UHF FM TRANSCEIVER / UHF 调频对讲机

TK-868HG

SERVICE MANUAL / 维修手册

128 channels / 128 条信道

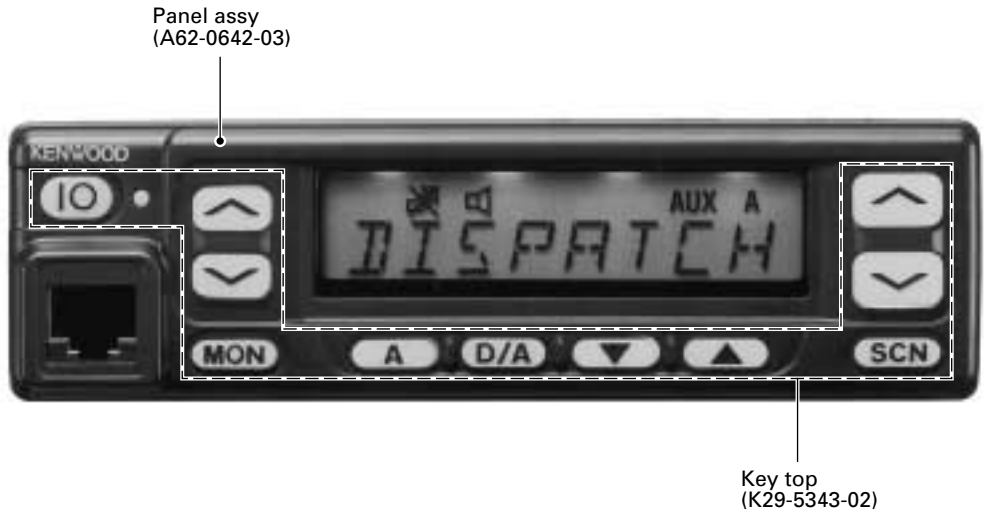
KENWOOD

B51-8541-10 (N) 610

REVISED / 修订版

The service manual is the same as the C market, TK-868HG (B51-8541-00) service manual with the exception of the new C3 market.

本维修手册与TK-868HG(B51-8541-00)相同带有类型C新类型C3除外。



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Service Manual List

Title	Parts number	Remarks	Destination	TX-RX unit PCB number
TK-868G	B51-8500-00		C,C3	J72-0678-02
TK-868G	B51-8502-00		M,M3	J72-0678-02
TK-868HG	B51-8541-00	SUPPLEMENT	C	J72-0760-02
TK-868HG	B51-8541-10	REVISED This Service manual	C,C3	J72-0760-12

Frequency range C,M : 450~490MHz
C3,M3 : 400~430MHz

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 (❷) into pin 3 of the square plug (❶) supplied with the KCT-19, then insert the square plug into the KCT-19 connector (❸).

点火传感器电缆(KCT-18 : 可选件)

KCT-18是用于使用点火功能的可选电缆。点火功能允许用户使用汽车点火器接通和关闭通信机的电源。

如果使用喇叭告警功能或手动继电器功能，用户可以在使用点火钥匙开车的过程中关闭此功能。

■ 将KCT-18连接到车台

1. 在车台上安装KCT-19。
2. 将KCT-18的引线头(❷)插入KCT-19方形插头(❶)的管脚3上，然后将方形插头插入KCT-19连接器(❸)。

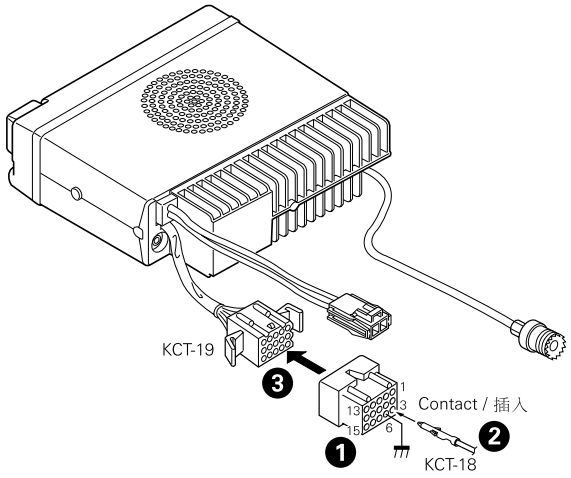


Fig. 1 / 图1

■ 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.

■ 改装车台

按照下述方法改装车台能够通过点火钥匙开启和关闭电源，喇叭告警或手动继电器功能。

1. 取下车台的底壳。
2. 按照表1的内容设定发射-接收单元的跳线电阻(0Ω)R134和R135。

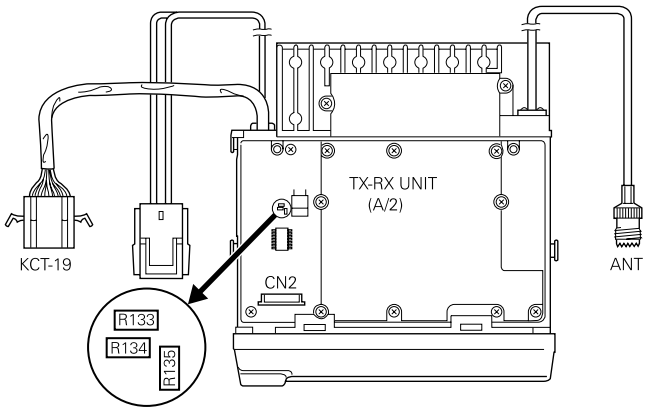


Fig. 2 / 图2

Operation when KCT-18 is connected	R134	R135	
	Yes	Yes	← KCT-18 cannot be connected
Power on/off and Horn Alert or AUX-A on/off	No	Yes	
Horn Alert or AUX-A on/off	Yes	No	
	No	No	← Power cannot be turned on

Table 1 R134 and R135 setup chart

当连接了KCT-18时操作	R134	R135	
	使用	使用	← KCT-18不能被连接
接通/关闭电源和开启/关闭喇叭告警或AUX-A	不使用	使用	
开启/关闭喇叭告警或AUX-A	使用	不使用	
	不使用	不使用	← 不能接通电源

表1 R134和R135设置表

INSTALLATION / 安装

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

PA/HA单元(KAP-1 : 可选件)

■ 在车台上安装KAP-1

喇叭告警(最大2A驱动)和扩音功能通过将KAP-1 W1(3P : 白/黑/红)插入发射-接收单元上的CN3, 将W2(3P : 绿)插入发射-接收单元上CN7, 并且将KCT-19(可选件)连接到KAP-1的CN2和CN3而生效。

● 安装步骤

1. 打开车台的上机壳。
2. 将KAP-1开关单元的两根带插头的电缆插到车载台的插座上(❶)。
3. 使用螺钉(❸)将开关单元板固定在底座上。板上的切口(❷)必须放置在前端左侧。
4. 将减震垫放置在KAP-1开关单元的顶部。

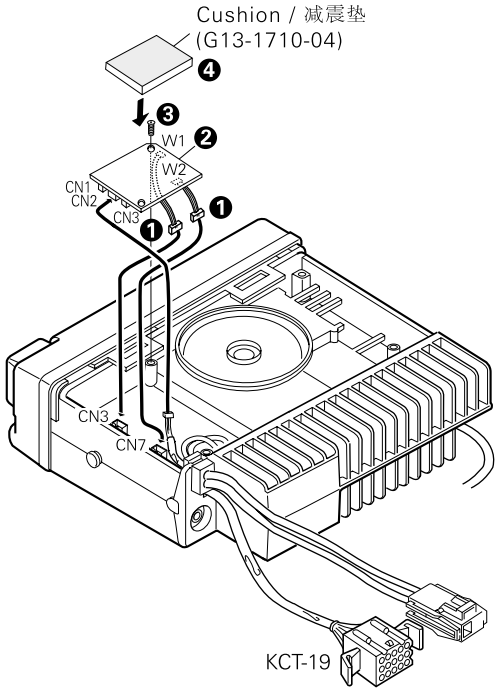


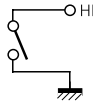
Fig. 3 / 图 3

■ 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.

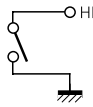
	R1	Output form
HR1 (Default)	Yes	
HR2	No	

■ 改装车台

● 喇叭告警

来自于TX-RX单元上IC9的管脚4的信号接通和断开Q5和Q1, 并且驱动KAP-1 HA继电器K2, 使其以最大2A的电流驱动喇叭。

出厂设定的输出是HR1。通过移除KAP-1内的R1可以在HR1和HR2之间获得继电器开路输出。

	R1	输出形式
HR1(出厂设定)	使用	
HR2	不使用	

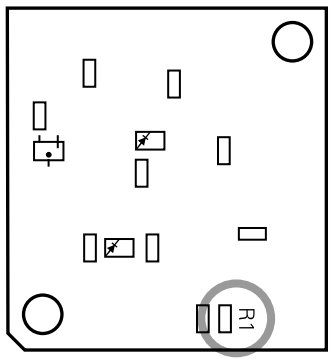


Fig. 4 KAP-1 foil side view
图 4

INSTALLATION / 安装

● Public address

The signal from pin 13 of IC9 on the TX-RX unit drives PA relay 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	No
Do not use the PA function	Yes

● 扩音功能

来自于TX-RX单元上IC9的管脚13的信号驱动KAP-1上的PA继电器K1，并且在外置PA系统(通过KCT-19)和内置以及外置扬声器之间转换音频功率放大器输出。

要使用PA功能，TX-RX单元上的R153必须被移除。

	R153
使用PA功能	不使用
不使用PA功能	使用

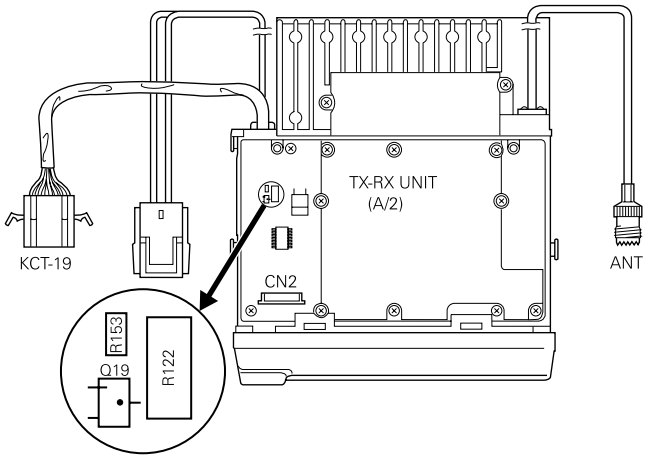


Fig. 5 / 图 5

■ 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.

■ 其他

如果不需要PA和HR2，并且扬声器输出通过KCT-19被输出到外置单元，则将KCT-19 C连接器连接到TX-RX单元上的CN8。

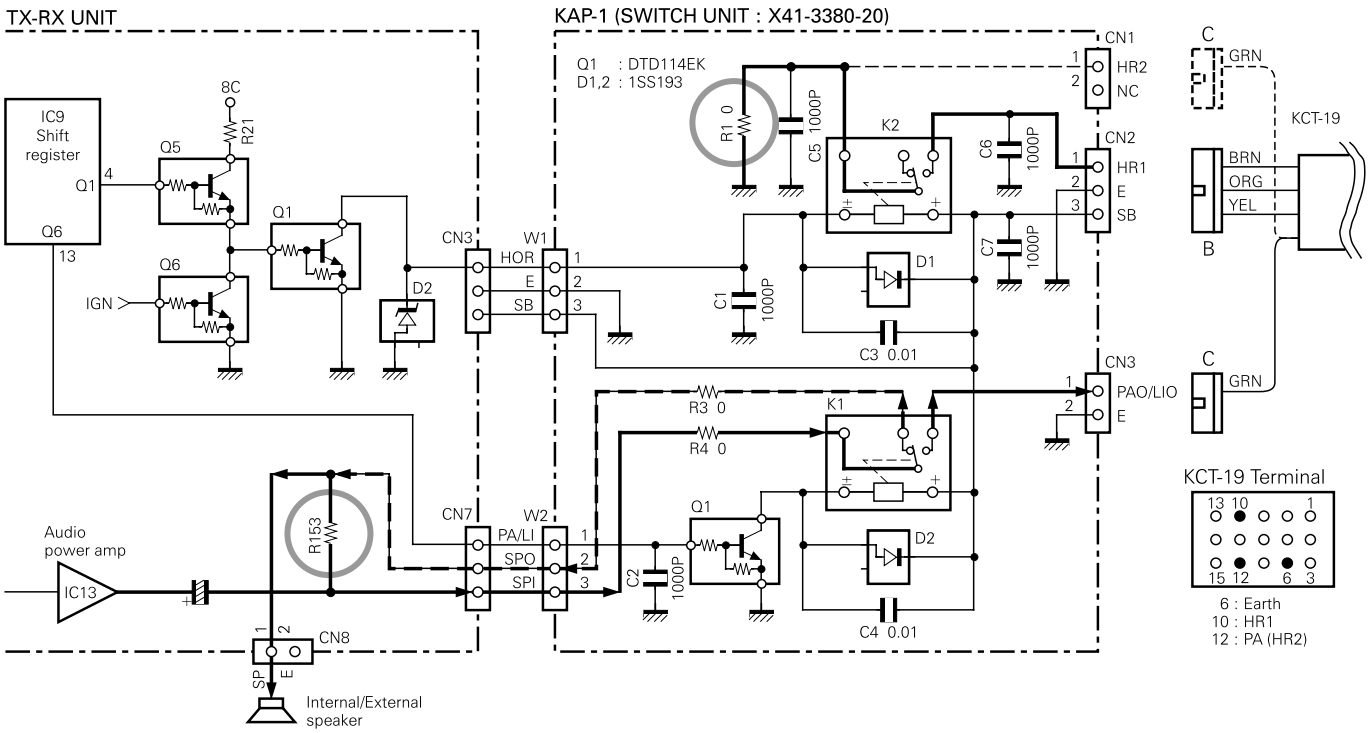


Fig. 6 / 图 6

INSTALLATION / 安装

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.)

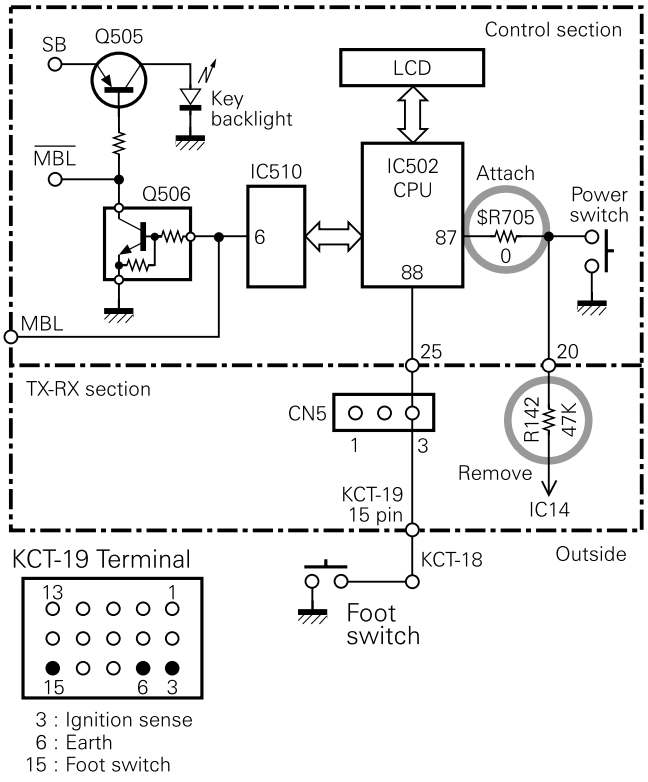


Fig. 7 / 图 7

应急模式

■ 车台机修改步骤

- **安装底脚开关**

当按下开关时，通过KCT-19和KCT-18安装底脚开关，车台机进入应急模式。

- **改变电源开关电路**

TX-RX单元(B/2)：控制部分
$R705：附带(R92-1252-05，0Ω)
TX-RX单元(A/2)：射频部分
R142：移除(RK73GB1J473J，47kΩ)

由于车台机已被修改，所以不能通过电源开关开启和改变车台机。电源开关开启和关闭 显示器背景灯光和 显示器。(通过启动传感器开启和关闭电源。)

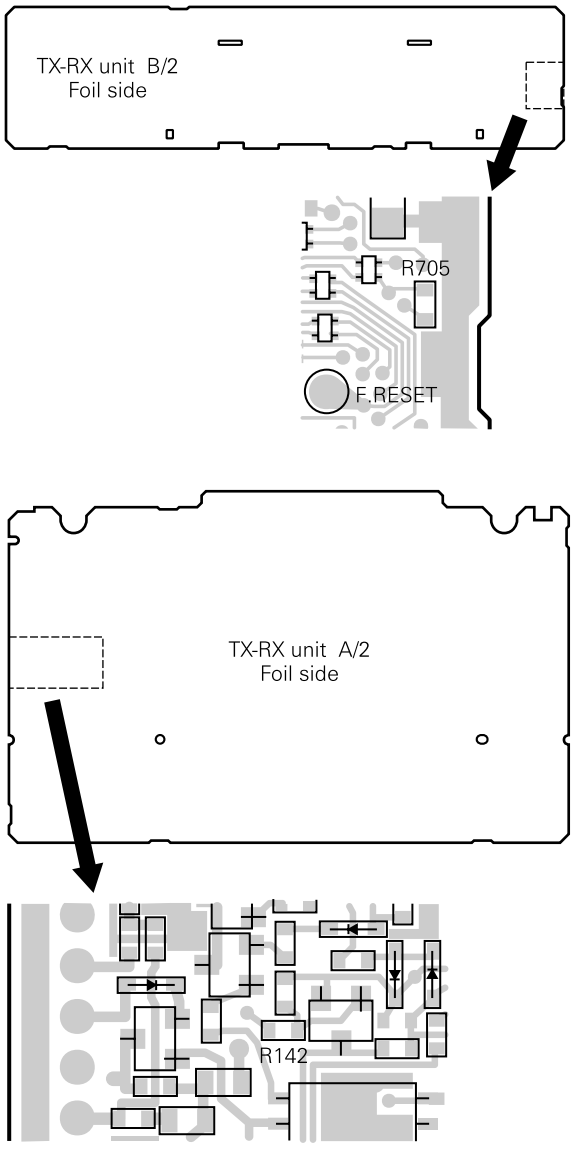
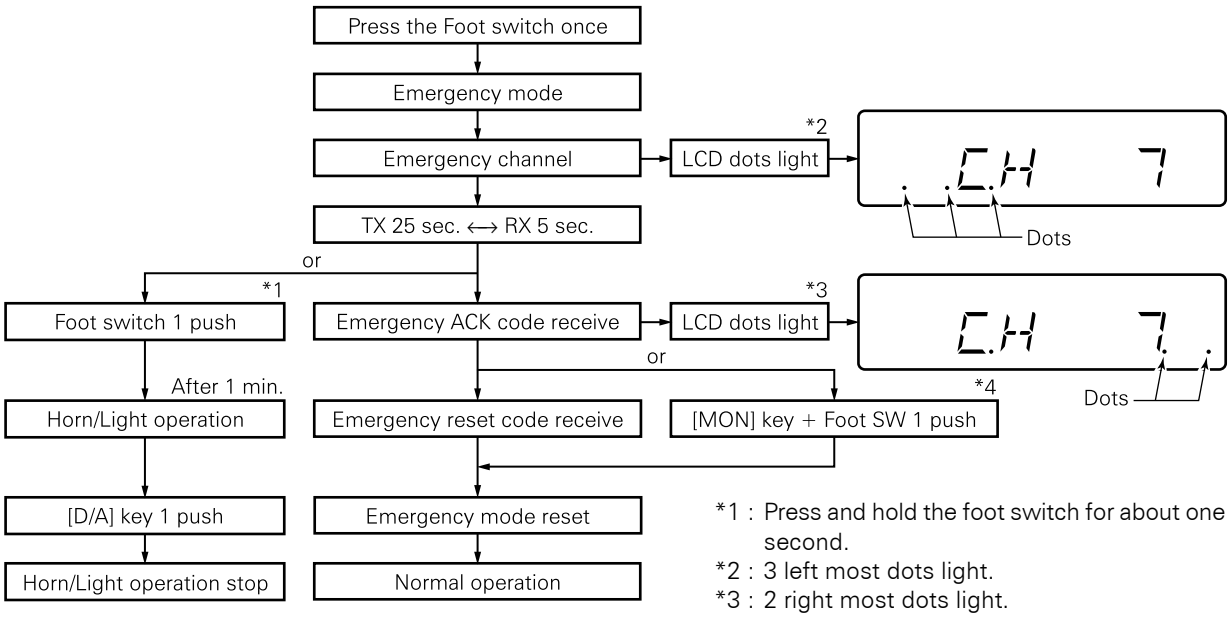


