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UHF FM TRANSCEIVER

TK-860HG/862HG

SERVICE MANUAL

REVISED

KENWOOD

© 2000-12 PRINTED IN JAPAN
B51-8539-10 (N) 1350

This service manual is the same as the K and M markets, TK-860HG/862HG (B51-8539-00) service manual with the exception of the new K2, K3 and M3 markets.

TK-860HG (K)



TK-862HG (K)



TK-860HG/862HG

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Service Manual List

| Title | Parts number | Remarks | Destination | TX-RX unit PCB number |
|----------------|--------------|----------------------------------|---|-----------------------|
| TK-860G/862G | B51-8498-10 | REVISED | TK-860G : K,K3,M TK-862G : K | J72-0678-02 |
| TK-860G/862G | B51-8529-00 | SUPPLEMENT | TK-860G : K2,M2 TK-862G : K2 | J72-0760-02 |
| TK-860HG/862HG | B51-8539-00 | SUPPLEMENT | TK-860HG : K,M TK-862HG : K | J72-0760-02 |
| TK-860HG/862HG | B51-8539-10 | REVISED (This service manual) | TK-860HG : K,K2,K3,M,M3 TK-862HG : K | J72-0760-12 |

Frequency range K,M : 450~490MHz
 K2 : 485~512MHz
 M2 : 485~520MHz
 K3,M3 : 400~430MHz

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.

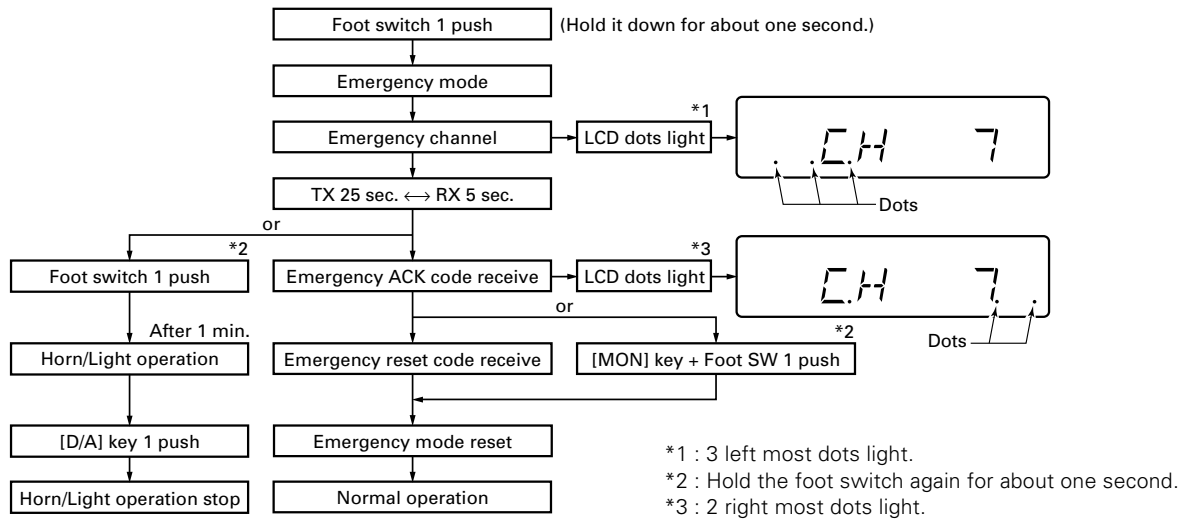
The transceiver disables mic mute while transmitting. After finishing transmission, the transceiver receives for 5 seconds. The transceiver mutes the speaker while receiving. Following the above sequence, the transceiver continues to transmit and receive.

Radio Password (TK-860HG only)

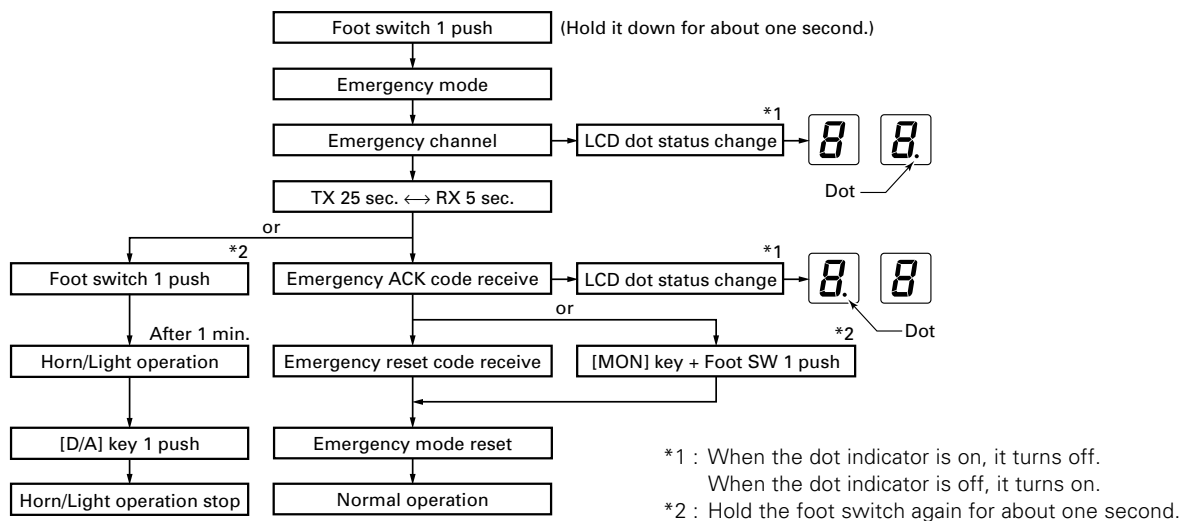
When the password is set in the transceiver, user can not use the transceiver unless enter the correct password.

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-860HG)



Emergency mode system chart (TK-862HG)



TK-860HG/862HG

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-860HG power ON with the [▼] key held down. If the password is set to the TK-860HG, the TK-860HG displays "CLN LOCK". If the password is not set, the TK-860HG displays "CLONE".
2. When "CLN LOCK" is displayed, only the [CH▲/▼] key and [SCN], and [0] to [9] keys can be accepted. When you enter the correct password, and "CLONE" is displayed, the TK-860HG 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-860HG. 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▲/▼] key; If the [CH▲/▼] 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-860HG/862HG.
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.

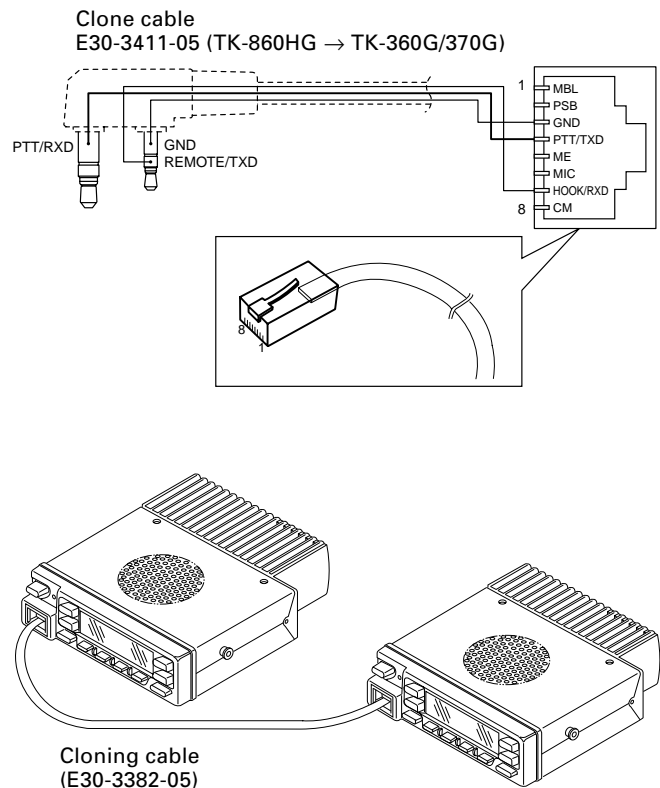


Fig. 1

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

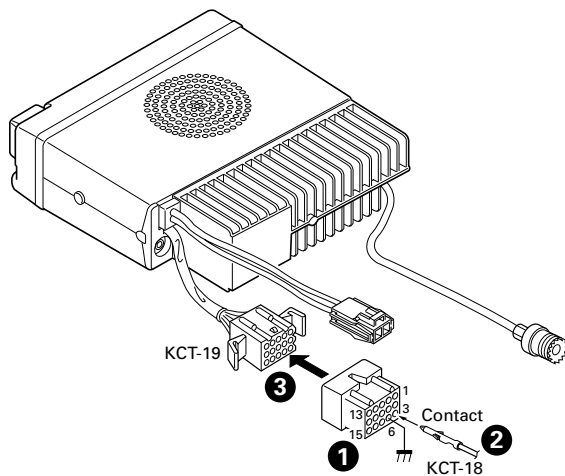


Fig. 1

■ 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.

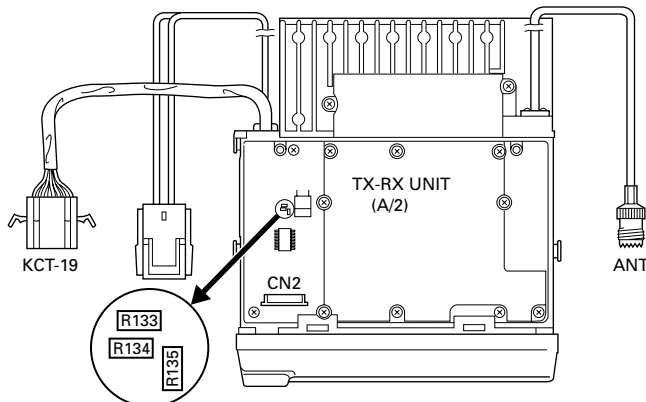


Fig. 2

| Operation when KCT-18 is connected | R134 | R135 |
|--|---------|---------|
| | Enable | Enable |
| Power on/off and Horn Alert or AUX-A on/off | Disable | Enable |
| Horn Alert or AUX-A on/off | Enable | Disable |
| | Disable | Disable |

← **KCT-18 cannot be connected**

← **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 (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 (❷). The notch (❸) in the board must be placed at the front left side.
4. Attach the cushion on the top of the KAP-1 switch unit.

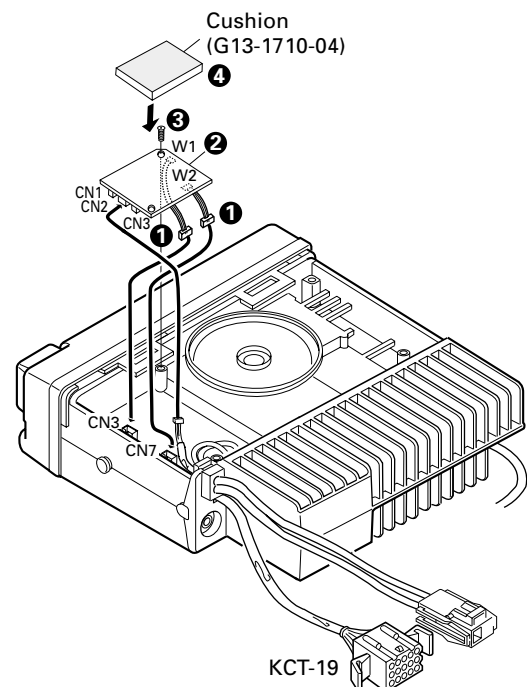


Fig. 3

TK-860HG/862HG

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 | |

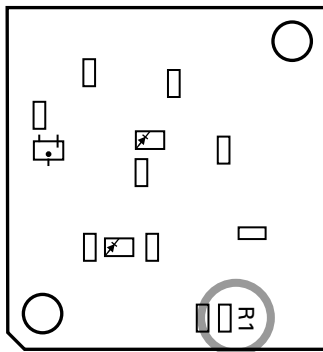


Fig. 4 KAP-1 foil side view

• 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 |

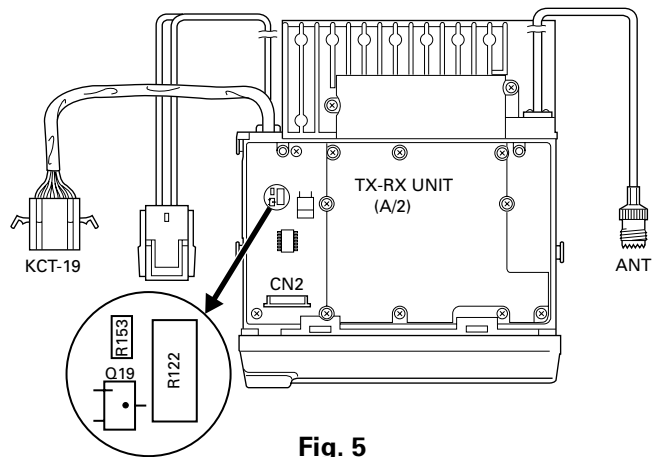


Fig. 5

■ 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.

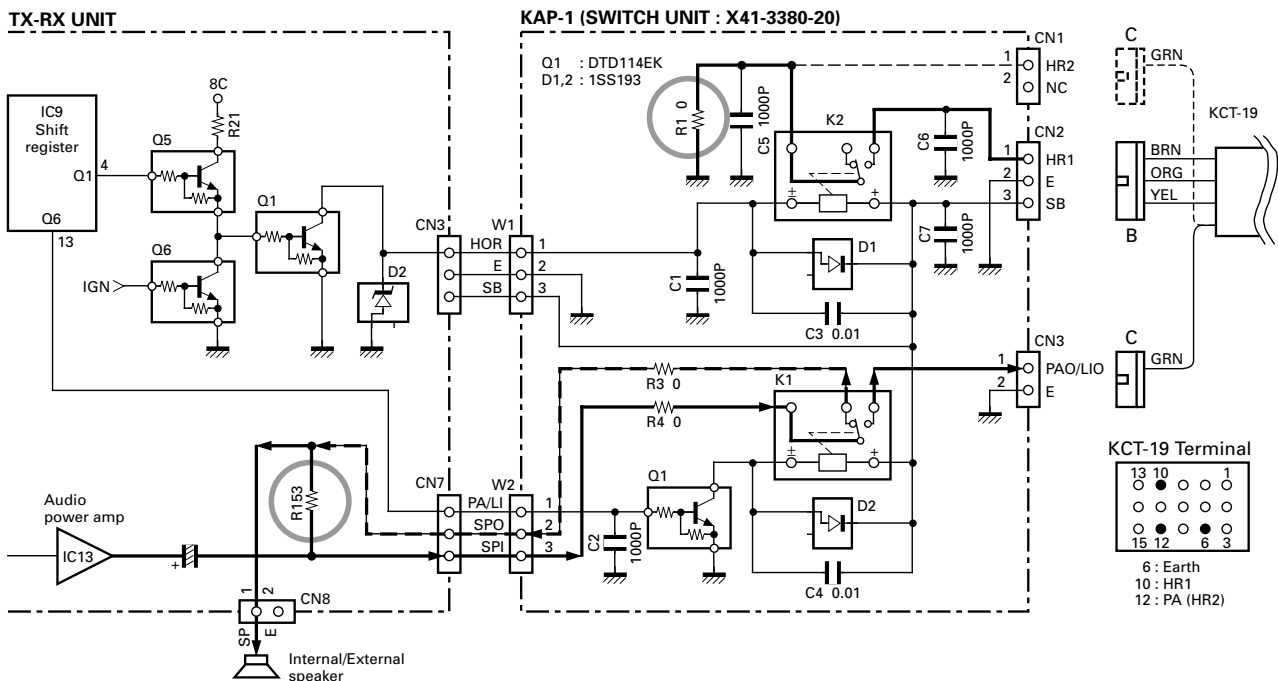


Fig. 6

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.)

