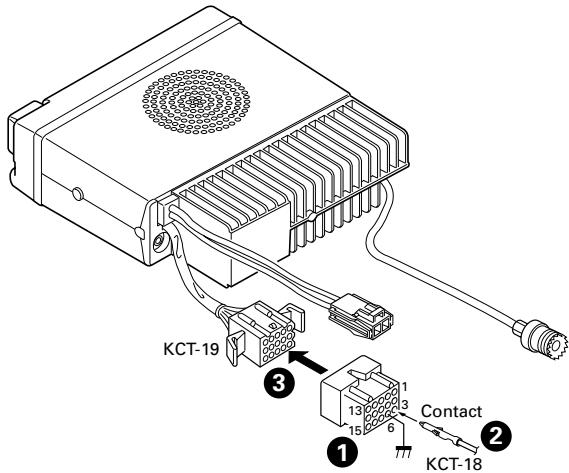


Fig. 1

■ 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.

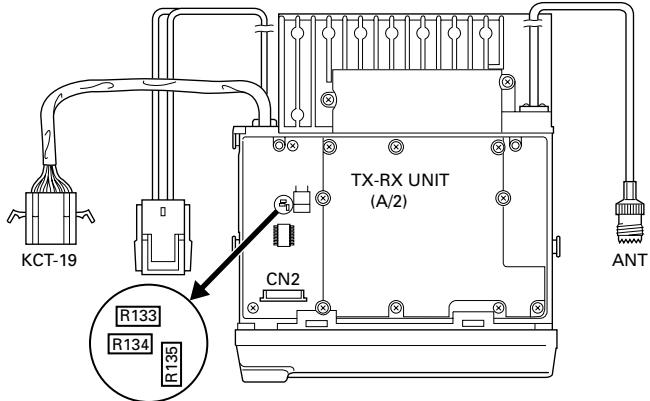


Fig. 2

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

PA/HA Unit (KAP-1 : Option)

■ 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 (①) 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 (③). The notch (②) in the board must be placed at the front left side.
4. Attach the cushion on the top of the KAP-1 switch unit.

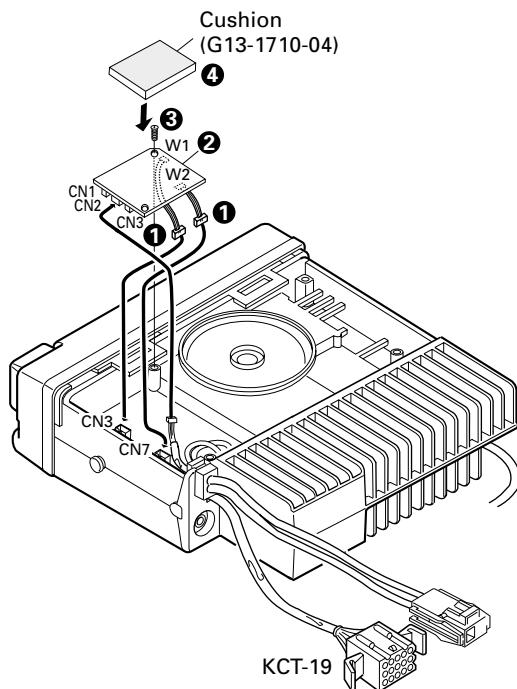


Fig. 3

TK-760HG/762HG

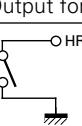
INSTALLATION

■ Modifying the Transceiver

• Horn alert

The signal from pin 4 of IC9 on the TX-RX unit turns Q5 and Q1 on and off and drives KAP-1 HA relay K2 to drive the horn with a maximum of 2A.

The default output is HR1. The relay open output can be obtained between HR1 and HR2 by removing R1 in the KAP-1.

	R1	Output form
HR1 (Default)	Enable	
HR2	Disable	

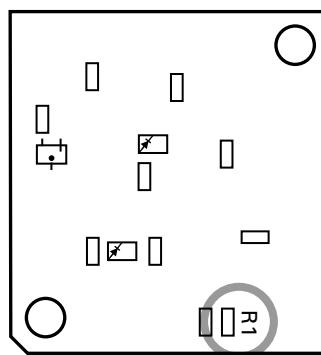


Fig. 4 KAP-1 foil side view

• Public address

The signal from pin 13 of IC9 on the TX-RX unit drives PA relay K1 in the KAP-1 and switches the audio power amplifier output between the external PA system (through KCT-19) and internal and external speakers.

To use the PA function, R153 on the TX-RX unit must be removed.

	R153
Use the PA function	Disable
Do not use the PA function	Enable

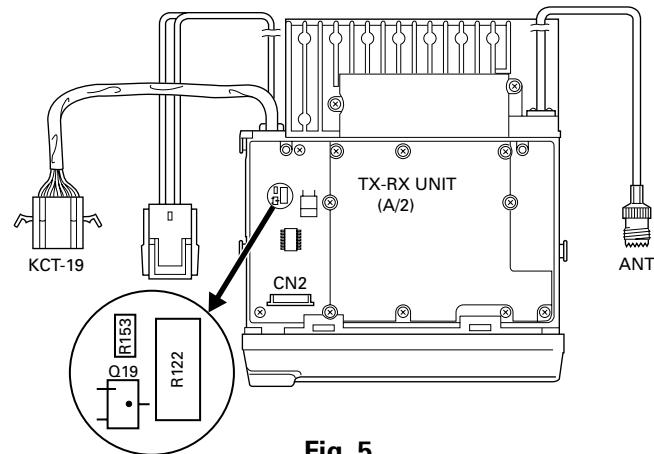


Fig. 5

■ Others

If the PA and HR2 are not necessary and the speaker output is output to an external unit through the KCT-19, connect the KCT-19 C connector to CN8 on the TX-RX unit.

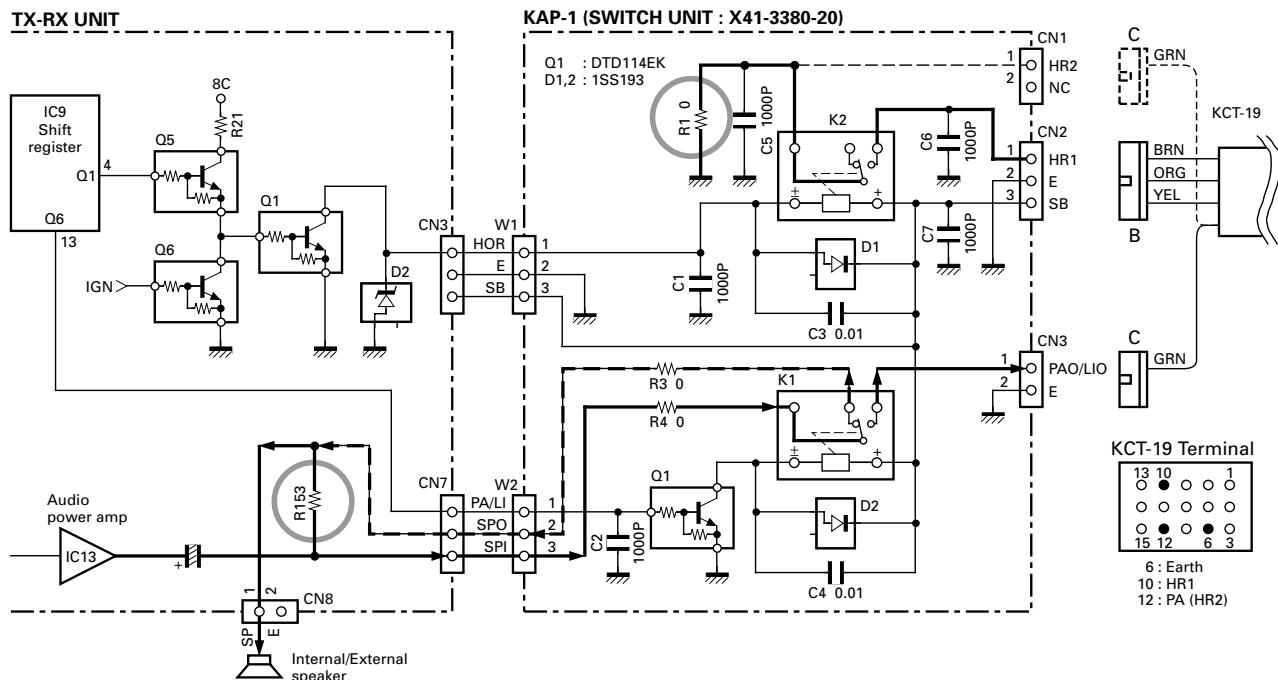


Fig. 6

TK-760HG/762HG

INSTALLATION

Emergency Mode

■ Transceiver Modification Procedure

- **Install the foot switch**

Install the foot switch through the KCT-19 and KCT-18. When the switch is treaded on, the radio enters the emergency mode.

- **Change the power switch circuit**

TX-RX unit (B/2) : Control section

\$R705 : Attach (R92-1252-05, 0Ω)

TX-RX unit (A/2) : RF section

R142 : Remove (RK73GB1J473J, 47kΩ)

Once the transceiver is modified, it cannot be turned on and off with the power switch. The power switch turns the LCD backlight and display on and off. (The power is switched on and off by IGNITION SENSE.)

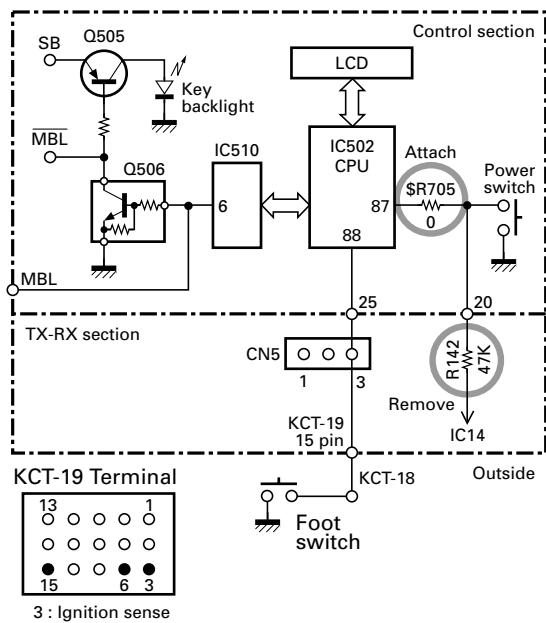


Fig. 7

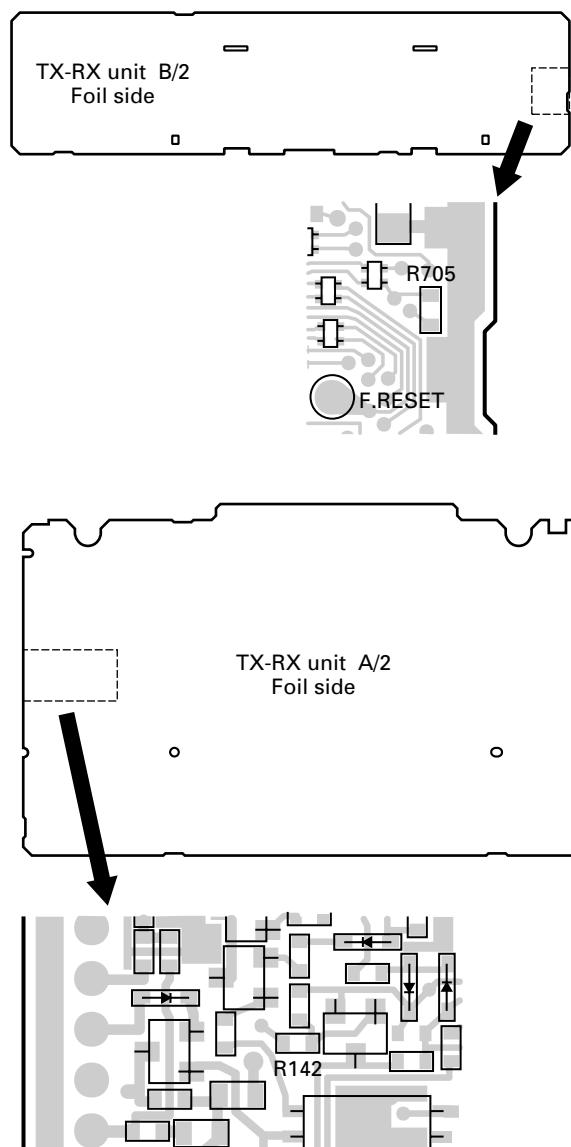


Fig. 8

TK-760HG/762HG

PARTS LIST

* New Parts. Δ indicates safety critical components.