Fig. 8 / 图 8

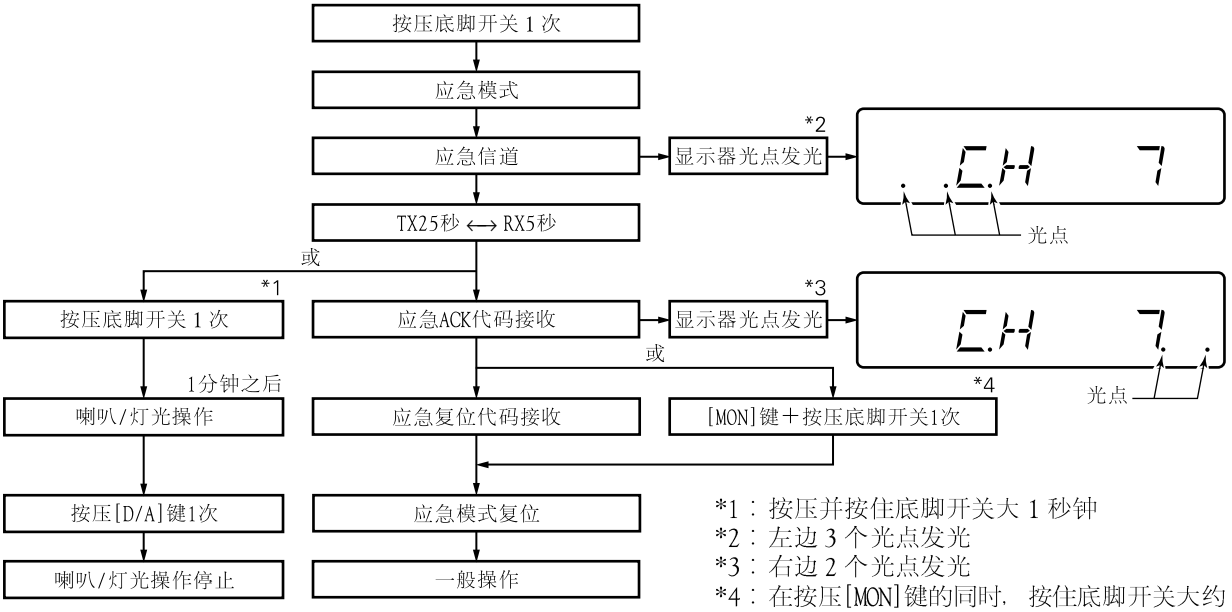
INSTALLATION / 安装

■ Emergency Mode System Chart



*1 : Press and hold the foot switch for about one second.
*2 : 3 left most dots light.
*3 : 2 right most dots light.
*4 : While pressing [MON] key, push foot switch for about one second.

■ 应急模式系统图



*1 : 按压并按住底脚开关大 1 秒钟
*2 : 左边 3 个光点发光
*3 : 右边 2 个光点发光
*4 : 在按压[MON]键的同时，按住底脚开关大约 1 秒钟

PARTS LIST / 零件表

✻ 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-868HG
DISPLAY UNIT (X54-3270-10)
TX-RX UNIT (X57-596X-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
TK-868HG					
1	1B		A01-2165-13	CABINET UPPER	
2	2A		A01-2166-13	CABINET LOWER	
3	2A		A62-0642-03	PANEL ASSY	
6	2B		B11-1226-03	ILLUMINATION GUIDE	
7	2A		B38-0824-05	LCD	
8	2D		B62-1259-20	INSTRUCTION MANUAL	
9	1C	✻	B72-1826-14	MODEL NAME PLATE	C
9	1C	✻	B72-1917-04	MODEL NAME PLATE	C3
11	2B		E29-1179-04	INTER CONNECTOR	
12	1C		E30-2145-15	ANTENNA CABLE	
14	1C		E30-3340-05	DC CORD RADIO	
-			E30-3404-05	EXTENSION CABLE	
16	1C		E37-0790-25	LEAD WIRE WITH CONNECTOR (SP)	
17	2B		E37-0815-05	FLAT CABLE	
-			E37-0852-05	LEAD WIRE WITH CONNECTOR (15P)	
-			E37-0853-05	LEAD WIRE WITH CONNECTOR (10P)	
-			E37-0854-05	LEAD WIRE WITH CONNECTOR (8P)	
-			E37-0855-05	LEAD WIRE WITH CONNECTOR (3P)	
18	2B		F12-0435-04	CONDUCTIVE SHEET	
21	1C		G02-0791-04	FLAT SPRING AF, APC	
-			G02-0841-14	FLAT SPRING SIDE	
22	1B,1C		G10-1221-04	FIBROUS SHEET UP, DOWN	
23	1B		G10-1222-14	FIBROUS SHEET SHIELD	
24	1A,2C		G10-1223-14	FIBROUS SHEET DC CORD	
25	1C		G13-1468-04	CUSHION SP	
26	1B		G13-1759-04	CUSHION PHONE JACK	
27	2C		G53-0796-04	PACKING	
30	2D		H10-6628-02	POLYSTYRENE FOAMED FIXTURE (F)	
31	1E		H10-6629-02	POLYSTYRENE FOAMED FIXTURE (R)	
33	2E		H25-0720-04	PROTECTION BAG (200X350)	
34	3E		H52-1654-02	ITEM CARTON CASE	
37	2A		J21-8382-03	HARDWARE FIXTURE	
40	2A		K29-5343-02	KEY TOP	
A	2A,1B		N33-2606-45	OVAL HEAD MACHINE SCREW	
B	2C		N67-3008-46	PAN HEAD SEMS SCREW W	
C	2B,1C		N87-2606-46	BRAZIER HEAD TAPTITE SCREW	
D	2B		N87-2612-46	BRAZIER HEAD TAPTITE SCREW	
44	1B		T07-0368-05	SPEAKER	
DISPLAY UNIT (X54-3270-10)					
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	
TX-RX UNIT (X57-596X-XX) 3-05 : C 3-07 : C3					
D509-514			B30-2050-05	LED	
D521			B30-2151-05	LED (RED/GREEN)	
C1 -11			CK73GB1H471K	CHIP C 470PF K	
C13 -19			CK73GB1H471K	CHIP C 470PF K	
C20			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C21			CK73GB1H471K	CHIP C 470PF K	
C22			CK73GB1C104K	CHIP C 0.10UF K	
C23 ,24			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C25			CC73GCH1H060D	CHIP C 6.0PF D	C
C25			CC73GCH1H080D	CHIP C 8.0PF D	C3
C26			CK73GB1H471K	CHIP C 470PF K	
C28			CC73GCH1H060D	CHIP C 6.0PF D	C
C28			CC73GCH1H080D	CHIP C 8.0PF D	C3
C29			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C30			CC73GCH1H030C	CHIP C 3.0PF C	
C31			CK73GB1H102K	CHIP C 1000PF K	
C32			C92-0662-05	CHIP-TAN 15UF 6.3WV	
C33			CC73GCH1H220J	CHIP C 22PF J	
C35			CK73GB1C104K	CHIP C 0.10UF K	
C36			CK73GB1H102K	CHIP C 1000PF K	
C37			CK73FB1C334K	CHIP C 0.33UF K	
C40 ,41			CK73GB1H103K	CHIP C 0.010UF K	
C43			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C44			CK73GB1H331K	CHIP C 330PF K	
C45			CK73GB1H102K	CHIP C 1000PF K	
C46			CK73GB1H103K	CHIP C 0.010UF K	
C47			C92-0561-05	CHIP-ELE 22UF 16WV	
C49			CK73GB1H102K	CHIP C 1000PF K	
C51			CK73GB1C104K	CHIP C 0.10UF K	
C52			CC73GCH1H680J	CHIP C 68PF J	
C53			CK73GB1C104K	CHIP C 0.10UF K	
C54			CK73GB1H103K	CHIP C 0.010UF K	
C56			CC73GCH1H220J	CHIP C 22PF J	
C58			CK73GB1E223K	CHIP C 0.022UF K	
C60 ,61			CK73GB1H102K	CHIP C 1000PF K	
C62			CC73GCH1H101J	CHIP C 100PF J	
C63			CK73GB1C104K	CHIP C 0.10UF K	
C64			CK73GB1H103K	CHIP C 0.010UF K	
C66			CK73GB1H102K	CHIP C 1000PF K	
C67			CK73GB1H471K	CHIP C 470PF K	
C68			CC73GCH1H101J	CHIP C 100PF J	

PARTS LIST / 零件表

TX-RX UNIT (X57-596X-XX)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C69			CK73GB1E223K	CHIP C	0.022UF	K	
C70			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C71			CC73GCH1H101J	CHIP C	100PF	J	
C72			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C73			CC73GCH1H101J	CHIP C	100PF	J	
C74 ,75			CK73GB1H471K	CHIP C	470PF	K	
C78			CK73GB1H102K	CHIP C	1000PF	K	
C79 ,80			CK73GB1H221K	CHIP C	220PF	K	
C81			CK73GB1H471K	CHIP C	470PF	K	
C82			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C83			CC73GCH1H270J	CHIP C	27PF	J	
C84			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C86			C92-0662-05	CHIP-TAN	15UF	6.3WV	
C87			CC73GCH1H330J	CHIP C	33PF	J	
C88			CK73GB1H103K	CHIP C	0.010UF	K	
C89			CK73GB1H471K	CHIP C	470PF	K	
C91			CC73GCH1H020B	CHIP C	2.0PF	B	
C92			CK73GB1H471K	CHIP C	470PF	K	
C93			C92-0555-05	CHIP-TAN	0.047UF	35WV	
C94 -96			CK73GB1H471K	CHIP C	470PF	K	
C97			C92-0546-05	CHIP-TAN	68UF	6.3WV	
C98			CK73GB1H103K	CHIP C	0.010UF	K	
C99			C92-0697-05	CHIP-TAN	3.3UF	16WV	
C100			CC73GCH1H020B	CHIP C	2.0PF	B	
C101			CK73GB1H471K	CHIP C	470PF	K	
C102			CC73GCH1H020B	CHIP C	2.0PF	B	
C103			CK73GB1H471K	CHIP C	470PF	K	
C104			C92-0001-05	CHIP C	0.1UF	35WV	
C105			CK73GB1H471K	CHIP C	470PF	K	
C106			CC73GCH1H180J	CHIP C	18PF	J	
C107			CK73GB1H471K	CHIP C	470PF	K	
C108			CC73GCH1H020B	CHIP C	2.0PF	B	
C109			CK73GB1H471K	CHIP C	470PF	K	
C110			CC73GCH1H070D	CHIP C	7.0PF	D	C3
C110			CC73GCH1H090D	CHIP C	9.0PF	D	C
C111			CC73GCH1H030C	CHIP C	3.0PF	C	
C112			CK73GB1H471K	CHIP C	470PF	K	
C113			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C114			C92-0697-05	CHIP-TAN	3.3UF	16WV	
C115			CK73GB1H471K	CHIP C	470PF	K	
C116			CK73GB1H103K	CHIP C	0.010UF	K	
C117			CK73GB1H102K	CHIP C	1000PF	K	
C118			CK73GB1H471K	CHIP C	470PF	K	
C119			CK73GB1H103K	CHIP C	0.010UF	K	
C120			CC73GCH1H040C	CHIP C	4.0PF	C	
C121			CK73GB1H471K	CHIP C	470PF	K	
C122,123			CK73GB1C104K	CHIP C	0.10UF	K	
C124			CC73GCH1H030C	CHIP C	3.0PF	C	C3
C125			C92-0004-05	CHIP-TAN	1.0UF	16WV	
C126			CC73GCH1H120J	CHIP C	12PF	J	
C127			CK73GB1H103K	CHIP C	0.010UF	K	
C128			C92-0543-05	CHIP-TAN	3.3UF	10WV	
C129			CK73FF1C105Z	CHIP C	1.0UF	Z	
C130			CK73GB1H103K	CHIP C	0.010UF	K	
C131			CK73GB1H102K	CHIP C	1000PF	K	
C133			CK73GB1H471K	CHIP C	470PF	K	
C134			CK73FB1E104K	CHIP C	0.10UF	K	
C135			CC73GCH1H120J	CHIP C	12PF	J	C3
C135			CC73GCH1H180J	CHIP C	18PF	J	C
C138			CK73FB1E104K	CHIP C	0.10UF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C139,140			CK73GB1H471K	CHIP C	470PF	K	
C141			C92-0719-05	ELECTRO	47UF	25WV	
C142,143			CK73GB1H471K	CHIP C	470PF	K	
C144			CK73GB1H102K	CHIP C	1000PF	K	
C145			CC73GCH1H070D	CHIP C	7.0PF	D	C3
C145			CC73GCH1H090D	CHIP C	9.0PF	D	C
C146			CK73GB1H471K	CHIP C	470PF	K	
C148,149			CK73GB1H471K	CHIP C	470PF	K	
C150			CK73FF1C105Z	CHIP C	1.0UF	Z	
C152			CC73GCH1H060D	CHIP C	6.0PF	D	C3
C152			CC73GCH1H080D	CHIP C	8.0PF	D	C
C153			CC73GCH1H040C	CHIP C	4.0PF	C	C
C154			CK73GB1H102K	CHIP C	1000PF	K	
C155			CC73GCH1H040C	CHIP C	4.0PF	C	C3
C155			CC73GCH1H060D	CHIP C	6.0PF	D	C
C156			CK73GB1H471K	CHIP C	470PF	K	
C157			CK73GB1H102K	CHIP C	1000PF	K	
C158			CK73GB1H471K	CHIP C	470PF	K	
C160,161			C92-0719-05	ELECTRO	47UF	25WV	
C162,163			CK73GB1H471K	CHIP C	470PF	K	
C164			CK73GB1H102K	CHIP C	1000PF	K	
C165			C92-0719-05	ELECTRO	47UF	25WV	
C166			CE04EW1E471M	ELECTRO	470UF	25WV	
C167			CK73GB1H471K	CHIP C	470PF	K	
C168			CC73GCH1H060D	CHIP C	6.0PF	D	C3
C168			CC73GCH1H080D	CHIP C	8.0PF	D	C
C169			CK73GB1H471K	CHIP C	470PF	K	
C172			CE04EW1E471M	ELECTRO	470UF	25WV	
C173			CK73GB1C104K	CHIP C	0.10UF	K	
C174			CK73GB1H471K	CHIP C	470PF	K	
C175			CC73GCH1H020B	CHIP C	2.0PF	B	C
C177			CC73FCH1H220J	CHIP C	22PF	J	
C178			CC73GCH1H060D	CHIP C	6.0PF	D	C3
C178			CC73GCH1H080D	CHIP C	8.0PF	D	C
C179			CK73GB1H471K	CHIP C	470PF	K	
C181			CK73GB1H471K	CHIP C	470PF	K	
C183			CK73GB1C104K	CHIP C	0.10UF	K	
C185			CK73GB1C104K	CHIP C	0.10UF	K	
C186			CK73GB1H471K	CHIP C	470PF	K	
C187			CC73GCH1H060D	CHIP C	6.0PF	D	C3
C187			CC73GCH1H080D	CHIP C	8.0PF	D	C
C188			CC73GCH1H040C	CHIP C	4.0PF	C	C
C189,190			CK73GB1H471K	CHIP C	470PF	K	
C191			CK73GB1C104K	CHIP C	0.10UF	K	
C192			C92-0719-05	ELECTRO	47UF	25WV	
C195			CK73GB1C104K	CHIP C	0.10UF	K	
C196,197			CK73GB1H471K	CHIP C	470PF	K	
C198			C92-0719-05	ELECTRO	47UF	25WV	
C201			CK73GB1H471K	CHIP C	470PF	K	
C202			CK73GB1C104K	CHIP C	0.10UF	K	
C203			CK73GB1H471K	CHIP C	470PF	K	
C204			C92-0004-05	CHIP-TAN	1.0UF	16WV	C3
C204			C92-0501-05	CHIP-TAN	1.5UF	10WV	C
C206			CK73GB1H102K	CHIP C	1000PF	K	
C207			CK73GB1H103K	CHIP C	0.010UF	K	
C208			CC73GCH1H060D	CHIP C	6.0PF	D	C3
C208			CC73GCH1H070D	CHIP C	7.0PF	D	C
C209			CC73FCH1H050C	CHIP C	5.0PF	C	
C210			CK73GB1H103K	CHIP C	0.010UF	K	
C211			CC73GCH1H180J	CHIP C	18PF	J	