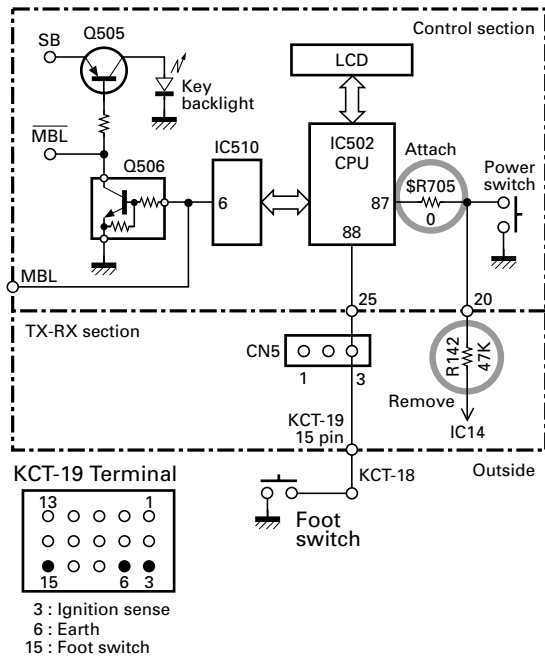


Fig. 7

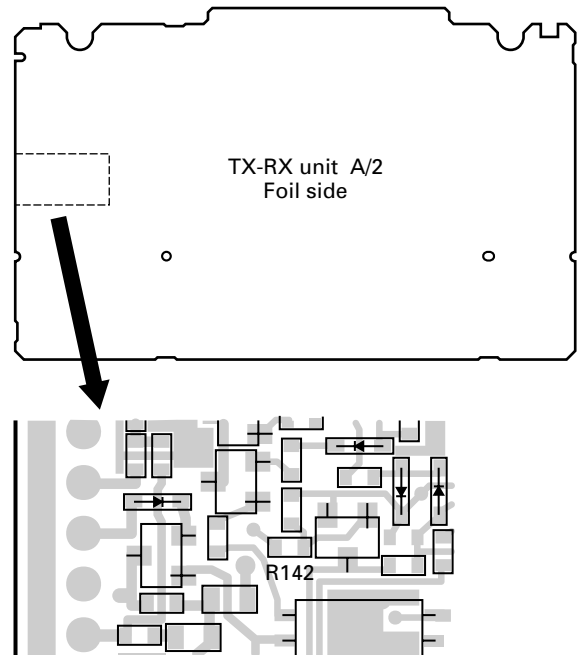
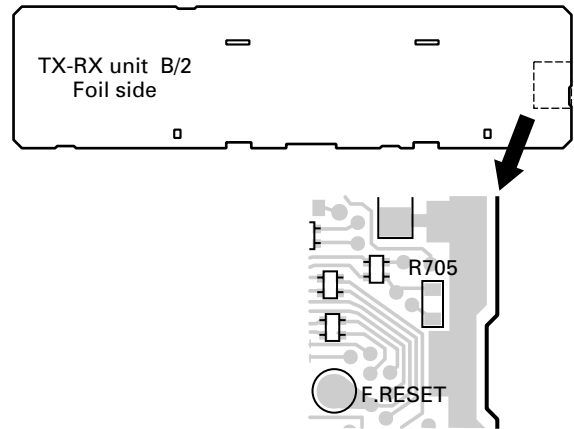


Fig. 8

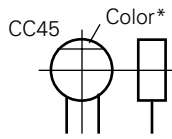
TK-860HG/862HG

PARTS LIST

CAPACITORS

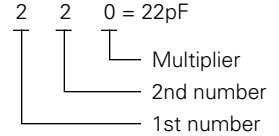
CC 45 TH 1H 220 J
 1 2 3 4 5 6

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



• Capacitor value

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



• Temperature coefficient

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

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

Example : CC45TH = -470 ± 60ppm/°C

• Tolerance (More than 10pF)

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

(Less than 10pF)

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

• Voltage rating

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

• Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J
 1 2 3 4 5 6 7

(Chip) (CH, RH, UJ, SL)

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

(Chip) (B, F)

Refer to the table above.

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

Dimension (Chip capacitors)

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

RESISTORS

• Chip resistor (Carbon)

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

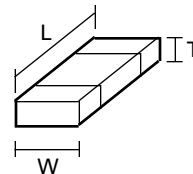
(Chip) (B, F)

• Carbon resistor (Normal type)

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

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

Dimension



Dimension (Chip resistor)

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

Rating wattage

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

TK-860HG/862HG

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

TK-860HG/862HG
DISPLAY UNIT (X54-3270-10) : TK-860HG
DISPLAY UNIT (X54-3280-10) : TK-862HG

| Ref. No. | Address | New parts | Parts No. | Description | Destination |
|-----------------------|---------|-----------|-------------|--------------------------------|-------------|
| TK-860HG/862HG | | | | | |
| 1 | 1B,1E | | A01-2165-13 | CABINET UPPER | |
| 2 | 2A,2D | | A01-2166-13 | CABINET LOWER | |
| 3 | 2A | | A62-0642-03 | PANEL ASSY | 860 |
| 3 | 2D | | A62-0731-03 | PANEL ASSY | 862 |
| 5 | 1G | | B09-0235-05 | CAP | |
| 6 | 2B | | B11-1226-03 | ILLUMINATION GUIDE | 860 |
| 6 | 2E | | B11-1230-03 | ILLUMINATION GUIDE | 862 |
| 7 | 2A | | B38-0824-05 | LCD | 860 |
| 7 | 2E | | B38-0825-05 | LCD | 862 |
| 8 | 2G | | B62-1257-20 | INSTRUCTION MANUAL | M,M3 |
| 8 | 2G | | B62-1258-20 | INSTRUCTION MANUAL | K,K2,K3 |
| 9 | 1C | * | B72-1822-14 | MODEL NAME PLATE | 860K |
| 9 | 1C | | B72-1823-04 | MODEL NAME PLATE | 860M |
| 9 | 1F | * | B72-1824-14 | MODEL NAME PLATE | 862 |
| 9 | 1C | | B72-1914-04 | MODEL NAME PLATE | 860K2 |
| 9 | 1C | | B72-1915-04 | MODEL NAME PLATE | 80K3 |
| 9 | 1C | | B72-1916-04 | MODEL NAME PLATE | 860M3 |
| 11 | 2B | | E29-1179-04 | INTER CONNECTOR | 860 |
| 11 | 2E | | E29-1183-04 | INTER CONNECTOR | 862 |
| 12 | 1C,1F | | 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 | |
| 18 | 2B,2E | | F12-0435-04 | CONDUCTIVE SHEET | |
| 19 | 1G | | F51-0017-05 | FUSE (6*30) | |
| 21 | 1C,1F | | G02-0791-04 | FLAT SPRING AF, APC | |
| - | | | G02-0841-14 | FLAT SPRING | |
| 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 | 862 |
| 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 | 860 |
| 40 | 2D | | K29-5344-02 | KEY TOP | 862 |
| 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 | |

| Ref. No. | Address | New parts | Parts No. | Description | Destination |
|--|---------|-----------|---------------|---------------------|-------------|
| 44 | 1B,1E | | T07-0368-05 | SPEAKER | |
| 45 | 1G | | T91-0621-05 | MICROPHONE | K,K2,K3 |
| DISPLAY UNIT (X54-3270-10) : TK-860HG | | | | | |
| 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-862HG | | | | | |
| 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 | |

TK-860HG : K,K2,K3,M,M3
 TK-862HG : K

TK-860HG/862HG

PARTS LIST

DISPLAY UNIT (X54-3280-10) : TK-862HG

TX-RX UNIT (X57-5960-XX)

| Ref. No. | Address | New parts | Parts No. | Description | Destination |
|--|---------|-----------|---------------|-----------------------|-------------|
| 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 | |
| TX-RX UNIT (X57-5960-XX) -15 : TK-860HG K,M -16 : TK-862HG K -17 : TK-860HG K2 -18 : TK-860HG K3,M3 | | | | | |
| 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 | K,K2,M |
| C25 | | | CC73GCH1H080D | CHIP C 8.0PF D | K3,M3 |
| C26 | | | CK73GB1H471K | CHIP C 470PF K | |
| C28 | | | CC73GCH1H060D | CHIP C 6.0PF D | K,K2,M |
| C28 | | | CC73GCH1H080D | CHIP C 8.0PF D | K3,M3 |
| 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 | |
| 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 | K2,K3,M3 |
| C110 | | | CC73GCH1H090D | CHIP C 9.0PF D | K,M |
| 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 | K,K3,M |
| C120 | | | CC73GCH1H040C | CHIP C 4.0PF C | M3 |
| C120 | | | CC73GCH1H050C | CHIP C 5.0PF C | K2 |
| C121 | | | CK73GB1H471K | CHIP C 470PF K | |
| C122,123 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C124 | | | CC73GCH1H030C | CHIP C 3.0PF C | K2,K3,M3 |
| C125 | | | C92-0004-05 | CHIP-TAN 1.0UF 16WV | K,K3,M |
| C125 | | | C92-0004-05 | CHIP-TAN 1.0UF 16WV | M3 |
| C125 | | | C92-0005-05 | CHIP-TAN 2.2UF 6.3WV | K2 |
| 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 | K3,M3 |
| C135 | | | CC73GCH1H180J | CHIP C 18PF J | K,M |
| C135 | | | CK73GB1H102K | CHIP C 1000PF K | K2 |
| C138 | | | CK73FB1E104K | CHIP C 0.10UF K | |
| C139,140 | | | CK73GB1H471K | CHIP C 470PF K | |
| C141 | | | C92-0719-05 | ELECTRO 47UF 25WV | |

PARTS LIST

TX-RX UNIT (X57-5960-XX)

| Ref. No. | Address | New parts | Parts No. | Description | Desti- nation | Ref. No. | Address | New parts | Parts No. | Description | Desti- nation |
|----------|---------|-----------|---------------|---------------------|------------------|----------|---------|-----------|---------------|----------------------|------------------|
| C142,143 | | | CK73GB1H471K | CHIP C 470PF K | | C209 | | | CC73FCH1H050C | CHIP C 5.0PF C | M3 |
| C144 | | | CK73GB1H102K | CHIP C 1000PF K | | C210 | | | CK73GB1H103K | CHIP C 0.010UF K | |
| C145 | | | CC73GCH1H070D | CHIP C 7.0PF D | K2,K3,M3 | C211 | | | CC73GCH1H180J | CHIP C 18PF J | K,K3,M |
| C145 | | | CC73GCH1H090D | CHIP C 9.0PF D | K,M | C211 | | | CC73GCH1H180J | CHIP C 18PF J | M3 |
| C146 | | | CK73GB1H471K | CHIP C 470PF K | | C212 | | | CK73GB1H471K | CHIP C 470PF K | |
| C147 | | | CC73GCH1H1R5B | CHIP C 1.5PF B | K2 | C214 | | | C93-0553-05 | CHIP C 3.0PF C | K3,M3 |
| C148,149 | | | CK73GB1H471K | CHIP C 470PF K | | C215 | | | CC73FCH1H060D | CHIP C 6.0PF D | K,K3,M |
| C150 | | | CK73FF1C105Z | CHIP C 1.0UF Z | | C215 | | | CC73FCH1H060D | CHIP C 6.0PF D | M3 |
| C152 | | | CC73GCH1H060D | CHIP C 6.0PF D | K2,K3,M3 | C216 | | | CC73GCH1H0R5B | CHIP C 0.5PF B | |
| C152 | | | CC73GCH1H080D | CHIP C 8.0PF D | K,M | C217 | | | CC73GCH1H020B | CHIP C 2.0PF B | |
| C153 | | | CC73GCH1H040C | CHIP C 4.0PF C | K,M | C218 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C154 | | | CK73GB1H102K | CHIP C 1000PF K | K,K3,M | C219 | | | CC73FCH1H040C | CHIP C 4.0PF C | |
| C154 | | | CK73GB1H102K | CHIP C 1000PF K | M3 | C220 | | | CK73GB1H471K | CHIP C 470PF K | |
| C154,155 | | | CK73GB1H102K | CHIP C 1000PF K | K2 | C221 | | | C93-0552-05 | CHIP C 2.0PF C | K3,M3 |
| C155 | | | CC73GCH1H040C | CHIP C 4.0PF C | K3,M3 | C221 | | | C93-0554-05 | CHIP C 4.0PF C | K,K2,M |
| C155 | | | CC73GCH1H060D | CHIP C 6.0PF D | K,M | C222 | | | CC73GCH1H0R5B | CHIP C 0.5PF B | |
| C156 | | | CK73GB1H471K | CHIP C 470PF K | | C223 | | | CC73GCH1H020B | CHIP C 2.0PF B | |
| C157 | | | CK73GB1H102K | CHIP C 1000PF K | | C224 | | | CK73GB1H471K | CHIP C 470PF K | |
| C158 | | | CK73GB1H471K | CHIP C 470PF K | | C225 | | | C93-0603-05 | CHIP C 1000PF K | |
| C160,161 | | | C92-0719-05 | ELECTRO 47UF 25WV | | C226 | | | C93-0553-05 | CHIP C 3.0PF C | K2 |
| C162,163 | | | CK73GB1H471K | CHIP C 470PF K | | C226 | | | C93-0556-05 | CHIP C 6.0PF D | K,M |
| C164 | | | CK73GB1H102K | CHIP C 1000PF K | | C226 | | | C93-0558-05 | CHIP C 8.0PF D | K3,M3 |
| C165 | | | C92-0719-05 | ELECTRO 47UF 25WV | | C227 | | | C93-0555-05 | CHIP C 5.0PF C | K2 |
| C166 | | | CE04EW1E471M | ELECTRO 470UF 25WV | | C227 | | | C93-0558-05 | CHIP C 8.0PF D | K,M |
| C167 | | | CK73GB1H471K | CHIP C 470PF K | | C227 | | | C93-0560-05 | CHIP C 10PF D | K3,M3 |
| C168 | | | CC73GCH1H060D | CHIP C 6.0PF D | K2,K3,M3 | C229 | | | C93-0553-05 | CHIP C 3.0PF C | K2 |
| C168 | | | CC73GCH1H080D | CHIP C 8.0PF D | K,M | C229 | | | C93-0556-05 | CHIP C 6.0PF D | K,K3,M |
| C169 | | | CK73GB1H471K | CHIP C 470PF K | | C229 | | | C93-0556-05 | CHIP C 6.0PF D | M3 |
| C172 | | | CE04EW1E471M | ELECTRO 470UF 25WV | | C230,231 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C173 | | | CK73GB1C104K | CHIP C 0.10UF K | | C241 | | | CK73GB1H102K | CHIP C 1000PF K | K2,K3,M3 |
| C174 | | | CK73GB1H471K | CHIP C 470PF K | | C243 | | | CK73GB1H102K | CHIP C 1000PF K | K2,K3,M3 |
| C175 | | | CC73GCH1H020B | CHIP C 2.0PF B | K,K2,M | C245 | | | CK73GB1C104K | CHIP C 0.10UF K | K,K2,M |
| C177 | | | CC73FCH1H220J | CHIP C 22PF J | | C247 | | | CK73GB1H102K | CHIP C 1000PF K | K2 |
| C178 | | | CC73GCH1H060D | CHIP C 6.0PF D | K2,K3,M3 | C248 | | | C92-0585-05 | CHIP-TAN 4.7UF 16WV | |
| C178 | | | CC73GCH1H080D | CHIP C 8.0PF D | K,M | C250 | | | CK73FF1C105Z | CHIP C 1.0UF Z | |
| C179 | | | CK73GB1H471K | CHIP C 470PF K | | C254 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C181 | | | CK73GB1H471K | CHIP C 470PF K | | C258 | | | CK73GB1H102K | CHIP C 1000PF K | K2,K3,M3 |
| C182 | | | CK73GB1H102K | CHIP C 1000PF K | K2 | C259 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C183 | | | CK73GB1C104K | CHIP C 0.10UF K | | C265 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C185 | | | CK73GB1C104K | CHIP C 0.10UF K | | C267 | | | CK73GB1H102K | CHIP C 1000PF K | K,M |
| C186 | | | CK73GB1H471K | CHIP C 470PF K | | C270 | | | CK73GB1H471K | CHIP C 470PF K | |
| C187 | | | CC73GCH1H060D | CHIP C 6.0PF D | K2,K3,M3 | C271 | | | CK73GB1H472K | CHIP C 4700PF K | |
| C187 | | | CC73GCH1H080D | CHIP C 8.0PF D | K,M | C274 | | | CC73GCH1H050C | CHIP C 5.0PF C | K3,M3 |
| C188 | | | CC73GCH1H040C | CHIP C 4.0PF C | K,M | C275 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C189,190 | | | CK73GB1H471K | CHIP C 470PF K | | C276 | | | C90-2046-05 | ELECTRO 22UF 10WV | |
| C191 | | | CK73GB1C104K | CHIP C 0.10UF K | | C290 | | | C92-0004-05 | CHIP-TAN 1.0UF 16WV | K,K2,M |
| C192 | | | C92-0719-05 | ELECTRO 47UF 25WV | | C291 | | | CC73GCH1H100D | CHIP C 10PF D | K2 |
| C195 | | | CK73GB1C104K | CHIP C 0.10UF K | | C501 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C196,197 | | | CK73GB1H471K | CHIP C 470PF K | | C502 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C198 | | | C92-0719-05 | ELECTRO 47UF 25WV | | C503 | | | CK73GB1H471K | CHIP C 470PF K | |
| C201 | | | CK73GB1H471K | CHIP C 470PF K | | C504 | | | CK73GB1H103K | CHIP C 0.010UF K | |
| C202 | | | CK73GB1C104K | CHIP C 0.10UF K | | C505 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C203 | | | CK73GB1H471K | CHIP C 470PF K | | C506,507 | | | CK73GB1H103K | CHIP C 0.010UF K | |
| C204 | | | C92-0004-05 | CHIP-TAN 1.0UF 16WV | K3,M3 | C508 | | | CK73GB1H472K | CHIP C 4700PF K | |
| C204 | | | C92-0501-05 | CHIP-TAN 1.5UF 10WV | K,K2,M | C509 | | | C92-0507-05 | CHIP-TAN 4.7UF 6.3WV | |
| C206 | | | CK73GB1H102K | CHIP C 1000PF K | | C514 | | | CC73GCH1H680J | CHIP C 68PF J | |
| C207 | | | CK73GB1H103K | CHIP C 0.010UF K | | C515 | | | CK73GB1H103K | CHIP C 0.010UF K | |
| C208 | | | CC73GCH1H060D | CHIP C 6.0PF D | K3,M3 | C516 | | | CC73GCH1H270J | CHIP C 27PF J | |
| C208 | | | CC73GCH1H070D | CHIP C 7.0PF D | K,M | C517 | | | CK73GB1C683K | CHIP C 0.068UF K | |
| C209 | | | CC73FCH1H050C | CHIP C 5.0PF C | K,K3,M | C518 | | | CC73GCH1H270J | CHIP C 27PF J | |