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

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

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

L : Scandinavia

Y : PX (Far East, Hawaii)

Y : AAFES (Europe)

K : USA

T : England

X : Australia

P : Canada

E : Europe

M : Other Areas

TK-760HG/762HG

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

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
TK-760HG/762HG					
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	B62-1257-20	INSTRUCTION MANUAL		M
8	2G	* B62-1258-20	INSTRUCTION MANUAL		K
9	1C	B72-1816-04	MODEL NAME PLATE		760K
9	1C	B72-1817-04	MODEL NAME PLATE		760M
9	1F	B72-1818-04	MODEL NAME PLATE		762
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	EXTENSION CABLE		
16	1C,1F	E37-0790-25	LEAD WIRE WITH CONNECTOR (SP)		
17	2B,2E	E37-0815-05	FLAT CABLE		
19	1G	F51-0017-05	FUSE (6*30)		
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	H10-6628-02	POLYSTYRENE FOAMED FIXTURE (F)		
31	2H	H10-6629-02	POLYSTYRENE FOAMED FIXTURE (R)		
32	1G	H12-1391-03	INNER PACKING CASE		
33	1H,2H	H25-0720-04	PROTECTION BAG (200X350)		
34	3H	H52-1653-02	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	T91-0597-25	MICROPHONE		K

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
DISPLAY UNIT (X54-3270-10) : TK-760HG					
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 (LCD DRIVER)	
Q801			2SB1132(Q,R)	TRANSISTOR	
DISPLAY UNIT (X54-3280-10) : TK-762HG					
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	DIGITAL TRANSISTOR	
Q805			DTA114EKA	DIGITAL TRANSISTOR	
Q806-809			2SK1824	FET	

TK-760HG : K,M

TK-762HG : K

PARTS LIST

TX-RX UNIT (X57-5950-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation		
TX-RX UNIT (X57-5950-XX)													
-14 : TK-760HG -15 : TK-762HG													
D509-514 D521			B30-2050-05 B30-2151-05	LED LED (RED/GREEN)		C98 C99 C100 C101 C102,103			CK73GB1H103K C92-0004-05 CK73GB1H102K CC73GCH1H040C CK73GB1H102K	CHIP C CHIP-TAN CHIP C CHIP C CHIP C	0.010UF 1.0UF 1000PF 4.0PF 1000PF	K 16WV K C K	
C1-11 C13-19 C20 C21 C22			CK73GB1H102K CK73GB1H102K C92-0507-05 CK73GB1H102K CK73GB1C104K	CHIP C CHIP C CHIP-TAN CHIP C CHIP C	1000PF 1000PF 4.7UF 1000PF 0.10UF	K K 6.3WV K K	C104 C105 C106 C107 C110		C92-0002-05 CK73GB1H102K CC73GCH1H180J CK73GB1H102K CC73GCH1H180J	CHIP-TAN CHIP C CHIP C CHIP C CHIP C	0.22UF 1000PF 18PF 1000PF 18PF	35WV K J K J	
C23,24 C26 C29 C30 C31			C92-0507-05 CK73GB1H102K C92-0507-05 CC73GCH1H050C CK73GB1H102K	CHIP-TAN CHIP C CHIP-TAN CHIP C CHIP C	4.7UF 1000PF 4.7UF 5.0PF 1000PF	6.3WV K 6.3WV C K	C111 C112 C113 C114 C115		CC73GCH1H040C CK73GB1H102K C92-0507-05 C92-0697-05 CK73GB1H102K	CHIP C CHIP C CHIP-TAN CHIP-TAN CHIP C	4.0PF 1000PF 4.7UF 3.3UF 1000PF	C K 6.3WV 16WV K	
C32 C33 C35 C36 C37			C92-0662-05 CC73GCH1H220J CK73GB1C104K CK73GB1H102K CK73FB1C334K	CHIP-TAN CHIP C CHIP C CHIP C CHIP C	15UF 22PF 0.10UF 1000PF 0.33UF	6.3WV J K K K	C116 C117 C118 C119 C120		CK73GB1H103K CK73GB1H102K CC73GCH1H100D CK73GB1H103K CC73GCH1H220J	CHIP C CHIP C CHIP C CHIP C CHIP C	0.010UF 1000PF 10PF 0.010UF 22PF	K K D K J	
C40,41 C43 C44 C45 C46			CK73GB1H103K C92-0507-05 CK73GB1H331K CK73GB1H102K CK73GB1H103K	CHIP C CHIP-TAN CHIP C CHIP C CHIP C	0.010UF 4.7UF 330PF 1000PF 0.010UF	K 6.3WV K K K	C121 C122,123		CK73GB1H102K CK73GB1C104K CC73GCH1H101J C92-0004-05 CC73GCH1H180J	CHIP C CHIP C CHIP C CHIP-TAN CHIP C	1000PF 0.10UF 100PF 1.0UF 18PF	K K J 16WV J	
C47 C49 C50 C51 C52			C92-0561-05 CK73GB1H102K CC73GCH1H220J CK73GB1C104K CC73GCH1H680J	CHIP-ELE CHIP C CHIP C CHIP C CHIP C	22UF 1000PF 22PF 0.10UF 68PF	16WV K J K J	C127 C128 C129 C130 C131-133		CK73GB1H103K C92-0543-05 CK73FF1C105Z CK73GB1H103K CK73GB1H102K	CHIP C CHIP-TAN CHIP C CHIP C CHIP C	0.010UF 3.3UF 1.0UF 0.010UF 1000PF	K 10WV Z K K	
C53 C54 C56 C58 C60,61			CK73GB1C104K CK73GB1H103K CC73GCH1H220J CK73GB1E223K CK73GB1H102K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.10UF 0.010UF 22PF 0.022UF 1000PF	K K J K K	C134 C135 C136 C137 C138		CK73FB1E104K CC73GCH1H090D CK73GB1C104K CC73GCH1H101J CK73FB1E104K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.10UF 9.0PF 0.10UF 100PF 0.10UF	K D K J K	
C62 C63 C64 C66,67 C69			CC73GCH1H101J CK73GB1C104K CK73GB1H103K CK73GB1H102K CK73GB1E223K	CHIP C CHIP C CHIP C CHIP C CHIP C	100PF 0.10UF 0.010UF 1000PF 0.022UF	J K K K K	C139 C141 C142-144 C146-149 C150		CK73GB1H102K C92-0719-05 CK73GB1H102K CK73GB1H102K CK73FF1C105Z	CHIP C ELECTRO CHIP C CHIP C CHIP C	1000PF 47UF 1000PF 1000PF 1.0UF	K 25WV K K Z	
C70 C72 C74,75 C77 C78			C92-0507-05 C92-0507-05 CK73GB1H102K C90-2046-05 CK73GB1H102K	CHIP-TAN CHIP-TAN CHIP C ELECTRO CHIP C	4.7UF 4.7UF 1000PF 22UF 1000PF	6.3WV 6.3WV K 10WV K	C151 C152 C153 C154 C155		CK73GB1H102K CC73GCH1H030C CC73GCH1H330J CK73GB1H102K CC73GCH1H220J	CHIP C CHIP C CHIP C CHIP C CHIP C	1000PF 3.0PF 33PF 1000PF 22PF	K C J K J	
C79,80 C81 C82 C83 C84			CK73GB1H221K CK73GB1H102K C92-0507-05 CC73GCH1H270J C92-0507-05	CHIP C CHIP C CHIP-TAN CHIP C CHIP-TAN	220PF 1000PF 4.7UF 27PF 4.7UF	K K 6.3WV J 6.3WV	C156,157 C158 C159 C160,161 C162		CK73GB1H102K CC73GCH1H270J CC73GCH1H180J C92-0719-05 CK73GB1H102K	CHIP C CHIP C CHIP C ELECTRO CHIP C	1000PF 27PF 18PF 47UF 1000PF	K J J 25WV K	
C86 C87 C88 C91 C92			C92-0662-05 CC73GCH1H330J CK73GB1H103K CC73GCH1H050C CK73GB1H102K	CHIP-TAN CHIP C CHIP C CHIP C CHIP C	15UF 33PF 0.010UF 5.0PF 1000PF	6.3WV J K C K	C163 C164 C165 C166 C167		CC73GCH1H010B CK73GB1H102K C92-0719-05 CE04EW1E471M CC73GCH1H150J	CHIP C CHIP C ELECTRO ELECTRO CHIP C	1.0PF 1000PF 47UF 470UF 15PF	B K 25WV 25WV J	
C93 C94 C95 C96 C97			C92-0555-05 CK73GB1H102K CC73GCH1H020B CK73GB1H102K C92-0546-05	CHIP-TAN CHIP C CHIP C CHIP C CHIP-TAN	0.047UF 1000PF 2.0PF 1000PF 68UF	35WV K B K 6.3WV	C168-170 C171 C172 C173 C174		CK73GB1H102K CC73GCH1H020B CE04EW1E471M CK73GB1C104K CK73GB1H102K	CHIP C CHIP C ELECTRO CHIP C CHIP C	1000PF 2.0PF 470UF 0.10UF 1000PF	K B 25WV K K	

PARTS LIST

TX-RX UNIT (X57-5950-XX)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
C603			CK73GB1H102K	CHIP C 1000PF K		L503,504			L92-0138-05	FERRITE CHIP	
C604-606			CC73GCH1H101J	CHIP C 100PF J		L510			L92-0138-05	FERRITE CHIP	
C608-610			CC73GCH1H101J	CHIP C 100PF J		X1			L77-1826-05	TCXO (16.8M)	
C611,612			CK73GB1H471K	CHIP C 470PF K		X501			L77-1708-05	CRYSTAL RESONATOR (3.579545MHZ)	
C613			CC73GCH1H101J	CHIP C 100PF J		X502			L78-0462-05	RESONATOR (9.8304M/8*2.5)	
C615			CK73GB1H471K	CHIP C 470PF K		XF1			L71-0551-15	MCF (49.95MHZ/5.0K)	
C616			CC73GCH1H101J	CHIP C 100PF J		CP501-505			R90-0741-05	MULTIPLE RESISTOR	
C618			CK73GB1H102K	CHIP C 1000PF K		CP508-514			R90-0741-05	MULTIPLE RESISTOR	
C620			CK73GB1H471K	CHIP C 470PF K		CP516-524			R90-0741-05	MULTIPLE RESISTOR	
C621			CK73GB1H102K	CHIP C 1000PF K		CP526,527			R90-0741-05	MULTIPLE RESISTOR	
C623			CK73GB1H102K	CHIP C 1000PF K		CP529-536			R90-0741-05	MULTIPLE RESISTOR	
C626			CK73GB1C104K	CHIP C 0.10UF K		CP538			R90-0741-05	MULTIPLE RESISTOR	
C628			CK73GB1C104K	CHIP C 0.10UF K		CP539			R90-0724-05	MULTI-COMP 1K X4	
C629			CC73GCH1H470J	CHIP C 47PF J		R1			R92-1252-05	CHIP R 0 OHM	
C630			C92-0507-05	CHIP-TAN 4.7UF 6.3WV		R2			RK73GB1J102J	CHIP R 1.0K J 1/16W	
C631			CK73GB1H103K	CHIP C 0.010UF K		R3			R92-1252-05	CHIP R 0 OHM	
C632			CK73FF1C105Z	CHIP C 1.0UF Z		R4			RK73GB1J333J	CHIP R 33K J 1/16W	
C633			CK73GB1C104K	CHIP C 0.10UF K		R6			R92-1252-05	CHIP R 0 OHM	
C720			C92-0566-05	CHIP-TAN 10UF 6.3WV		R7,8			RK73GB1J102J	CHIP R 1.0K J 1/16W	
CN1			E40-6047-05	PIN ASSY		R9,10			R92-1252-05	CHIP R 0 OHM	
CN2			E40-6021-05	FLAT CABLE CONNECTOR		R11			RK73GB1J102J	CHIP R 1.0K J 1/16W	
CN3			E40-3247-05	PIN ASSY		R12			RK73GB1J104J	CHIP R 100K J 1/16W	
CN4			E40-5737-05	PIN ASSY		R13			RK73GB1J473J	CHIP R 47K J 1/16W	
CN5			E40-5738-05	PIN ASSY		R14			RK73GB1J474J	CHIP R 470K J 1/16W	
CN7			E40-3247-05	PIN ASSY		R15			RK73GB1J104J	CHIP R 100K J 1/16W	
CN8			E40-3246-05	PIN ASSY		R16			RK73GB1J220J	CHIP R 22 J 1/16W	
CN501			E40-6021-05	FLAT CABLE CONNECTOR		R17			RK73GB1J104J	CHIP R 150K J 1/16W	
J1			E11-0442-05	3.5D PHONE JACK (3P)		R18			RK73GB1J104J	CHIP R 100K J 1/16W	
J501			E08-0877-05	MODULAR JACK		R19			RK73GB1J392J	CHIP R 3.9K J 1/16W	
F1			F53-0108-05	FUSE		R20			RK73GB1J224J	CHIP R 220K J 1/16W	
-			J31-0543-05	COLLAR (LH-5-1.5)		R21			RK73GB1J102J	CHIP R 1.0K J 1/16W	
CF1			L72-0959-05	CERAMIC FILTER		R22			RK73GB1J474J	CHIP R 470K J 1/16W	
CF2			L72-0973-05	CERAMIC FILTER		R23			RK73GB1J223J	CHIP R 22K J 1/16W	
L1			L40-1005-34	SMALL FIXED INDUCTOR (10UH/8)		R24			RK73GB1J183J	CHIP R 18K J 1/16W	
L2-4			L40-3381-86	SMALL FIXED INDUCTOR (0.33U/160)		R25,26			R92-1252-05	CHIP R 0 OHM	
L5			L34-4530-05	COIL		R29			R92-1252-05	CHIP R 0 OHM	
L6			L40-1581-86	SMALL FIXED INDUCTOR (0.15U/160)		R30			RK73GB1J103J	CHIP R 10K J 1/16W	
L7			L40-4785-85	SMALL FIXED INDUCTOR (0.47U/252)		R31			RK73GB1J152J	CHIP R 1.5K J 1/16W	
L8			L40-8285-85	SMALL FIXED INDUCTOR (0.82U/252)		R32			RK73GB1J103J	CHIP R 10K J 1/16W	
L9			L40-1085-77	SMALL FIXED INDUCTOR (100NH/160)		R33			R92-1252-05	CHIP R 0 OHM	
L10			L40-6875-77	SMALL FIXED INDUCTOR (68NH/1608)		R34			RK73GB1J104J	CHIP R 100K J 1/16W	
L11			L34-4472-05	COIL		R35			RK73GB1J224J	CHIP R 220K J 1/16W	
L12			L40-3375-34	SMALL FIXED INDUCTOR (33NH/8)		R36			RK73GB1J223J	CHIP R 22K J 1/16W	
L13			L34-4473-05	COIL		R37			RK73GB1J220J	CHIP R 22 J 1/16W	
L14			L40-6875-34	SMALL FIXED INDUCTOR (68NH/8)		R38-40			RK73GB1J103J	CHIP R 10K J 1/16W	
L15			L34-4473-05	COIL		R41			RK73GB1J224J	CHIP R 220K J 1/16W	
L17			L92-0179-05	FERRITE CHIP		R42			RK73GB1J473J	CHIP R 47K J 1/16W	
L18			L34-4472-05	COIL		R43			RK73GB1J683J	CHIP R 68K J 1/16W	
L20			L34-4481-05	AIR-CORE COIL		R44			RK73GB1J153J	CHIP R 15K J 1/16W	
L21			L34-4478-05	AIR-CORE COIL		R46			RK73GB1J223J	CHIP R 22K J 1/16W	
L22			L34-4480-05	AIR-CORE COIL		R47			RK73GB1J101J	CHIP R 100 J 1/16W	
L23	*		L34-4655-05	AIR-CORE COIL		R48			RK73GB1J184J	CHIP R 180K J 1/16W	
L24			L34-4481-05	AIR-CORE COIL		R49			RK73GB1J152J	CHIP R 1.5K J 1/16W	
L25			L34-4478-05	AIR-CORE COIL		R50			RK73GB1J473J	CHIP R 47K J 1/16W	
L26			L40-4775-77	SMALL FIXED INDUCTOR (47NH/1608)		R51-53			RK73GB1J102J	CHIP R 1.0K J 1/16W	
L27			L40-1581-86	SMALL FIXED INDUCTOR (0.15U/160)		R54			R92-1252-05	CHIP R 0 OHM	
L33,34			L92-0179-05	FERRITE CHIP		R55			RK73GB1J104J	CHIP R 100K J 1/16W	
L501			L92-0138-05	FERRITE CHIP		R56			RK73GB1J101J	CHIP R 100 J 1/16W	
						R57			RK73GB1J471J	CHIP R 470 J 1/16W	