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Ref. No.	Address	New parts	Parts No.	Description			Destination
C212			CK73GB1H471K	CHIP C	470PF	K	
C214			C93-0553-05	CHIP C	3.0PF	C	C3
C215			CC73FCH1H060D	CHIP C	6.0PF	D	
C216			CC73GCH1H0R5B	CHIP C	0.5PF	B	
C217			CC73GCH1H020B	CHIP C	2.0PF	B	
C218			CK73GB1C104K	CHIP C	0.10UF	K	
C219			CC73FCH1H040C	CHIP C	4.0PF	C	
C220			CK73GB1H471K	CHIP C	470PF	K	
C221			C93-0552-05	CHIP C	2.0PF	C	C3
C221			C93-0554-05	CHIP C	4.0PF	C	C
C222			CC73GCH1H0R5B	CHIP C	0.5PF	B	
C223			CC73GCH1H020B	CHIP C	2.0PF	B	
C224			CK73GB1H471K	CHIP C	470PF	K	
C225			C93-0603-05	CHIP C	1000PF	K	
C226			C93-0556-05	CHIP C	6.0PF	D	C
C226			C93-0558-05	CHIP C	8.0PF	D	C3
C227			C93-0558-05	CHIP C	8.0PF	D	C
C227			C93-0560-05	CHIP C	10PF	D	C3
C229			C93-0556-05	CHIP C	6.0PF	D	
C230,231			CK73GB1C104K	CHIP C	0.10UF	K	
C241			CK73GB1H102K	CHIP C	1000PF	K	C3
C243			CK73GB1H102K	CHIP C	1000PF	K	C3
C245			CK73GB1C104K	CHIP C	0.10UF	K	C
C248			C92-0585-05	CHIP-TAN	4.7UF	16WV	
C250			CK73FF1C105Z	CHIP C	1.0UF	Z	
C254			CK73GB1C104K	CHIP C	0.10UF	K	
C258			CK73GB1H102K	CHIP C	1000PF	K	C3
C259			CK73GB1C104K	CHIP C	0.10UF	K	
C265			CK73GB1H102K	CHIP C	1000PF	K	
C267			CK73GB1H102K	CHIP C	1000PF	K	C
C270			CK73GB1H471K	CHIP C	470PF	K	
C271			CK73GB1H472K	CHIP C	4700PF	K	
C274			CC73GCH1H050C	CHIP C	5.0PF	C	C3
C275			CK73GB1H102K	CHIP C	1000PF	K	
C276			C90-2046-05	ELECTRO	22UF	10WV	
C290			C92-0004-05	CHIP-TAN	1.0UF	16WV	C
C501			CK73GB1H102K	CHIP C	1000PF	K	
C502			CK73GB1C104K	CHIP C	0.10UF	K	
C503			CK73GB1H471K	CHIP C	470PF	K	
C504			CK73GB1H103K	CHIP C	0.010UF	K	
C505			CK73GB1C104K	CHIP C	0.10UF	K	
C506,507			CK73GB1H103K	CHIP C	0.010UF	K	
C508			CK73GB1H472K	CHIP C	4700PF	K	
C509			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C514			CC73GCH1H680J	CHIP C	68PF	J	
C515			CK73GB1H103K	CHIP C	0.010UF	K	
C516			CC73GCH1H270J	CHIP C	27PF	J	
C517			CK73GB1C683K	CHIP C	0.068UF	K	
C518			CC73GCH1H270J	CHIP C	27PF	J	
C519			CK73GB1H102K	CHIP C	1000PF	K	
C520			CK73GB1C104K	CHIP C	0.10UF	K	
C521			CK73GB1H102K	CHIP C	1000PF	K	
C522			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C523			CC73GCH1H221J	CHIP C	220PF	J	
C524			CK73GB1H103K	CHIP C	0.010UF	K	
C525			CK73GB1E123K	CHIP C	0.012UF	K	
C526			CK73GB1C683K	CHIP C	0.068UF	K	
C527			CK73GB1H222K	CHIP C	2200PF	K	
C528			CK73GB1H103K	CHIP C	0.010UF	K	
C529			CK73GB1H272K	CHIP C	2700PF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C530			CK73GB1H152K	CHIP C	1500PF	K	
C531			CK73GB1H272K	CHIP C	2700PF	K	
C532,533			CK73GB1C104K	CHIP C	0.10UF	K	
C534,535			CK73GB1H103K	CHIP C	0.010UF	K	
C536,537			CK73GB1C104K	CHIP C	0.10UF	K	
C538			C92-0566-05	CHIP-TAN	10UF	6.3WV	
C539			CK73GB1H103K	CHIP C	0.010UF	K	
C540,541			CK73GB1C104K	CHIP C	0.10UF	K	
C542			CC73GCH1H331J	CHIP C	330PF	J	
C543			CK73GB1H102K	CHIP C	1000PF	K	
C544-546			CK73GB1H562K	CHIP C	5600PF	K	
C547			CC73GCH1H030C	CHIP C	3.0PF	C	
C548-550			CK73GB1H272K	CHIP C	2700PF	K	
C551			CC73GCH1H151J	CHIP C	150PF	J	
C552			CC73GCH1H030C	CHIP C	3.0PF	C	
C553			CK73GB1H102K	CHIP C	1000PF	K	
C554			CK73GB1H122K	CHIP C	1200PF	K	
C555			C92-0566-05	CHIP-TAN	10UF	6.3WV	
C556			CK73GB1C333K	CHIP C	0.033UF	K	
C557			CK73GB1C104K	CHIP C	0.10UF	K	
C558			CC73GCH1H101J	CHIP C	100PF	J	
C559			CK73GB1H102K	CHIP C	1000PF	K	
C560-563			CK73GB1C104K	CHIP C	0.10UF	K	
C564			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C565,566			CK73GB1H472K	CHIP C	4700PF	K	
C567			CC73GCH1H101J	CHIP C	100PF	J	
C568			C92-0507-05	CHIP-TAN	4.7UF	6.3WV	
C569			CK73GB1E223K	CHIP C	0.022UF	K	
C570			CK73FF1C105Z	CHIP C	1.0UF	Z	
C571,572			CK73GB1H102K	CHIP C	1000PF	K	
C573			CK73FB1H563K	CHIP C	0.056UF	K	
C574			CC73GCH1H470J	CHIP C	47PF	J	
C575			CK73GB1H102K	CHIP C	1000PF	K	
C576			CK73GB1C104K	CHIP C	0.10UF	K	
C577,578			CK73GB1H103K	CHIP C	0.010UF	K	
C579			CC73GCH1H101J	CHIP C	100PF	J	
C580			CK73GB1C104K	CHIP C	0.10UF	K	
C581			CK73GB1H102K	CHIP C	1000PF	K	
C582			CK73GB1C473K	CHIP C	0.047UF	K	
C583			C92-0566-05	CHIP-TAN	10UF	6.3WV	
C584			CK73GB1H103K	CHIP C	0.010UF	K	
C585			CC73GCH1H101J	CHIP C	100PF	J	
C587			CK73GB1H103K	CHIP C	0.010UF	K	
C589			C92-0606-05	CHIP-TAN	4.7UF	10WV	
C590			CK73GB1H102K	CHIP C	1000PF	K	
C594			CK73GB1H102K	CHIP C	1000PF	K	
C596			CK73GB1H102K	CHIP C	1000PF	K	
C597			CC73GCH1H101J	CHIP C	100PF	J	
C598			CK73GB1H102K	CHIP C	1000PF	K	
C599			CC73GCH1H101J	CHIP C	100PF	J	
C600			CK73GB1H102K	CHIP C	1000PF	K	
C601,602			CC73GCH1H101J	CHIP C	100PF	J	
C603			CK73GB1H102K	CHIP C	1000PF	K	
C604-606			CC73GCH1H101J	CHIP C	100PF	J	
C608-610			CC73GCH1H101J	CHIP C	100PF	J	
C611,612			CK73GB1H471K	CHIP C	470PF	K	
C613			CC73GCH1H101J	CHIP C	100PF	J	
C615			CK73GB1H471K	CHIP C	470PF	K	
C616			CC73GCH1H101J	CHIP C	100PF	J	
C618			CK73GB1H102K	CHIP C	1000PF	K	

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Ref. No.	Address	New parts	Parts No.	Description	Destination
C620			CK73GB1H471K	CHIP C 470PF K	
C621			CK73GB1H102K	CHIP C 1000PF K	
C623			CK73GB1H102K	CHIP C 1000PF K	
C626			CK73GB1C104K	CHIP C 0.10UF K	
C628			CK73GB1C104K	CHIP C 0.10UF K	
C629			CC73GCH1H470J	CHIP C 47PF J	
C630			C92-0507-05	CHIP-TAN 4.7UF 6.3WV	
C631			CK73GB1H103K	CHIP C 0.010UF K	
C632			CK73FF1C105Z	CHIP C 1.0UF Z	
C633			CK73GB1C104K	CHIP C 0.10UF K	
C720			C92-0566-05	CHIP-TAN 10UF 6.3WV	
CN1			E40-6047-05	PIN ASSY	
CN2			E40-6021-05	FLAT CABLE CONNECTOR	
CN3			E40-3247-05	PIN ASSY	
CN4			E40-5737-05	PIN ASSY	
CN5			E40-5738-05	PIN ASSY	
CN6			E40-5751-05	PIN ASSY	
CN7			E40-3247-05	PIN ASSY	
CN8			E40-3246-05	PIN ASSY	
CN501			E40-6021-05	FLAT CABLE CONNECTOR	
J1			E11-0442-05	3.5D PHONE JACK (3P)	
J501			E08-0877-05	MODULAR JACK	
F1			F53-0108-05	FUSE	
-			J31-0543-05	COLLAR	
CF1			L72-0959-05	CERAMIC FILTER	
CF2			L72-0973-05	CERAMIC FILTER	
L1			L40-1005-34	SMALL FIXED INDUCTOR (10UH)	
L2 -4			L40-3381-86	SMALL FIXED INDUCTOR (0.33UH)	
L5			L34-4530-05	COIL	
L6			L40-8275-77	SMALL FIXED INDUCTOR (82NH)	
L7			L40-5685-85	SMALL FIXED INDUCTOR (0.56UH)	
L8			L40-8285-85	SMALL FIXED INDUCTOR (0.82UH)	
L9			L40-1575-77	SMALL FIXED INDUCTOR (15NH)	
L10			L40-2775-77	SMALL FIXED INDUCTOR (27NH)	
L11 ,12			L40-1575-34	SMALL FIXED INDUCTOR (15NH)	
L13			L79-1585-05	HELICAL BLOCK	C
L13			L79-1591-05	HELICAL BLOCK	C3
L14			L40-1875-77	SMALL FIXED INDUCTOR (18NH)	C
L14			L40-2775-77	SMALL FIXED INDUCTOR (27NH)	C3
L15			L40-4775-77	SMALL FIXED INDUCTOR (47NH)	
L16			L40-6875-34	SMALL FIXED INDUCTOR (68NH)	
L17			L40-1875-77	SMALL FIXED INDUCTOR (18NH)	
L18			L40-1075-34	SMALL FIXED INDUCTOR (10NH)	
L19			L40-1085-77	SMALL FIXED INDUCTOR (100NH)	C3
L19			L40-5675-77	SMALL FIXED INDUCTOR (56NH)	C
L20			L40-1875-77	SMALL FIXED INDUCTOR (18NH)	C
L20			L40-2775-77	SMALL FIXED INDUCTOR (27NH)	C3
L21			L34-4478-05	AIR-CORE COIL	
L22			L79-1585-05	HELICAL BLOCK	C
L22			L79-1591-05	HELICAL BLOCK	C3
L24			L92-0179-05	FERRITE CHIP	
L26			L40-3375-34	SMALL FIXED INDUCTOR (33NH/8)	
L27			L40-1575-34	SMALL FIXED INDUCTOR (15NH/8)	C
L27			L40-1875-34	SMALL FIXED INDUCTOR (18NH/8)	C3
L29			L34-1185-05	AIR-CORE COIL	
L30 ,31			L34-1039-05	AIR-CORE COIL	
L32			L34-4478-05	AIR-CORE COIL	
L33 ,34			L92-0179-05	FERRITE CHIP	
L35			L40-2775-77	SMALL FIXED INDUCTOR (27NH)	C3
L501			L92-0138-05	FERRITE CHIP	
L503,504			L92-0138-05	FERRITE CHIP	
L510			L92-0138-05	FERRITE CHIP	
X1			L77-1826-05	TCXO (16.8MHZ)	
X501			L77-1708-05	CRYSTAL RESONATOR (3.579545MHZ)	
X502			L78-0462-05	RESONATOR (9.8304MHZ)	
XF1			L71-0551-25	MCF (49.95MHZ)	
CP501-505			R90-0741-05	MULTIPLE RESISTOR	
CP508-514			R90-0741-05	MULTIPLE RESISTOR	
CP516-524			R90-0741-05	MULTIPLE RESISTOR	
CP526,527			R90-0741-05	MULTIPLE RESISTOR	
CP529-536			R90-0741-05	MULTIPLE RESISTOR	
CP538			R90-0741-05	MULTIPLE RESISTOR	
CP539			R90-0724-05	MULTI-COMP 1K X4	
R1			R92-1252-05	CHIP R 0 OHM	
R2			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R3			R92-1252-05	CHIP R 0 OHM	
R4			RK73GB1J333J	CHIP R 33K J 1/16W	
R6			R92-1252-05	CHIP R 0 OHM	
R7 ,8			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R9 ,10			R92-1252-05	CHIP R 0 OHM	
R11			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R12			RK73GB1J104J	CHIP R 100K J 1/16W	
R13			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R14			RK73GB1J474J	CHIP R 470K J 1/16W	
R15			RK73GB1J104J	CHIP R 100K J 1/16W	
R16			RK73GB1J220J	CHIP R 22 J 1/16W	
R17			RK73GB1J154J	CHIP R 150K J 1/16W	
R18			RK73GB1J103J	CHIP R 10K J 1/16W	
R19			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R20			RK73GB1J224J	CHIP R 220K J 1/16W	
R21			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R22			RK73GB1J474J	CHIP R 470K J 1/16W	
R23			RK73GB1J223J	CHIP R 22K J 1/16W	
R24			RK73GB1J563J	CHIP R 56K J 1/16W	
R25			R92-1252-05	CHIP R 0 OHM	
R26			RK73GB1J104J	CHIP R 100K J 1/16W	
R29			R92-1252-05	CHIP R 0 OHM	
R30			RK73GB1J103J	CHIP R 10K J 1/16W	
R31			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R32			RK73GB1J103J	CHIP R 10K J 1/16W	
R33			R92-1252-05	CHIP R 0 OHM	
R34 ,35			RK73GB1J104J	CHIP R 100K J 1/16W	
R36			RK73GB1J223J	CHIP R 22K J 1/16W	
R37			RK73GB1J100J	CHIP R 10 J 1/16W	
R38 -40			RK73GB1J103J	CHIP R 10K J 1/16W	
R41			RK73GB1J224J	CHIP R 220K J 1/16W	
R42			RK73GB1J473J	CHIP R 47K J 1/16W	
R43			RK73GB1J683J	CHIP R 68K J 1/16W	
R44			RK73GB1J153J	CHIP R 15K J 1/16W	
R46			RK73GB1J223J	CHIP R 22K J 1/16W	
R47			RK73GB1J101J	CHIP R 100 J 1/16W	
R48			RK73GB1J184J	CHIP R 180K J 1/16W	
R49			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R50			RK73GB1J473J	CHIP R 47K J 1/16W	
R51 -53			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R54 ,55			R92-1252-05	CHIP R 0 OHM	

PARTS LIST / 零件表

TX-RX UNIT (X57-596X-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
R56			RK73GB1J100J	CHIP R 10 J 1/16W	
R57			RK73GB1J471J	CHIP R 470 J 1/16W	
R58			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R59			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R60			RK73GB1J334J	CHIP R 330K J 1/16W	
R61			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R62			RK73GB1J224J	CHIP R 220K J 1/16W	
R63			RK73GB1J474J	CHIP R 470K J 1/16W	
R64 ,65			RK73GB1J223J	CHIP R 22K J 1/16W	
R66			RK73GB1J101J	CHIP R 100 J 1/16W	
R67			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R68			RK73GB1J182J	CHIP R 1.8K J 1/16W	
R69			R92-1252-05	CHIP R 0 OHM	
R70 ,71			RK73GB1J103J	CHIP R 10K J 1/16W	
R72			R92-1252-05	CHIP R 0 OHM	
R73			RK73GB1J223J	CHIP R 22K J 1/16W	
R75			R92-1252-05	CHIP R 0 OHM	
R76			RK73GB1J223J	CHIP R 22K J 1/16W	
R77			RK73GB1J224J	CHIP R 220K J 1/16W	
R78			RK73GB1J104J	CHIP R 100K J 1/16W	
R79			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R80			RK73GB1J471J	CHIP R 470 J 1/16W	
R81			RK73GB1J101J	CHIP R 100 J 1/16W	
R82			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R83			RK73GB1J684J	CHIP R 680K J 1/16W	
R84			R92-1252-05	CHIP R 0 OHM	
R85 ,86			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R87			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R88			RK73GB1J271J	CHIP R 270 J 1/16W	
R89			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R90			RK73GB1J104J	CHIP R 100K J 1/16W	
R91			RK73GB1J823J	CHIP R 82K J 1/16W	
R92			RK73GB1J822J	CHIP R 8.2K J 1/16W	
R93			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R94			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R95 ,96			RK73GB1J103J	CHIP R 10K J 1/16W	
R97 ,98			RK73GB1J101J	CHIP R 100 J 1/16W	
R99			RK73GB1J331J	CHIP R 330 J 1/16W	
R100,101			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R103			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R104			RK73GB1J682J	CHIP R 6.8K J 1/16W	
R105			RK73GB1J101J	CHIP R 100 J 1/16W	
R106			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R107			RK73GB1J473J	CHIP R 47K J 1/16W	
R108			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R109			RK73GB1J103J	CHIP R 10K J 1/16W	
R110			RK73GB1J470J	CHIP R 47 J 1/16W	
R111			RK73GB1J101J	CHIP R 100 J 1/16W	
R112			RK73GB1J471J	CHIP R 470 J 1/16W	
R113			RK73GB1J100J	CHIP R 10 J 1/16W	
R114			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R115			RK73GB1J223J	CHIP R 22K J 1/16W	
R116			RK73GB1J473J	CHIP R 47K J 1/16W	
R117			RK73GB1J221J	CHIP R 220 J 1/16W	
R118			RK73GB1J681J	CHIP R 680 J 1/16W	
R119			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R120			R92-1252-05	CHIP R 0 OHM	
R121			RK73GB1J100J	CHIP R 10 J 1/16W	
R122			R92-1215-05	CHIP R 470 J 1/2W	
R123			RK73GB1J472J	CHIP R 4.7K J 1/16W	

Ref. No.	Address	New parts	Parts No.	Description	Destination
R124			RK73GB1J103J	CHIP R 10K J 1/16W	
R125			RK73GB1J333J	CHIP R 33K J 1/16W	
R126			RK73GB1J471J	CHIP R 470 J 1/16W	
R127,128			RK73GB1J104J	CHIP R 100K J 1/16W	
R129			RK73GB1J331J	CHIP R 330 J 1/16W	
R130			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R131			RK73GB1J681J	CHIP R 680 J 1/16W	
R132			R92-0670-05	CHIP R 0 OHM	
R133-136			R92-1252-05	CHIP R 0 OHM	
R138			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R139			R92-0699-05	CHIP R 10 J 1/2W	C
R140			RK73FB2A2R2J	CHIP R 2.2 J 1/10W	
R141			R92-0685-05	CHIP R 22 J 1/2W	C3
R142			RK73GB1J473J	CHIP R 47K J 1/16W	
R143			RK73GB1J101J	CHIP R 100 J 1/16W	
R144			RK73GB1J222J	CHIP R 2.2K J 1/16W	
R145,146			RK73GB1J473J	CHIP R 47K J 1/16W	
R147			RK73GB1J683J	CHIP R 68K J 1/16W	
R148			RK73GB1J104J	CHIP R 100K J 1/16W	
R149			RK73GB1J151J	CHIP R 150 J 1/16W	
R150			RK73GB1J104J	CHIP R 100K J 1/16W	
R151			RK73FB2A102J	CHIP R 1.0K J 1/10W	C
R151			RK73FB2A331J	CHIP R 330 J 1/10W	C3
R152			R92-1252-05	CHIP R 0 OHM	
R153			R92-0670-05	CHIP R 0 OHM	
R154			RK73GB1J152J	CHIP R 1.5K J 1/16W	
R155			RK73GB1J103J	CHIP R 10K J 1/16W	
R156			RK73FB2A180J	CHIP R 18 J 1/10W	C3
R156			RK73FB2A5R6J	CHIP R 5.6 J 1/10W	C
R158			R92-0670-05	CHIP R 0 OHM	
R159			RK73GB1J473J	CHIP R 47K J 1/16W	
R160			RK73FB2A102J	CHIP R 1.0K J 1/10W	C
R160			RK73FB2A331J	CHIP R 330 J 1/10W	C3
R161,162			RK73GB1J104J	CHIP R 100K J 1/16W	
R163			R92-0670-05	CHIP R 0 OHM	
R164			R92-1215-05	CHIP R 470 J 1/2W	
R166			RK73GB1J151J	CHIP R 150 J 1/16W	
R169			RK73GB1J103J	CHIP R 10K J 1/16W	
R170			RK73FB2A222J	CHIP R 2.2K J 1/10W	
R171			RK73GB1J153J	CHIP R 15K J 1/16W	
R172			RK73GB1J683J	CHIP R 68K J 1/16W	
R173			RK73GB1J472J	CHIP R 4.7K J 1/16W	C3
R173			RK73GB1J822J	CHIP R 8.2K J 1/16W	C
R174			RK73GB1J103J	CHIP R 10K J 1/16W	
R175			RK73GB1J682J	CHIP R 6.8K J 1/16W	
R176			RK73GB1J103J	CHIP R 10K J 1/16W	
R177			R92-1214-05	CHIP R 120 J 1/2W	
R178			RK73GB1J822J	CHIP R 8.2K J 1/16W	
R179			RK73GB1J273J	CHIP R 27K J 1/16W	
R180			RK73GB1J272J	CHIP R 2.7K J 1/16W	C3
R180,181			RK73GB1J562J	CHIP R 5.6K J 1/16W	C
R181			RK73GB1J103J	CHIP R 10K J 1/16W	C3
R182			R92-0670-05	CHIP R 0 OHM	
R184			R92-1252-05	CHIP R 0 OHM	C
R185			RK73GB1J473J	CHIP R 47K J 1/16W	
R186			RK73GB1J100J	CHIP R 10 J 1/16W	C
R186			R92-1252-05	CHIP R 0 OHM	C3
R187			RK73GB1J220J	CHIP R 22 J 1/16W	
R188			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R189			RK73GB1J101J	CHIP R 100 J 1/16W	