TK-860HG : K,K2,K3,M,M3

TK-862HG : K

TK-860HG/862HG

PARTS LIST

TX-RX UNIT (X57-5960-XX)

| Ref. No. | Address | New parts | Parts No. | Description | Destination | Ref. No. | Address | New parts | Parts No. | Description | Destination |
|----------|---------|-----------|---------------|----------------------|-------------|----------|---------|-----------|---------------|-------------------------------|-------------|
| C519 | | | CK73GB1H102K | CHIP C 1000PF K | | C599 | | | CC73GCH1H101J | CHIP C 100PF J | |
| C520 | | | CK73GB1C104K | CHIP C 0.10UF K | | C600 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C521 | | | CK73GB1H102K | CHIP C 1000PF K | | C601,602 | | | CC73GCH1H101J | CHIP C 100PF J | |
| C522 | | | C92-0507-05 | CHIP-TAN 4.7UF 6.3WV | | C603 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C523 | | | CC73GCH1H221J | CHIP C 220PF J | | C604-606 | | | CC73GCH1H101J | CHIP C 100PF J | |
| C524 | | | CK73GB1H103K | CHIP C 0.010UF K | | C608-610 | | | CC73GCH1H101J | CHIP C 100PF J | |
| C525 | | | CK73GB1E123K | CHIP C 0.012UF K | | C611,612 | | | CK73GB1H471K | CHIP C 470PF K | |
| C526 | | | CK73GB1C683K | CHIP C 0.068UF K | | C613 | | | CC73GCH1H101J | CHIP C 100PF J | |
| C527 | | | CK73GB1H222K | CHIP C 2200PF K | | C615 | | | CK73GB1H471K | CHIP C 470PF K | |
| C528 | | | CK73GB1H103K | CHIP C 0.010UF K | | C616 | | | CC73GCH1H101J | CHIP C 100PF J | |
| C529 | | | CK73GB1H272K | CHIP C 2700PF K | | C618 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C530 | | | CK73GB1H152K | CHIP C 1500PF K | | C620 | | | CK73GB1H471K | CHIP C 470PF K | |
| C531 | | | CK73GB1H272K | CHIP C 2700PF K | | C621 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C532,533 | | | CK73GB1C104K | CHIP C 0.10UF K | | C623 | | | CK73GB1H102K | CHIP C 1000PF K | |
| C534,535 | | | CK73GB1H103K | CHIP C 0.010UF K | | C626 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C536,537 | | | CK73GB1C104K | CHIP C 0.10UF K | | C628 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C538 | | | C92-0566-05 | CHIP-TAN 10UF 6.3WV | | C629 | | | CC73GCH1H470J | CHIP C 47PF J | |
| C539 | | | CK73GB1H103K | CHIP C 0.010UF K | | C630 | | | C92-0507-05 | CHIP-TAN 4.7UF 6.3WV | |
| C540,541 | | | CK73GB1C104K | CHIP C 0.10UF K | | C631 | | | CK73GB1H103K | CHIP C 0.010UF K | |
| C542 | | | CC73GCH1H331J | CHIP C 330PF J | | C632 | | | CK73FF1C105Z | CHIP C 1.0UF Z | |
| C543 | | | CK73GB1H102K | CHIP C 1000PF K | | C633 | | | CK73GB1C104K | CHIP C 0.10UF K | |
| C544-546 | | | CK73GB1H562K | CHIP C 5600PF K | | C720 | | | C92-0566-05 | CHIP-TAN 10UF 6.3WV | |
| C547 | | | CC73GCH1H030C | CHIP C 3.0PF C | | CN1 | | | E40-6047-05 | PIN ASSY | |
| C548-550 | | | CK73GB1H272K | CHIP C 2700PF K | | CN2 | | | E40-6021-05 | FLAT CABLE CONNECTOR | |
| C551 | | | CC73GCH1H151J | CHIP C 150PF J | | CN3 | | | E40-3247-05 | PIN ASSY | |
| C552 | | | CC73GCH1H030C | CHIP C 3.0PF C | | CN4 | | | E40-5737-05 | PIN ASSY | |
| C553 | | | CK73GB1H102K | CHIP C 1000PF K | | CN5 | | | E40-5738-05 | PIN ASSY | |
| C554 | | | CK73GB1H122K | CHIP C 1200PF K | | CN7 | | | E40-3247-05 | PIN ASSY | |
| C555 | | | C92-0566-05 | CHIP-TAN 10UF 6.3WV | | CN8 | | | E40-3246-05 | PIN ASSY | |
| C556 | | | CK73GB1C333K | CHIP C 0.033UF K | | CN501 | | | E40-6021-05 | FLAT CABLE CONNECTOR | |
| C557 | | | CK73GB1C104K | CHIP C 0.10UF K | | J1 | | | E11-0442-05 | 3.5D PHONE JACK (3P) | |
| C558 | | | CC73GCH1H101J | CHIP C 100PF J | | J501 | | | E08-0877-05 | MODULAR JACK | |
| C559 | | | CK73GB1H102K | CHIP C 1000PF K | | F1 | | | F53-0108-05 | FUSE | |
| C560-563 | | | CK73GB1C104K | CHIP C 0.10UF K | | - | | | J31-0543-05 | COLLAR | |
| C564 | | | C92-0507-05 | CHIP-TAN 4.7UF 6.3WV | | CF1 | | | L72-0959-05 | CERAMIC FILTER | |
| C565,566 | | | CK73GB1H472K | CHIP C 4700PF K | | CF2 | | | L72-0973-05 | CERAMIC FILTER | |
| C567 | | | CC73GCH1H101J | CHIP C 100PF J | | L1 | | | L40-1005-34 | SMALL FIXED INDUCTOR (10UH) | |
| C568 | | | C92-0507-05 | CHIP-TAN 4.7UF 6.3WV | | L2-4 | | | L40-3381-86 | SMALL FIXED INDUCTOR (0.33U) | |
| C569 | | | CK73GB1E223K | CHIP C 0.022UF K | | L5 | | | L34-4530-05 | COIL | |
| C570 | | | CK73FF1C105Z | CHIP C 1.0UF Z | | L6 | | | L40-8275-77 | SMALL FIXED INDUCTOR (82NH) | |
| C571,572 | | | CK73GB1H102K | CHIP C 1000PF K | | L7 | | | L40-5685-85 | SMALL FIXED INDUCTOR (0.56UH) | |
| C573 | | | CK73FB1H563K | CHIP C 0.056UF K | | L8 | | | L40-8285-85 | SMALL FIXED INDUCTOR (0.82UH) | |
| C574 | | | CC73GCH1H470J | CHIP C 47PF J | | L9 | | | L40-1575-77 | SMALL FIXED INDUCTOR (15NH) | |
| C575 | | | CK73GB1H102K | CHIP C 1000PF K | | L10 | | | L40-2775-77 | SMALL FIXED INDUCTOR (27NH) | |
| C576 | | | CK73GB1C104K | CHIP C 0.10UF K | | L11,12 | | | L40-1575-34 | SMALL FIXED INDUCTOR (15NH) | |
| C577,578 | | | CK73GB1H103K | CHIP C 0.010UF K | | L13 | | | L79-1169-05 | HELICAL BLOCK | K2 |
| C579 | | | CC73GCH1H101J | CHIP C 100PF J | | L13 | | | L79-1585-05 | HELICAL BLOCK | K,M |
| C580 | | | CK73GB1C104K | CHIP C 0.10UF K | | L13 | | | L79-1591-05 | HELICAL BLOCK | K3,M3 |
| C581 | | | CK73GB1H102K | CHIP C 1000PF K | | L14 | | | L40-1875-77 | SMALL FIXED INDUCTOR (18NH) | K,M |
| C582 | | | CK73GB1C473K | CHIP C 0.047UF K | | L14 | | | L40-2775-77 | SMALL FIXED INDUCTOR (27NH) | K2,K3,M3 |
| C583 | | | C92-0566-05 | CHIP-TAN 10UF 6.3WV | | L15 | | | L40-3975-77 | SMALL FIXED INDUCTOR (39NH) | K2 |
| C584 | | | CK73GB1H103K | CHIP C 0.010UF K | | L15 | | | L40-4775-77 | SMALL FIXED INDUCTOR (47NH) | K,K3,M |
| C585 | | | CC73GCH1H101J | CHIP C 100PF J | | L15 | | | L40-4775-77 | SMALL FIXED INDUCTOR (47NH) | M2 |
| C587 | | | CK73GB1H103K | CHIP C 0.010UF K | | L16 | | | L40-6875-34 | SMALL FIXED INDUCTOR (68NH) | |
| C589 | | | C92-0606-05 | CHIP-TAN 4.7UF 10WV | | L17 | | | L40-1875-77 | SMALL FIXED INDUCTOR (18NH) | |
| C590 | | | CK73GB1H102K | CHIP C 1000PF K | | L18 | | | L40-1075-34 | SMALL FIXED INDUCTOR (10NH) | |
| C594 | | | CK73GB1H102K | CHIP C 1000PF K | | L19 | | | L40-1085-77 | SMALL FIXED INDUCTOR (100NH) | K3,M3 |
| C596 | | | CK73GB1H102K | CHIP C 1000PF K | | L19 | | | L40-4775-77 | SMALL FIXED INDUCTOR (47NH) | K2 |
| C597 | | | CC73GCH1H101J | CHIP C 100PF J | | | | | | | |
| C598 | | | CK73GB1H102K | CHIP C 1000PF K | | | | | | | |

PARTS LIST

TX-RX UNIT (X57-5960-XX)

| Ref. No. | Address | New parts | Parts No. | Description | Destination | Ref. No. | Address | New parts | Parts No. | Description | Destination |
|-----------|---------|-----------|--------------|---------------------------------|-------------|----------|---------|-----------|--------------|---------------------|-------------|
| L19 | | | L40-5675-77 | SMALL FIXED INDUCTOR (56NH) | K,M | R34,35 | | | RK73GB1J104J | CHIP R 100K J 1/16W | |
| L20 | | | L40-1875-77 | SMALL FIXED INDUCTOR (18NH) | K,M | R36 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| L20 | | | L40-2775-77 | SMALL FIXED INDUCTOR (27NH) | K3,M3 | R37 | | | RK73GB1J100J | CHIP R 10 J 1/16W | |
| L21 | | | L34-4478-05 | AIR-CORE COIL | | R38-40 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| L22 | | | L79-1169-05 | HELICAL BLOCK | K2 | R41 | | | RK73GB1J224J | CHIP R 220K J 1/16W | |
| L22 | | | L79-1585-05 | HELICAL BLOCK | K,M | R42 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| L22 | | | L79-1591-05 | HELICAL BLOCK | K3,M3 | R43 | | | RK73GB1J683J | CHIP R 68K J 1/16W | |
| L24 | | | L92-0179-05 | FERRITE CHIP | | R44 | | | RK73GB1J153J | CHIP R 15K J 1/16W | |
| L26 | | | L40-3375-34 | SMALL FIXED INDUCTOR (33NH) | K,K3,M | R46 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| L26 | | | L40-3375-34 | SMALL FIXED INDUCTOR (33NH) | M2 | R47 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| L27 | | | L40-1575-34 | SMALL FIXED INDUCTOR (15NH) | K,M | R48 | | | RK73GB1J184J | CHIP R 180K J 1/16W | |
| L27 | | | L40-1875-34 | SMALL FIXED INDUCTOR (18NH) | K3,M3 | R49 | | | RK73GB1J152J | CHIP R 1.5K J 1/16W | |
| L29 | | | L34-1185-05 | AIR-CORE COIL | | R50 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| L30,31 | | | L34-1039-05 | AIR-CORE COIL | | R51-53 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| L32 | | | L34-4478-05 | AIR-CORE COIL | | R54,55 | | | R92-1252-05 | CHIP R 0 OHM | |
| L33,34 | | | L92-0179-05 | FERRITE CHIP | | R56 | | | RK73GB1J100J | CHIP R 10 J 1/16W | |
| L35 | | | L40-2775-77 | SMALL FIXED INDUCTOR (27NH) | K3,M3 | R57 | | | RK73GB1J471J | CHIP R 470 J 1/16W | |
| L501 | | | L92-0138-05 | FERRITE CHIP | | R58 | | | RK73GB1J332J | CHIP R 3.3K J 1/16W | |
| L503,504 | | | L92-0138-05 | FERRITE CHIP | | R59 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| L510 | | | L92-0138-05 | FERRITE CHIP | | R60 | | | RK73GB1J334J | CHIP R 330K J 1/16W | |
| X1 | | * | L77-1826-05 | TCXO (16.8M) | | R61 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| X501 | | | L77-1708-05 | CRYSTAL RESONATOR (3.579545MHZ) | | R62 | | | RK73GB1J224J | CHIP R 220K J 1/16W | |
| X502 | | | L78-0462-05 | RESONATOR (9.8304M) | | R63 | | | RK73GB1J474J | CHIP R 470K J 1/16W | |
| XF1 | | | L71-0551-25 | MCF (49.95MHZ) | | R64,65 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| CP501-505 | | | R90-0741-05 | MULTIPLE RESISTOR | | R66 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| CP508-514 | | | R90-0741-05 | MULTIPLE RESISTOR | | R67 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| CP516-524 | | | R90-0741-05 | MULTIPLE RESISTOR | | R68 | | | RK73GB1J182J | CHIP R 1.8K J 1/16W | |
| CP526,527 | | | R90-0741-05 | MULTIPLE RESISTOR | | R69 | | | R92-1252-05 | CHIP R 0 OHM | |
| CP529-536 | | | R90-0741-05 | MULTIPLE RESISTOR | | R70,71 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| CP538 | | | R90-0741-05 | MULTIPLE RESISTOR | | R72 | | | R92-1252-05 | CHIP R 0 OHM | |
| CP539 | | | R90-0724-05 | MULTI-COMP 1K X4 | | R73 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| R1 | | | R92-1252-05 | CHIP R 0 OHM | | R75 | | | R92-1252-05 | CHIP R 0 OHM | |
| R2 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | | R76 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| R3 | | | R92-1252-05 | CHIP R 0 OHM | | R77 | | | RK73GB1J224J | CHIP R 220K J 1/16W | |
| R4 | | | RK73GB1J333J | CHIP R 33K J 1/16W | | R78 | | | RK73GB1J104J | CHIP R 100K J 1/16W | |
| R6 | | | R92-1252-05 | CHIP R 0 OHM | | R79 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R7,8 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | | R80 | | | RK73GB1J471J | CHIP R 470 J 1/16W | |
| R9,10 | | | R92-1252-05 | CHIP R 0 OHM | | R81 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| R11 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | | R82 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R12 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R83 | | | RK73GB1J684J | CHIP R 680K J 1/16W | |
| R13 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | | R84 | | | R92-1252-05 | CHIP R 0 OHM | |
| R14 | | | RK73GB1J474J | CHIP R 470K J 1/16W | | R85,86 | | | RK73GB1J122J | CHIP R 1.2K J 1/16W | |
| R15 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R87 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R16 | | | RK73GB1J220J | CHIP R 22 J 1/16W | | R88 | | | RK73GB1J271J | CHIP R 270 J 1/16W | |
| R17 | | | RK73GB1J154J | CHIP R 150K J 1/16W | | R89 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R18 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R90 | | | RK73GB1J104J | CHIP R 100K J 1/16W | |
| R19 | | | RK73GB1J392J | CHIP R 3.9K J 1/16W | | R91 | | | RK73GB1J823J | CHIP R 82K J 1/16W | |
| R20 | | | RK73GB1J224J | CHIP R 220K J 1/16W | | R92 | | | RK73GB1J822J | CHIP R 8.2K J 1/16W | |
| R21 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | | R93 | | | RK73GB1J152J | CHIP R 1.5K J 1/16W | |
| R22 | | | RK73GB1J474J | CHIP R 470K J 1/16W | | R94 | | | RK73GB1J392J | CHIP R 3.9K J 1/16W | |
| R23 | | | RK73GB1J223J | CHIP R 22K J 1/16W | | R95 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| R24 | | | RK73GB1J563J | CHIP R 56K J 1/16W | | R97,98 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| R25 | | | R92-1252-05 | CHIP R 0 OHM | | R99 | | | RK73GB1J331J | CHIP R 330 J 1/16W | |
| R26 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R100,101 | | | RK73GB1J222J | CHIP R 2.2K J 1/16W | |
| R29 | | | R92-1252-05 | CHIP R 0 OHM | | R103 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| R30 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R104 | | | RK73GB1J682J | CHIP R 6.8K J 1/16W | |
| R31 | | | RK73GB1J152J | CHIP R 1.5K J 1/16W | | R105 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| R32 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R106 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R33 | | | R92-1252-05 | CHIP R 0 OHM | | R107 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| | | | | | | R108 | | | RK73GB1J152J | CHIP R 1.5K J 1/16W | |