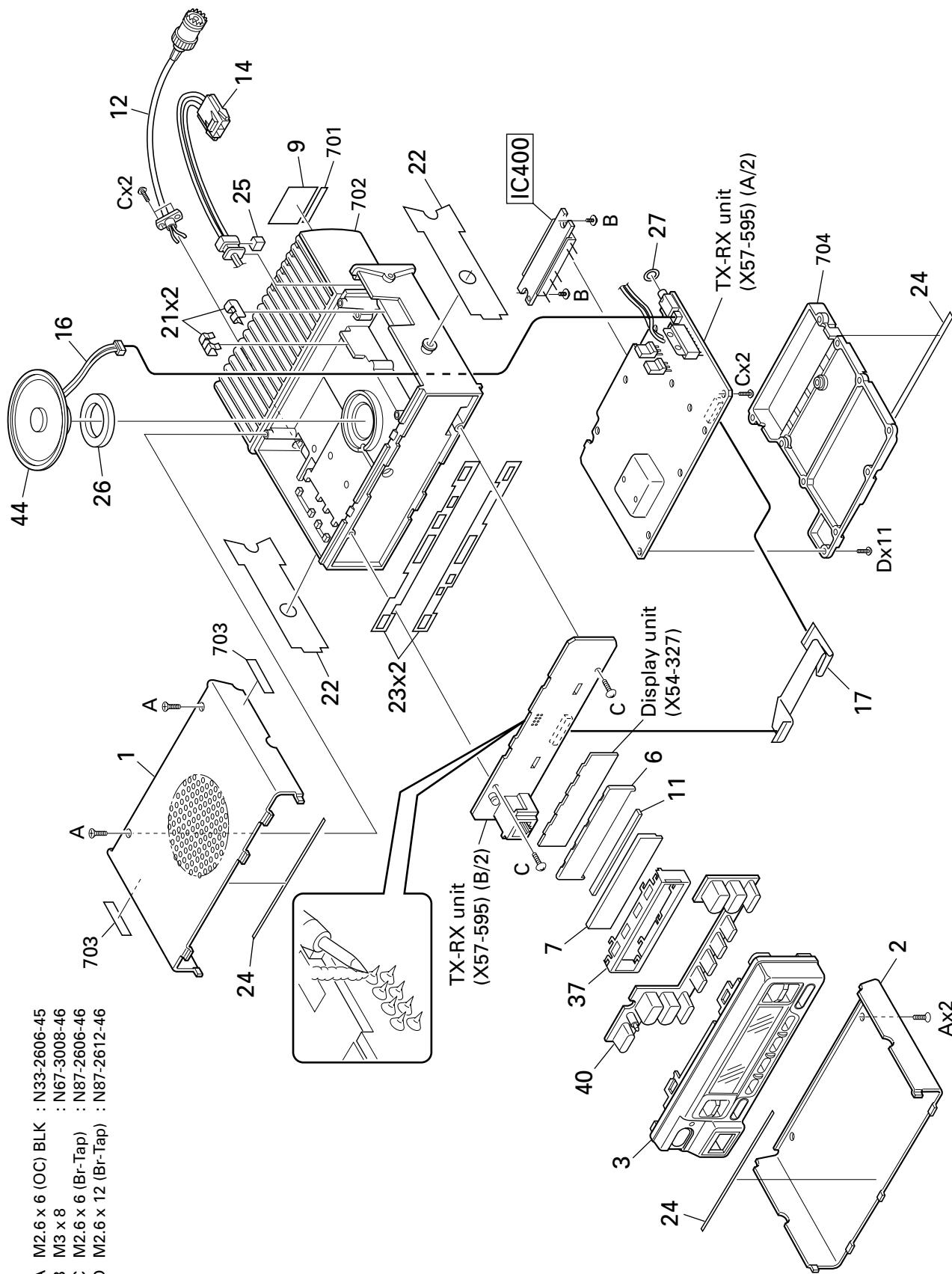
PARTS LIST

PLL/VCO (X58-4670-10)

Ref. No.	Address	New parts	Parts No.	Description	Desti-nation	Ref. No.	Address	New parts	Parts No.	Description	Desti-nation
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							
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							

TK-760HG/762HG

EXPLODED VIEW (TK-760HG)

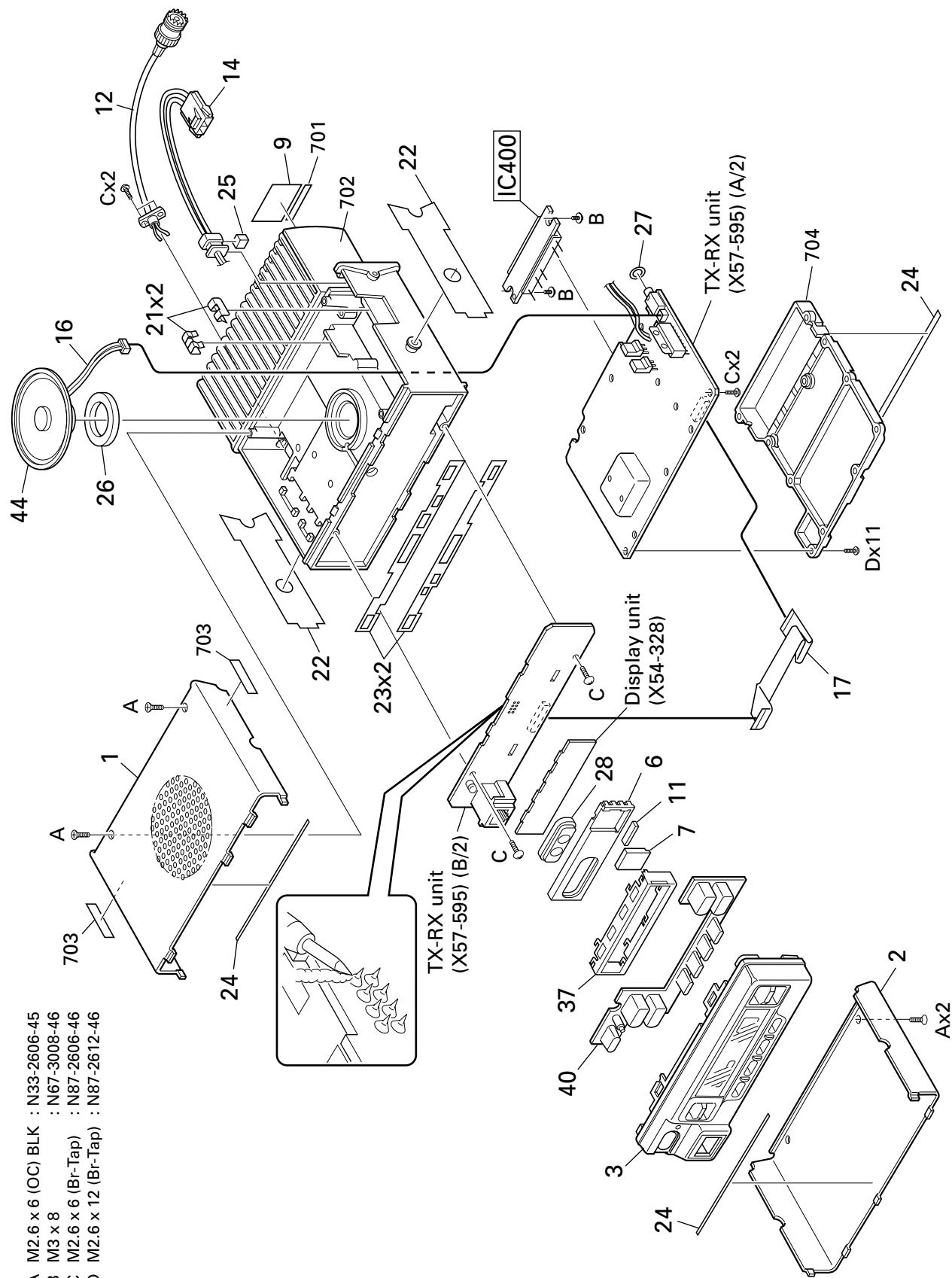


1

2

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

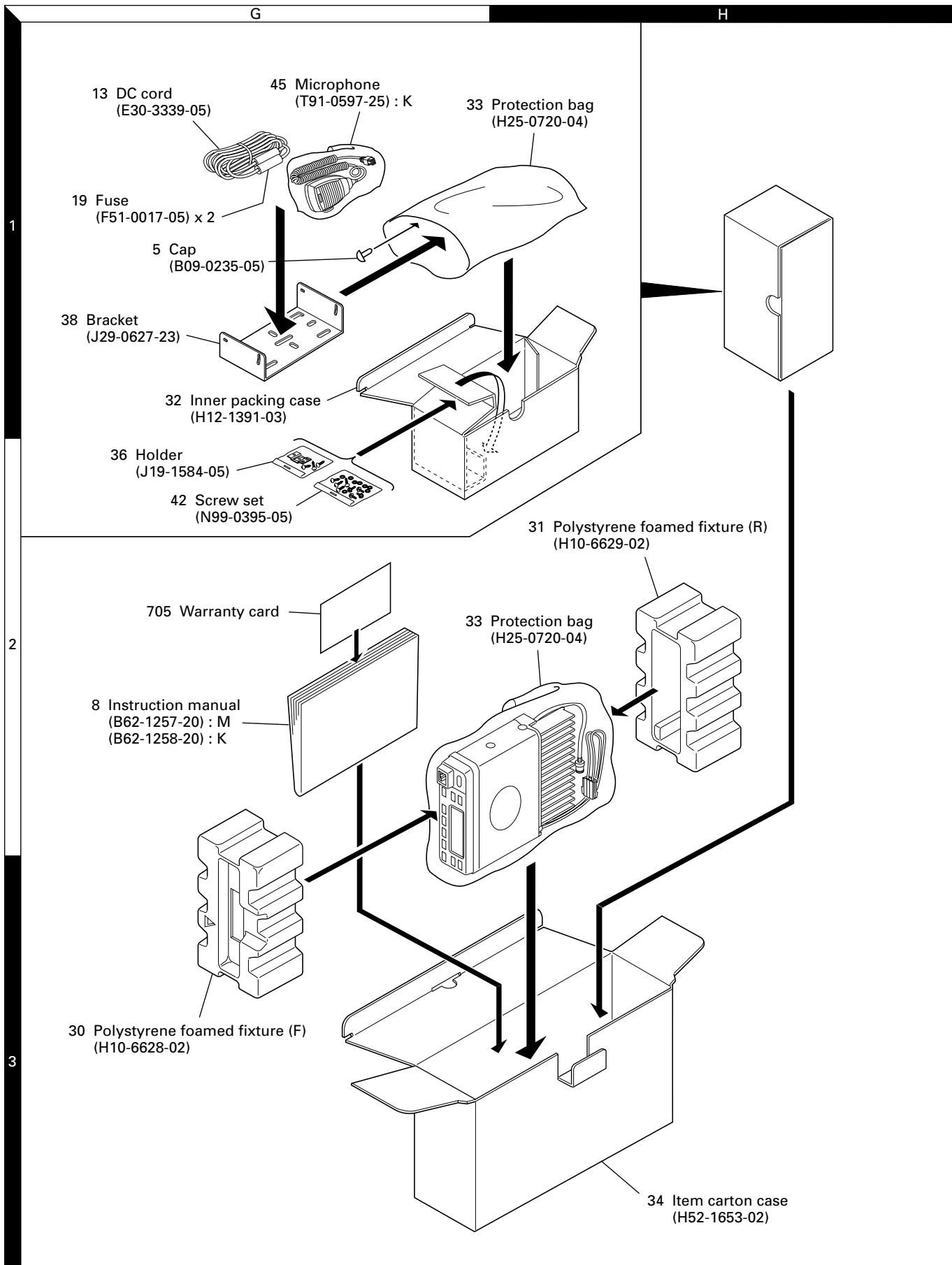
EXPLODED VIEW (TK-762HG)



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

TK-760HG/762HG

PACKING



ADJUSTMENT

Test Mode (TK-760HG 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-760HG/762HG (K)		TK-760HG (M)	
	RX	TX	RX	TX
1 (Center)	161.050	161.100	160.050	160.100
2 (Low)	148.050	148.100	146.050	146.100
3 (High)	173.950	173.900	173.950	173.900
4	161.000	161.000	160.000	160.000
5	161.200	161.200	160.200	160.200
6	161.400	161.400	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.

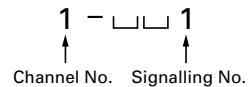
Whenever the transmitter is turned, the unit must be connected to a suitable dummy load (i.e. power meter).

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.

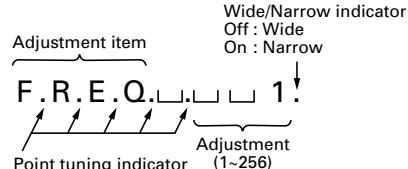
LCD display (Test mode)



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.