PARTS LIST / 零件表

TX-RX UNIT (X57-596X-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
R190			RK73GB1J473J	CHIP R 47K J 1/16W	
R192			RK73GB1J103J	CHIP R 10K J 1/16W	
R193			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R196			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R197			R92-1252-05	CHIP R 0 OHM	
R198			RK73GB1J104J	CHIP R 100K J 1/16W	
R199-202			R92-1252-05	CHIP R 0 OHM	
R207			R92-1252-05	CHIP R 0 OHM	
R208			R92-0670-05	CHIP R 0 OHM	
R210			R92-1252-05	CHIP R 0 OHM	
R219			R92-1252-05	CHIP R 0 OHM	
R221			R92-1252-05	CHIP R 0 OHM	
R501			RK73GB1J473J	CHIP R 47K J 1/16W	
R502			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R503			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R504-507			RK73GB1J473J	CHIP R 47K J 1/16W	
R508			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R509,510			R92-1252-05	CHIP R 0 OHM	
R511			RK73GB1J473J	CHIP R 47K J 1/16W	
R512			RK73GB1J104J	CHIP R 100K J 1/16W	
R513			RK73GB1J223J	CHIP R 22K J 1/16W	
R514			RK73GB1J473J	CHIP R 47K J 1/16W	
R515,516			RK73GB1J223J	CHIP R 22K J 1/16W	
R517			RK73GB1J473J	CHIP R 47K J 1/16W	
R518			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R519			RK73GB1J103J	CHIP R 10K J 1/16W	
R520-523			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R526			RK73GB1J154J	CHIP R 150K J 1/16W	
R527			R92-1252-05	CHIP R 0 OHM	
R528			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R529			RK73GB1J154J	CHIP R 150K J 1/16W	
R530			RK73GB1J473J	CHIP R 47K J 1/16W	
R531			RK73GB1J394J	CHIP R 390K J 1/16W	
R532			RK73GB1J103J	CHIP R 10K J 1/16W	
R533			RK73GB1J104J	CHIP R 100K J 1/16W	
R534			RK73GB1J823J	CHIP R 82K J 1/16W	
R535			RK73GB1J103J	CHIP R 10K J 1/16W	
R536			RK73GB1J153J	CHIP R 15K J 1/16W	
R537			RK73GB1J105J	CHIP R 1.0M J 1/16W	
R538			RK73GB1J103J	CHIP R 10K J 1/16W	
R539			R92-1252-05	CHIP R 0 OHM	
R540			RK73GB1J223J	CHIP R 22K J 1/16W	
R541			RK73GB1J184J	CHIP R 180K J 1/16W	
R542			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R543			RK73GB1J184J	CHIP R 180K J 1/16W	
R544			RK73GB1J103J	CHIP R 10K J 1/16W	
R545			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R546			RN73GH1J913D	CHIP R 91K D 1/16W	
R547			RK73GB1J103J	CHIP R 10K J 1/16W	
R548			RN73GH1J333D	CHIP R 33K D 1/16W	
R549			RN73GH1J913D	CHIP R 91K D 1/16W	
R550			RN73GH1J683D	CHIP R 68K D 1/16W	
R551,552			RK73GB1J223J	CHIP R 22K J 1/16W	
R553			RK73GB1J105J	CHIP R 1.0M J 1/16W	
R554			RN73GH1J913D	CHIP R 91K D 1/16W	
R555,556			RK73GB1J104J	CHIP R 100K J 1/16W	
R557			RN73GH1J274D	CHIP R 270K D 1/16W	
R558			R92-1252-05	CHIP R 0 OHM	
R559			RK73GB1J333J	CHIP R 33K J 1/16W	
R560			RK73GB1J474J	CHIP R 470K J 1/16W	

Ref. No.	Address	New parts	Parts No.	Description	Destination
R561			RK73GB1J333J	CHIP R 33K J 1/16W	
R562			R92-1252-05	CHIP R 0 OHM	
R563			RK73GB1J473J	CHIP R 47K J 1/16W	
R564			RK73GB1J223J	CHIP R 22K J 1/16W	
R565			R92-1252-05	CHIP R 0 OHM	
R566			RK73GB1J563J	CHIP R 56K J 1/16W	
R567			RK73GB1J334J	CHIP R 330K J 1/16W	
R568			RK73GB1J473J	CHIP R 47K J 1/16W	
R569			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R570			RK73GB1J155J	CHIP R 1.5M J 1/16W	
R571			RN73GH1J682D	CHIP R 6.8K D 1/16W	
R572			RK73GB1J473J	CHIP R 47K J 1/16W	
R573			RK73GB1J474J	CHIP R 470K J 1/16W	
R574			RN73GH1J683D	CHIP R 68K D 1/16W	
R575			RK73GB1J101J	CHIP R 100 J 1/16W	
R576			RK73GB1J224J	CHIP R 220K J 1/16W	
R577			RK73GB1J103J	CHIP R 10K J 1/16W	
R578			RN73GH1J682D	CHIP R 6.8K D 1/16W	
R579			RK73GB1J223J	CHIP R 22K J 1/16W	
R580			R92-1252-05	CHIP R 0 OHM	
R581			RK73GB1J394J	CHIP R 390K J 1/16W	
R582			RK73GB1J273J	CHIP R 27K J 1/16W	
R583			RK73GB1J470J	CHIP R 47 J 1/16W	
R584			RK73GB1J220J	CHIP R 22 J 1/16W	
R585			R92-1252-05	CHIP R 0 OHM	
R586			RK73GB1J473J	CHIP R 47K J 1/16W	
R587			R92-1252-05	CHIP R 0 OHM	
R588			RK73GB1J103J	CHIP R 10K J 1/16W	
R590			RK73GB1J333J	CHIP R 33K J 1/16W	
R591			R92-1252-05	CHIP R 0 OHM	
R592			RK73GB1J103J	CHIP R 10K J 1/16W	
R593			RK73GB1J181J	CHIP R 180 J 1/16W	
R594			RK73GB1J392J	CHIP R 3.9K J 1/16W	
R595			RK73GB1J181J	CHIP R 180 J 1/16W	
R598			RK73GB1J473J	CHIP R 47K J 1/16W	
R599			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R600			R92-1252-05	CHIP R 0 OHM	
R602			RK73GB1J473J	CHIP R 47K J 1/16W	
R603			RK73GB1J101J	CHIP R 100 J 1/16W	
R604			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R605			RK73GB1J332J	CHIP R 3.3K J 1/16W	
R606			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R607			RK73GB1J101J	CHIP R 100 J 1/16W	
R608			RK73GB1J122J	CHIP R 1.2K J 1/16W	
R610,611			RK73GB1J473J	CHIP R 47K J 1/16W	
R612			R92-1201-05	CHIP R 220 J 1/2W	
R613			RK73GB1J103J	CHIP R 10K J 1/16W	
R614,615			R92-1252-05	CHIP R 0 OHM	
R616			RK73GB1J474J	CHIP R 470K J 1/16W	
R617			RK73GB1J472J	CHIP R 4.7K J 1/16W	
R618			RK73GB1J683J	CHIP R 68K J 1/16W	
R619			RK73GB1J104J	CHIP R 100K J 1/16W	
R620,621			RK73GB1J103J	CHIP R 10K J 1/16W	
R622			RK73GB1J473J	CHIP R 47K J 1/16W	
R630			R92-1252-05	CHIP R 0 OHM	
R701			RK73GB1J473J	CHIP R 47K J 1/16W	
R704			RK73GB1J223J	CHIP R 22K J 1/16W	
R720			R92-1252-05	CHIP R 0 OHM	
R722			R92-1252-05	CHIP R 0 OHM	

PARTS LIST / 零件表

TX-RX UNIT (X57-596X-XX)
PLL/VCO (X58-4670-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
D1			HSB123	DIODE	
D2			02DZ20(Y,Z)	ZENER DIODE	
D3 -5			HSB123	DIODE	
D8			DAN235K	DIODE	
D9			1SS355	DIODE	
D10			DAN235K	DIODE	
D11			MA742	DIODE	
D14			1SS355	DIODE	
D15			DAN202K	DIODE	
D16			DAN235K	DIODE	C3
D16			HVC131	DIODE	C
D17			HSB123	DIODE	
D18			1SV280	VARIABLE CAPACITANCE DIODE	
D19 ,20			1SS355	DIODE	
D21			02DZ18(X,Y)	ZENER DIODE	
D23			1SV280	VARIABLE CAPACITANCE DIODE	
D24			02DZ15(X,Y)	ZENER DIODE	
D25			22ZR-10D	SURGE ABSORBER	
D26			DSA3A1-FK	DIODE	
D27			1SS355	DIODE	
D28			1SV280	VARIABLE CAPACITANCE DIODE	
D30			MA4PH633	DIODE	
D31			1SV280	VARIABLE CAPACITANCE DIODE	
D33 ,34			XB15A709	DIODE	
D35 ,36			MA742	DIODE	
D37			MA4PH633	DIODE	
D39			UDZ4.7(B)	ZENER DIODE	
D40			MA742	DIODE	
D41			1SS355	DIODE	
D42			HZU5ALL	DIODE	
D54			HVC131	DIODE	C
D501-504			MA2S111	DIODE	
D506			MA2S111	DIODE	
D508			MA742	DIODE	
D523			DAN202U	DIODE	
D524,525			HSB123	DIODE	
D526			1812L075PR	VARISTOR	
D527,528			HSB123	DIODE	
D529			MA742	DIODE	
IC1 ,2			TA75S01F	IC (OP AMP)	
IC3			MB15A02	IC (PLL)	
IC4			NJM4558M	IC (OP AMP X2)	
IC5			TA31136FN	IC (FM IF DETECTOR)	
IC6			M62363FP	IC (8BIT D/A CONVERTER)	
IC7			NJM2904M	IC (OP AMP X2)	
IC9			BU4094BCF	IC (8-STAGE SHIFT/STORE REGISTER)	
IC10			NJM78L05UA	IC (VOLTAGE REGULATOR/ +5V)	
IC11			AN8009M	IC (REGULATOR)	
IC12			TA7808S	IC (REGULATOR)	
IC13			LA4422	IC (AF POWER AMP/ 5.8W)	
IC14			TC4013BF(N)	IC (MEMORY)	
IC15			TA75S01F	IC (OP AMP)	
IC400	2C		M68769H-22	IC (POWER MODULE)	C
IC400	2C		M68769L	IC (POWER MODULE)	C3
IC501			AT29C020-90TI	IC (FLASH ROM)	
IC502			30622M4102GP	CPU	
IC503			RH5VL42C	IC (REGULATOR)	
IC505			AT2408N10SI2.5	IC (8KBIT SERIAL EEPROM)	
IC507			NJM2904V	IC (APC)	
IC508			TC35453F	IC (AUDIO PROCESSOR)	

Ref. No.	Address	New parts	Parts No.	Description	Destination
IC509			BU4066BCFV	IC (ANALOG SWITCH X4)	
IC510			BU4094BCFV	IC (8BIT SHIFT/STORE REGISTER)	
IC511			LC73872M	IC (DTMF RECEIVER)	
IC512			NJM78L05UA	IC (VOLTAGE REGULATOR)	
IC513			TA75W558FU	IC (OP AMP X2)	
IC514			TC75W51FU	IC (OP AMP X2)	
Q1			DTD114EK	DIGITAL TRANSISTOR	
Q2			KRA225S	DIGITAL TRANSISTOR	
Q3			DTA114EKA	DIGITAL TRANSISTOR	
Q4 -6			DTC114EKA	DIGITAL TRANSISTOR	
Q7			2SC4649(N,P)	TRANSISTOR	
Q8			2SC2412K	TRANSISTOR	
Q9			2SC4215(Y)	TRANSISTOR	
Q10			2SC2412K	TRANSISTOR	
Q11			2SA1832(GR)	TRANSISTOR	
Q12			2SC4738(GR)	TRANSISTOR	
Q13			2SC4649(N,P)	TRANSISTOR	
Q14			2SC5110(O)	TRANSISTOR	
Q15			3SK228	FET	
Q16			DTC114EKA	DIGITAL TRANSISTOR	
Q17			DTC363EU	DIGITAL TRANSISTOR	
Q18			2SA1745(6,7)	TRANSISTOR	
Q19			DTC114EKA	DIGITAL TRANSISTOR	
Q20			DTA114EKA	DIGITAL TRANSISTOR	
Q21			DTC114EKA	DIGITAL TRANSISTOR	
Q22			2SC4093	TRANSISTOR	
Q23			2SA1641(S,T)	TRANSISTOR	
Q24			DTA114EKA	DIGITAL TRANSISTOR	
Q25			2SC3357	TRANSISTOR	
Q26			DTA114EKA	DIGITAL TRANSISTOR	
Q27			2SC2954	TRANSISTOR	
Q28			2SB1132(Q,R)	TRANSISTOR	
Q29			DTC114EKA	DIGITAL TRANSISTOR	
Q31			2SC2412K	TRANSISTOR	
Q32			2SB1565(E,F)	TRANSISTOR	
Q33			DTC114EKA	DIGITAL TRANSISTOR	
Q34			3SK228	FET	
Q35			DTC144EKA	DIGITAL TRANSISTOR	
Q36			2SC2412K	TRANSISTOR	
Q37 ,38			2SK1824	FET	
Q501			2SC4619	TRANSISTOR	
Q502,503			DTC114EE	DIGITAL TRANSISTOR	
Q504			2SC4617(S)	TRANSISTOR	
Q505			2SB1132(Q,R)	TRANSISTOR	
Q506			DTC114EE	DIGITAL TRANSISTOR	
Q508			2SC4617(S)	TRANSISTOR	
Q509			DTC363EU	DIGITAL TRANSISTOR	
TH1			157-153-65001	THERMISTOR	

PLL/VCO (X58-4670-XX) -12 : C -14 : C3

C102			CK73GB1H471K	CHIP C	470PF	K	
C104			CC73GCH1H060D	CHIP C	6.0PF	D	C
C104			CC73GCH1H080D	CHIP C	8.0PF	D	C3
C105			CC73GCH1H070D	CHIP C	7.0PF	D	
C107			CC73GCH1H030B	CHIP C	3.0PF	B	C
C107			CC73GCH1H040B	CHIP C	4.0PF	B	C3
C108			CC73GCH1HR75B	CHIP C	0.75PF	B	
C110			CC73GCH1H040B	CHIP C	4.0PF	B	C3

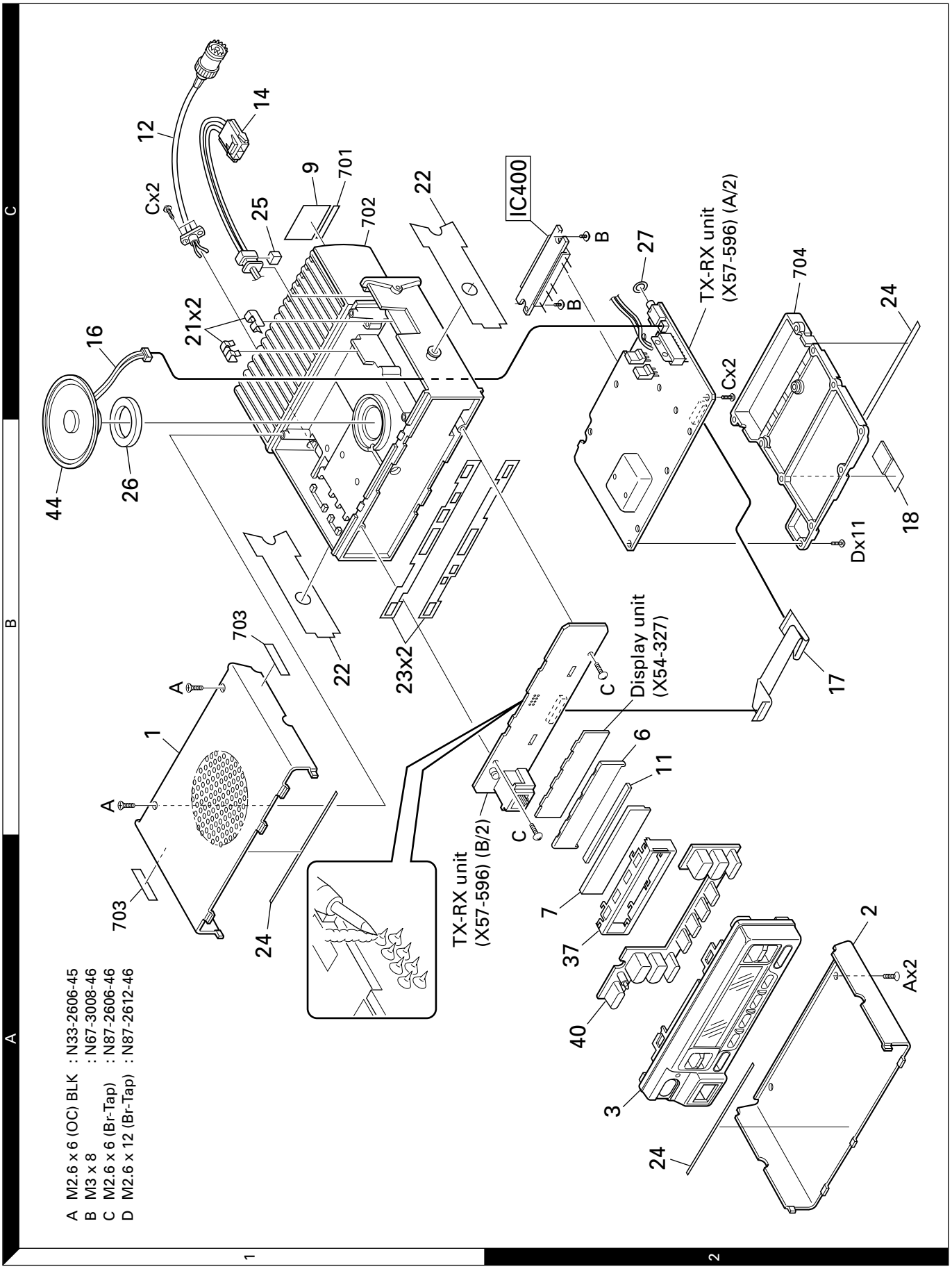
PARTS LIST / 零件表

PLL/VCO (X58-4670-XX)

Ref. No.	Address	New parts	Parts No.	Description	Destination
C110			CC73GCH1H060D	CHIP C 6.0PF D	C
C111			CC73GCH1H050B	CHIP C 5.0PF B	
C112			CC73GCH1H1R5B	CHIP C 1.5PF B	
C113			CC73GCH1H010B	CHIP C 1.0PF B	C
C113			CC73GCH1H020B	CHIP C 2.0PF B	C3
C114			CC73GCH1H040B	CHIP C 4.0PF B	C
C114			CC73GCH1H050B	CHIP C 5.0PF B	C3
C115			CC73GCH1H060D	CHIP C 6.0PF D	C
C115			CC73GCH1H070D	CHIP C 7.0PF D	C3
C116			CC73GCH1H050B	CHIP C 5.0PF B	C
C116			CC73GCH1H060D	CHIP C 6.0PF D	C3
C117			CK73GB1H471K	CHIP C 470PF K	
C118			CC73GCH1H050B	CHIP C 5.0PF B	
C119,120			CK73GB1H471K	CHIP C 470PF K	
C121			CC73GCH1H050B	CHIP C 5.0PF B	
C122			CC73GCH1H0R5B	CHIP C 0.5PF B	
C123			CK73GB1H471K	CHIP C 470PF K	
C124			CC73GCH1H0R5B	CHIP C 0.5PF B	
C125			CK73GB1H102K	CHIP C 1000PF K	
C126			CK73GB1H471K	CHIP C 470PF K	
C127			CC73GCH1H050B	CHIP C 5.0PF B	
TC106			C05-0384-05	CERAMIC TRIMMER CAP (10PF)	
TC109			C05-0384-05	CERAMIC TRIMMER CAP (10P)	
CN101			E40-6019-05	PIN ASSY	
-			F10-2279-04	SHIELDING CASE	
L101-104			L40-1595-34	SMALL FIXED INDUCTOR (1.5UH)	
L105			L40-3975-34	SMALL FIXED INDUCTOR (39NH)	
L106			L40-2775-34	SMALL FIXED INDUCTOR (27NH)	
L107,108			L40-1098-76	SMALL FIXED INDUCTOR (1UH)	
L109,110			L40-1595-34	SMALL FIXED INDUCTOR (1.5UH)	
L112			L34-4548-05	AIR-CORE COIL	C
L112			L34-4549-05	AIR-CORE COIL	C3
L115			L34-4547-05	AIR-CORE COIL	C
L116			L34-4548-05	AIR-CORE COIL	C3
R101,102			RK73GB1J101J	CHIP R 100 J 1/16W	
R103			RK73GB1J102J	CHIP R 1.0K J 1/16W	
R104			RK73GB1J101J	CHIP R 100 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			RK73GB1J181J	CHIP R 180 J 1/16W	C3
R112,113			RK73GB1J221J	CHIP R 220 J 1/16W	C
R113			RK73GB1J221J	CHIP R 220 J 1/16W	C3
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			1SV214	VARIABLE CAPACITANCE DIODE	
Q101			2SK508NV(K52)	FET	
Q102			DTC114EUA	DIGITAL TRANSISTOR	
Q103			2SK508NV(K52)	FET	
Q104,105			2SC4081	TRANSISTOR	
Q106			2SC4226(R24)	TRANSISTOR	