TK-860HG : K,K2,K3,M,M3

TK-862HG : K

TK-860HG/862HG

PARTS LIST

TX-RX UNIT (X57-5960-XX)

| Ref. No. | Address | New parts | Parts No. | Description | Destination | Ref. No. | Address | New parts | Parts No. | Description | Destination |
|----------|---------|-----------|--------------|---------------------|-------------|----------|---------|-----------|--------------|---------------------|-------------|
| R109 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R170 | | | RK73FB2A222J | CHIP R 2.2K J 1/10W | |
| R110 | | | RK73GB1J470J | CHIP R 47 J 1/16W | | R171 | | | RK73GB1J153J | CHIP R 15K J 1/16W | |
| R111 | | | RK73GB1J101J | CHIP R 100 J 1/16W | | R172 | | | RK73GB1J683J | CHIP R 68K J 1/16W | |
| R112 | | | RK73GB1J471J | CHIP R 470 J 1/16W | | R173 | | | RK73GB1J332J | CHIP R 3.3K J 1/16W | K2 |
| R113 | | | RK73GB1J100J | CHIP R 10 J 1/16W | | R173 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | K3,M3 |
| R114 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | | R173 | | | RK73GB1J822J | CHIP R 8.2K J 1/16W | K,M |
| R115 | | | RK73GB1J223J | CHIP R 22K J 1/16W | | R174 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| R116 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | R175 | | | RK73GB1J682J | CHIP R 6.8K J 1/16W | |
| R117 | | | RK73GB1J221J | CHIP R 220 J 1/16W | | R176 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| R118 | | | RK73GB1J681J | CHIP R 680 J 1/16W | | R177 | | | R92-1214-05 | CHIP R 120 J 1/2W | |
| R119 | | | RK73GB1J222J | CHIP R 2.2K J 1/16W | | R178 | | | RK73GB1J822J | CHIP R 8.2K J 1/16W | |
| R120 | | | R92-1252-05 | CHIP R 0 OHM | | R179 | | | RK73GB1J273J | CHIP R 27K J 1/16W | |
| R121 | | | RK73GB1J100J | CHIP R 10 J 1/16W | | R180 | | | RK73GB1J272J | CHIP R 2.7K J 1/16W | K2,K3,M3 |
| R122 | | | R92-1215-05 | CHIP R 470 J 1/2W | | R180,181 | | | RK73GB1J562J | CHIP R 5.6K J 1/16W | K,M |
| R123 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | | R181 | | | RK73GB1J103J | CHIP R 10K J 1/16W | K3,M3 |
| R124 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R181 | | | RK73GB1J332J | CHIP R 3.3K J 1/16W | K2 |
| R125 | | | RK73GB1J333J | CHIP R 33K J 1/16W | | R182 | | | R92-0670-05 | CHIP R 0 OHM | |
| R126 | | | RK73GB1J471J | CHIP R 470 J 1/16W | | R184 | | | R92-1252-05 | CHIP R 0 OHM | K,K2,M |
| R127,128 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R185 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R129 | | | RK73GB1J331J | CHIP R 330 J 1/16W | | R186 | | | RK73GB1J100J | CHIP R 10 J 1/16W | K,K2,M |
| R130 | | | RK73GB1J152J | CHIP R 1.5K J 1/16W | | R186 | | | R92-1252-05 | CHIP R 0 OHM | K3,M3 |
| R131 | | | RK73GB1J681J | CHIP R 680 J 1/16W | | R187 | | | RK73GB1J220J | CHIP R 22 J 1/16W | |
| R132 | | | RK73FB2A120J | CHIP R 12 J 1/10W | K2 | R188 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R132 | | | R92-0670-05 | CHIP R 0 OHM | K,K3,M | R189 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| R132 | | | R92-0670-05 | CHIP R 0 OHM | M3 | R190 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R133-136 | | | R92-1252-05 | CHIP R 0 OHM | | R192 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| R138 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | | R193 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R139 | | | R92-0699-05 | CHIP R 10 J 1/2W | K,M | R196 | | | RK73GB1J332J | CHIP R 3.3K J 1/16W | |
| R140 | | | RK73FB2A2R2J | CHIP R 2.2 J 1/10W | | R197 | | | R92-1252-05 | CHIP R 0 OHM | |
| R141 | | | R92-0685-05 | CHIP R 22 J 1/2W | K3,M3 | R198 | | | RK73GB1J104J | CHIP R 100K J 1/16W | |
| R141 | | | R92-1212-05 | CHIP R 27 J 1/2W | K2 | R199 | | | R92-1252-05 | CHIP R 0 OHM | K2 |
| R142 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | R199-202 | | | R92-1252-05 | CHIP R 0 OHM | K,K3,M |
| R143 | | | RK73GB1J101J | CHIP R 100 J 1/16W | | R199-202 | | | R92-1252-05 | CHIP R 0 OHM | M3 |
| R144 | | | RK73GB1J222J | CHIP R 2.2K J 1/16W | | R201,202 | | | R92-1252-05 | CHIP R 0 OHM | K2 |
| R145,146 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | R207 | | | R92-1252-05 | CHIP R 0 OHM | |
| R147 | | | RK73GB1J683J | CHIP R 68K J 1/16W | | R208 | | | R92-0670-05 | CHIP R 0 OHM | |
| R148 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R210 | | | R92-1252-05 | CHIP R 0 OHM | |
| R149 | | | RK73GB1J101J | CHIP R 100 J 1/16W | K2 | R219 | | | R92-1252-05 | CHIP R 0 OHM | |
| R149 | | | RK73GB1J151J | CHIP R 150 J 1/16W | K,K3,M | R221 | | | R92-1252-05 | CHIP R 0 OHM | |
| R149 | | | RK73GB1J151J | CHIP R 150 J 1/16W | M3 | R228,229 | | | R92-0670-05 | CHIP R 0 OHM | K2 |
| R150 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R230 | | | R92-1252-05 | CHIP R 0 OHM | K2 |
| R151 | | | RK73FB2A102J | CHIP R 1.0K J 1/10W | K,M | R501 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R151 | | | RK73FB2A331J | CHIP R 330 J 1/10W | K2,K3,M3 | R502 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| R152 | | | R92-1252-05 | CHIP R 0 OHM | | R503 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R153 | | | R92-0670-05 | CHIP R 0 OHM | | R504-507 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R154 | | | RK73GB1J152J | CHIP R 1.5K J 1/16W | | R508 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R155 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R509,510 | | | R92-1252-05 | CHIP R 0 OHM | |
| R156 | | | RK73FB2A180J | CHIP R 18 J 1/10W | K2,K3,M3 | R511 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R156 | | | RK73FB2A5R6J | CHIP R 5.6 J 1/10W | K,M | R512 | | | RK73GB1J104J | CHIP R 100K J 1/16W | |
| R158 | | | R92-0670-05 | CHIP R 0 OHM | | R513 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| R159 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | R514 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R160 | | | RK73FB2A102J | CHIP R 1.0K J 1/10W | K,M | R515,516 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| R160 | | | RK73FB2A331J | CHIP R 330 J 1/10W | K2,K3,M3 | R517 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R161,162 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R518 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| R163 | | | R92-0670-05 | CHIP R 0 OHM | | R519 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| R164 | | | R92-1215-05 | CHIP R 470 J 1/2W | | R520-523 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R166 | | | RK73GB1J151J | CHIP R 150 J 1/16W | K,K3,M | R526 | | | RK73GB1J154J | CHIP R 150K J 1/16W | |
| R166 | | | RK73GB1J151J | CHIP R 150 J 1/16W | M3 | R527 | | | R92-1252-05 | CHIP R 0 OHM | |
| R166 | | | RK73GB1J181J | CHIP R 180 J 1/16W | K2 | R528 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| R169 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R529 | | | RK73GB1J154J | CHIP R 150K J 1/16W | |

PARTS LIST

TX-RX UNIT (X57-5960-XX)

| Ref. No. | Address | New parts | Parts No. | Description | Destination | Ref. No. | Address | New parts | Parts No. | Description | Destination |
|----------|---------|-----------|--------------|---------------------|-------------|----------|---------|-----------|--------------|----------------------------|-------------|
| R530 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | R593 | | | RK73GB1J181J | CHIP R 180 J 1/16W | |
| R531 | | | RK73GB1J394J | CHIP R 390K J 1/16W | | R594 | | | RK73GB1J392J | CHIP R 3.9K J 1/16W | |
| R532 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R595 | | | RK73GB1J181J | CHIP R 180 J 1/16W | |
| R533 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R598 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R534 | | | RK73GB1J823J | CHIP R 82K J 1/16W | | R599 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R535 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R600 | | | R92-1252-05 | CHIP R 0 OHM | |
| R536 | | | RK73GB1J153J | CHIP R 15K J 1/16W | | R602 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R537 | | | RK73GB1J105J | CHIP R 1.0M J 1/16W | | R603 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| R538 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R604 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| R539 | | | R92-1252-05 | CHIP R 0 OHM | | R605 | | | RK73GB1J332J | CHIP R 3.3K J 1/16W | |
| R540 | | | RK73GB1J223J | CHIP R 22K J 1/16W | | R606 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | |
| R541 | | | RK73GB1J184J | CHIP R 180K J 1/16W | | R607 | | | RK73GB1J101J | CHIP R 100 J 1/16W | |
| R542 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | | R608 | | | RK73GB1J122J | CHIP R 1.2K J 1/16W | |
| R543 | | | RK73GB1J184J | CHIP R 180K J 1/16W | | R610,611 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R544 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R612 | | | R92-1201-05 | CHIP R 220 J 1/2W | |
| R545 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | | R613 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| R546 | | | RN73GH1J913D | CHIP R 91K D 1/16W | | R614,615 | | | R92-1252-05 | CHIP R 0 OHM | |
| R547 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | R616 | | | RK73GB1J474J | CHIP R 470K J 1/16W | |
| R548 | | | RN73GH1J333D | CHIP R 33K D 1/16W | | R617 | | | RK73GB1J472J | CHIP R 4.7K J 1/16W | |
| R549 | | | RN73GH1J913D | CHIP R 91K D 1/16W | | R618 | | | RK73GB1J683J | CHIP R 68K J 1/16W | |
| R550 | | | RN73GH1J683D | CHIP R 68K D 1/16W | | R619 | | | RK73GB1J104J | CHIP R 100K J 1/16W | |
| R551,552 | | | RK73GB1J223J | CHIP R 22K J 1/16W | | R620,621 | | | RK73GB1J103J | CHIP R 10K J 1/16W | |
| R553 | | | RK73GB1J105J | CHIP R 1.0M J 1/16W | | R622 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R554 | | | RN73GH1J913D | CHIP R 91K D 1/16W | | R630 | | | R92-1252-05 | CHIP R 0 OHM | |
| R555,556 | | | RK73GB1J104J | CHIP R 100K J 1/16W | | R701 | | | RK73GB1J473J | CHIP R 47K J 1/16W | |
| R557 | | | RN73GH1J274D | CHIP R 270K D 1/16W | | R704 | | | RK73GB1J223J | CHIP R 22K J 1/16W | |
| R558 | | | R92-1252-05 | CHIP R 0 OHM | | R720 | | | R92-1252-05 | CHIP R 0 OHM | |
| R559 | | | RK73GB1J333J | CHIP R 33K J 1/16W | | R722 | | | R92-1252-05 | CHIP R 0 OHM | |
| R560 | | | RK73GB1J474J | CHIP R 470K J 1/16W | | D1 | | | HSB123 | DIODE | |
| R561 | | | RK73GB1J333J | CHIP R 33K J 1/16W | | D2 | | | 02DZ20(Y,Z) | ZENER DIODE | |
| R562 | | | R92-1252-05 | CHIP R 0 OHM | | D3-5 | | | HSB123 | DIODE | |
| R563 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | D8 | | | DAN235K | DIODE | |
| R564 | | | RK73GB1J223J | CHIP R 22K J 1/16W | | D9 | | | 1SS355 | DIODE | |
| R565 | | | R92-1252-05 | CHIP R 0 OHM | | D10 | | | DAN235K | DIODE | |
| R566 | | | RK73GB1J563J | CHIP R 56K J 1/16W | | D11 | | | MA742 | DIODE | |
| R567 | | | RK73GB1J334J | CHIP R 330K J 1/16W | | D14 | | | 1SS355 | DIODE | |
| R568 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | D15 | | | DAN202K | DIODE | |
| R569 | | | RK73GB1J102J | CHIP R 1.0K J 1/16W | | D16 | | | DAN235K | DIODE | K2,K3,M3 |
| R570 | | | RK73GB1J155J | CHIP R 1.5M J 1/16W | | D16 | | | HVC131 | DIODE | K,M |
| R571 | | | RN73GH1J682D | CHIP R 6.8K D 1/16W | | D17 | | | HSB123 | DIODE | |
| R572 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | D18 | | | 1SV280 | VARIABLE CAPACITANCE DIODE | |
| R573 | | | RK73GB1J474J | CHIP R 470K J 1/16W | | D19,20 | | | 1SS355 | DIODE | |
| R574 | | | RN73GH1J683D | CHIP R 68K D 1/16W | | D21 | | | 02DZ18(X,Y) | ZENER DIODE | |
| R575 | | | RK73GB1J101J | CHIP R 100 J 1/16W | | D23 | | | 1SV280 | VARIABLE CAPACITANCE DIODE | |
| R576 | | | RK73GB1J224J | CHIP R 220K J 1/16W | | D24 | | | 02DZ15(X,Y) | ZENER DIODE | |
| R577 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | D25 | | | 22ZR-10D | SURGE ABSORBER | |
| R578 | | | RN73GH1J682D | CHIP R 6.8K D 1/16W | | D26 | | | DSA3A1-FK | DIODE | |
| R579 | | | RK73GB1J223J | CHIP R 22K J 1/16W | | D27 | | | 1SS355 | DIODE | |
| R580 | | | R92-1252-05 | CHIP R 0 OHM | | D28 | | | 1SV280 | VARIABLE CAPACITANCE DIODE | |
| R581 | | | RK73GB1J394J | CHIP R 390K J 1/16W | | D30 | | | MA4PH633 | DIODE | |
| R582 | | | RK73GB1J273J | CHIP R 27K J 1/16W | | D31 | | | 1SV280 | VARIABLE CAPACITANCE DIODE | |
| R583 | | | RK73GB1J470J | CHIP R 47 J 1/16W | | D33,34 | | | XB15A709 | DIODE | |
| R584 | | | RK73GB1J220J | CHIP R 22 J 1/16W | | D35,36 | | | MA742 | DIODE | |
| R585 | | | R92-1252-05 | CHIP R 0 OHM | | D37 | | | MA4PH633 | DIODE | |
| R586 | | | RK73GB1J473J | CHIP R 47K J 1/16W | | D39 | | | UDZ4.7(B) | ZENER DIODE | |
| R587 | | | R92-1252-05 | CHIP R 0 OHM | | D40 | | | MA742 | DIODE | |
| R588 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | D41 | | | 1SS355 | DIODE | |
| R590 | | | RK73GB1J333J | CHIP R 33K J 1/16W | | D42 | | | HZU5ALL | DIODE | |
| R591 | | | R92-1252-05 | CHIP R 0 OHM | | D54 | | | HVC131 | DIODE | K,M |
| R592 | | | RK73GB1J103J | CHIP R 10K J 1/16W | | | | | | | |

TK-860HG : K,K2,K3,M,M3

TK-862HG : K

TK-860HG/862HG

PARTS LIST

TX-RX UNIT (X57-5960-XX)