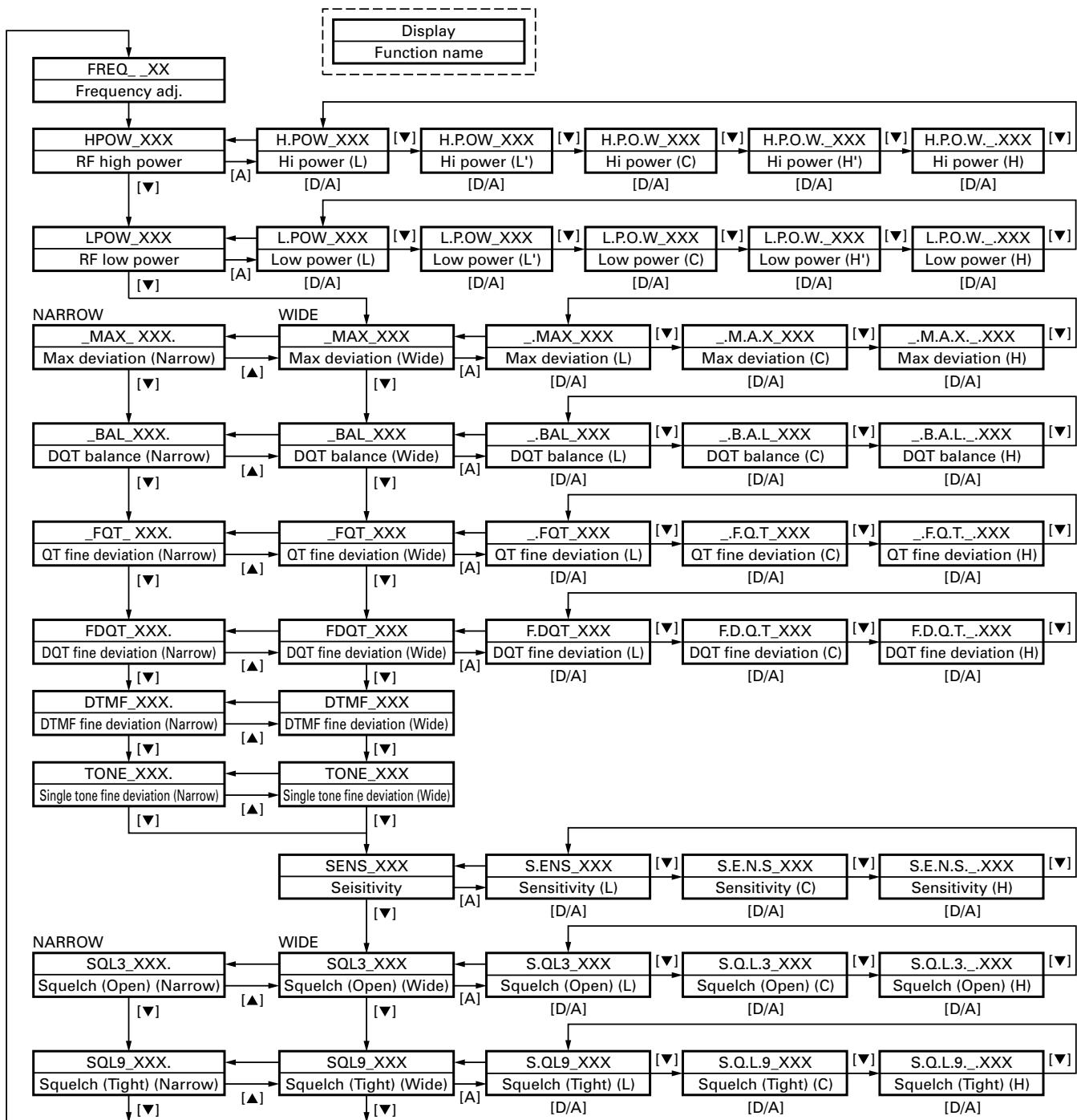
LCD display (Tuning mode)



TK-760HG/762HG

ADJUSTMENT

■ Tuning Mode

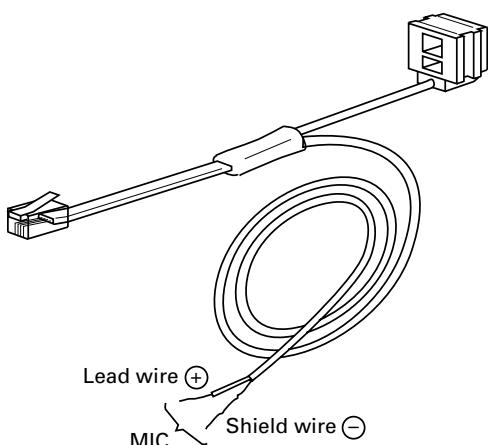
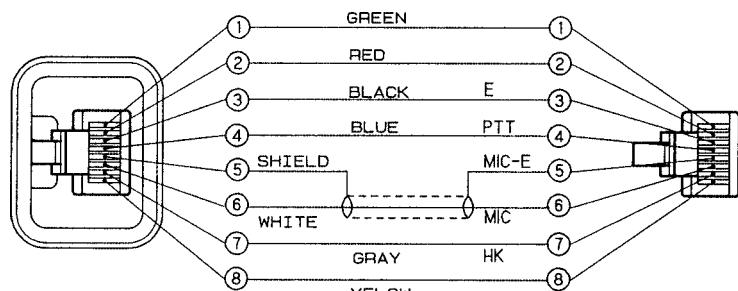


ADJUSTMENT**Test Equipment Required for Alignment**

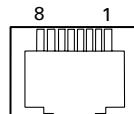
Test Equipment	Major Specifications	
1. Standard Signal Generator (SSG)	Frequency Range Modulation Output	136 to 174MHz Frequency modulation and external modulation -127dBm/0.1µV to greater than -7dBm/100mV
2. Power Meter	Input Impedance Operation Frequency Measurement Capability	50Ω 136 to 174MHz or 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 equipped

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)**



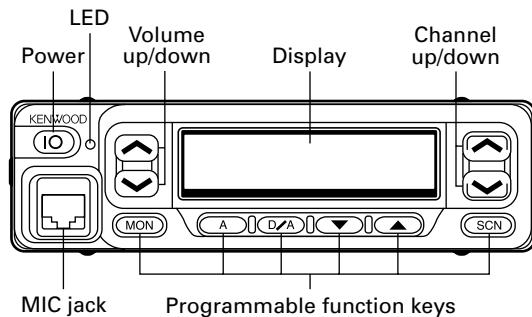
- 1 : BLC
- 2 : PSB
- 3 : E
- 4 : PTT
- 5 : ME
- 6 : MIC
- 7 : HOOK
- 8 : CM

TK-760HG/762HG

ADJUSTMENT

Adjustment Location

■ Switch (TK-760HG)



■ Note

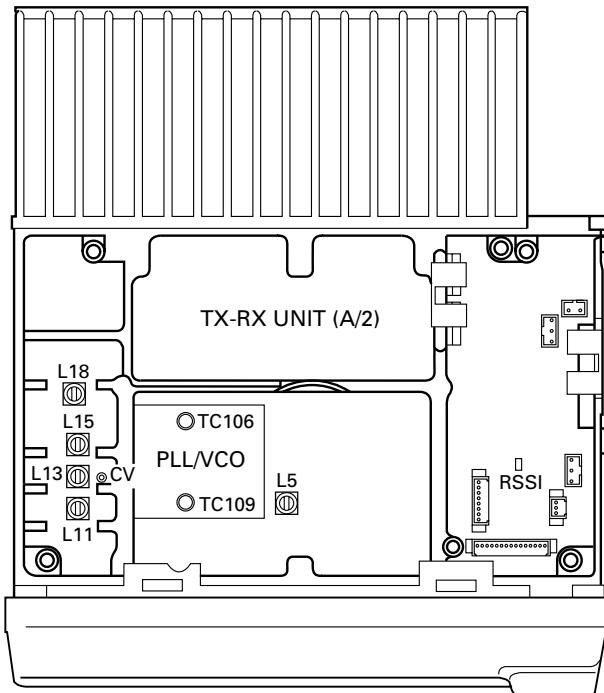
• Flash memory

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



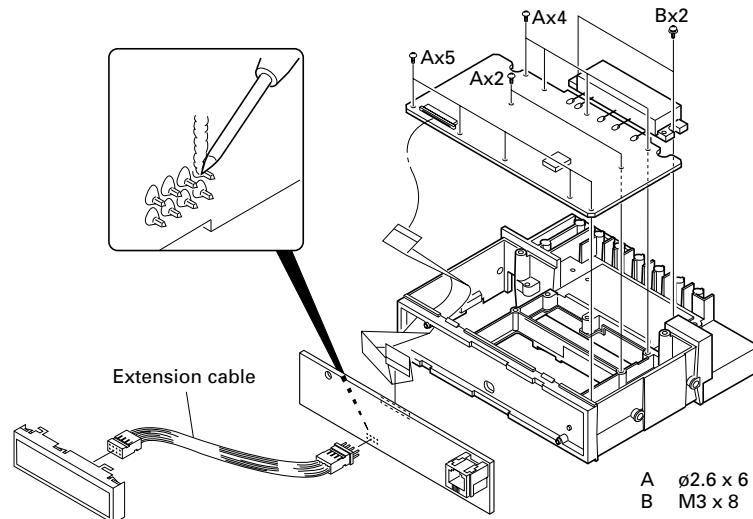
■ Repair Jig

• Chassis

Use jig (Part No. : A10-4010-02) for repairing the TK-760HG/762HG. 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-762HG 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	1) Set test mode CH : CH3 - Sig1 RX	DVM Power meter F. conter	TX-RX (A/2)	CV	PLL	TC106	7.5V	$\pm 0.1V$
	2) PTT : ON (Transmit)				TC109	7.5V		
	3) CH : CH2 - Sig1 AUX : ON (talk-around mode) RX						Check	1.0V or more
	4) PTT : ON (Transmit) TX							0.5V or more

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. Sensitivity • Wide	1) Set test mode Select "SENS" in tuning mode. "S.E.N.S" Adjust [120] SSG freq' : 161.050MHz K : 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	ANT ACC (EXT.SP)	TX-RX (A/2)	L11 L13 L15 L18	RSSI voltage maximum.		
	2) "S.ENS" Adjust [***] SSG freq' : 148.050MHz K : 146.050MHz M					Front panel	CH \wedge/\vee		
	3) "S.E.N.S._." Adjust [***] SSG freq' : 173.950MHz								
3. Squelch 3 • Wide	1) Set test mode Select "SQL3" in tuning mode. "S.QL3" Adjust [***] SSG freq' : 148.050MHz K : 146.050MHz M SSG output : -127dBm/0.1μV SSG MOD : 3kHz (Wide) 1.5kHz (Narrow)						Adjust to the squelch threshold point.		

TK-760HG/762HG

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
	2) "S.Q.L.3" Adjust [***] SSG freq' : 161.050MHz K : 160.050MHz M	SSG AF VTVM Distortion meter	Rear panel	ANT ACC (EXT.SP)	Front panel	CH \wedge/\vee	Adjust to the squelch threshold point.	
	3) "S.Q.L..3_._" Adjust [***] SSG freq' : 173.950MHz	Oscilloscope AG						
• Narrow	4) "SQL3***." Adjust [***] SSG freq' : 161.050MHz K : 160.050MHz M							
4. Squelch 9 • Wide	1) Set test mode Select "SQL9" in tuning mode. "S.QL9" Adjust [***] SSG freq' : 148.050MHz K : 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 : 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 : 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)	
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							
	2) CH : CH1 - Sig3 CH1 - Sig5 CH1 - Sig6					Check	Squelch must be opened.	

ADJUSTMENT**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 [<u>**</u>]	Power meter F. counter	Rear panel	ANT	Front panel	CH \wedge/\vee	Check	161.100MHz±50Hz K 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 52W
3. High power	1) Set test mode Select "HPOW" in tuning mode. "H.POW" PTT : ON Adjust [<u>***</u>]						50.0W	±2.0W
	2) "H.P.O.W" PTT : ON Adjust [<u>***</u>]							
	3) "H.P.O.W." PTT : ON Adjust [<u>***</u>]							
	4) "H.P.O.W." PTT : ON Adjust [<u>***</u>]						45.0W	±2.0W
	5) "H.P.O.W._" PTT : ON Adjust [<u>***</u>]							
4. Low power	1) Set test mode Select "LPOW" in tuning mode. "L.POW" PTT : ON Adjust [<u>***</u>]	Power mete					10.0W	±1.0W
	2) "L.P.O.W" PTT : ON Adjust [<u>***</u>]							
	3) "L.P.O.W." PTT : ON Adjust [<u>***</u>]							
	4) "L.P.O.W." PTT : ON Adjust [<u>***</u>]							
	5) "L.P.O.W._" PTT : ON Adjust [<u>***</u>]							
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	CH1, CH2 : 50W±2W, 12A or less CH3 : 45W±2W, 12A or less