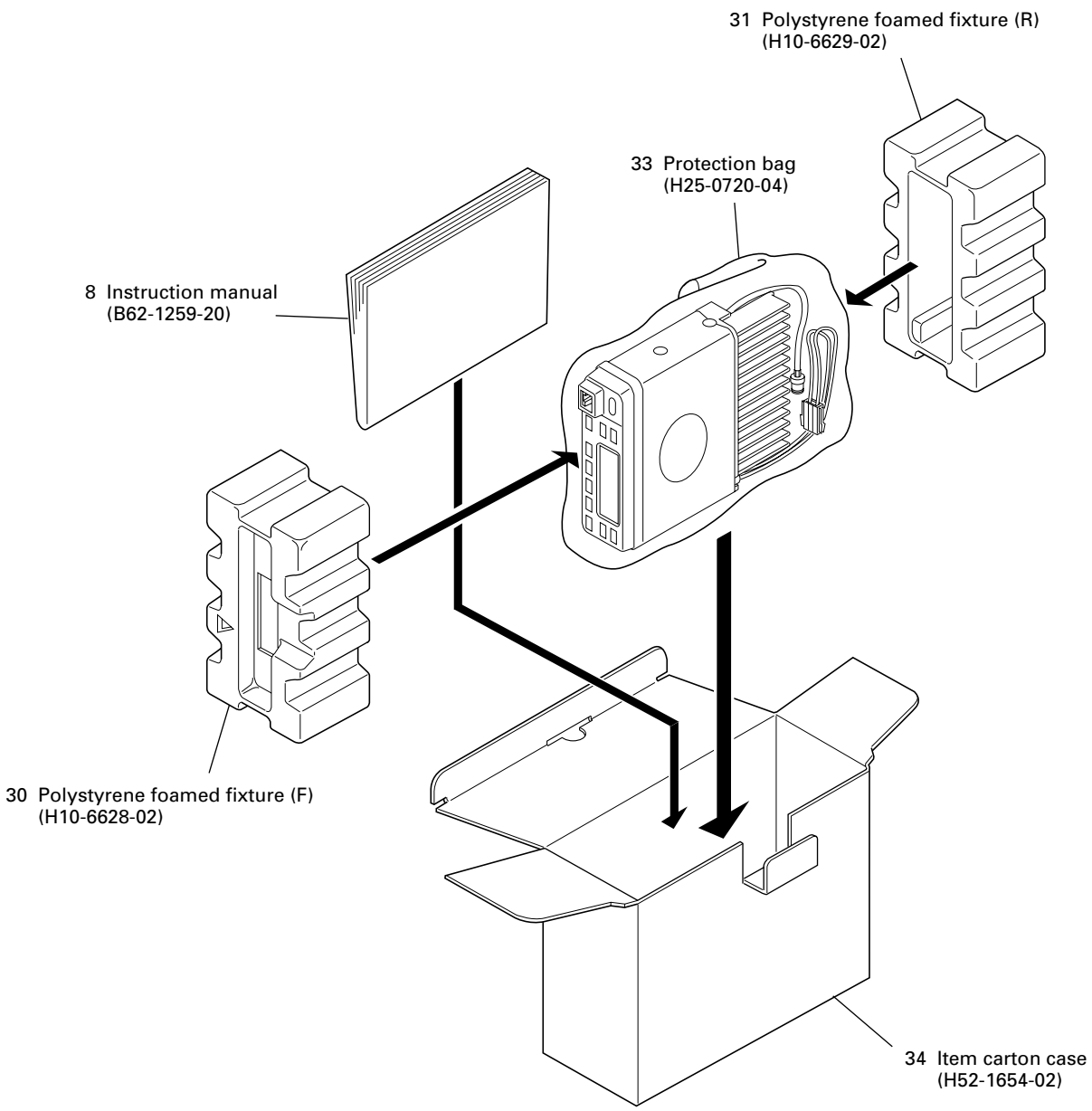
Ref. No.	Address	New parts	Parts No.	Description	Destination

EXPLODED VIEW / 部件分解图



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

PACKING / 包装



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

ADJUSTMENT / 调整

Test Mode

■ 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-868HG C		TK-868HG C3	
	RX	TX	RX	TX
1	470.050	470.100	415.050	415.100
2	450.050	450.100	400.050	400.100
3	489.950	489.900	429.950	429.900
4	470.000	470.000	415.000	415.000
5	470.200	470.200	415.200	415.200
6	470.400	470.400	415.400	415.400
7~16	-	-	-	-

测试模式

■ 测试模式操作功能

本车台具有测试模式。*要进入测试模式，按下[SCN]键并接通电源。按住[SCN]键直到测试信道号码和测试信令号码出现在LCD上为止。*测试模式可以通过编程被禁止。要退出测试模式，再一次开启电源。下述功能在测试模式中有效。

- **控制**

[PTT]	进行发射时使用。
[MON]	监听开启和关闭。
[SCN]	设定到调整模式。
[A]	开启功能。
[D/A]	射频高和低功率。
[▼]	改变信令。
[▲]	改变宽带和窄带。
[信道∧/∨]	改变信道。
[音量∧/∨]	音量高/低。

- **LCD指示器**

"SNC"	不使用。
"AUX"	低发射功率时显示。
"MON"	开启监视器时显示。
"右边的句点"	窄时燃亮。

- **LED指示器**

红色LED	发射过程中发光。
绿色LED	有载波时发光。

■ 频率和信令

为下表所列的频率调整设定。需要时，按照调整步骤重新调整以获得用户在实际操作中想要的频率。

- **频率(MHz)**

信道号码	TK-868HG C		TK-868HG C3	
	接收频率	发射频率	接收频率	发射频率
1	470.050	470.100	415.050	415.100
2	450.050	450.100	400.050	400.100
3	489.950	489.900	429.950	429.900
4	470.000	470.000	415.000	415.000
5	470.200	470.200	415.200	415.200
6	470.400	470.400	415.400	415.400
7~16	-	-	-	-

ADJUSTMENT / 调整

● 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).

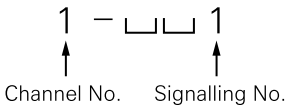
The speaker output connector must be terminated with a 4Ω dummy load and connected to an AC voltmeter and an audio distortion meter or a SINAD measurement meter at all times during tuning.

■ Transceiver tuning

(To place transceiver in tuning mode)

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

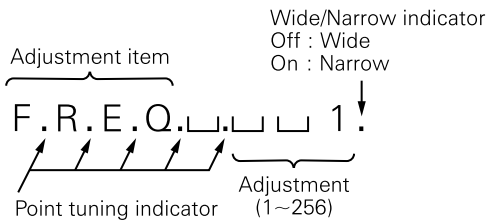
LCD display (Test mode)



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)



● 信令

信令号码	接 收	发 射
1	无	无
2	无	100Hz方波
3	QT67.0Hz	QT67.0Hz
4	QT151.4Hz	QT151.4Hz
5	QT210.7Hz	QT210.7Hz
6	QT250.3Hz	QT250.3Hz
7	DQT D023N	DQT D023N
8	DQT D7541	DQT D7541
9	DTMF DEC, (159D)	DTMF ENC, (159D)
10	无	DTMF音频9
11	双音信令321.7/928.1Hz	无
12	单音信令1200Hz	单音信令1200Hz

■ 调整车台机的准备

在进行调整车台机之前，将主机与电源连接。

无论何时调整发射部分，主机必须连接到合适的假负载(或功率仪)。

在整个调整过程中，扬声器输出必须经过4Ω假负载并被连接到一个交流电压表和一个音频失真测试仪或一个SINAD测量仪。

■ 车台调整

(将车台置于调整模式)

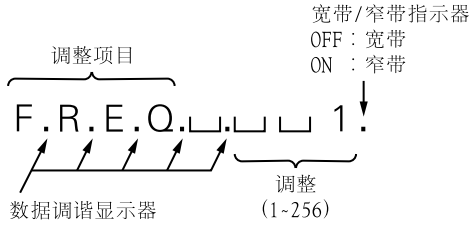
信道显示在LCD上。按照调整所需设定信道。

LCD显示(测试模式)

按[SCN]键进入调谐模式。使用[数/模]按键通过调谐模式写入调谐数据，并使用[CH∧/∨]键调整调谐要求(1到256出现在LCD上)。

使用[▼]按键通过调谐模式选择调整项。使用[A]键调整3点或5点调谐，并使用[▲]键转换宽/窄。

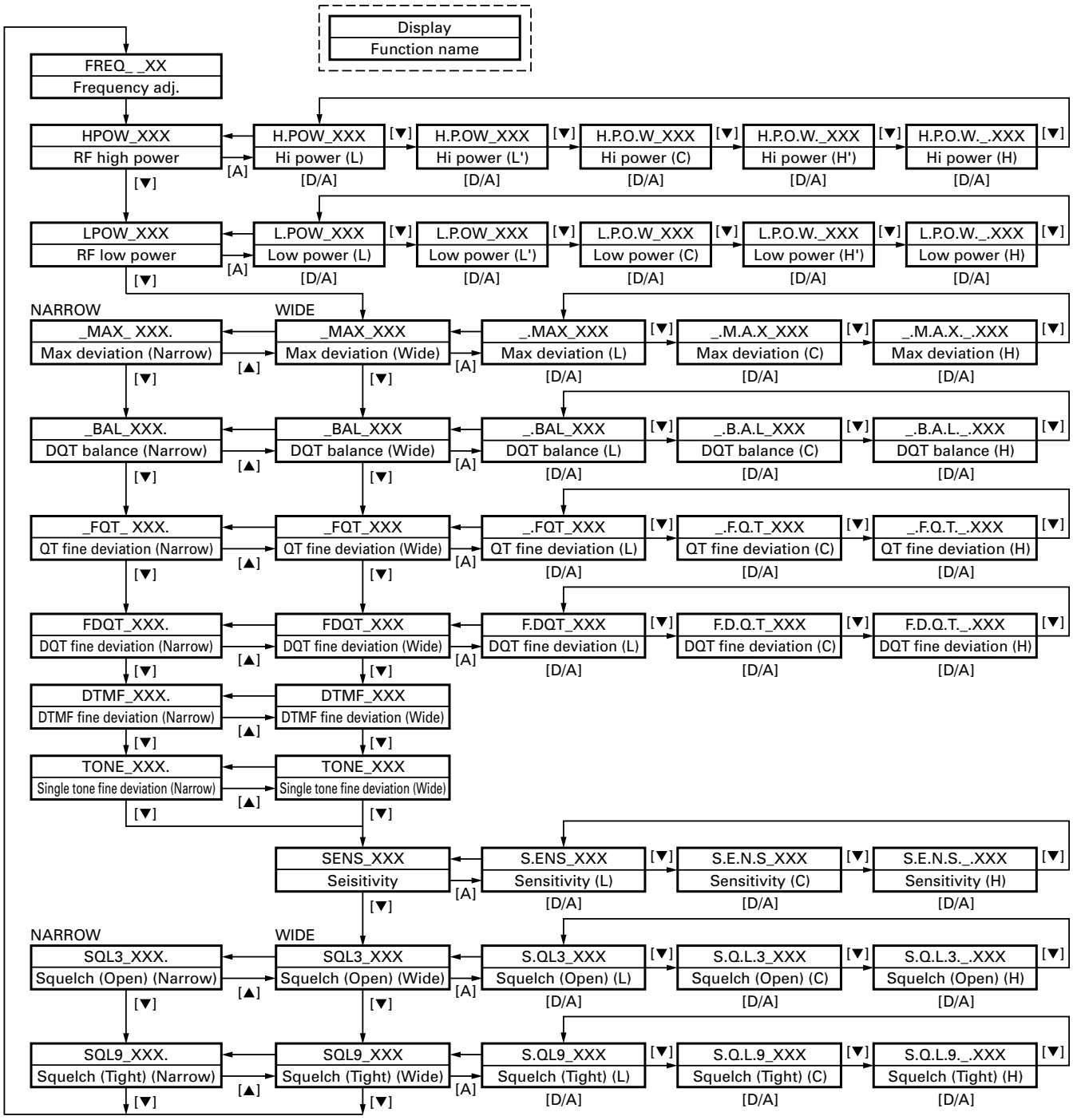
LCD显示(调谐模式)



ADJUSTMENT / 调整

■ Tuning Mode

■ 调谐模式



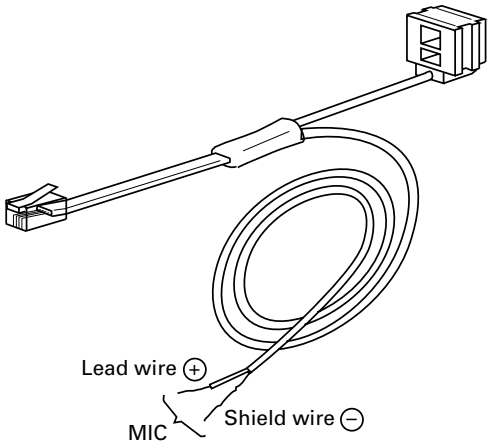
ADJUSTMENT

Test Equipment Required for Alignment

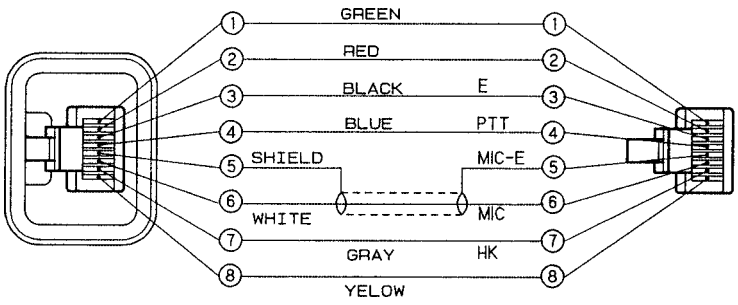
Test Equipment	Major Specifications	
1. Standard Signal Generator (SSG)	Frequency Range Modulation Output	400 to 520MHz Frequency modulation and external modulation –127dBm/0.1μV to greater than –7dBm/100mV
2. Power Meter	Input Impedance Operation Frequency Measurement Capability	50Ω 400 to 520MHz or more Vicinity of 100W
3. Deviation Meter	Frequency Range	400 to 520MHz
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 3V
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 17V) Useful if ammeter requipped

Tuning cable (E30-3383-05)

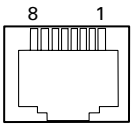
Adapter cable (E30-3383-05) is required for injecting an audio if PC tuning is used.



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

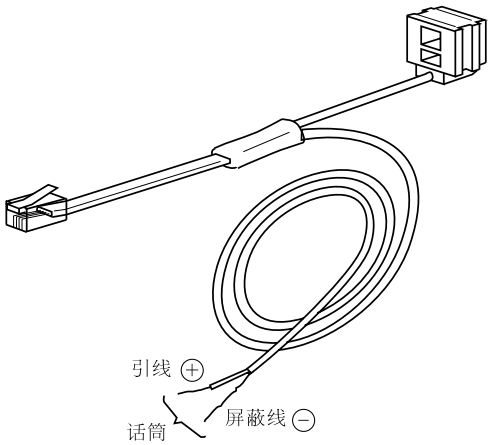
调　　整

所需的用于调整的测试设备

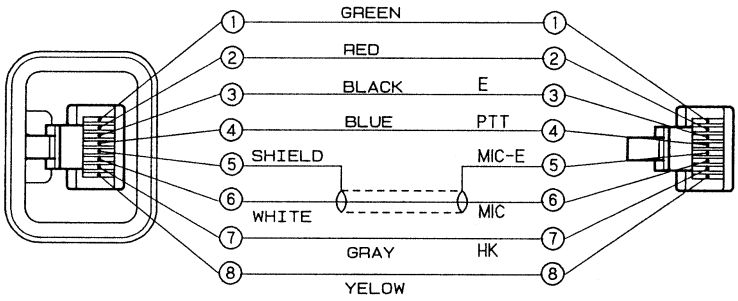
测　试　设　备	主　要　特　性	
1. 标准信号发生器(SSG)	频率范围	400到520MHz
	调制	调频和外部调制
	输出	-127dBm/0.1μV到大于-7dBm/100mV
2. 功率计	输入阻抗	50Ω
	工作频率	400到520MHz或更高
	测量范围	100W左右
3. 频偏仪	频率范围	400到520MHz
4. 数字电压表(DVM)	测量范围	直流1V到20V
	输入阻抗	最小电路负载时为高输入阻抗
5. 示波器		直流到30MHz
6. 高灵敏度频率计数器	频率范围	10Hz到1000MHz
	频率稳定性	0.2ppm或更低
7. 电流表		20A
8. 音频电压表(AF VTVM)	频率范围	50Hz到10kHz
	电压范围	1mV到3V
9. 音频发生器(AG)	频率范围	20Hz到20kHz或更高
	输出	0到1V
10. 失真测试仪	测量能力	在1kHz时3%或更低
	输入电平	50mV到10Vrms
11. 4Ω假负载		大约4Ω, 10W或更高
12. 可调电源		13.6V, 大约20A
		最好具备电流表

调谐电缆(E30-3383-05)

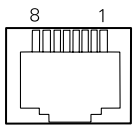
如果使用计算机调谐，接头电缆(E30-3383-05)将用于接入音频信号。



用于麦克风输入的测试电缆(E30-3360-08)



麦克风连接器(前视)



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

ADJUSTMENT

Common Section

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. PLL lock voltage RX	1) Set test mode CH : CH3 - Sig1 AUX : ON	DVM Power meter F. conter	TX-RX (A/2)	CV	PLL	TC106	7.5V	±0.1V
TX	2) PTT : ON (Transmit)					TC109	7.5V	
RX	3) CH : CH2 - Sig1 AUX : ON						Check	0.9V or more
TX	4) PTT : ON (Transmit)							0.9V 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 freq' : 470.050MHz **C** : 415.050MHz **C3** 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 [250] SSG freq' : 489.950MHz **C** : 429.950MHz **C3** SSG output : –116dBm/0.35µV SSG MOD : 3kHz AF output : 1V/4Ω	SSG AF VTVM Distortion meter Oscilloscope AG DVM	Rear panel TX-RX (A/2)	ANT ACC (EXT.SP) RSSI	TX-RX (A/2)	L13 L22	RSSI voltage maximum.	
	2) "S.ENS" Adjust [∗∗∗] SSG freq' : 450.050MHz **C** : 400.050MHz **C3**				Front panel	CH∧/∨		
	3) "S.E.N.S" Adjust [∗∗∗] SSG freq' : 470.050MHz **C** : 415.050MHz **C3**							
3. Squelch 3 • Wide	1) Set test mode Select "SQL3" in tuning mode. "S.QL3" Adjust [∗∗∗] SSG freq' : 450.050MHz **C** : 400.050MHz **C3** SSG output : –125dBm/0.12µV SSG MOD : 3kHz (Wide) 1.5kHz (Narrow)				Front panel	CH∧/∨	Adjust to the squelch threshold point.	