PLL/VCO (X58-4670-XX)

| Ref. No. | Address | New parts | Parts No. | Description | Destination | Ref. No. | Address | New parts | Parts No. | Description | Destination | | |
|----------|---------|-----------|----------------|-----------------------------------|-------------|---|---------|---------------|--------------------|--------------------|-------------|---|----------------------------|
| D501-504 | | | MA2S111 | DIODE | 862 | Q26 | | | DTA114EKA | DIGITAL TRANSISTOR | | | |
| D505 | | | MA2S111 | DIODE | | Q27 | | | 2SC2954 | TRANSISTOR | | | |
| D506,507 | | | MA2S111 | DIODE | | Q28 | | | 2SB1132(Q,R) | TRANSISTOR | | | |
| D508 | | | MA742 | DIODE | | Q29 | | | DTC114EKA | DIGITAL TRANSISTOR | | | |
| D523 | | | DAN202U | DIODE | | Q31 | | | 2SC2412K | TRANSISTOR | | | |
| D524,525 | | | HSB123 | DIODE | | Q32 | | | 2SB1565(E,F) | TRANSISTOR | | | |
| D526 | | | 1812L075PR | VARISTOR | | Q33 | | | DTC114EKA | DIGITAL TRANSISTOR | | | |
| D527,528 | | | HSB123 | DIODE | | Q34 | | | 3SK228 | FET | | | |
| D529 | | | MA742 | DIODE | | Q35 | | | DTC144EKA | DIGITAL TRANSISTOR | | | |
| IC1,2 | | | TA75S01F | IC (OP AMP) | | Q36 | | | 2SC2412K | TRANSISTOR | | | |
| IC3 | | | MB15A02 | IC (PLL) | | Q37,38 | | | 2SK1824 | FET | | | |
| IC4 | | | NJM4558M | IC (OP AMP X2) | | Q501 | | | 2SC4619 | TRANSISTOR | | | |
| IC5 | | | TA31136FN | IC (FM IF DETECTOR) | | Q502,503 | | | DTC114EE | DIGITAL TRANSISTOR | | | |
| IC6 | | | M62363FP | IC (8BIT D/A CONVERTER) | | Q504 | | | 2SC4617(S) | TRANSISTOR | | | |
| IC7 | | | NJM2904M | IC (OP AMP X2) | | Q505 | | | 2SB1132(Q,R) | TRANSISTOR | | | |
| IC9 | | | BU4094BCF | IC (S-STAGE SHIFT STORE REGISTER) | Q506 | | | DTC114EE | DIGITAL TRANSISTOR | | | | |
| IC10 | | | NJM78L05UA | IC (VOLTAGE REGULATOR/ +5V) | Q508 | | | 2SC4617(S) | TRANSISTOR | | | | |
| IC11 | | | AN8009M | IC (REGULATOR) | Q509 | | | DTC363EU | DIGITAL TRANSISTOR | | | | |
| IC12 | | | TA7808S | IC (REGULATOR) | TH1 | | | 157-153-65001 | THERMISTOR | | | | |
| IC13 | | | LA4422 | IC (AF POWER AMP/ 5.8W) | | | | | | | | | |
| IC14 | | | TC4013BF(N) | IC (MEMORY) | | | | | | | | | |
| IC15 | | | TA75S01F | IC (OP AMP) | | | | | | | | | |
| IC400 | 2C,2F | | M68769H-22 | IC (POWER MODULE) | | | | | | | | | |
| IC400 | 2C | | M68769L | IC (POWER MODULE) | | | | | | | | | |
| IC400 | 2C | | M68769SH | IC (POWER MODULE) | | | | | | | | | |
| 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) | | | | | | | | | |
| 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 | | | | | | | | | |
| | | | | | | PLL/VCO (X58-4670-XX) -12 : K,M -13 : K2 -14 : K3,M3 | | | | | | | |
| | | | | | | C102 | | | CK73GB1H471K | CHIP C | 470PF | K | |
| | | | | | | C104 | | | CC73GCH1H060D | CHIP C | 6.0PF | D | K,M |
| | | | | | | C104 | | | CC73GCH1H070D | CHIP C | 7.0PF | D | K2 |
| | | | | | | C104 | | | CC73GCH1H080D | CHIP C | 8.0PF | D | K3,M3 |
| | | | | | | C105 | | | CC73GCH1H070D | CHIP C | 7.0PF | D | K,K3,M |
| | | | | | | C105 | | | CC73GCH1H070D | CHIP C | 7.0PF | D | M3 |
| | | | | | | C105 | | | CC73GCH1H080D | CHIP C | 8.0PF | D | K2 |
| | | | | | | C107 | | | CC73GCH1H030B | CHIP C | 3.0PF | B | K,M |
| | | | | | | C107 | | | CC73GCH1H040B | CHIP C | 4.0PF | B | K2,K3,M3 |
| | | | | | | C108 | | | CC73GCH1HR75B | CHIP C | 0.75PF | B | |
| | | | | | | C110 | | | CC73GCH1H040B | CHIP C | 4.0PF | B | K3,M3 |
| | | | | | | C110 | | | CC73GCH1H060D | CHIP C | 6.0PF | D | K,K2,M |
| | | | | | | C111 | | | CC73GCH1H050B | CHIP C | 5.0PF | B | |
| | | | | | | C112 | | | CC73GCH1H1R5B | CHIP C | 1.5PF | B | |
| | | | | | | C113 | | | CC73GCH1H010B | CHIP C | 1.0PF | B | K,K2,M |
| | | | | | | C113 | | | CC73GCH1H020B | CHIP C | 2.0PF | B | K3,M3 |
| | | | | | | C114 | | | CC73GCH1H040B | CHIP C | 4.0PF | B | K,M |
| | | | | | | C114 | | | CC73GCH1H050B | CHIP C | 5.0PF | B | K2,K3,M3 |
| | | | | | | C115 | | | CC73GCH1H060D | CHIP C | 6.0PF | D | K,M |
| | | | | | | C115 | | | CC73GCH1H070D | CHIP C | 7.0PF | D | K2,K3,M3 |
| | | | | | | C116 | | | CC73GCH1H050B | CHIP C | 5.0PF | B | K,K2,M |
| | | | | | | C116 | | | CC73GCH1H060D | CHIP C | 6.0PF | D | K3,M3 |
| | | | | | | 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 (10PF) |
| | | | | | | CN101 | | | E40-6019-05 | | | | PIN ASSY |
| | | | | | | - | | | F10-2279-04 | | | | SHIELDING CASE |

PARTS LIST

PLL/VCO (X58-4670-XX)

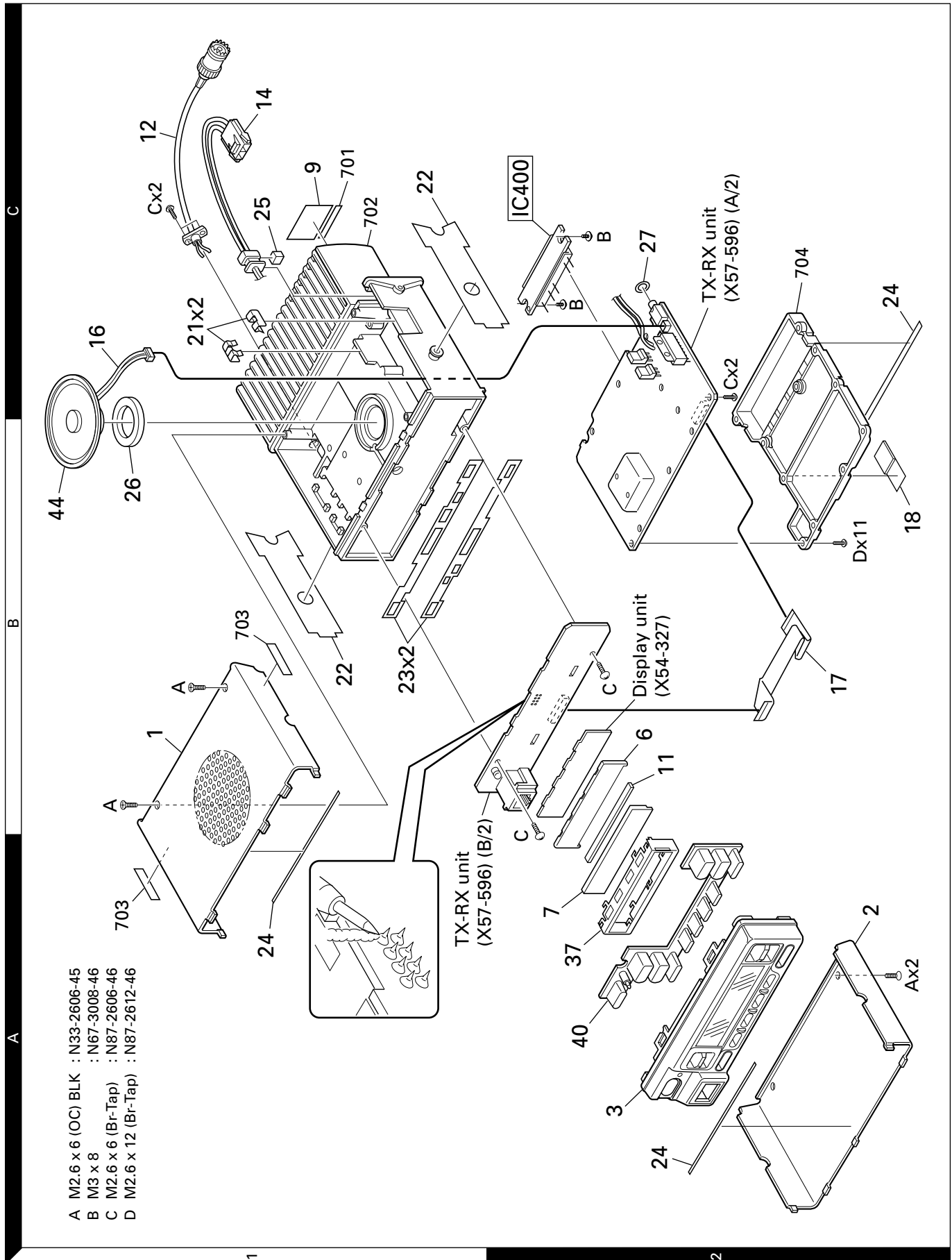
| Ref. No. | Address | New parts | Parts No. | Description | Destination | Ref. No. | Address | New parts | Parts No. | Description | Destination |
|----------|---------|-----------|---------------|------------------------------|-------------|----------|---------|-----------|-----------|-------------|-------------|
| 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) | | | | | | | |
| L111 | | | L34-4547-05 | AIR-CORE COIL | K2 | | | | | | |
| L112 | | | L34-4548-05 | AIR-CORE COIL | K,M | | | | | | |
| L112 | | | L34-4549-05 | AIR-CORE COIL | K3,M3 | | | | | | |
| L115 | | | L34-4546-05 | AIR-CORE COIL | K2 | | | | | | |
| L115 | | | L34-4547-05 | AIR-CORE COIL | K,M | | | | | | |
| L116 | | | L34-4548-05 | AIR-CORE COIL | K3,M3 | | | | | | |
| 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 | K3,M3 | | | | | | |
| R112,113 | | | RK73GB1J221J | CHIP R 220 J 1/16W | K,K2,M | | | | | | |
| R113 | | | RK73GB1J221J | CHIP R 220 J 1/16W | K3,M3 | | | | | | |
| 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 | | | | | | | |

TK-860HG : K,K2,K3,M,M3

TK-862HG : K

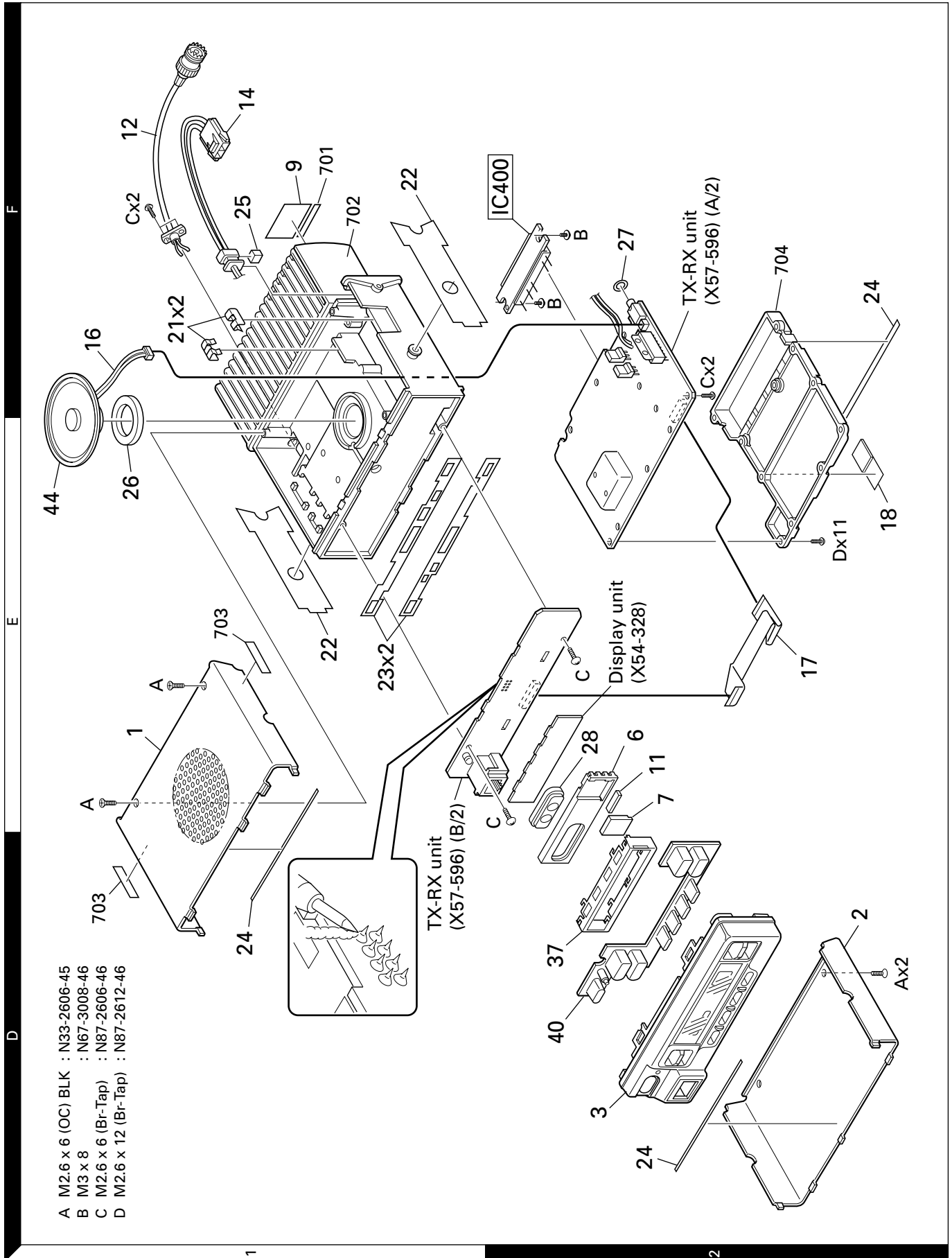
TK-860HG/862HG

EXPLODED VIEW (TK-860HG)



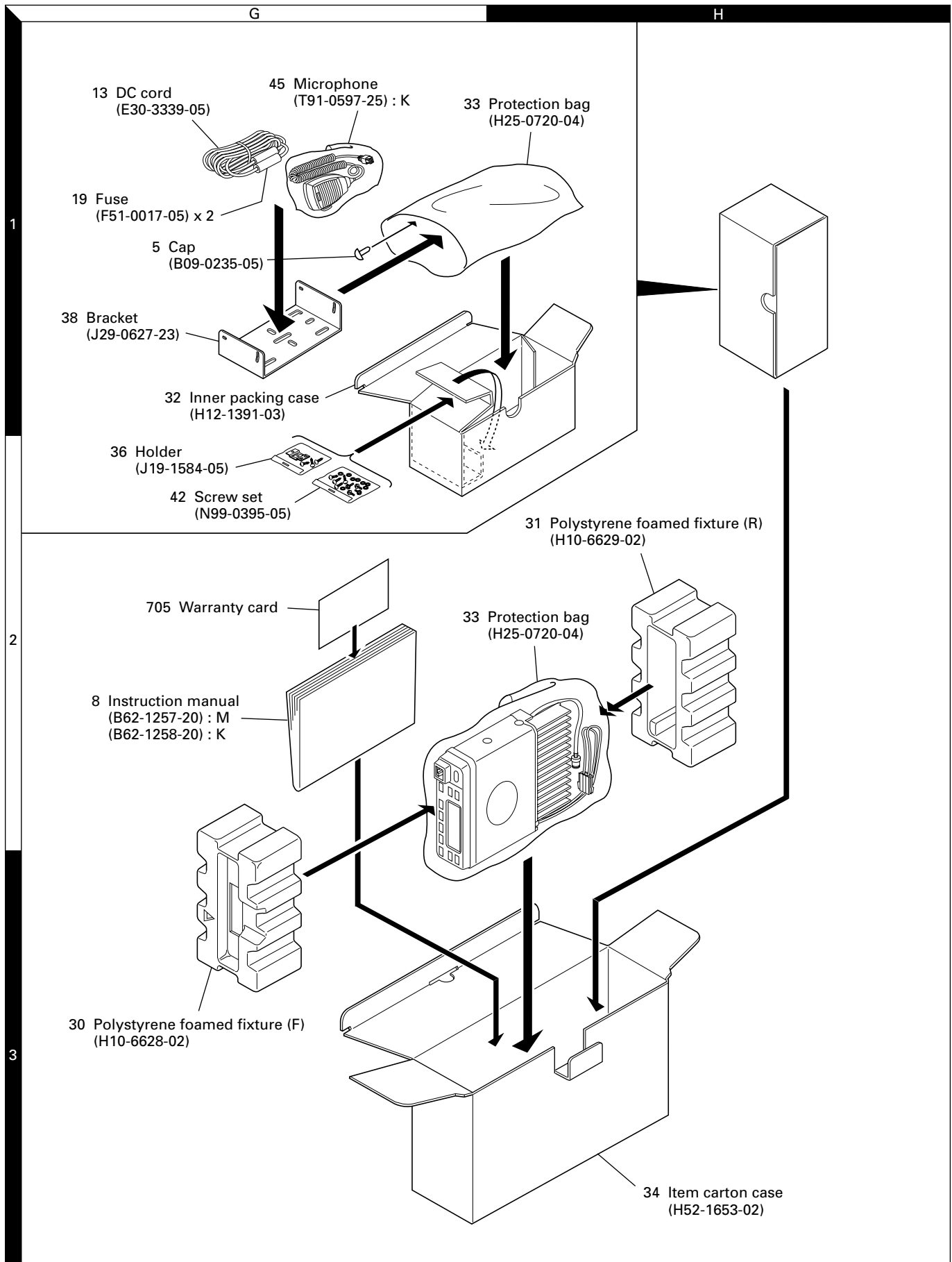
TK-860HG/862HG

EXPLODED VIEW (TK-862HG)