TK-760HG/762HG

ADJUSTMENT

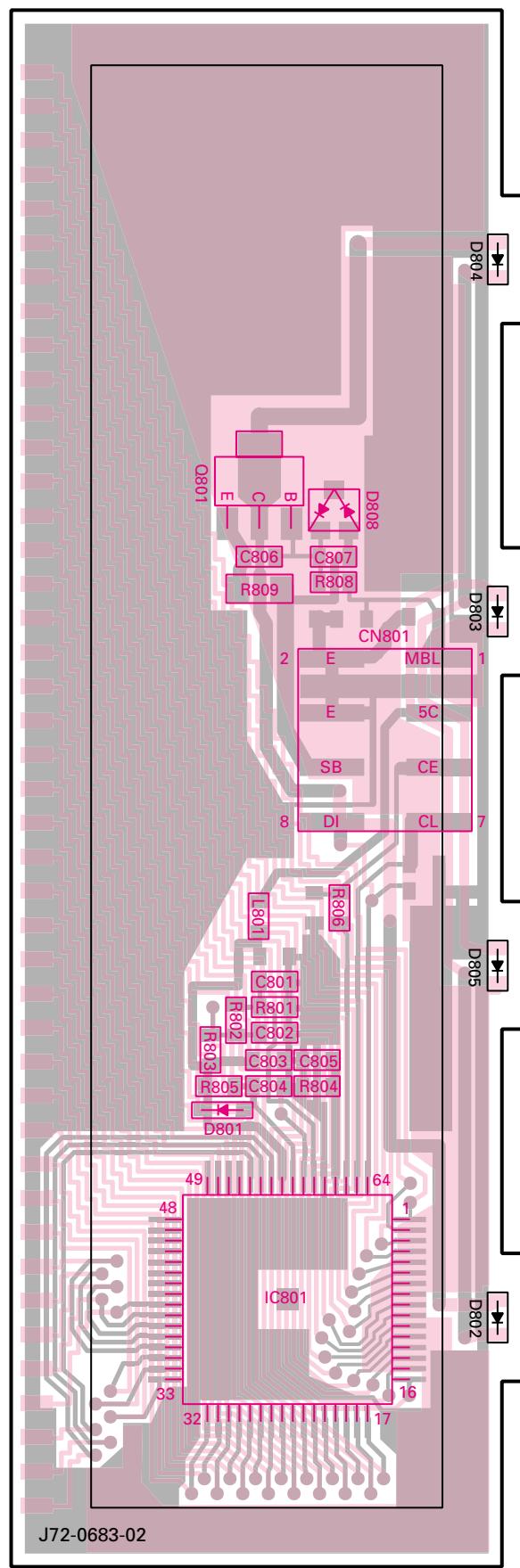
Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
6. Modulation balanced • Wide	1) Set test mode MIC input : OFF Select "BAL" in tuning mode. "._BAL" Deviation meter filter LPF : 3kHz HPF : OFF De-emphasis : OFF PTT : ON Adjust [***]	Power meter Deviation meter Oscilloscope AF VTVM AG	Rear panel Front panel Front panel	ANT MIC	Front panel	CH \wedge/\vee	Make the de-modulation waveform neat.	(Wide/Narrow)
	2) "._B.A.L" PTT : ON Adjust [***]							
	3) "._B.A.L._." PTT : ON Adjust [***]							
	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 +, -)	$\pm 50\text{Hz}$ (Wide/Narrow)	
	2) "._M.A.X" PTT : ON Adjust [***]							
	3) "._M.A.X._." PTT : ON Adjust [***]							
	4) "._MAX***." PTT : ON Adjust [***]							
8. MIC sensitivity check	1) Set test mode CH : CH1 - Sig1 AG : 1kHz/5mV PTT : ON Adjust [***]					Check	$\pm 3\text{kHz} \pm 0.2\text{kHz}$ (Wide) $\pm 1.5\text{kHz} \pm 0.05\text{kHz}$ (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 [***]							

ADJUSTMENT

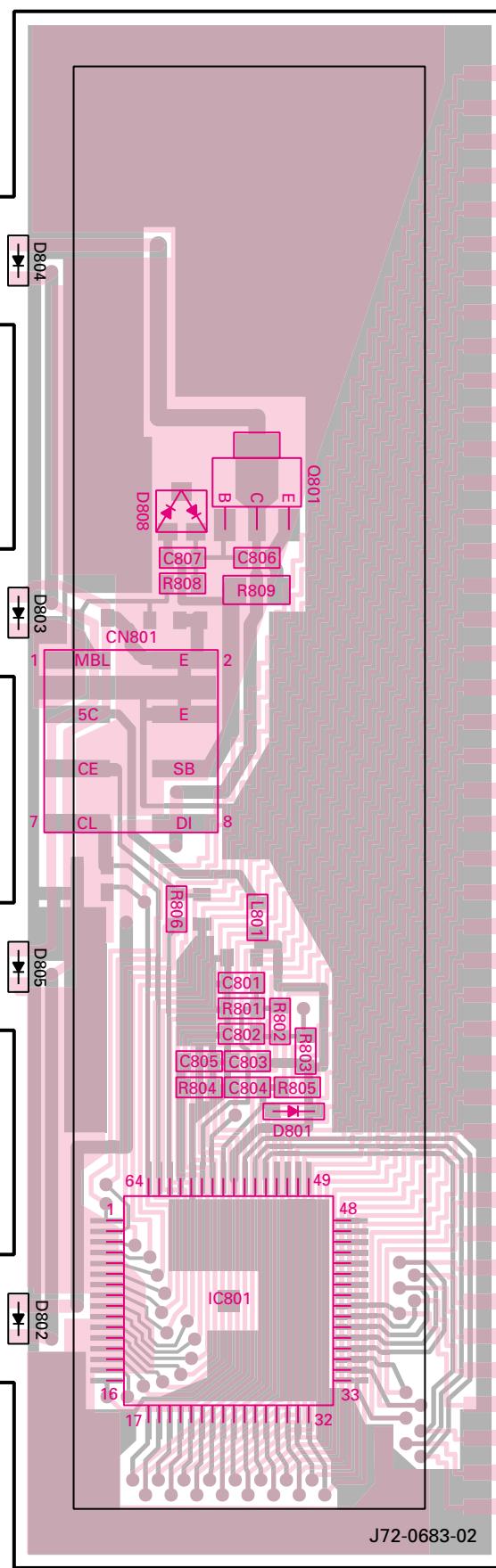
Item	Condition	Measurement			Adjustment			Specifications/Remarks					
		Test-equipment	Unit	Terminal	Unit	Parts	Method						
10. DQT deviation	2) "_F.Q.T" PTT : ON Adjust [***]	Power meter Deviation meter Oscilloscope AF VTVM AG	Rear panel Front panel	ANT MIC	Front panel	CH \wedge/\vee	0.75kHz	$\pm 50\text{Hz}$ (Wide/Narrow)					
							0.35kHz						
	• Narrow						0.35kHz						
	1) Set test mode Select "FDQT" in tuning mode. "F.DQT" Deviation meter filter LPF : 3kHz HPF : OFF PTT : ON Adjust [***]						0.75kHz	$\pm 50\text{Hz}$					
							0.36kHz						
							0.36kHz						
	2) "F.D.Q.T" PTT : ON Adjust [***]						$\pm 40\text{Hz}$						
	3) "F.D.Q.T._." PTT : ON Adjust [***]						$\pm 0.2\text{kHz}$						
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 \wedge/\vee	3.0kHz	$\pm 0.1\text{kHz}$ (Wide/Narrow)							
	• Narrow				1.5kHz								
	2) "DTMF***." PTT : ON Adjust [***]												
	• Wide				3.0kHz								
12. TONE deviation	1) Set test mode Select "TONE" in tuning mode. Deviation meter filter LPF : 15kHz HPF : OFF PTT : ON Adjust [***]	Front panel	CH \wedge/\vee	3.0kHz	$\pm 0.1\text{kHz}$ (Wide/Narrow)								
	2) "TONE***." PTT : ON Adjust [***]				1.5kHz								

TK-760HG/762HG PC BOARD VIEWS

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

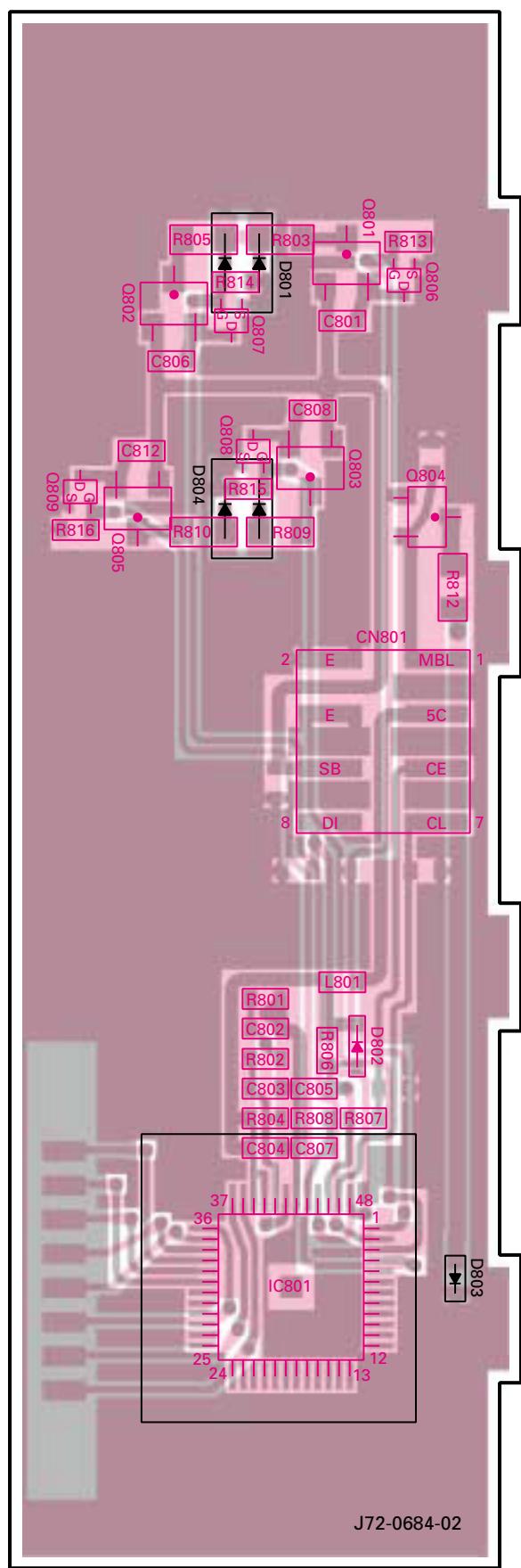


DISPLAY UNIT (X54-3270-10) : TK-760HG
Foil side view

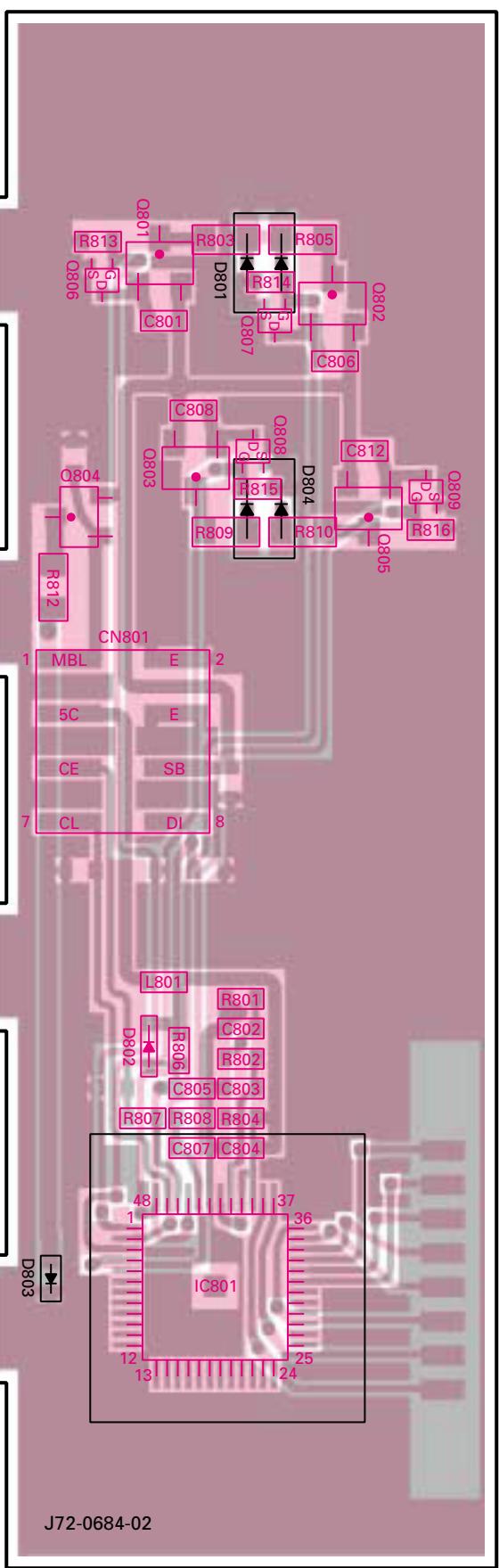


PC BOARD VIEWS TK-760HG/762HG

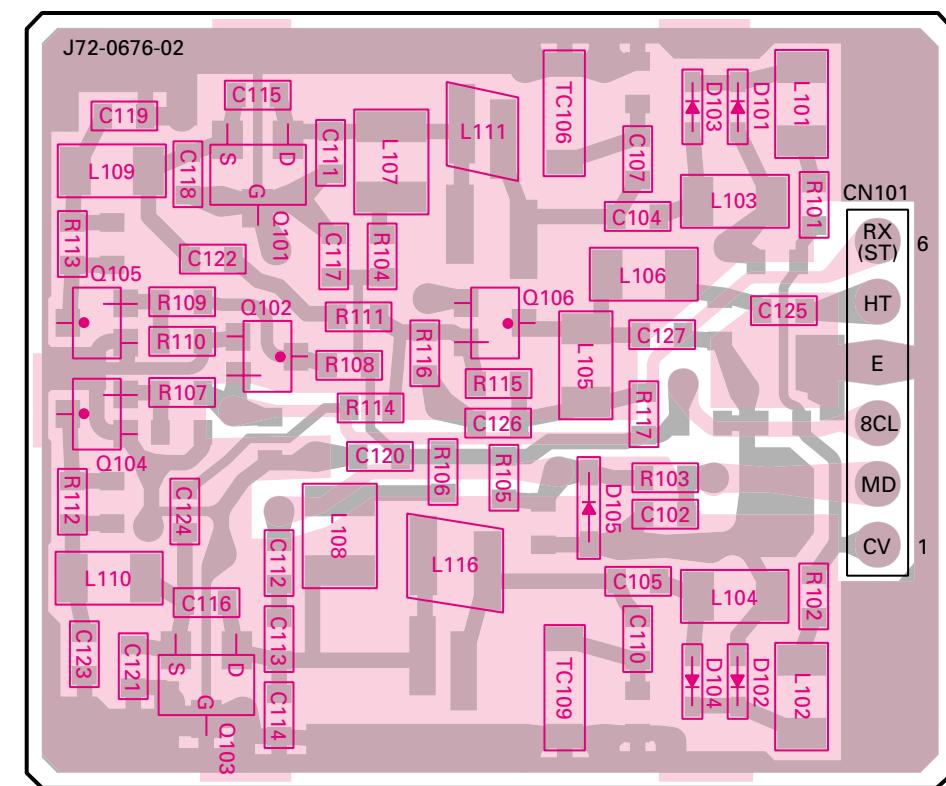
DISPLAY UNIT (X54-3280-10) : TK-762HG
Component side view