调　整

公用部分

项　目	条　件	测　量			调　整			规　格 / 备　注
		测量装置	单元	端子	单元	部件	方　法	
1.PLL锁定电压 接收	1)[测试模式] CH：CH3-Sig1 AUX：开启	DVM 功率计 频率计	TX-RX (A/2)	CV	PLL	TC106	7.5V	±0.1V
发射	2)PTT：开启(发射)					TC109	7.5V	
接收	3)CH：CH2-Sig1 AUX：开启						检查	0.9V或更高
发射	4)PTT：开启(发射)							0.9V或更高

接收部分

项　目	条　件	测　量			调　整			规　格 / 备　注
		测量装置	单元	端子	单元	部件	方　法	
1.鉴频器 ●宽	1)[测试模式] CH：CH1-Sig1 标准信号发生器输出 ：－53dBm/501μV 标准信号发生器频率 ：470.050MHz C ：415.050MHz C3 标准信号发生器调制：3kHz AF：1.4V/4Ω	SSG AF VTVM 示波器	背面板	ANT ACC (EXT.SP)	TX-RX (A/2)	L5	最大音频输出	
2.灵敏度 ●宽	1)[测试模式] 在调谐模式中选择"SENS" "S.E.N.S._." 调整[250] 标准信号发生器频率 ：489.950MHz C ：429.950MHz C3 标准信号发生器输出 ：－116dBm/0.35μV 标准信号发生器调制：3kHz AF：1V/4Ω	SSG AF VTVM 失真测试仪 示波器 AG DVM	背面板 TX-RX (A/2)	ANT ACC (EXT.SP) RSSI	TX-RX (A/2)	L13 L22	最大RSSI电压	
	2)"S.ENS" 调整[＊＊＊] 标准信号发生器频率 ：450.050MHz C ：400.050MHz C3				前面板	CH∧/∨		
	3)"S.E.N.S" 调整[＊＊＊] 标准信号发生器频率 ：470.050MHz C ：415.050MHz C3							
3.静噪3 ●宽	1)[测试模式] 在调谐模式中选择"SQL3" "S.QL3" 调整[＊＊＊] 标准信号发生器频率 ：450.050MHz C ：400.050MHz C3 标准信号发生器输出 ：－125dBm/0.12μV 标准信号发生器调制 ：3kHz(宽) ：1.5kHz(窄)				前面板	CH∧/∨	调整到噪音抑制电路临限点	

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
	2) "S.Q.L.3" Adjust [∗∗∗] SSG freq' : 470.050MHz **C** : 415.050MHz **C3**	SSG AF VTVM Distortion meter Oscilloscope AG	Rear panel	ANT ACC (EXT.SP)	Front panel	CH∧/∨	Adjust to the squelch threshold point.	
	3) "S.Q.L.3._." Adjust [∗∗∗] SSG freq' : 489.950MHz **C** : 429.950MHz **C3**							
• Narrow	4) "SQL3∗∗∗." Adjust [∗∗∗] SSG freq' : 470.050MHz **C** : 415.050MHz **C3**							
4. Squelch 9 • Wide	1) Set test mode Select "SQL9" in tuning mode. "S.QL9" Adjust [∗∗∗] SSG freq' : 450.050MHz **C** : 400.050MHz **C3** SSG output : –115dBm/0.4µV SSG MOD : 3kHz (Wide) 1.5kHz (Narrow)							
	2) "S.Q.L.9" Adjust [∗∗∗] SSG freq' : 470.050MHz **C** : 415.050MHz **C3**							
	3) "S.Q.L.9._." Adjust [∗∗∗] SSG freq' : 489.950MHz **C** : 429.950MHz **C3**							
• Narrow	4) "SQL9∗∗∗." Adjust [∗∗∗] SSG freq' : 470.050MHz **C** : 415.050MHz **C3**							
5. Squelch check	1) Set test mode CH : CH1 - Sig1~CH3 - Sig1 SSG output : –116dBm/0.35µV						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.

调　　整

项　目	条　　件	测　　量			调　　整			规　格 / 备　注
		测量装置	单元	端子	单元	部件	方　法	
	2）"S.Q.L.3" 调整[＊＊＊] 标准信号发生器频率 ：470.050MHz C ：415.050MHz C3	SSG AF VTVM 失真测试仪 示波器 AG	背面板	ANT ACC (EXT.SP)	前面板	CH∧/∨	调整到噪音抑制 电路临限点	
	3）"S.Q.L.3._." 调整[＊＊＊] 标准信号发生器频率 ：489.950MHz C ：429.950MHz C3							
●窄	4）"SQL3***." 调整[＊＊＊] 标准信号发生器频率 ：470.050MHz C ：415.050MHz C3							
4.静噪9 ●宽	1）[测试模式] 在调谐模式中选择"SQL9" "S.QL9" 调整[＊＊＊] 标准信号发生器频率 ：450.050MHz C ：400.050MHz C3 标准信号发生器输出 ：－115dBm/0.4μV 标准信号发生器调制 ：3kHz(宽) ：1.5kHz(窄)							
	2）"S.Q.L.9" 调整[＊＊＊] 标准信号发生器频率 ：470.050MHz C ：415.050MHz C3							
	3）"S.Q.L.9._." 调整[＊＊＊] 标准信号发生器频率 ：489.950MHz C ：429.950MHz C3							
●窄	4）"SQL9***." 调整[＊＊＊] 标准信号发生器频率 ：470.050MHz C ：415.050MHz C3							
5.静噪检查	1）[测试模式] CH：CH1-Sig1~CH3-Sig1 标准信号发生器输出 ：－116dBm/0.35μV						检查	静噪必须被打开(宽/窄带)
	2）标准信号发生器输出:关闭							静噪必须被关闭(宽/窄带)
6.QT检查	1）[测试模式] CH：CH1-Sig4 标准信号发生器调制 INT：3kHz(宽),1.5kHz(窄) EXT：151.4Hz 标准信号发生器系统MOD DEV ：±3.75kHz(宽) ±1.85kHz(窄) 标准信号发生器输出 ：10dB SINAD电平							
	2）CH：CH1-Sig3 CH1-Sig5 CH1-Sig6						检查	静噪必须被打开

ADJUSTMENT

Transmitter Section

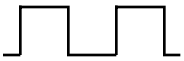
Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Frequency	1) Set test mode Select "FREQ" in tuning mode. PTT : ON Adjust [_**]	Power meter F. counter	Rear panel	ANT	Front panel	CH∧/∨	Check	470.100MHz±100Hz **C** 415.100MHz±100Hz **C3**
2. Power output	1) Maximum power Set test mode Select "HPOW" in tuning mode. "H.POW" Adjust [256] PTT : ON						Check	More than 42.0W
3. High power	1) Set test mode Select "HPOW" in tuning mode. "H.POW" PTT : ON Adjust [***]						40.0W	±2.0W
	2) "H.P.OW" PTT : ON Adjust [***]							
	3) "H.P.O.W" PTT : ON Adjust [***]							
	4) "H.P.O.W." PTT : ON Adjust [***]							
	5) "H.P.O.W._." PTT : ON Adjust [***]							
4. Low power	1) Set test mode Select "LPOW" in tuning mode. "L.POW" PTT : ON Adjust [***]	Power meter					10.0W	±1.0W
	2) "L.P.OW" PTT : ON Adjust [***]							
	3) "L.P.O.W" PTT : ON Adjust [***]							
	4) "L.P.O.W." PTT : ON Adjust [***]							
	5) "L.P.O.W._." PTT : ON Adjust [***]							
5. Power check	1) Set test mode CH : CH1 - Sig1 CH2 - Sig1 CH3 - Sig1 PTT : ON	Power meter Ammeter		ANT DC IN			Check	40W±2W 12A or less

调　　整

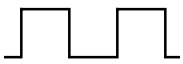
发射部分

项　目	条　　件	测　　量			调　　整			规　格 / 备　注
		测量装置	单元	端子	单元	部件	方　法	
1. 频率	1) [测试模式] 在调谐模式中选择 "FREQ" PTT：开启 调整[_＊＊]	功率计 频率计	背面板	ANT	前面板	CH∧/∨	检查	470.100MHz±50Hz C 415.100MHz±50Hz C3
2. 功率输出	1) 最大功率 [测试模式] 在调谐模式中选择 "HPOW" "H. POW" 调整[256] PTT：开启						检查	42.0W或更高
3. 高功率	1) [测试模式] 在调谐模式中选择 "HPOW" "H. POW" PTT：开启 调整[＊＊＊]						40.0W	±2.0W
	2) "H. P. OW" PTT：开启 调整[＊＊＊]							
	3) "H. P. O. W" PTT：开启 调整[＊＊＊]							
	4) "H. P. O. W. " PTT：开启 调整[＊＊＊]							
	5) "H. P. O. W. _. " PTT：开启 调整[＊＊＊]							
4. 低功率	1) [测试模式] 在调谐模式中选择 "LPOW" "L. POW" PTT：开启 调整[＊＊＊]	功率计					10.0W	±1.0W
	2) "L. P. OW" PTT：开启 调整[＊＊＊]							
	3) "L. P. O. W" PTT：开启 调整[＊＊＊]							
	4) "L. P. O. W. " PTT：开启 调整[＊＊＊]							
	5) "L. P. O. W. _. " PTT：开启 调整[＊＊＊]							
5. 功率检查	1) [测试模式] CH：CH1-Sig1 CH2-Sig1 CH3-Sig1 PTT: 开启	功率计 电流表		ANT DC IN			检查	4W±2W 12A或更低

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	ANT MIC	Front panel	CH∧/∨	Make the de-modulation waveform neat.	(Wide/Narrow) 
	2) "_.B.A.L" PTT : ON Adjust [∗∗∗]							
	3) "_.B.A.L._." PTT : ON Adjust [∗∗∗]							
• Narrow	4) "_BAL∗∗∗." PTT : ON Adjust [∗∗∗]							
7. Maximum deviation • Wide	1) Set test mode Connect AG to the MIC terminal. Select "MAX" in tuning mode. "_.MAX" AG : 1kHz/50mV Deviation meter filter LPF : 15kHz HPF : OFF De-emphasis : OFF PTT : ON Adjust [∗∗∗]						3.95kHz (Wide) 1.95kHz (Narrow) (According to the larger +, –)	±50Hz (Wide/Narrow)
	2) "_.M.A.X" PTT : ON Adjust [∗∗∗]							
	3) "_.M.A.X._." PTT : ON Adjust [∗∗∗]							
• Narrow	4) "_MAX∗∗∗." PTT : ON Adjust [∗∗∗]							
8. MIC seisitivity check	1) Set test mode CH : CH1 - Sig1 AG : 1kHz/5mV PTT : ON Adjust [∗∗∗]						Check	±1.5kHz±0.05kHz (Narrow) ±3kHz±0.2kHz (Wide)
9. QT deviation • Wide	1) Set test mode Select "FQT" in tuning mode. "_.FQT" Deviation meter filter LPF : 3kHz HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	0.75kHz	±50Hz (Wide/Narrow)

调　　整

项　目	条　　件	测　　量			调　　整			规　格 / 备　注
		测量装置	单元	端子	单元	部件	方　法	
6. 调制平衡 ●宽	1) [测试模式] 话筒输入：关闭 在调谐模式中选择 "BAL" "_. BAL" 频偏仪滤波器 LPF：3kHz HPF：关闭 去加重：关闭 PTT：开启 调整[＊＊＊]	功率计 频偏仪 示波器 AF VTVM AG	背面板 前面板	ANT MIC	前面板	CH∧/∨	使调整波形为 方形波	(宽/窄带) 
	2) "_. B. A. L" PTT：开启 调整[＊＊＊]							
	3) "_. B. A. L. _." PTT：开启 调整[＊＊＊]							
●窄	4) "_BAL***." PTT：开启 调整[＊＊＊]							
7. 最大频偏 ●宽	1) [测试模式] 将音频发生器连接到话筒终端 在调谐模式中选择 "MAX" "_. MAX" AG：1kHz/50mV 频偏仪滤波器 LPF：15kHz HPF：关闭 去加重：关闭 PTT：开启 调整[＊＊＊]						3.95kHz (宽带) 1.95kHz (窄带) (按照最大+, −)	±50Hz (宽/窄带)
	2) "_. M. A. X" PTT：开启 调整[＊＊＊]							
	3) "_. M. A. X. _." PTT：开启 调整[＊＊＊]							
●窄	4) "_MAX***." PTT：开启 调整[＊＊＊]							
8. 麦克风灵 敏度检查	1) [测试模式] CH：CH1-Sig1 AG：1kHz/5mV PTT：开启 调整[＊＊＊]						检查	±1.5kHz±0.05kHz (窄带) ±3kHz±0.2kHz (宽带)
9. QT频偏 ●宽	1) [测试模式] 在调谐模式中选择 "FQT" "_. FQT" 频偏仪滤波器 LPF：3kHz HPF：关闭 PTT：开启 调整[＊＊＊]				前面板	CH∧/∨	0.75kHz	±50Hz (宽/窄带)

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications/Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
	2) "_.F.Q.T" PTT : ON Adjust [∗∗∗]	Power meter Deviation meter Oscilloscope	Rear panel	ANT	Front panel	CH∧/∨	0.75kHz	±50Hz (Wide/Narrow)
	3) "_.F.Q.T._." PTT : ON Adjust [∗∗∗]	AF VTVM AG	Front panel	MIC				
• Narrow	4) "_FQT∗∗∗." PTT : ON Adjust [∗∗∗]						0.35kHz	
10. DQT deviation • Wide	1) Set test mode Select "FDQT" in tuning mode. "F.DQT" Deviation meter filter LPF : 3kHz HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	0.75kHz	±50Hz
	2) "F.D.Q.T" PTT : ON Adjust [∗∗∗]							
	3) "F.D.Q.T._." PTT : ON Adjust [∗∗∗]							
• Narrow	4) "FDQT∗∗∗." PTT : ON Adjust [∗∗∗]						0.36kHz	±40Hz
11. DTMF deviation • Wide	1) Set test mode Select "DTMF" in tuning mode. Deviation meter filter LPF : 15kHz HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	3.0kHz	±0.2kHz
• Narrow	2) "DTMF∗∗∗." PTT : ON Adjust [∗∗∗]						1.5kHz	±0.1kHz
12. TONE deviation • Wide	1) Set test mode Select "TONE" in tuning mode. Deviation meter filter LPF : 15kHz HPF : OFF PTT : ON Adjust [∗∗∗]				Front panel	CH∧/∨	3.0kHz	±0.1kHz (Wide/Narrow)
• Narrow	2) "TONE∗∗∗." PTT : ON Adjust [∗∗∗]						1.5kHz	

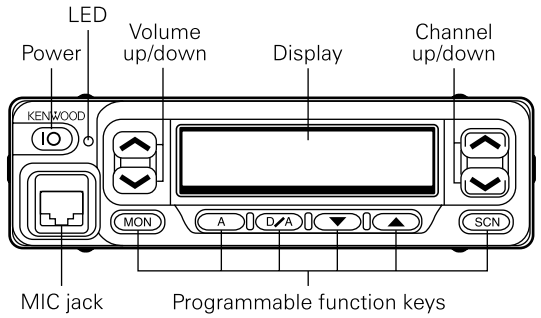
调　　整

项　目	条　　件	测　　量			调　　整			规　格 / 备　注
		测量装置	单元	端子	单元	部件	方　法	
	2）"_.F.Q.T" PTT：开启 调整[＊＊＊]	功率计 频偏仪 示波器	背面板	ANT	前面板	CH∧/∨	0.75kHz	±50Hz(宽/窄带)
	3）"_.F.Q.T._." PTT：开启 调整[＊＊＊]	AF VTVM AG	前面板	MIC				
●窄	4）"_FQT***." PTT：开启 调整[＊＊＊]						0.35kHz	
10.DQT频偏 ●宽	1）[测试模式] 在调谐模式中选择"FDQT" "F.DQT" 频偏仪滤波器 LPF：3kHz HPF：关闭 PTT：开启 调整[＊＊＊]				前面板	CH∧/∨	0.75kHz	±50Hz
	2）"F.D.Q.T" PTT：开启 调整[＊＊＊]							
	3）"F.D.Q.T._." PTT：开启 调整[＊＊＊]							
●窄	4）"FDQT***." PTT：开启 调整[＊＊＊]						0.36kHz	±40Hz
11.DTMF频偏 ●宽	1）[测试模式] 在调谐模式中选择"DTMF" 频偏仪滤波器 LPF：15kHz HPF：关闭 PTT：开启 调整[＊＊＊]				前面板	CH∧/∨	3.0kHz	±0.2kHz
●窄	2）"DTMF***." PTT：开启 调整[＊＊＊]						1.5kHz	±0.1kHz
12.TONE频偏 ●宽	1）[测试模式] 在调谐模式中选择"TONE" 频偏仪滤波器 LPF：15kHz HPF：关闭 PTT：开启 调整[＊＊＊]				前面板	CH∧/∨	3.0kHz	±0.1kHz(宽/窄带)
●窄	2）"TONE***." PTT：开启 调整[＊＊＊]						1.5kHz	

ADJUSTMENT / 调整

Adjustment Location / 调整位置

■ Switch / 开关



■ 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.

■ 注释

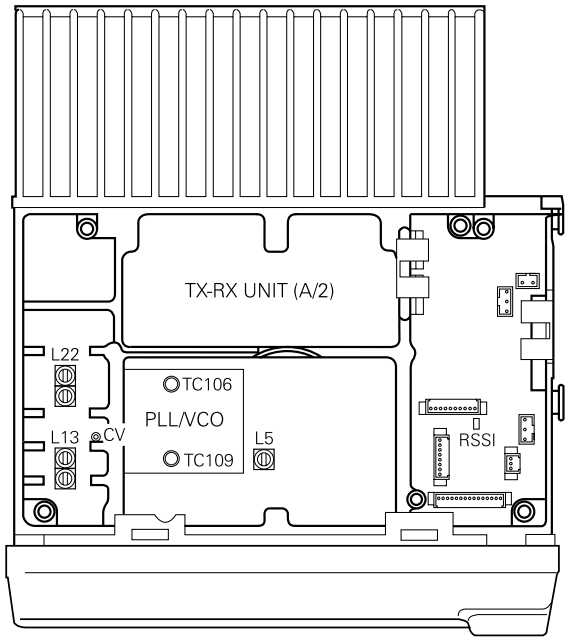
- 闪存

固件程序(用户模式, 测试模式, 调谐模式等), 和由FPU (KPG-62D CPS)处理的可编程数据, 安全号码(MPT序列号)保存在存储器中。当更换闪存时, 重新对数据进行编程。

- EEPROM

EEPROM的调谐数据(频偏, 静噪, 等等)被储存在存储器中。当零件被更换时, 需要重新调整车台。

■ Adjustment Point / 调整点



■ Repair Jig

- **Chassis**

Use jig (Part No. : A10-4010-02) for repairing the TK-868HG. 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

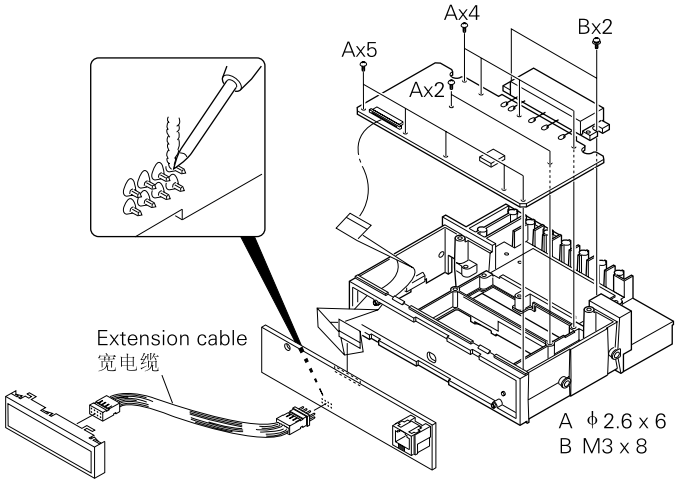
■ 维修用具

- 底座

使用维修用具(零件号码：A10-4010-02)修理TK-868HG。维修用具能够在修理时方便地检测发射-接收单元电路板元器件面上的电压。

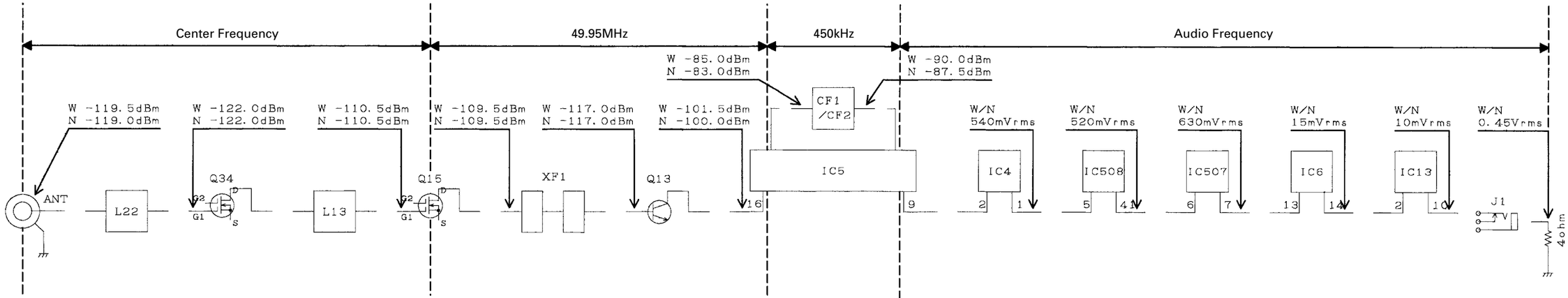
- 宽电缆

零件号码：E30-3404-05



LEVEL DIAGRAM / 电平图

Receiver Section / 接收部



SG input level for 12dB SINAD are obtained measured by connecting SG to each point via a 0.01μF capacitor.