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

PACKING



ADJUSTMENT

Test Mode (TK-860HG 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-860HG (K,M)/862HG (K) | | TK-860HG (K2) | |
|-------------|--------------------------|---------|---------------|---------|
| | RX | TX | RX | TX |
| 1 (Center) | 470.050 | 470.100 | 489.550 | 498.600 |
| 2 (Low) | 450.050 | 450.100 | 485.050 | 485.100 |
| 3 (High) | 489.950 | 489.900 | 511.950 | 511.900 |
| 4 | 470.000 | 470.000 | 498.500 | 498.500 |
| 5 | 470.200 | 470.200 | 498.700 | 498.700 |
| 6 | 470.400 | 470.400 | 498.900 | 498.900 |
| 7~16 | - | - | - | - |

| Channel No. | TK-860HG (K3,M3) | |
|-------------|------------------|---------|
| | RX | TX |
| 1 (Center) | 415.050 | 415.100 |
| 2 (Low) | 400.050 | 400.100 |
| 3 (High) | 429.950 | 429.900 |
| 4 | 415.000 | 415.000 |
| 5 | 415.200 | 415.200 |
| 6 | 415.400 | 415.400 |
| 7~16 | - | - |

• Signalling

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

• Preparations for tuning the transceiver

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

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

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

• Transceiver tuning

(To place transceiver in tuning mode)

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

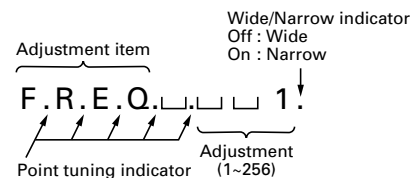
LCD display (Test mode)



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

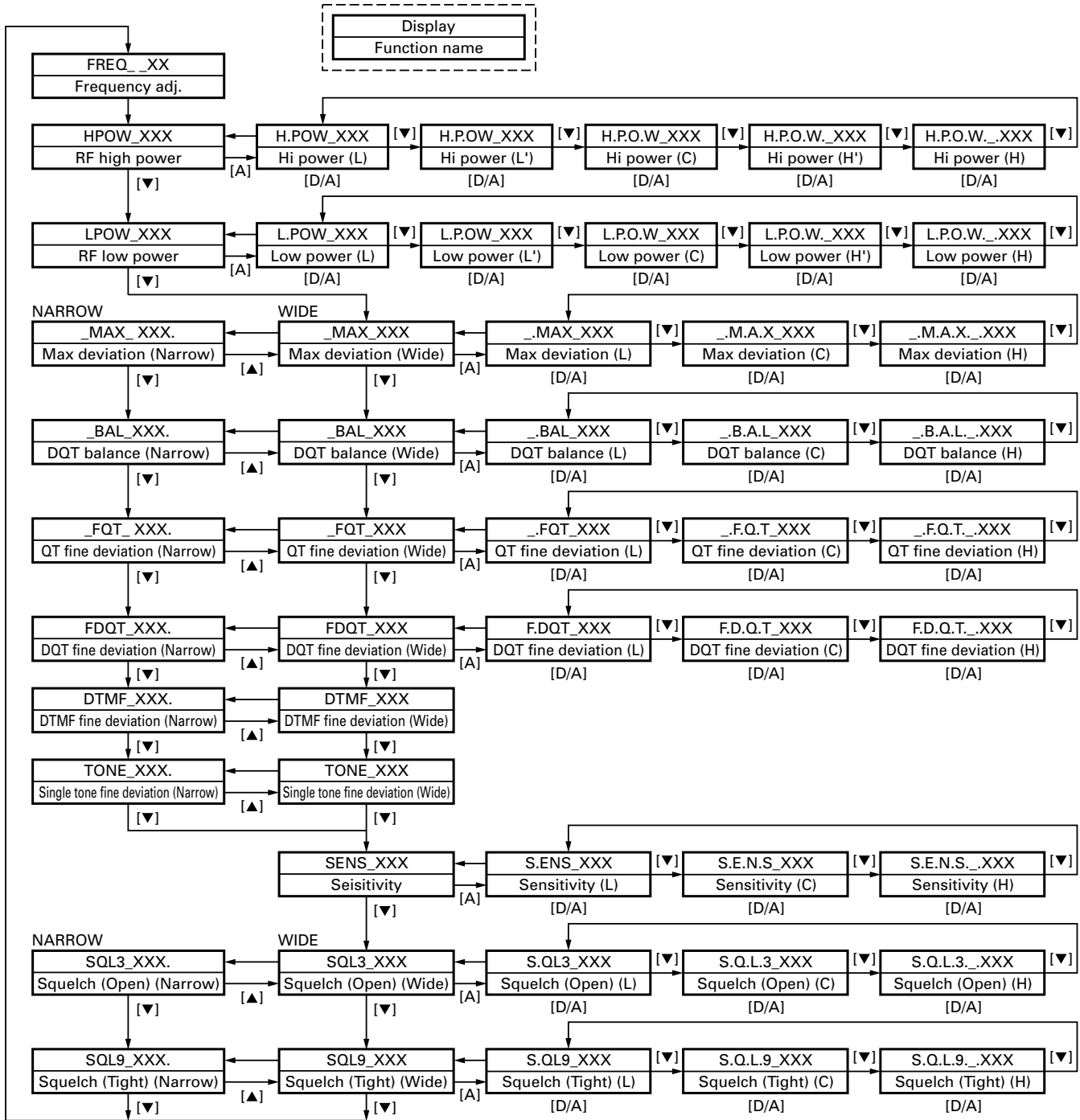
Use [▼] button to select the adjustment item through tuning modes. Use [A] button to adjust 3-point or 5-point tuning, and use [▲] button to switch between wide/narrow.

LCD display (Tuning mode)



ADJUSTMENT

■ Tuning Mode

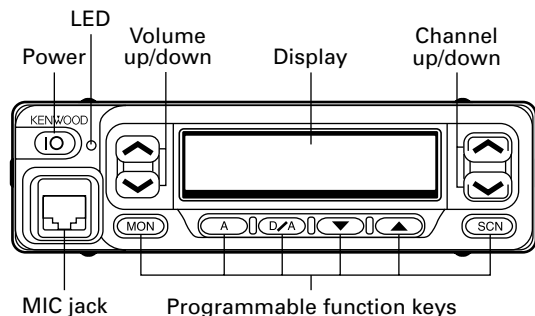


TK-860HG/862HG

ADJUSTMENT

Adjustment Location

■ Switch (TK-860HG)



■ Note

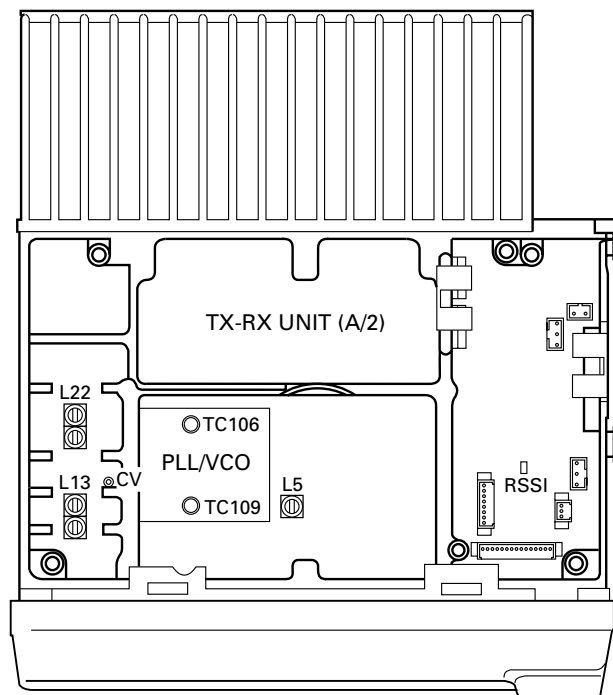
• Flash memory

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



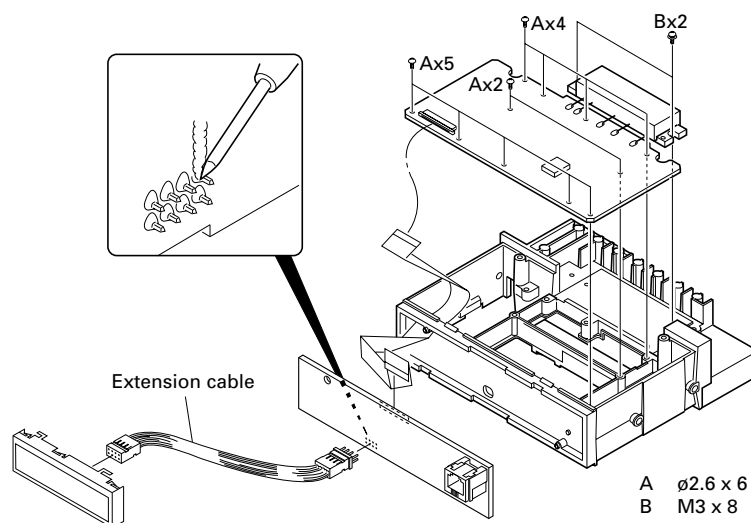
■ Repair Jig

• Chassis

Use jig (Part No. : A10-4010-02) for repairing the TK-860HG/862HG. 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-862HG cannot be tuned from the panel, the FPU (KPG-56D) should be used for adjustment.


| Item | Condition | Measurement | | | Adjustment | | | Specifications/Remarks |
|---------------------------|-------------------------------------|---|----------------|----------|------------|------------------------|--------------|------------------------|
| | | Test-equipment | Unit | Terminal | Unit | Parts | Method | |
| 1. PLL lock voltage RX | 1) Set test mode CH : CH3 - Sig1 | DVM Power meter F. conter | TX-RX (A/2) | CV | PLL | TC106 | 7.5V | ±0.1V |
| | TX | | | | | 2) PTT : ON (Transmit) | TC109 | |
| | RX | 3) CH : CH2 - Sig1 AUX : ON (talk-around mode) | | | | 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 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 K,M : 511.950MHz K2 : 429.950MHz K3,M3 SSG output : -116dBm/0.35μV SSG MOD : 3kHz AF output : 1V/4Ω | SSG AF VTVM Distortion meter Oscilloscope AG DVM | Rear panel | ANT ACC (EXT.SP) RSSI | TX-RX (A/2) | L13 L22 | RSSI voltage maximum. | |
| | 2) "S.ENS" Adjust [***] SSG freq' : 450.050MHz K,M : 485.050MHz K2 : 400.050MHz K3,M3 | | | | Front panel | CH  | RSSI voltage maximum. | |
| | 3) "S.E.N.S." Adjust [***] SSG freq' : 470.050MHz K,M : 498.550MHz K2 : 415.050MHz K3,M3 | | | | | | | |
| 3. Squelch 3 • Wide | 1) Set test mode Select "SQL3" in tuning mode. "S.QL3" Adjust [***] SSG freq' : 450.050MHz K,M : 485.050MHz K2 : 400.050MHz K3,M3 SSG output : -125dBm/0.12μV SSG MOD : 3kHz (Wide) 1.5kHz (Narrow) | | | | | | Adjust to the squelch threshold point. | |

TK-860HG/862HG

ADJUSTMENT

| Item | Condition | Measurement | | | Adjustment | | | Specifications/Remarks |
|------------------------|--|---|---------------|----------------------------|----------------|--|--|--|
| | | Test-equipment | Unit | Terminal | Unit | Parts | Method | |
| | 2) "S.O.L.3" Adjust [***] SSG freq' : 470.050MHz K,M : 498.550MHz K2 : 415.050MHz K3,M3 | SSG AF VTVM Distortion meter Oscilloscope AG | Rear panel | ANT ACC (EXT.SP) | Front panel | CH  | Adjust to the squelch threshold point. | |
| | 3) "S.O.L.3._" Adjust [***] SSG freq' : 489.950MHz K,M : 511.950MHz K2 : 429.950MHz K3,M3 | | | | | | | |
| • Narrow | 4) "SQL3***," Adjust [***] SSG freq' : 470.050MHz K,M : 498.550MHz K2 : 415.050MHz K3,M3 | | | | | | | |
| 4. Squelch 9 • Wide | 1) Set test mode Select "SQL9" in tuning mode. "S.QL9" Adjust [***] SSG freq' : 450.050MHz K,M : 485.050MHz K2 : 400.050MHz K3,M3 SSG output : -115dBm/0.4μV SSG MOD : 3kHz (Wide) 1.5kHz (Narrow) | | | | | | | |
| | 2) "S.O.L.9" Adjust [***] SSG freq' : 470.050MHz K,M : 498.550MHz K2 : 415.050MHz K3,M3 | | | | | | | |
| | 3) "S.O.L.9._" Adjust [***] SSG freq' : 489.950MHz K,M : 511.950MHz K2 : 429.950MHz K3,M3 | | | | | | | |
| • Narrow | 4) "SQL9***," Adjust [***] SSG freq' : 470.050MHz K,M : 498.550MHz K2 : 415.050MHz K3,M3 | | | | | | | |
| 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. |




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 K,M 498.600MHz±100Hz K2 415.100MHz±100Hz K2,M3 |
| 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.O.W" PTT : ON Adjust [***] | | | | | | | |
| | 3) "H.P.O.W" PTT : ON Adjust [***] | | | | | | | |
| | 4) "H.P.O.W." PTT : ON Adjust [***] | | | | | | | |
| | 5) "H.P.O.W._." PTT : ON Adjust [***] | | | | | | | |
| 4. Low power | 1) Set test mode Select "LPOW" in tuning mode. "L.POW" PTT : ON Adjust [***] | Power mete | | | | | 10.0W | ±1.0W |
| | 2) "L.P.O.W" 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 | Rear panel | ANT DC IN | | | Check | 40W±2W, 12A or less |

TK-860HG/862HG

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 | Rear panel | ANT | Front panel | CH  | Make the de-modulation waveform neat. | (Wide/Narrow)  |
| | 2) "_.B.A.L." PTT : ON Adjust [***] | AF VTVM AG | Front panel | MIC | | | | |
| | 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 sensitivity check | 1) Set test mode CH : CH1 - Sig1 AG : 1kHz/5mV PTT : ON Adjust [***] | | | | | | Check | ±3kHz±0.2kHz (Wide) ±1.5kHz±0.05kHz (Narrow) |
| 9. QT deviation • Wide | 1) Set test mode Select "FQT" in tuning mode. "_.FQT" Deviation meter filter LPF : 3kHz HPF : OFF PTT : ON Adjust [***] | | | | Front panel | CH  | 0.75kHz | ±50Hz (Wide/Narrow) |