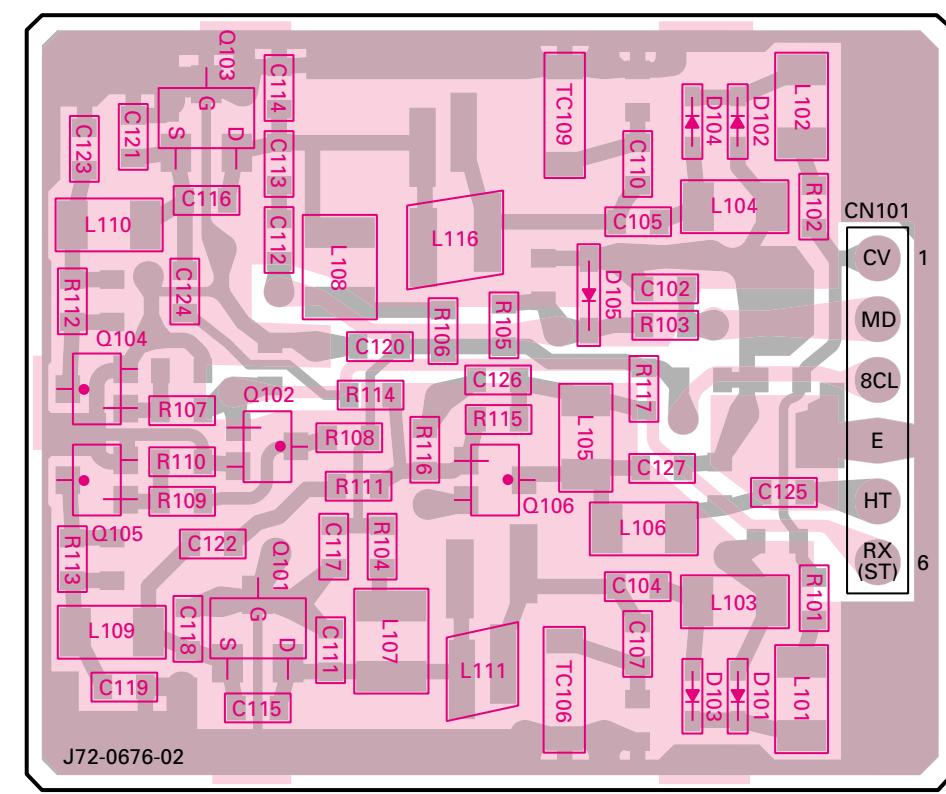
DISPLAY UNIT (X54-3280-10) : TK-762HG
Foil side view



PLL/VCO (X58-4670-10) Component side view



PLL/VCO (X58-4670-10) Foil side view

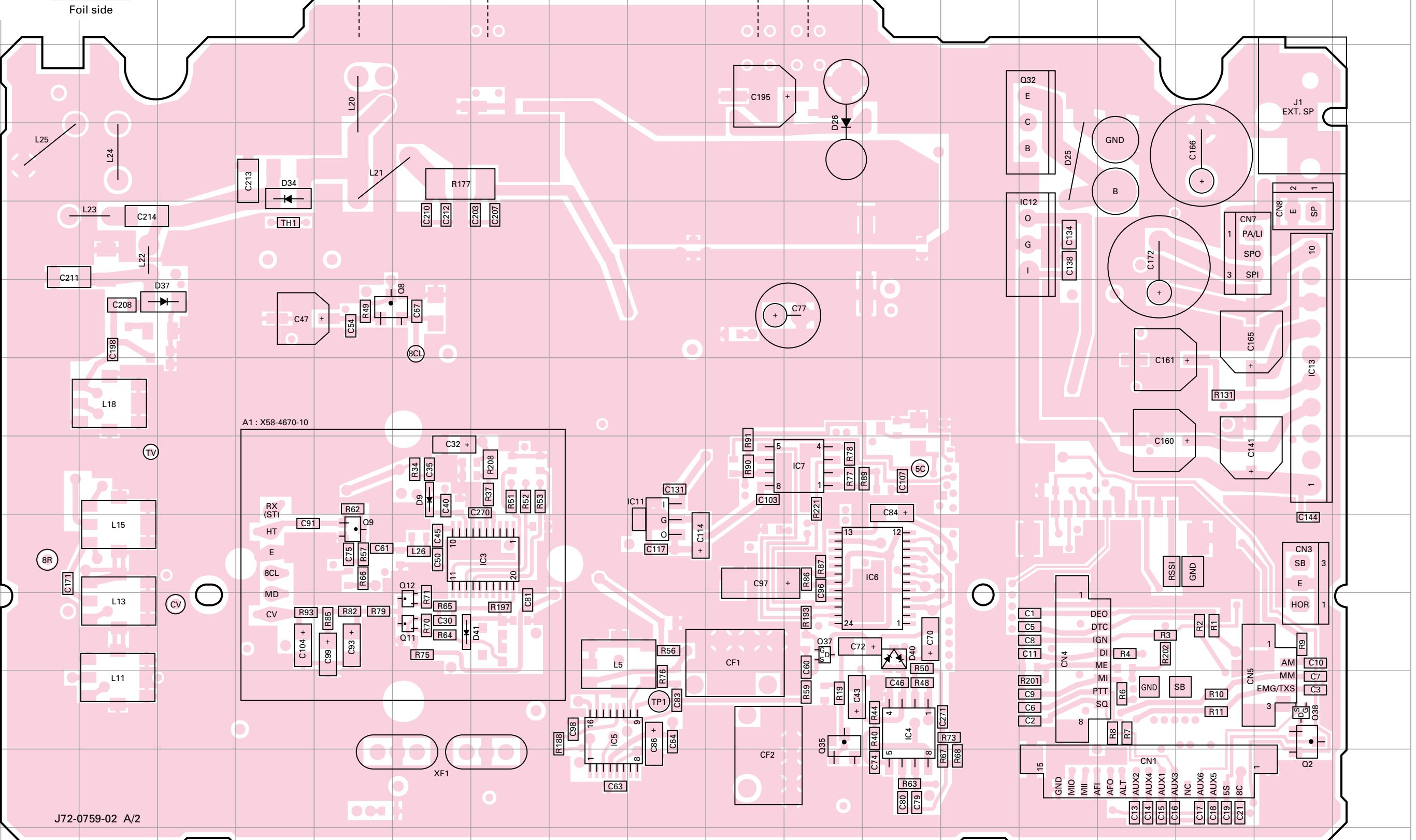
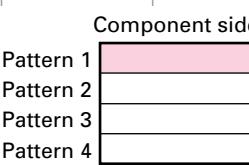


■ Component side ■ Foil side

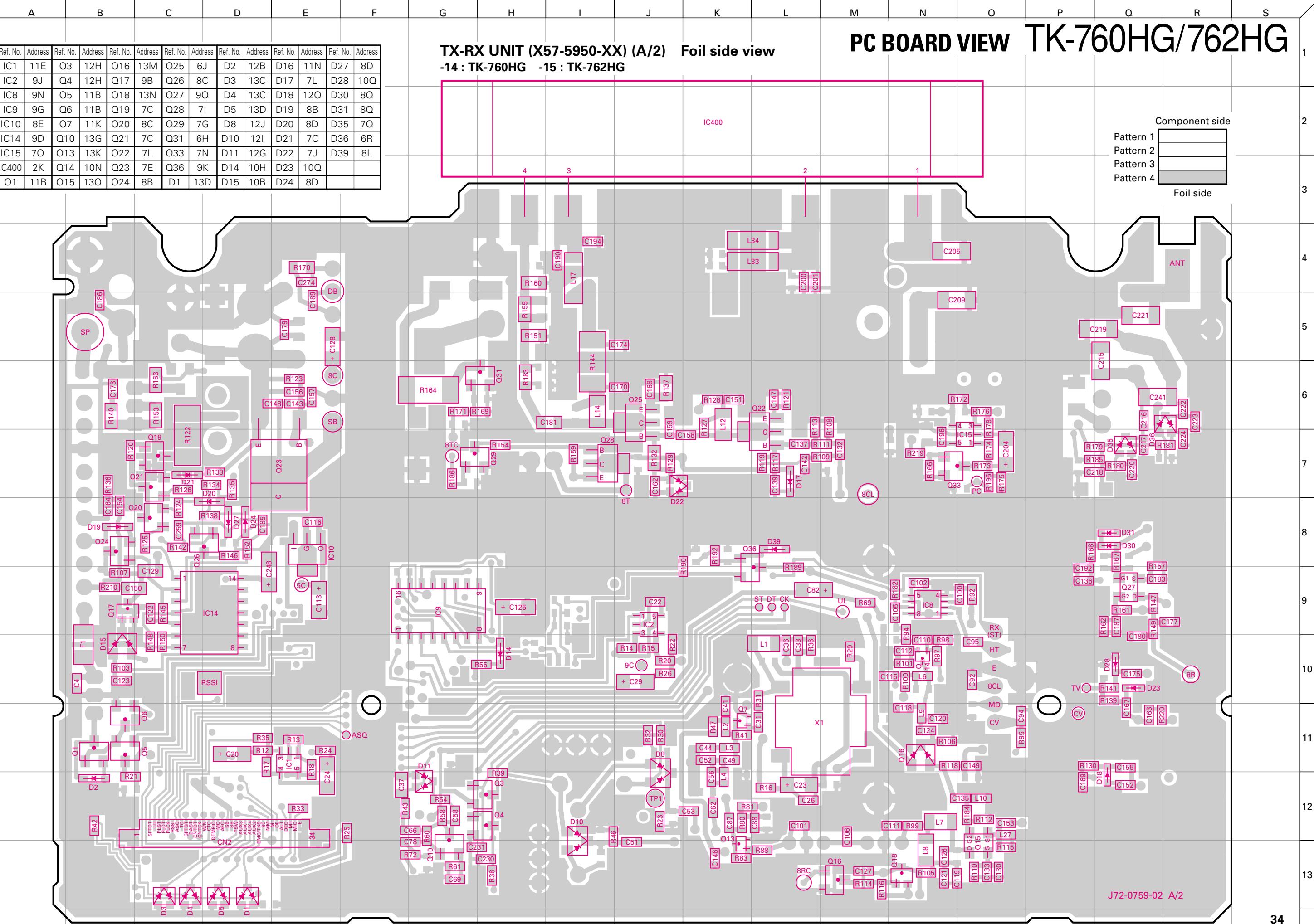
TK-760HG/762HG PC BOARD VIEW

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

-14 : TK-760HG -15 : TK-762HG



Ref. No.	Address						
IC3	10H	IC13	8R	Q32	4O	D34	5E
IC4	12M	IC400	2I	Q35	12L	D37	7D
IC5	12I	Q2	12R	Q37	11L	D40	11M
IC6	10M	Q8	7G	Q38	12R	D41	11G
IC7	9L	Q9	10F	D9	9G		
IC11	10J	Q11	11G	D25	5O		
IC12	6O	Q12	11G	D26	4L		



TK-760HG/762HG PC BOARD VIEW

TX-RX UNIT (X57-5950-XX) (A/2)