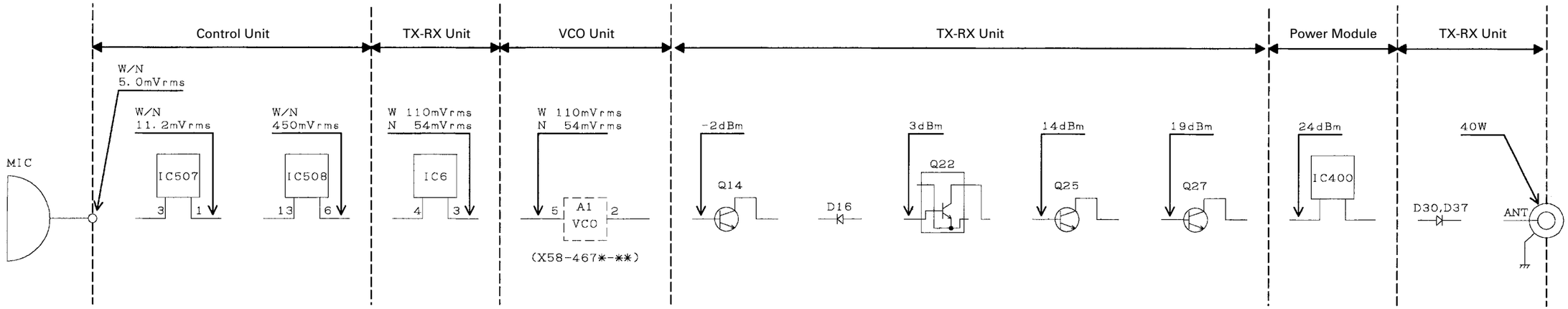
通过将SG经由0.1μF电容与每一点连接获得12dB SINAD SG输入电平。

AF VTVM

AF level obtained when the AF output level is adjusted for 0.45V/4Ω with the front panel AF VOL control. Measured with AF voltmeter connected to the external speaker jack, receiving a –53dBm SSG signal modulated at 1kHz, DEV. 3kHz (Wide), 1.5kHz (Narrow).

AF电平的测量要在通过调整前面板上的音量旋钮使音频输出为0.45V/4Ω的条件下进行。使用连接到外置扬声器接口上的音频电压计测量，接收调制为1KHz，DEV. 3KHz（宽带），1.5KHz（窄带）的－53dBm SSG信号。

Transmitter Section / 发射部



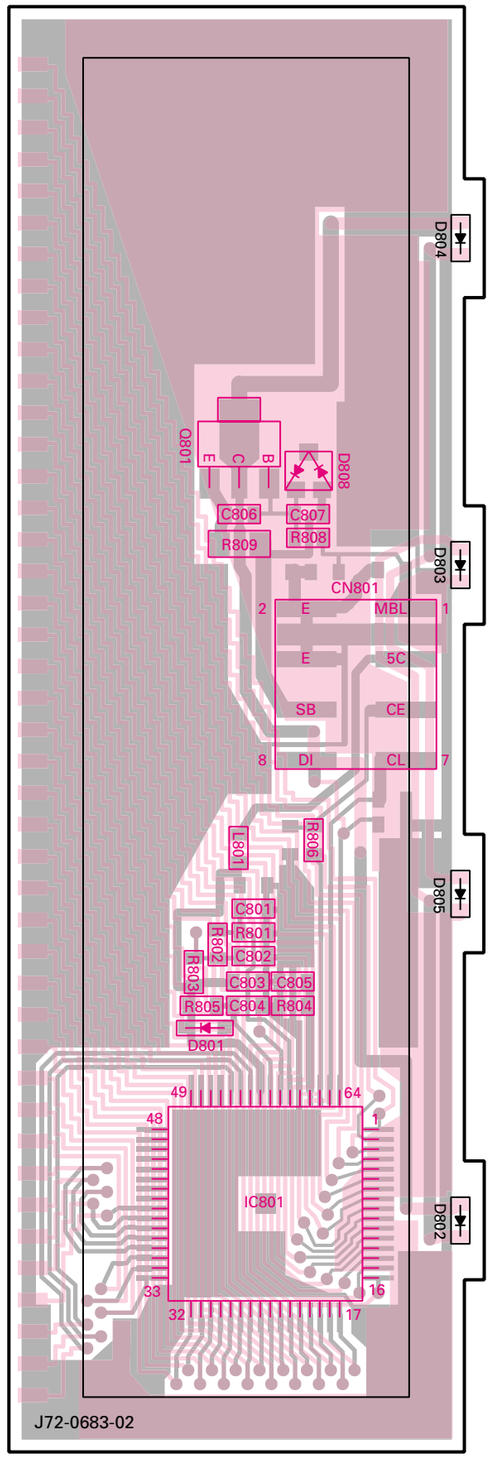
1. AG is set so that MIC input becomes 3kHz (Wide), 1.5kHz (Narrow) DEV. at 1kHz MOD.
2. Transmitting frequency : Center frequency.

1. 设定AG使MIC输入在1kHz MOD时变为3kHz（宽），1.5kHz（窄）DEV。
2. 发送频率：中心频率

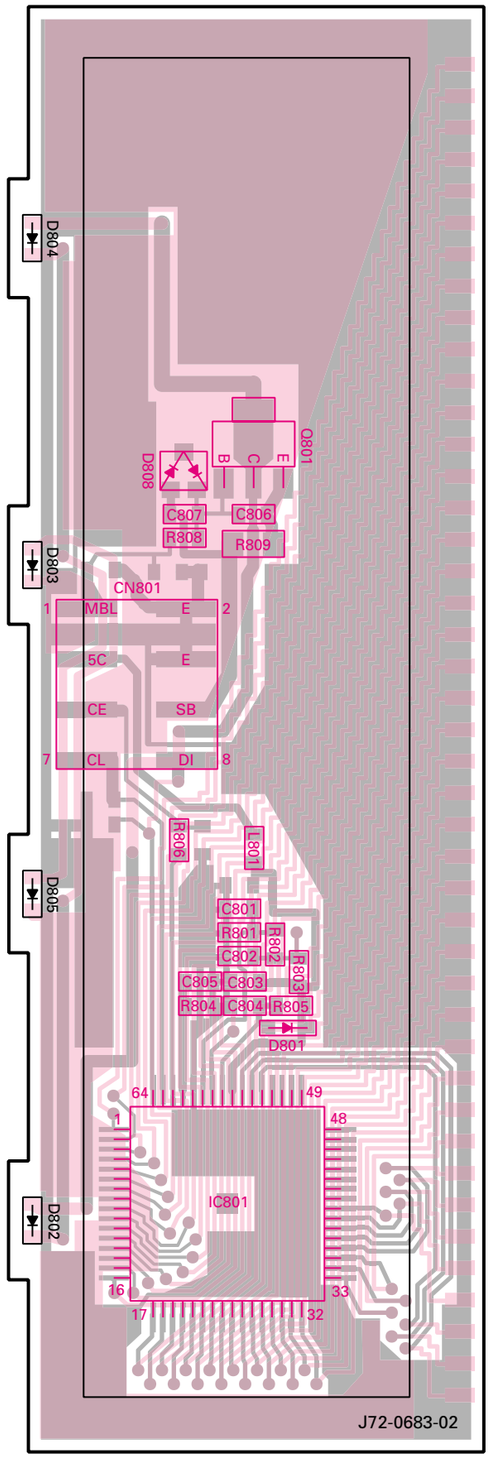
RF wattmeter (50Ω).

功率计（50Ω）

DISPLAY UNIT (X54-3270-10)
Component side view

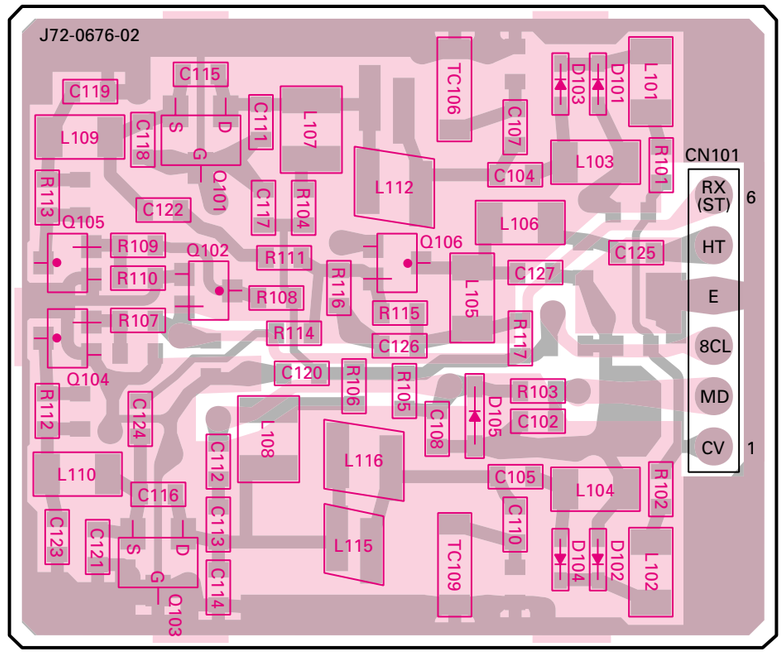


DISPLAY UNIT (X54-3270-10)
Foil side view

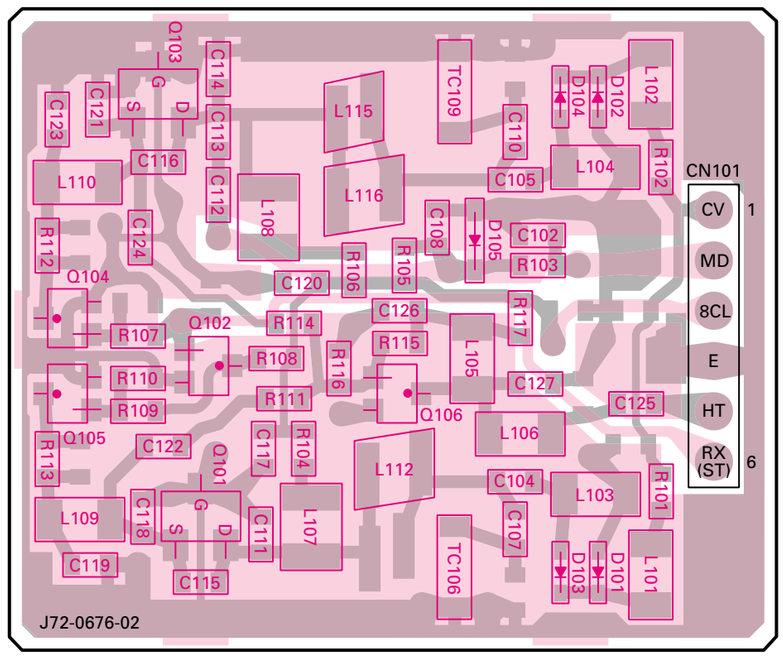


Component side Foil side

PLL/VCO (X58-4670-XX) -12 : C -14 : C3 Component side view



PLL/VCO (X58-4670-XX) -12 : C -14 : C3 Foil side view



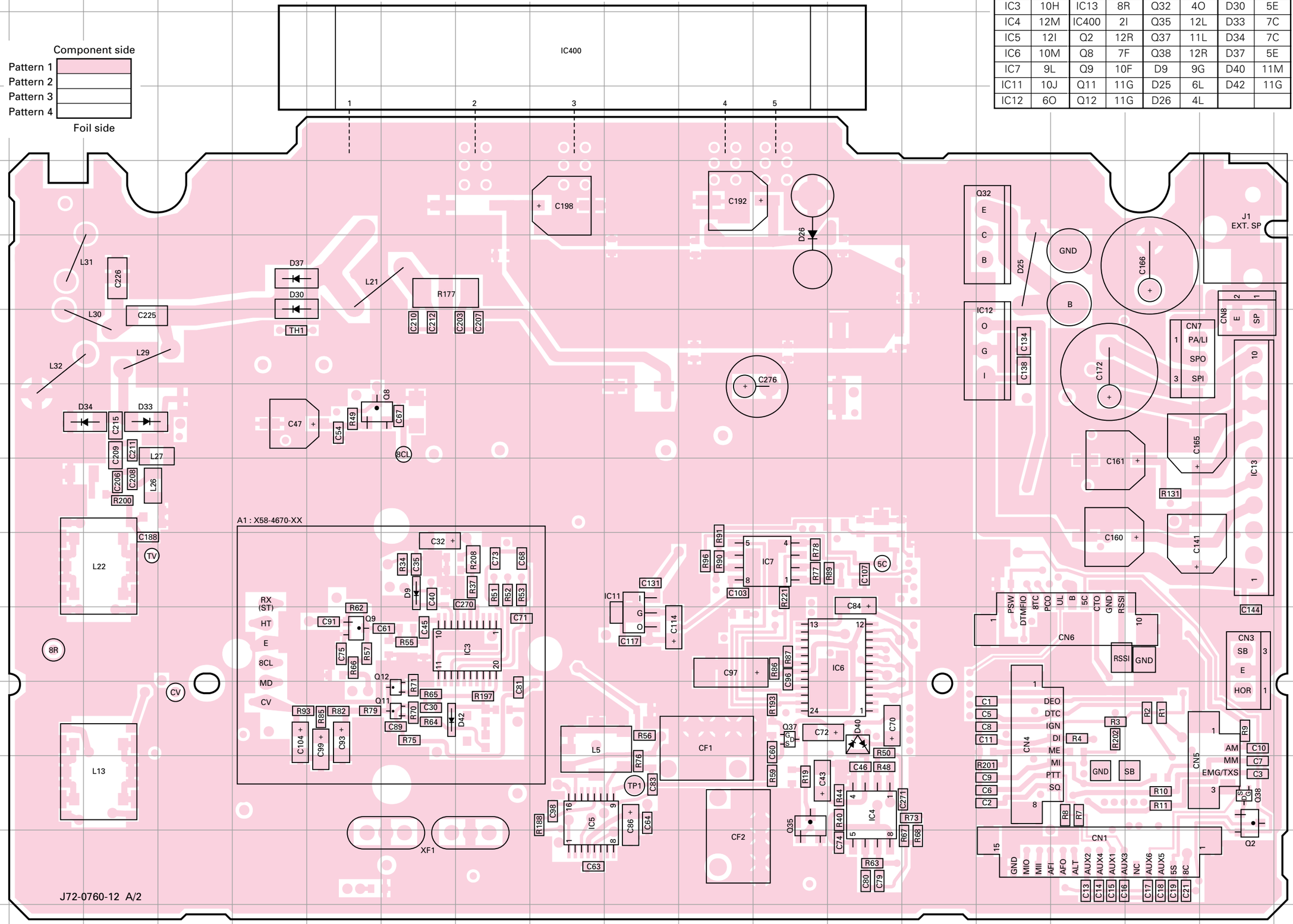
Component side
Foil side

TK-868HG PC 板视图

TX-RX UNIT (X57-596X-XX) (A/2) 3-05 : C 3-07 : C3 Component side view

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

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC3	10H	IC13	8R	Q32	4O	D30	5E
IC4	12M	IC400	2I	Q35	12L	D33	7C
IC5	12I	Q2	12R	Q37	11L	D34	7C
IC6	10M	Q8	7F	Q38	12R	D37	5E
IC7	9L	Q9	10F	D9	9G	D40	11M
IC11	10J	Q11	11G	D25	6L	D42	11G
IC12	6O	Q12	11G	D26	4L		

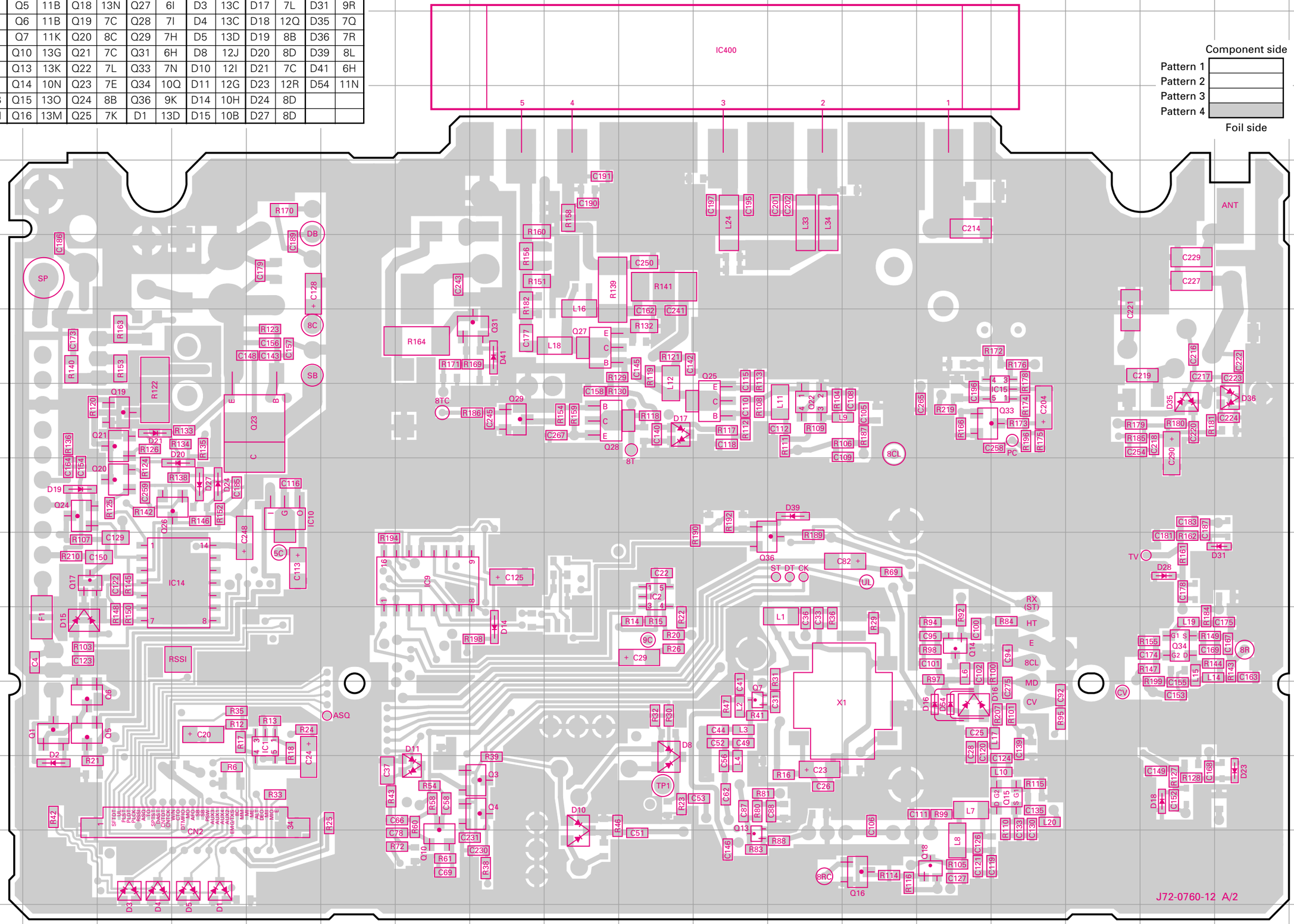


J72-0760-12 A/2

PC 板视图 TK-868HG

TX-RX UNIT (X57-596X-XX) (A/2) 3-05 : C 3-07 : C3 Foil side view

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	11E	Q4	12H	Q17	9B	Q26	8C	D2	12B	D16	11N	D28	9Q
IC2	9J	Q5	11B	Q18	13N	Q27	6I	D3	13C	D17	7L	D31	9R
IC9	9G	Q6	11B	Q19	7C	Q28	7I	D4	13C	D18	12Q	D35	7Q
IC10	8E	Q7	11K	Q20	8C	Q29	7H	D5	13D	D19	8B	D36	7R
IC14	9D	Q10	13G	Q21	7C	Q31	6H	D8	12J	D20	8D	D39	8L
IC15	7O	Q13	13K	Q22	7L	Q33	7N	D10	12I	D21	7C	D41	6H
IC400	2K	Q14	10N	Q23	7E	Q34	10Q	D11	12G	D23	12R	D54	11N
Q1	11B	Q15	13O	Q24	8B	Q36	9K	D14	10H	D24	8D		
Q3	12H	Q16	13M	Q25	7K	D1	13D	D15	10B	D27	8D		