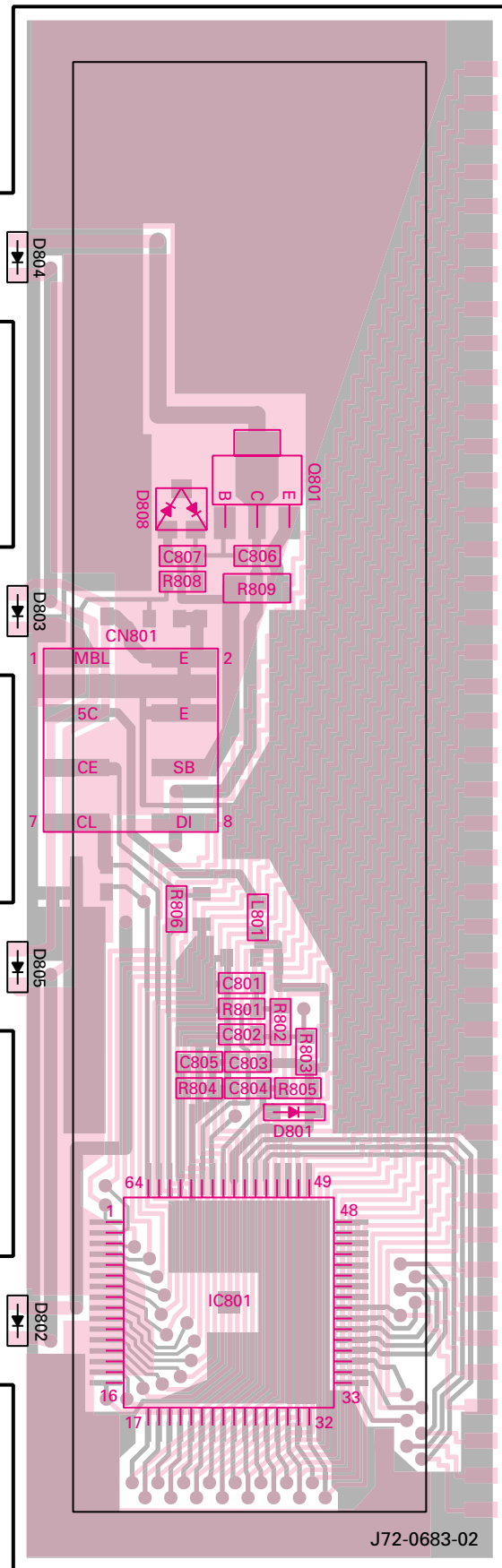
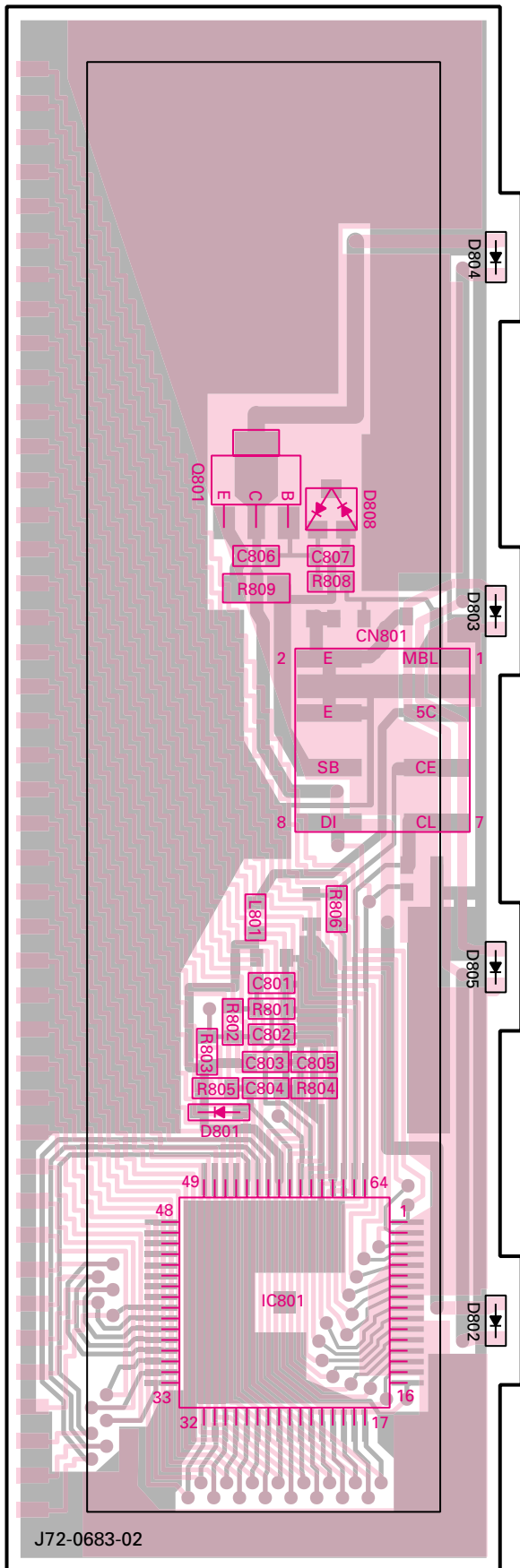
ADJUSTMENT

| 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 | |

TK-860HG/862HG PC BOARD VIEWS

DISPLAY UNIT (X54-3270-10) : TK-860HG
Component side view

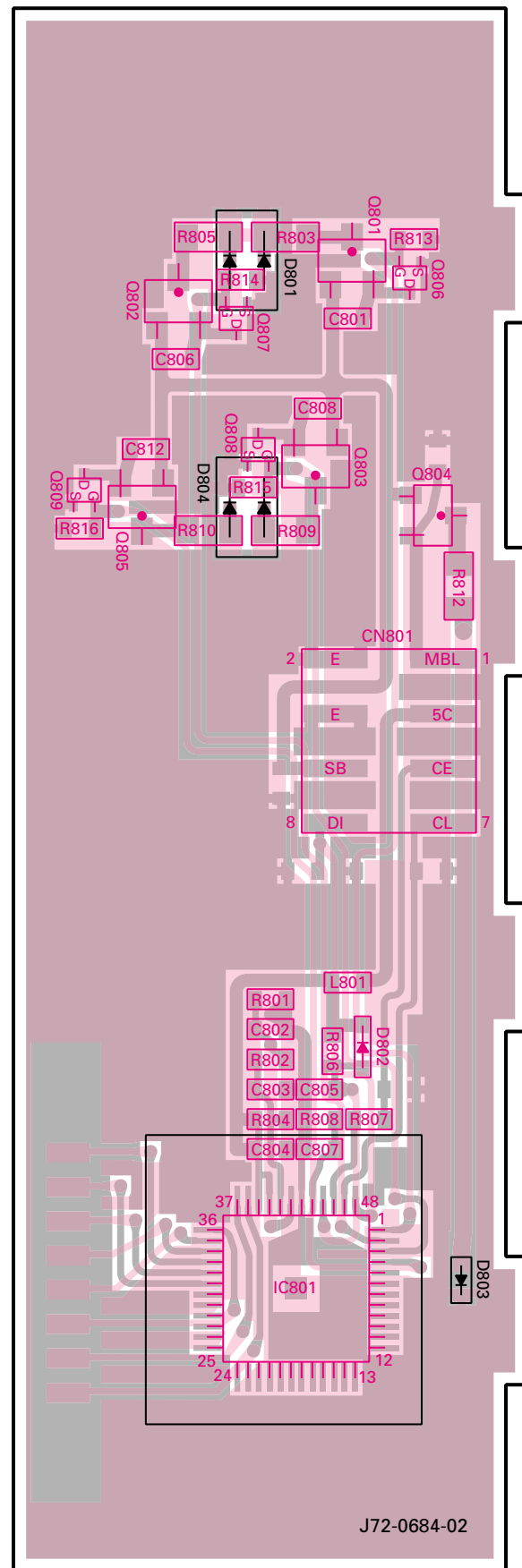
DISPLAY UNIT (X54-3270-10) : TK-860HG
Foil side view



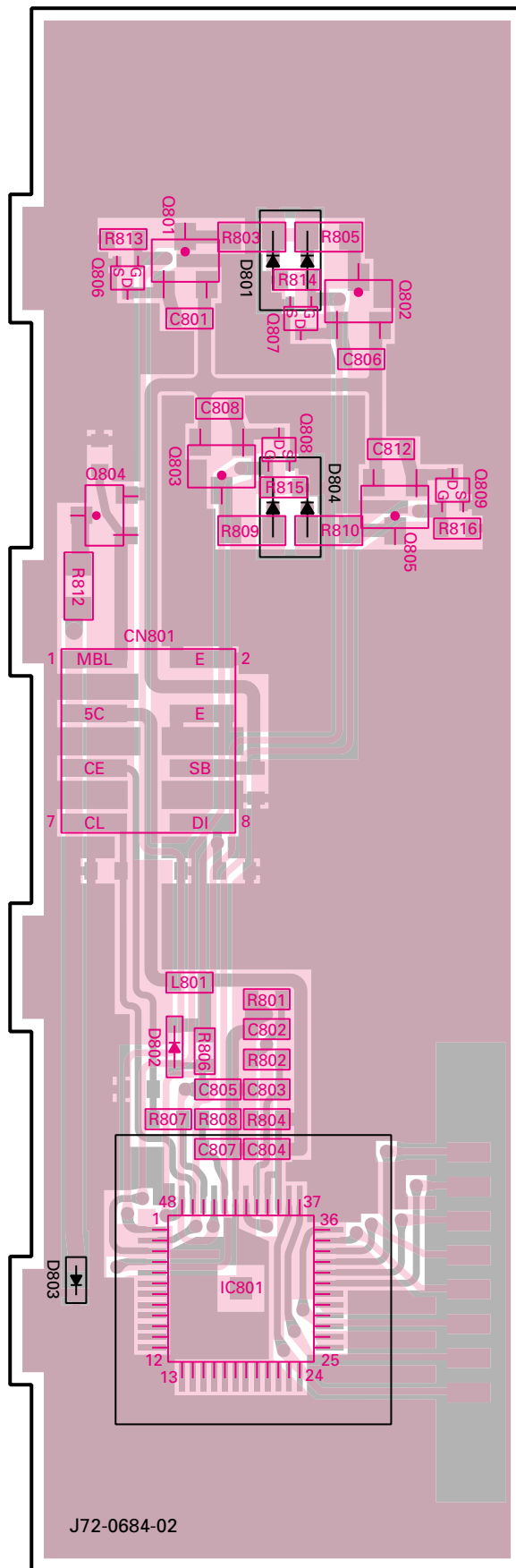
Component side Foil side

PC BOARD VIEWS TK-860HG/862HG

DISPLAY UNIT (X54-3280-10) : TK-862HG
Component side view

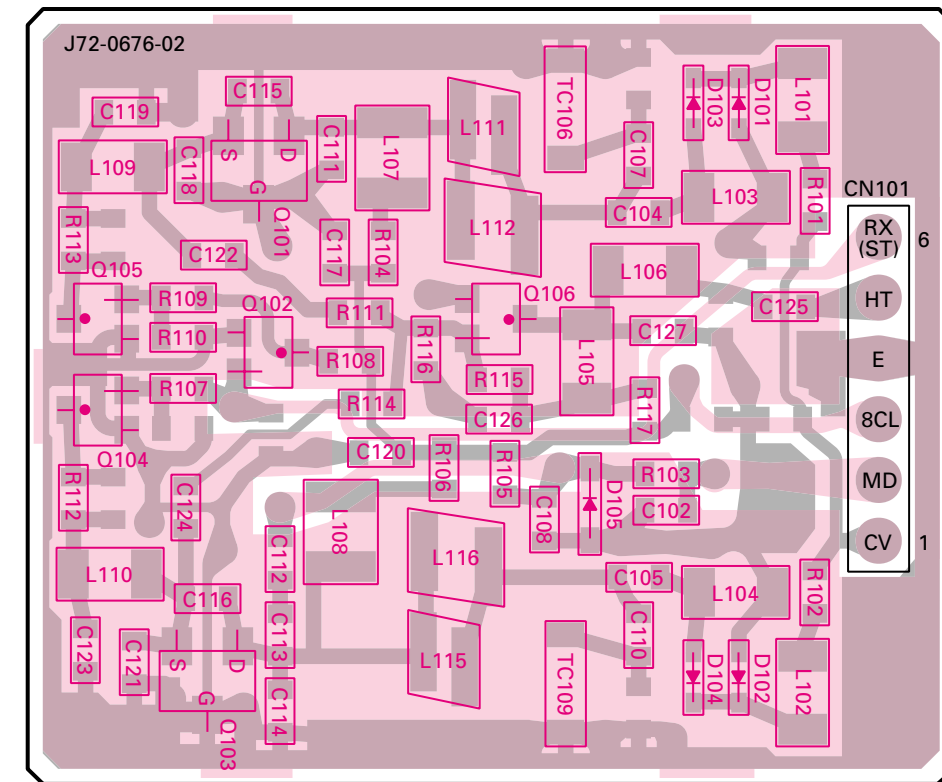


DISPLAY UNIT (X54-3280-10) : TK-862HG
Foil side view

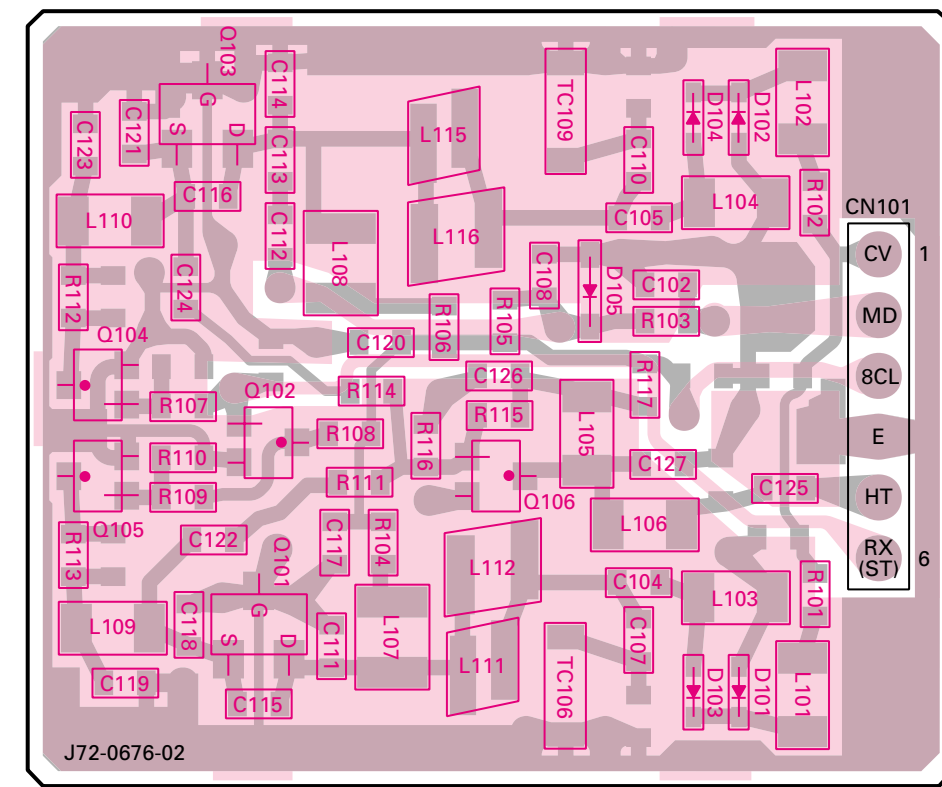


Component side Foil side

PLL/VCO (X58-4670-XX) -12 : K,M -13 : K2 -14 : K3,M3
Component side view



PLL/VCO (X58-4670-XX) -12 : K,M -13 : K2 -14 : K3,M3
Foil side view



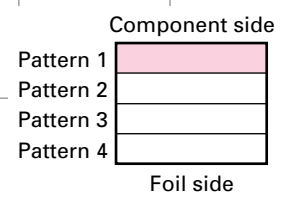
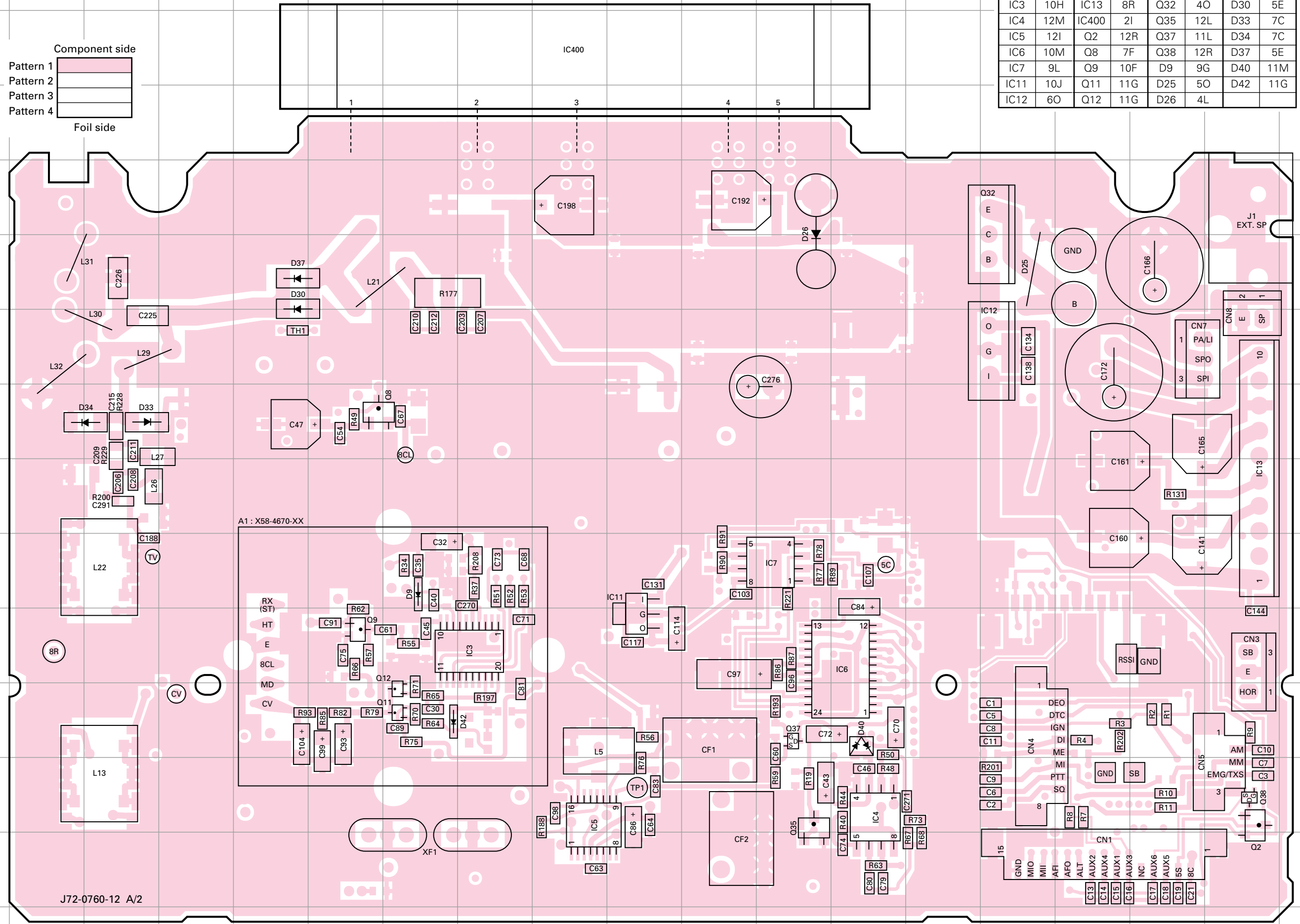
Component side
Foil side