Component side view + Foil side

-14 : TK-760HG -15 : TK-762HG

Component side

Pattern 1

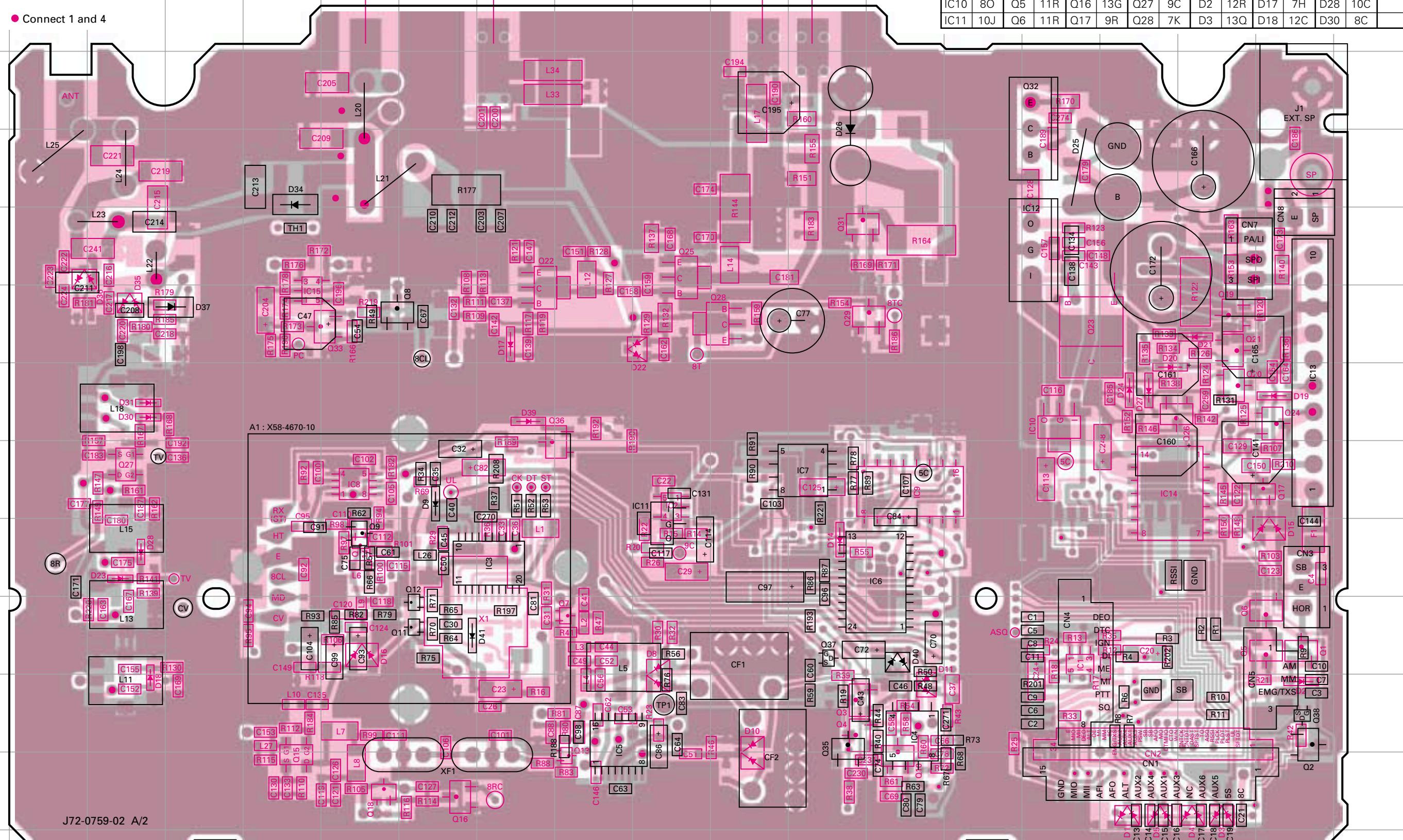
Pattern 2

Pattern 3

Pattern 4

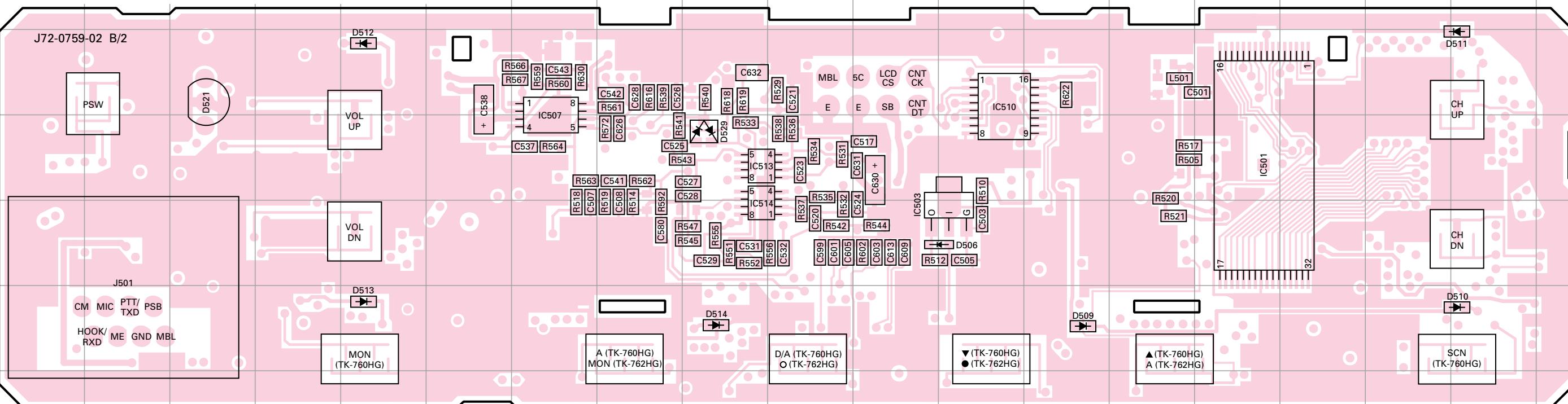
Foil side

• Connect 1 and 4



A B C D E F G H I J K L M N O P Q R S
TX-RX UNIT (X57-5950-XX) (B/2) Component side view

-14 : TK-760HG -15 : TK-762HG



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

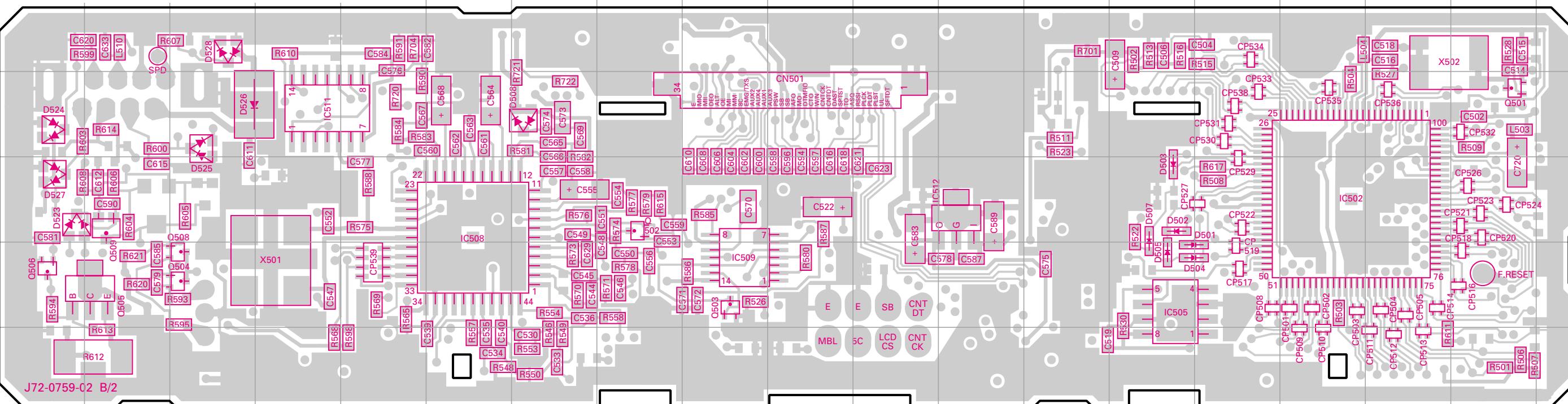
Pattern 3

Pattern 4

Foil side

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

-14 : TK-760HG -15 : TK-762HG



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

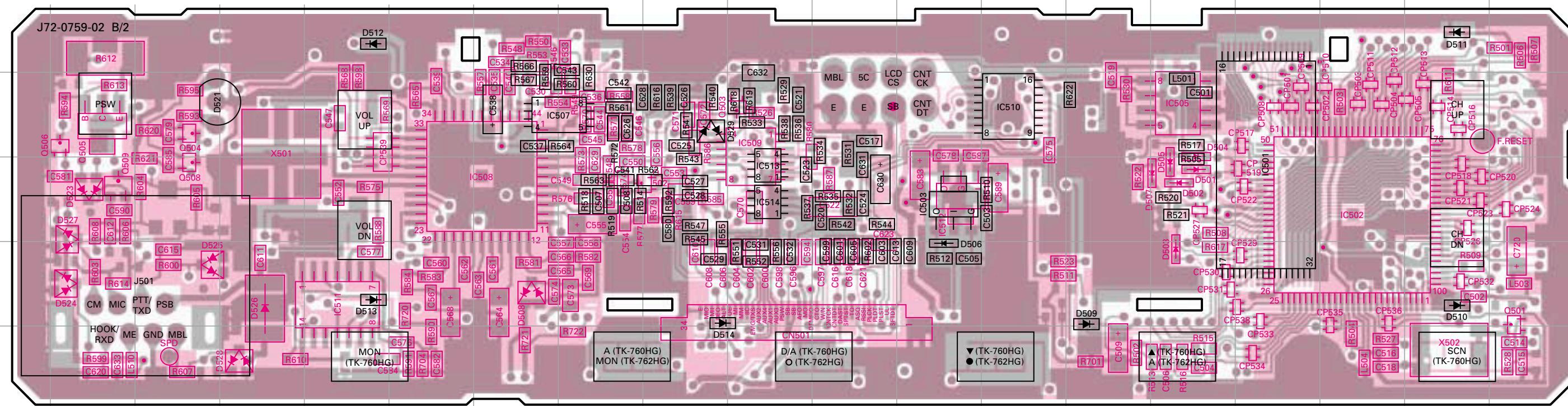
Pattern 4

Foil side

TK-760HG/762HG PC BOARD VIEW

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

-14 : TK-760HG -15 : TK-762HG

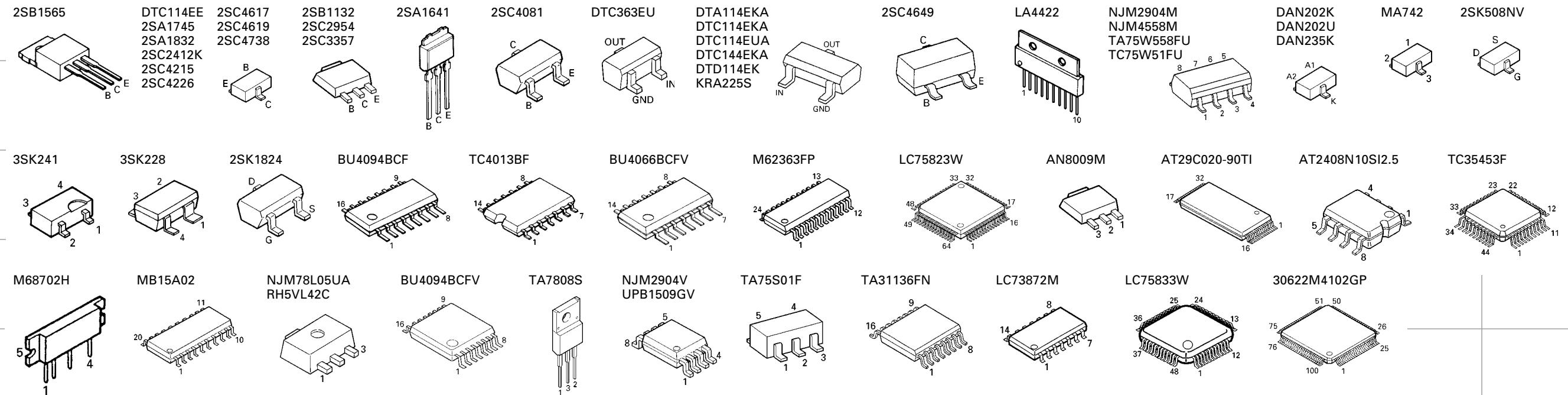


Ref. No.	Address										
IC501	4P	IC510	3M	Q503	3J	D502	4O	D509	5N	D523	4B
IC502	4Q	IC511	5E	Q504	3C	D503	5O	D510	5R	D524	5B
IC503	4L	IC512	4L	Q505	3B	D504	4O	D511	2R	D525	5C
IC505	3O	IC513	4J	Q506	3B	D505	4O	D512	2E	D526	5D
IC507	3H	IC514	4J	Q508	4C	D506	5L	D513	5E	D527	4B
IC508	4G	Q501	5S	Q509	4B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

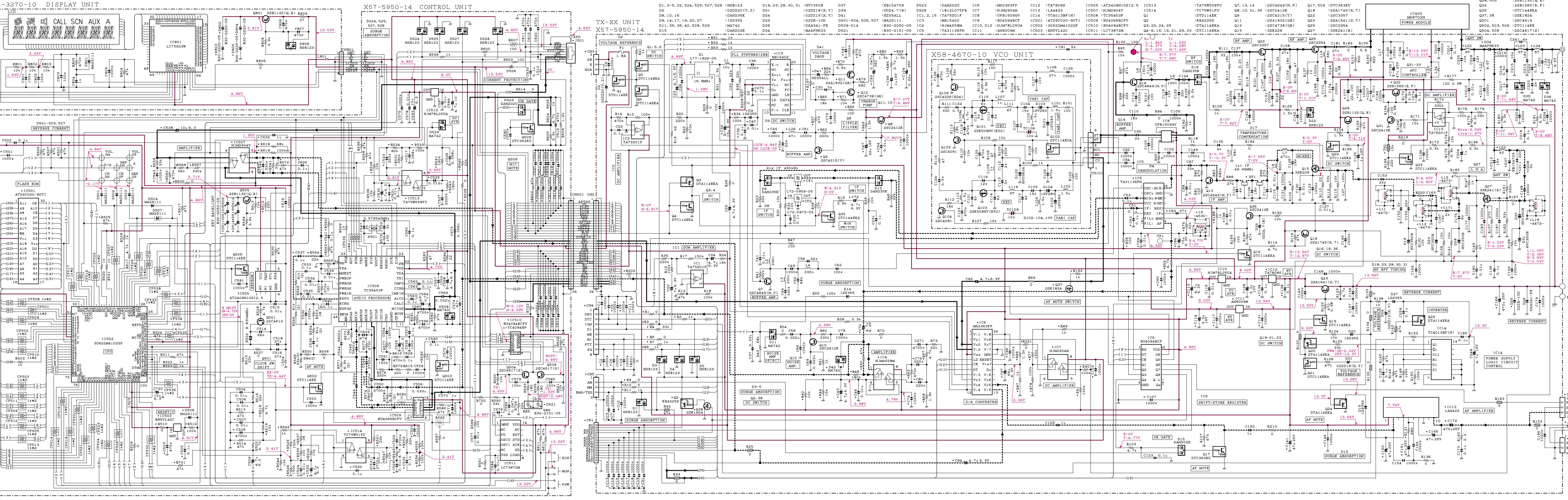
Foil side

● Connect 1 and 4



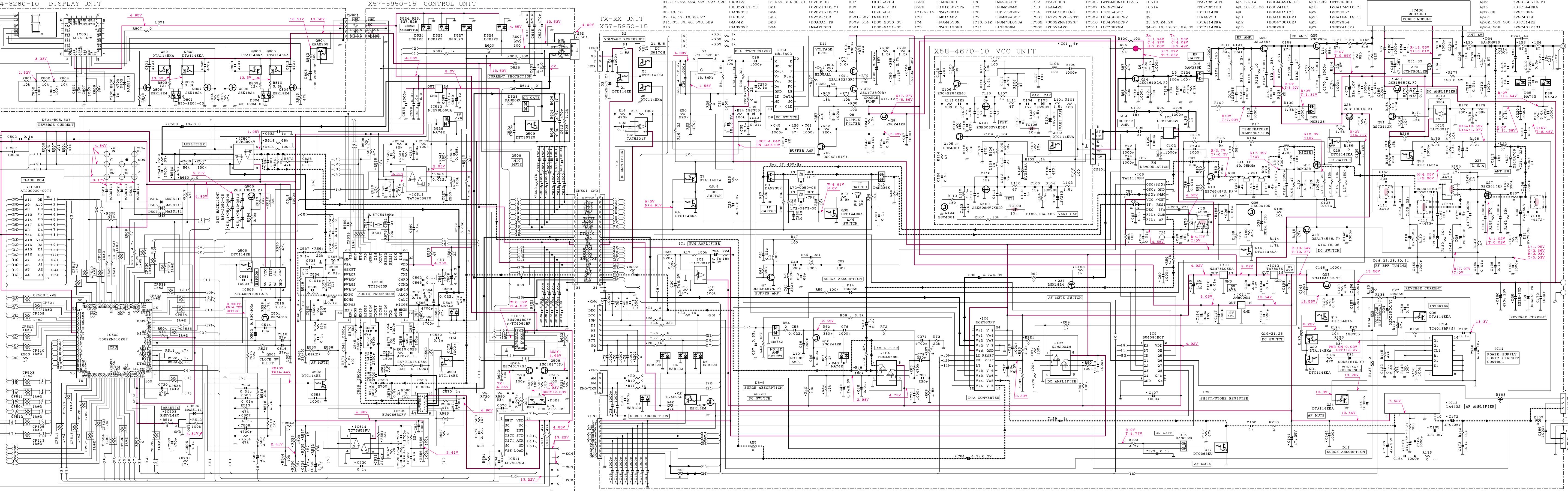
SCHEMATIC DIAGRAM TK-760HG

Note : Components marked with a dot (-) are parts of pattern 1.