TK-868HG PC板视图

TX-RX UNIT (X57-596X-XX) (A/2) 3-05 : C 3-07 : C3

Component side view + Foil side

Component side

Pattern 1

Pattern 2

Pattern 3

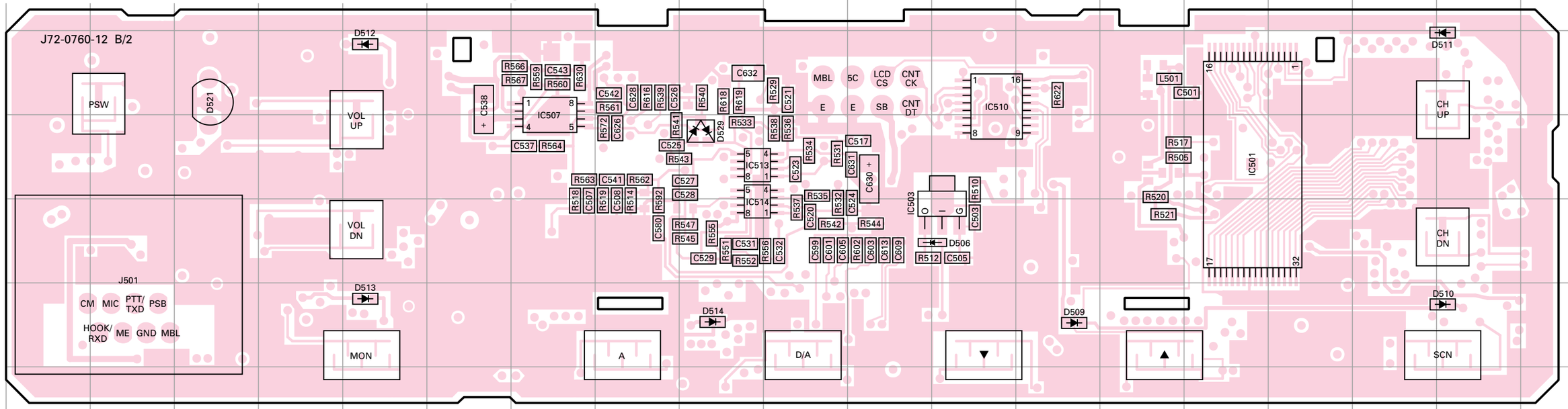
Pattern 4

Foil side

● Connect 1 and 4

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	11O	IC13	8R	Q8	7G	Q19	7Q	Q31	6L	D4	13Q	D19	8R	D33	7C
IC2	9J	IC14	9P	Q9	10F	Q20	8Q	Q32	4O	D5	13P	D20	8P	D34	7C
IC3	10H	IC15	7E	Q10	13M	Q21	7Q	Q33	7F	D8	12J	D21	7Q	D35	7C
IC4	12M	IC400	2I	Q11	11G	Q22	7H	Q34	10C	D9	9G	D23	12B	D36	7B
IC5	12I	Q1	11R	Q12	11G	Q23	7O	Q35	12L	D10	12K	D24	8P	D37	5E
IC6	10M	Q2	12R	Q13	13I	Q24	8R	Q36	9I	D11	12M	D25	6L	D39	8H
IC7	9L	Q3	12L	Q14	10F	Q25	7I	Q37	11L	D14	10L	D26	4L	D40	11M
IC9	9M	Q4	12L	Q15	12E	Q26	8Q	Q38	12R	D15	10R	D27	8P	D41	6L
IC10	8O	Q5	11R	Q16	13G	Q27	6K	D1	13P	D16	11F	D28	9C	D42	11G
IC11	10J	Q6	11R	Q17	9R	Q28	7K	D2	12R	D17	7J	D30	5E	D54	11F
IC12	6O	Q7	11I	Q18	13F	Q29	7L	D3	13Q	D18	12C	D31	9B		

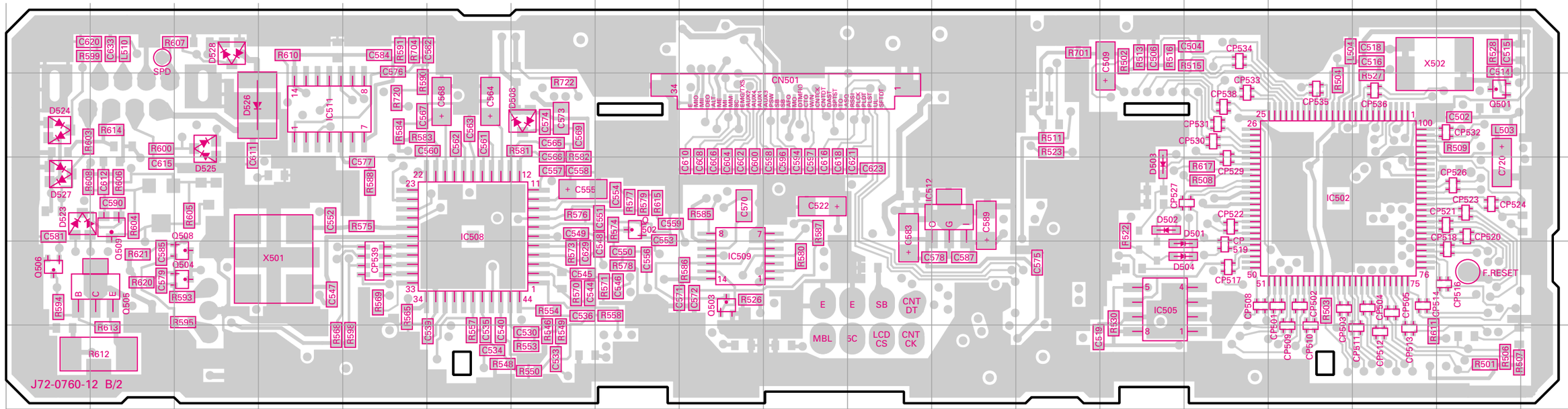
TX-RX UNIT (X57-596X-XX) (B/2) 3-05 : C 3-07 : C3 Component side view



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

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

TX-RX UNIT (X57-596X-XX) (B/2) 3-05 : C 3-07 : C3 Foil side view

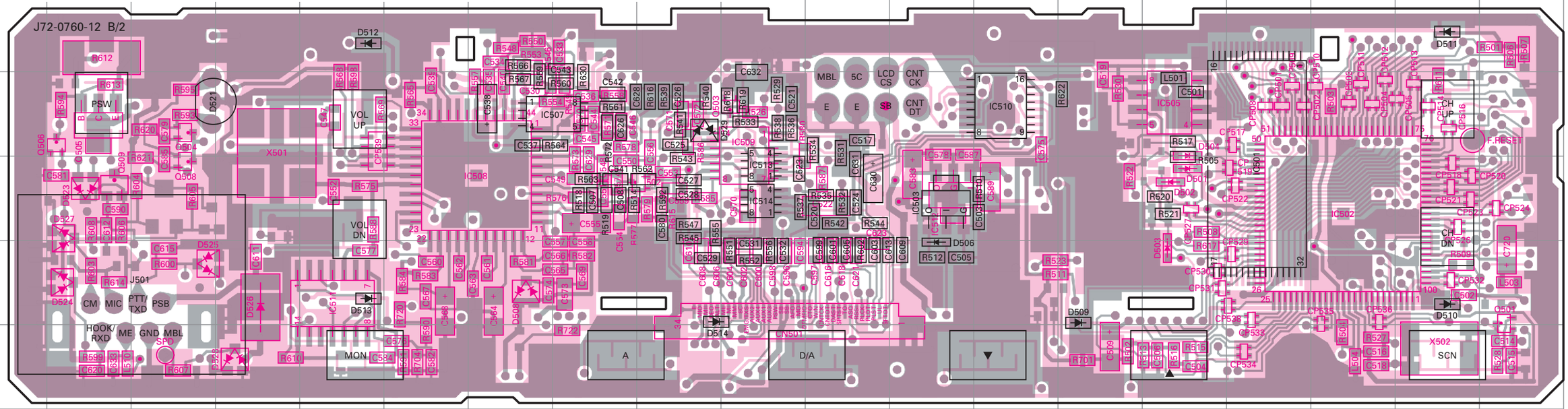


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC502	10P	IC509	11I	Q501	9R	Q504	11C	Q508	11C	D502	10N	D508	9G	D525	9C	D528	8C
IC505	11N	IC511	9D	Q502	10H	Q505	11B	Q509	10B	D503	10N	D523	10A	D526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

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

TK-868HG PC板视图

TX-RX UNIT (X57-596X-XX) (B/2) 3-05 : C 3-07 : C3 Component side view + Foil side

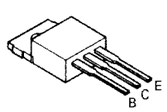


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC501	4P	IC510	3M	Q503	3J	D502	4O	D511	2R	D525	5C
IC502	4Q	IC511	5E	Q504	3C	D503	5O	D512	2E	D526	5D
IC503	4L	IC512	4L	Q505	3B	D504	4O	D513	5E	D527	4B
IC505	3O	IC513	4J	Q506	3B	D506	5L	D514	5I	D528	6D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

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

● Connect 1 and 4

2SB1565



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DTD114EK
2SA1745
2SA1832
2SC2412K
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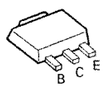
2SC4226
2SC4617

2SC4619
2SC4738
2SC5110

2SB1132
2SC2954
2SC3357



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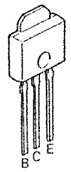

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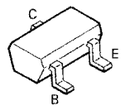

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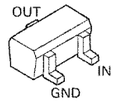

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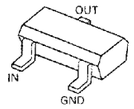
DTC114EKA
DTC114EUA
DTC144EKA
KRA225S



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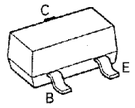

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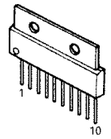

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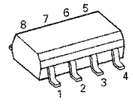

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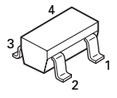

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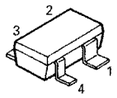

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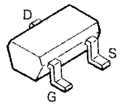

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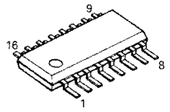

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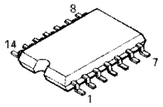

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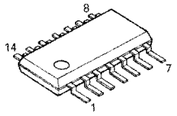

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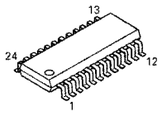

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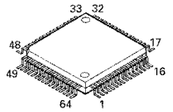

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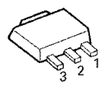

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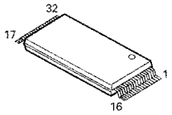

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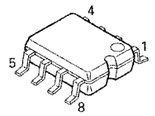

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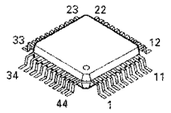

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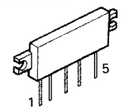
M68769L



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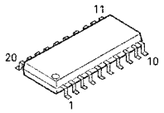

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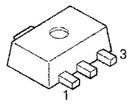

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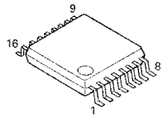

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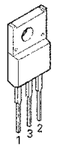

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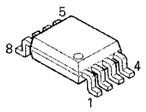

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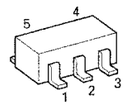

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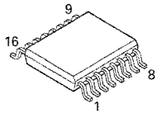

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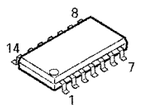
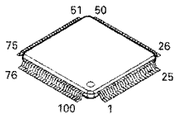
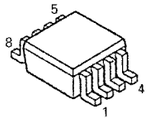


30622M4102GP

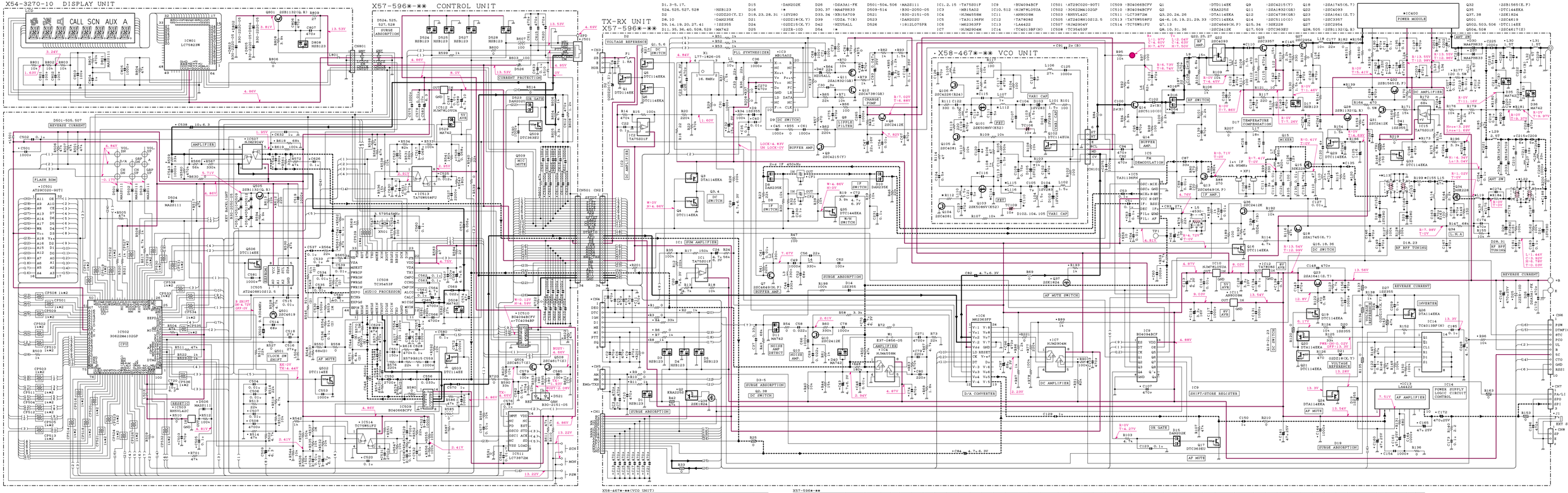


TC75W51FU

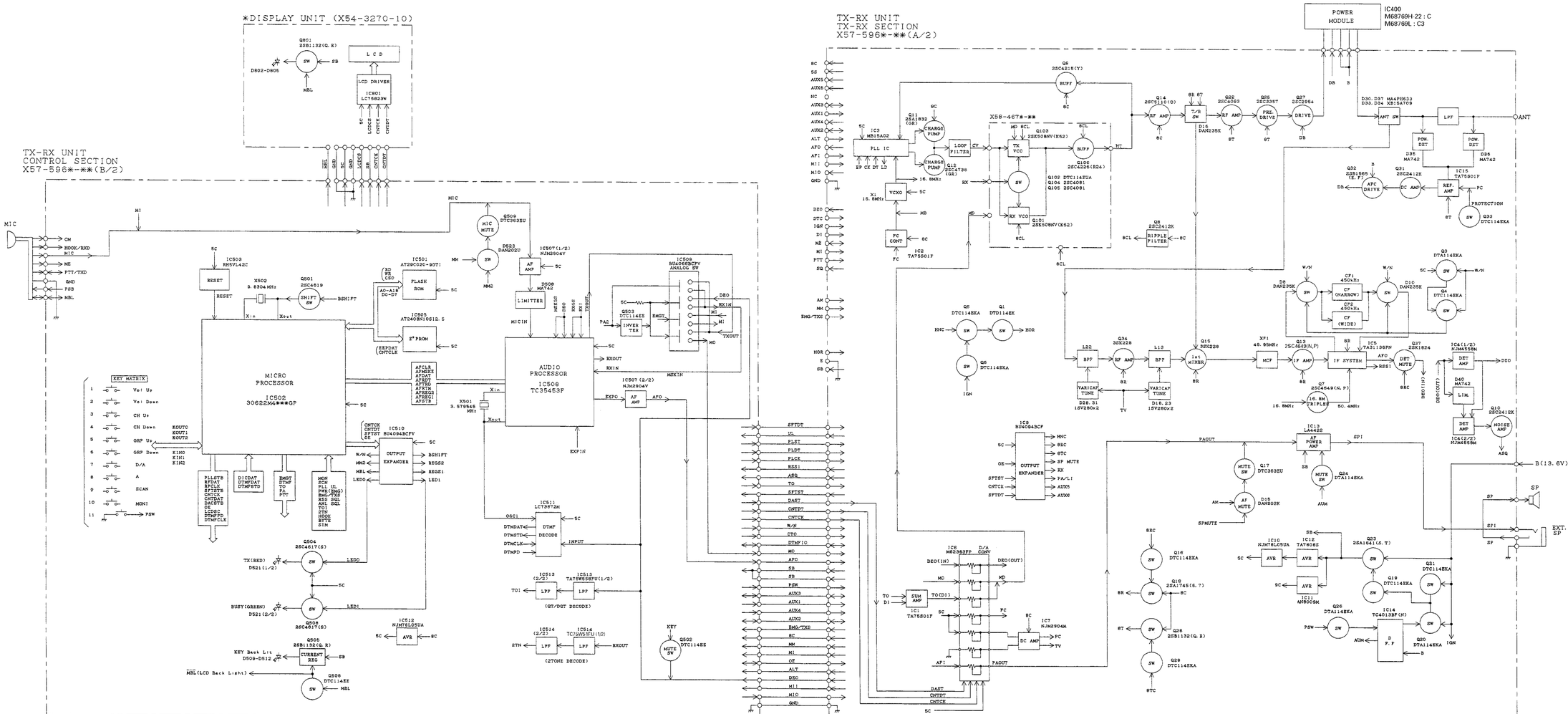


Note : Components marked with a dot (·) are parts of patterun 1.

SCHEMATIC DIAGRAM / 原理图 TK-868HG



BLOCK DIAGRAM / 方块图



SPECIFICATIONS

GENERAL

Frequency Range	C : 450 to 490MHz C3 : 400 to 430MHz
Number of Channels	Maximum 128 channels
Number of Groups	Maximum 128 channels
Channel Spacing	Wide : 25kHz Narrow : 12.5kHz
PLL Channel Stepping	5, 6.25kHz
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 173 (6-52/64) D mm (inch), 1050g (2.31 lbs)
Channel Frequency Spread	C : 40MHz C3 : 30MHz

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

Sensitivity (12dB SINAD)	Wide : 0.28μV Narrow : 0.35μV
Selectivity	Wide : 80dB Narrow : 65dB
Intermodulation	Wide : 75dB Narrow : 63dB
Spurious Responce	85dB
Audio Power Output	4.0W
Frequency Stability	±2.5ppm

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

RF Power Output	40W
Spurious and Harmonics	65dB
Modulation	Wide : 16K0F3E Narrow : 11K0F3E
FM Noise	Wide : 50dB Narrow : 45dB
Audio Distortion	Less than 3%
Frequency Stability	±2.5ppm

规　　格

概　述

频率范围	C：450～490MHz　　C3：400～430MHz
信道数量	最多128个
组数量	最多128个
信道间隔	宽：25kHz　　窄：12.5kHz
锁相环电路步进频率	5, 6.25kHz
工作电压	13.6V直流±15%
电流消耗	待机时：低于0.4A 接收时：低于1.0A 发送时：低于12.0A
工作温度范围	－30℃到＋60℃（－22°F到＋144°F）
体积和重量	140(5-33/64)宽×40(1-37/64)高×173(6-52/64)长 毫米(英寸), 1050g(2.31lbs)
信道频率扩展	C：40MHz　　C3：30MHz

接收部(按照EIA标准EIA/TIA-204-D测定)

灵敏度(12dB SINAD)	宽：0.28μV　　窄：0.35μV
选择性	宽：80dB　　窄：65dB
互调抑制	宽：75dB　　窄：63dB
假信号响应	85dB
音频功率输出	4.0W
频率稳定性	±2.5ppm

发射部(按照EIA标准EIA-152-C测定)

射频功率输出	40W
寄生和谐波	65dB
调制	宽：16K0F3E　　窄：11K0F3E
FM噪声	宽：50dB　　窄：45dB
音频失真	低于3%
频率稳定性	±2.5ppm

如需使用此机二次开发，请联络建伍公司或建伍经销商，
商讨提供专用插头及电缆事宜
零件号码：E37-0852-05，E37-0853-05，
E37-0854-05，E37-0855-05

TK-868HG

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