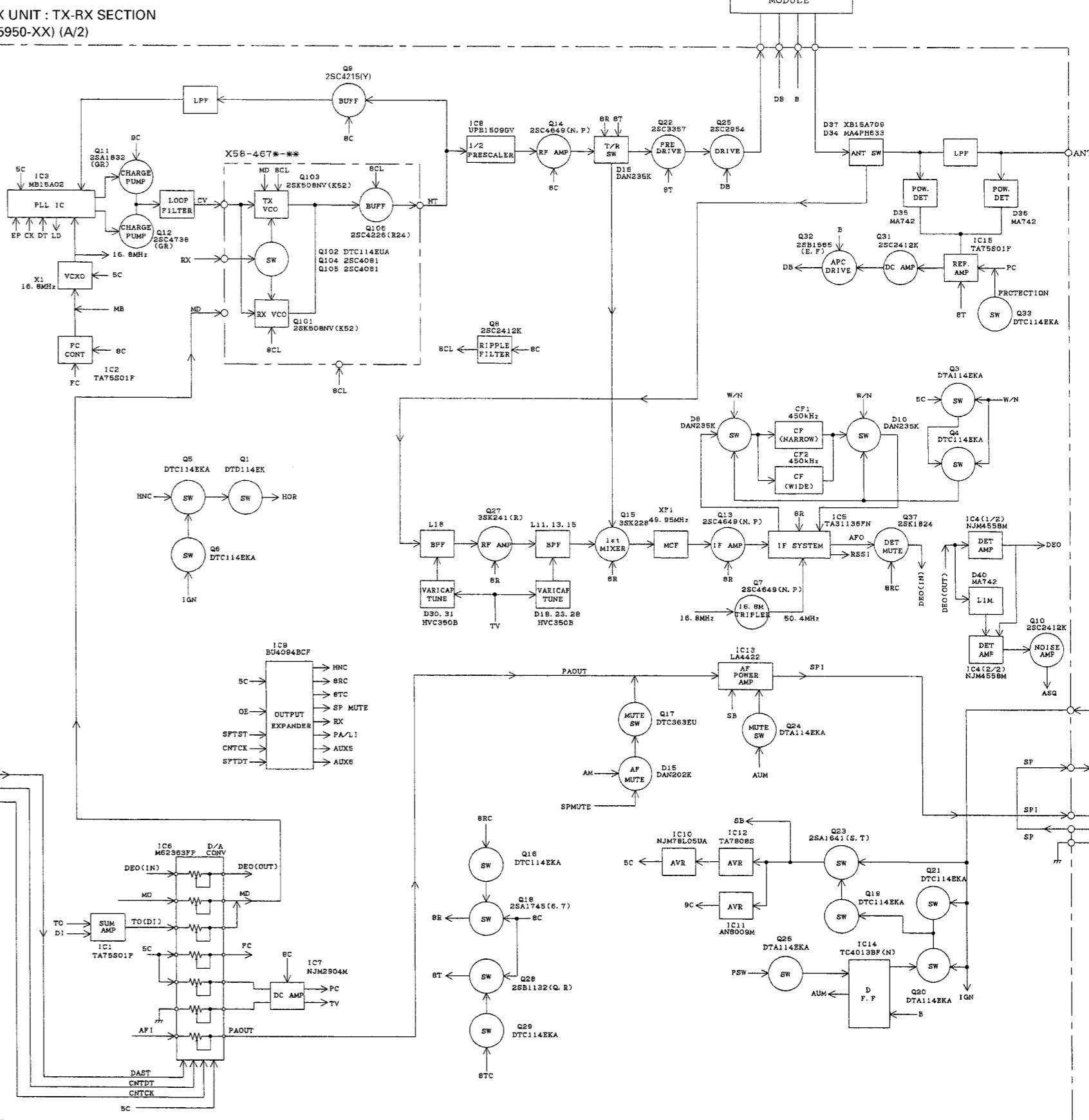
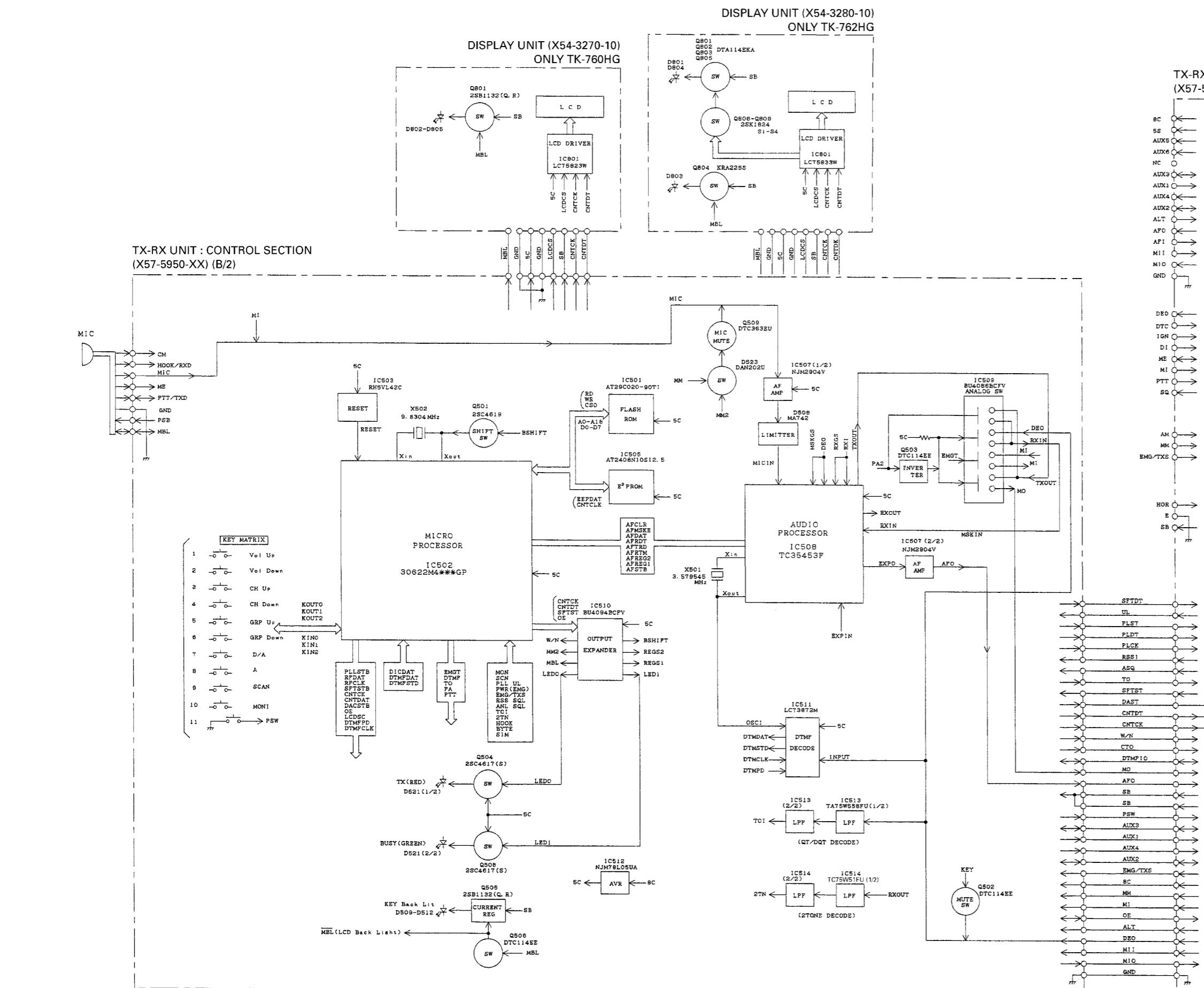


TK-762HG SCHEMATIC DIAGRAM

Note : Components marked with a dot (-) are parts of pattern 1.



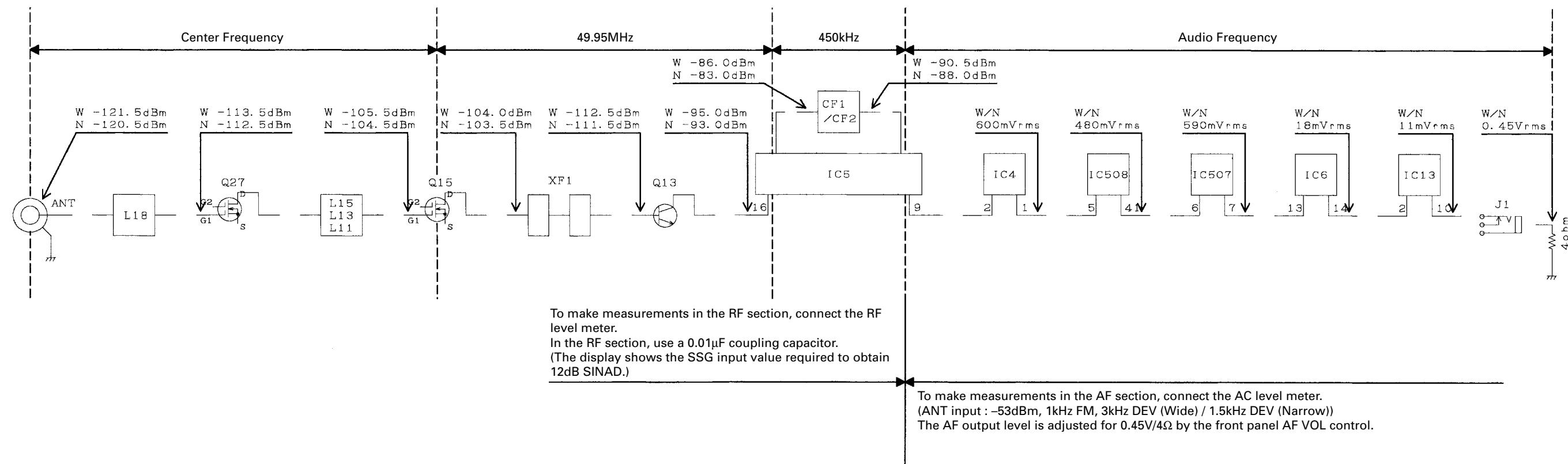
BLOCK DIAGRAM



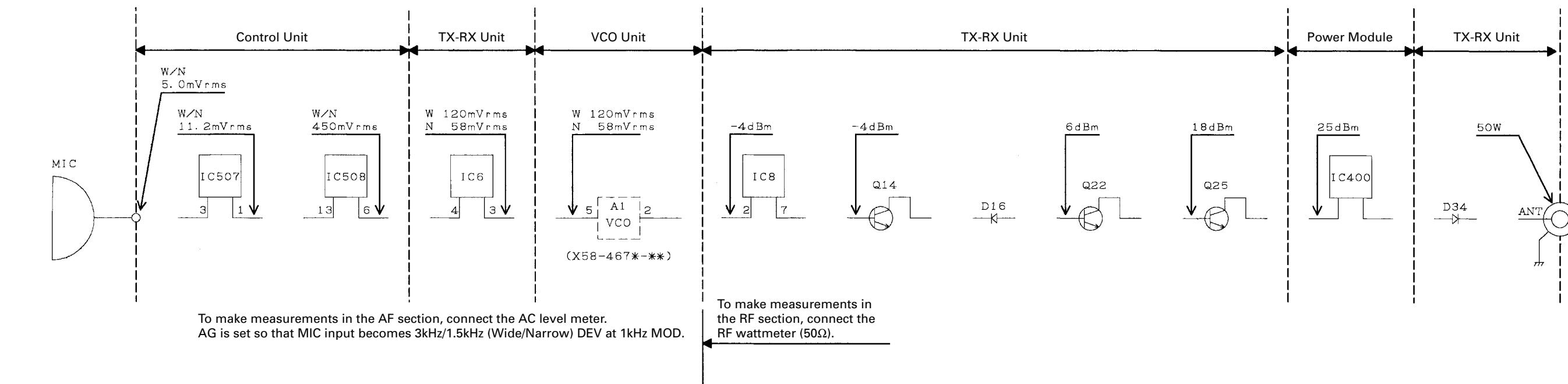
TK-760HG/762HG TK-760HG/762HG

LEVEL DIAGRAM

Receiver Section



Transmitter Section



TK-760HG/762HG

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 swtich.
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	OE	Output enable.
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

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 (At standard 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

*2 : MDT mode

*3 : Emergency mode

TK-760HG/762HG

SPECIFICATIONS

GENERAL

Frequency Range	K : 148 to 174MHz	M : 146 to 174MHz
Number of Channels	TK-762HG : Maximum 8 channels	TK-760HG : Maximum 128 channels
Number of Groups	TK-760HG : 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 12.0A 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 148 (5-53/64) D mm (inch), 1050g (2.31 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 Response	90dB	
Audio Power Output	4.0W	
Frequency Stability	±2.5ppm	

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

RF Power Output	50W
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-760HG/762HG

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