TK-860HG/862HG PC BOARD VIEW

TX-RX UNIT (X57-5960-XX) (A/2) Component side view

-15 : TK-860HG K,M -16 : TK-862HG K
 -17 : TK-860HG K2 -18 : TK-860HG K3,M3

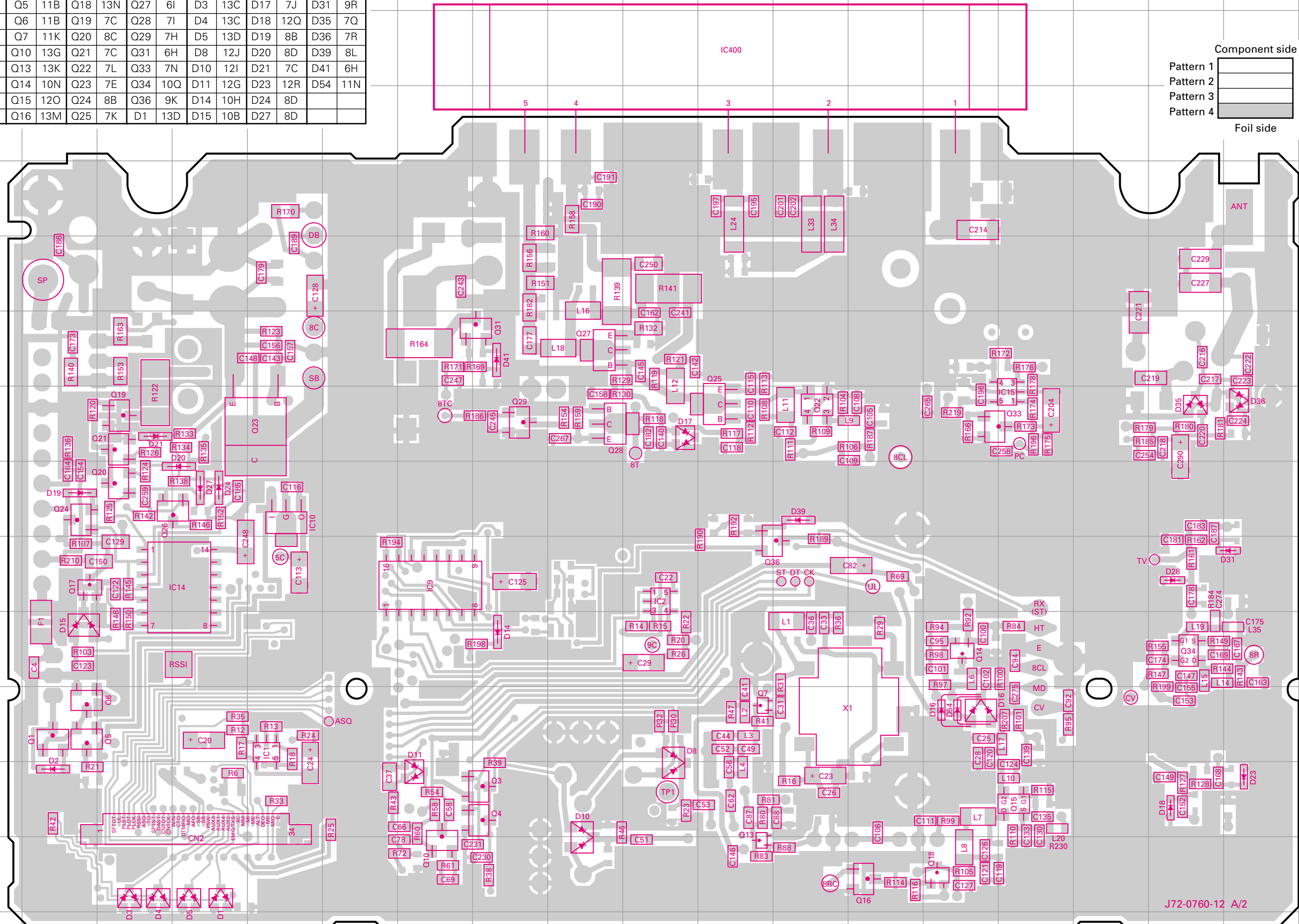
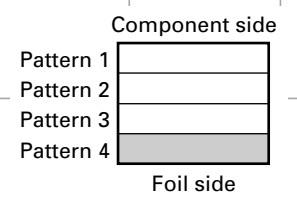
| Ref. No. | Address | Ref. No. | Address | Ref. No. | Address | Ref. No. | Address |
|----------|---------|----------|---------|----------|---------|----------|---------|
| IC3 | 10H | IC13 | 8R | Q32 | 4O | D30 | 5E |
| IC4 | 12M | IC400 | 2I | Q35 | 12L | D33 | 7C |
| IC5 | 12I | Q2 | 12R | Q37 |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



PC BOARD VIEW TK-860HG/862HG

TX-RX UNIT (X57-5960-XX) (A/2) Foil side view
 -15 : TK-860HG K,M -16 : TK-862HG K
 -17 : TK-860HG K2 -18 : TK-860HG K3,M3

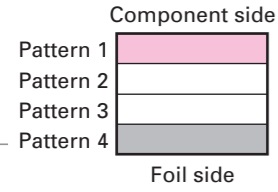
| Ref. No. | Address | Ref. No. | Address | Ref. No. | Address | Ref. No. | Address | Ref. No. | Address | Ref. No. | Address | Ref. No. | Address |
|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
| IC1 | 11E | Q4 | 12H | Q17 | 9B | Q26 | 8C | D2 | 12B | D16 | 11N | D28 | 9Q |
| IC2 | 9J | Q5 | 11B | Q18 | 13N | Q27 | 6I | D3 | 13C | D17 | 7J | 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 | 12O | Q24 | 8B | Q36 | 9K | D14 | 10H | D24 | 8D | | |
| Q3 | 12H | Q16 | 13M | Q25 | 7K | D1 | 13D | D15 | 10B | D27 | 8D | | |



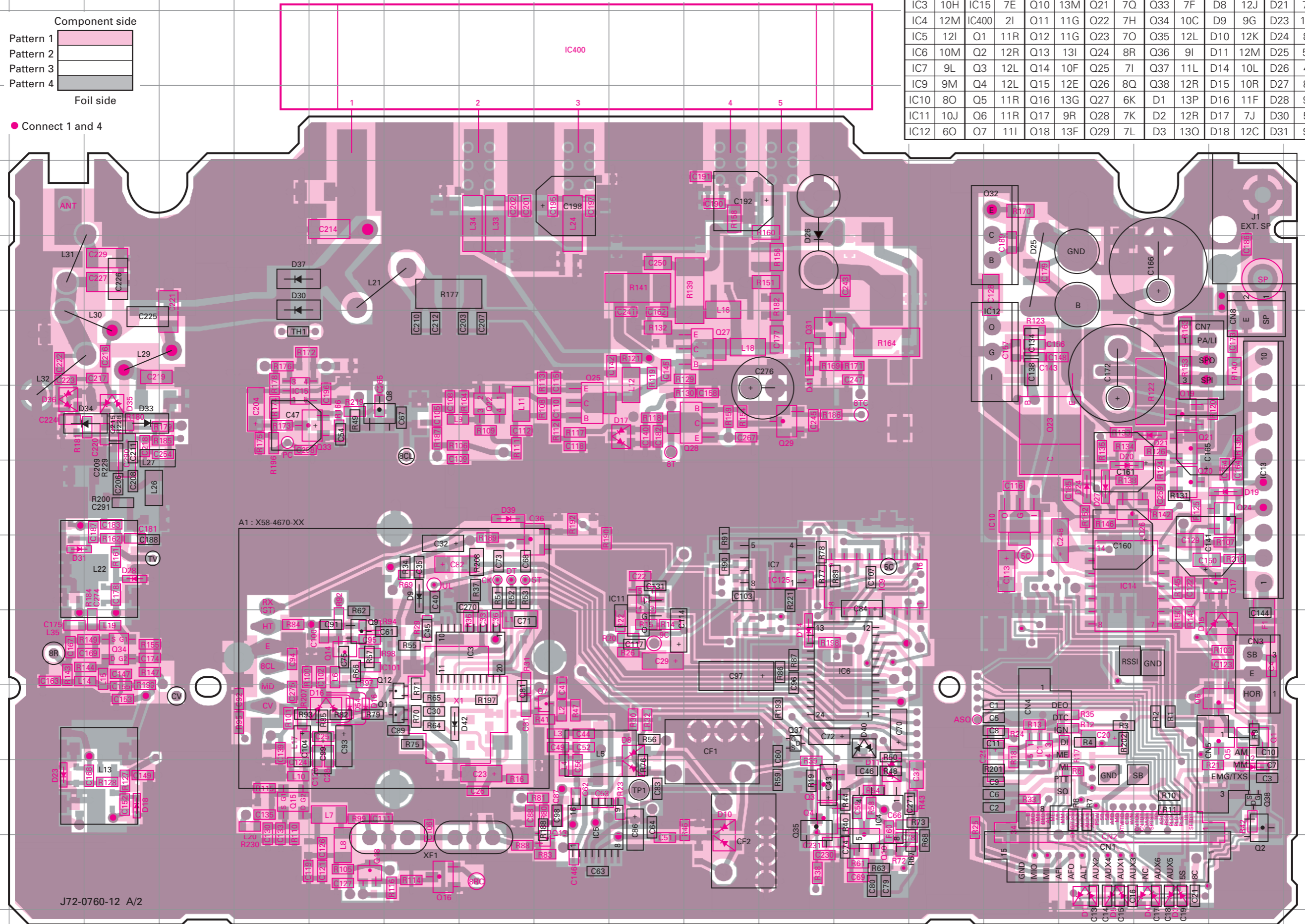
TK-860HG/862HG PC BOARD VIEW

TX-RX UNIT (X57-5960-XX) (A/2) -15 : TK-860HG K,M
 -16 : TK-862HG K -17 : TK-860HG K2 -18 : TK-860HG K3,M3
 Component side view + Foil side

| 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 | 7F | 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 | 5O | 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 | | |



● Connect 1 and 4

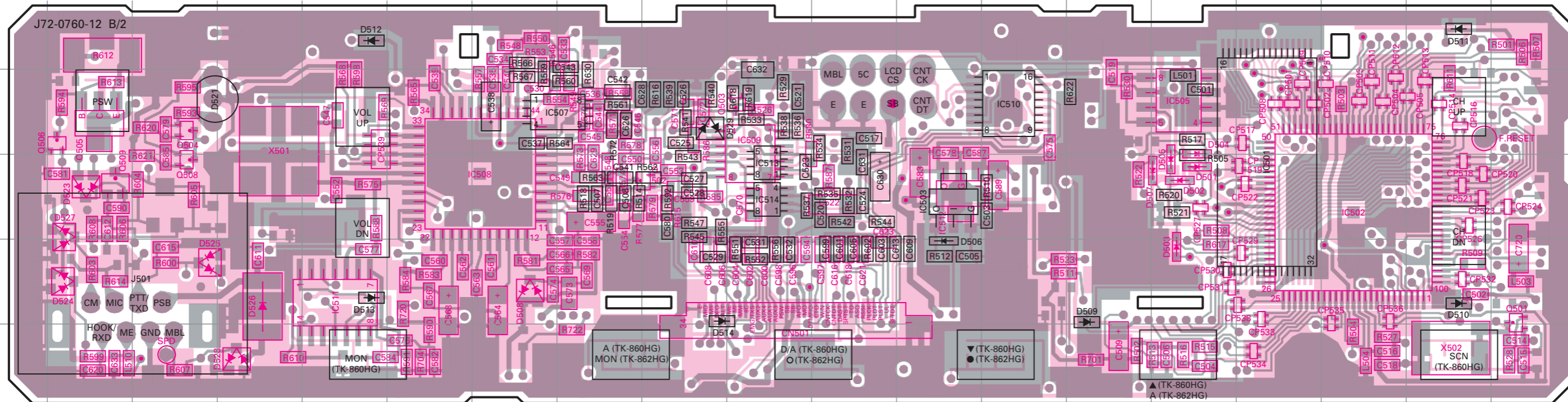


J72-0760-12 A/2

TK-860HG/862HG PC BOARD VIEW

TX-RX UNIT (X57-5960-XX) (B/2) Component side view + Foil side

-15 : TK-860HG K,M -16 : TK-862HG K -17 : TK-860HG K2 -18 : TK-860HG K3,M3



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

Component side

Pattern 1

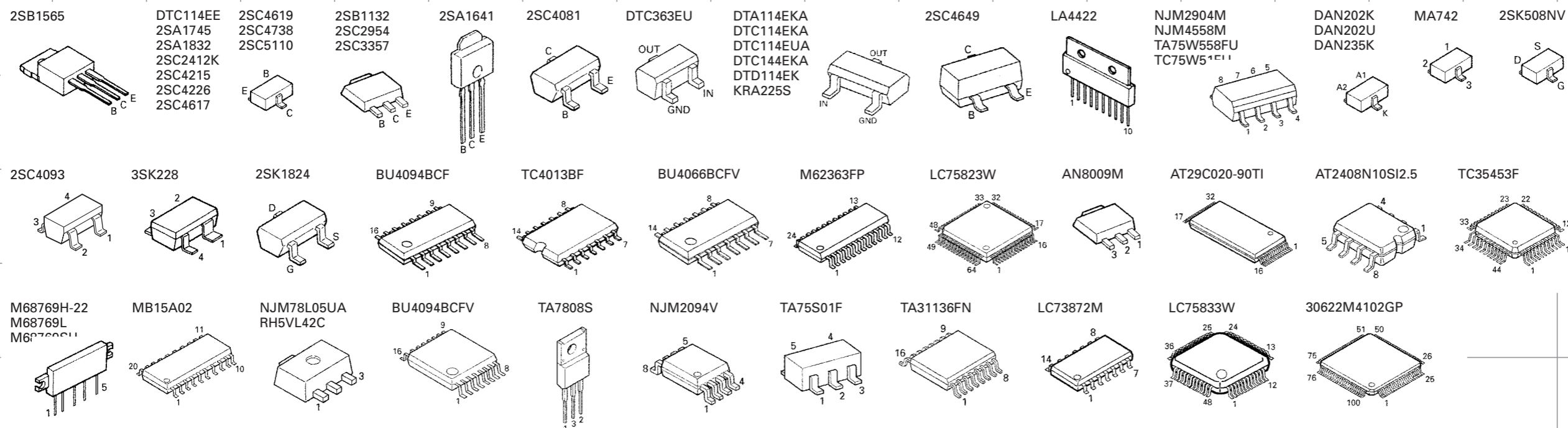
Pattern 2

Pattern 3

Pattern 4

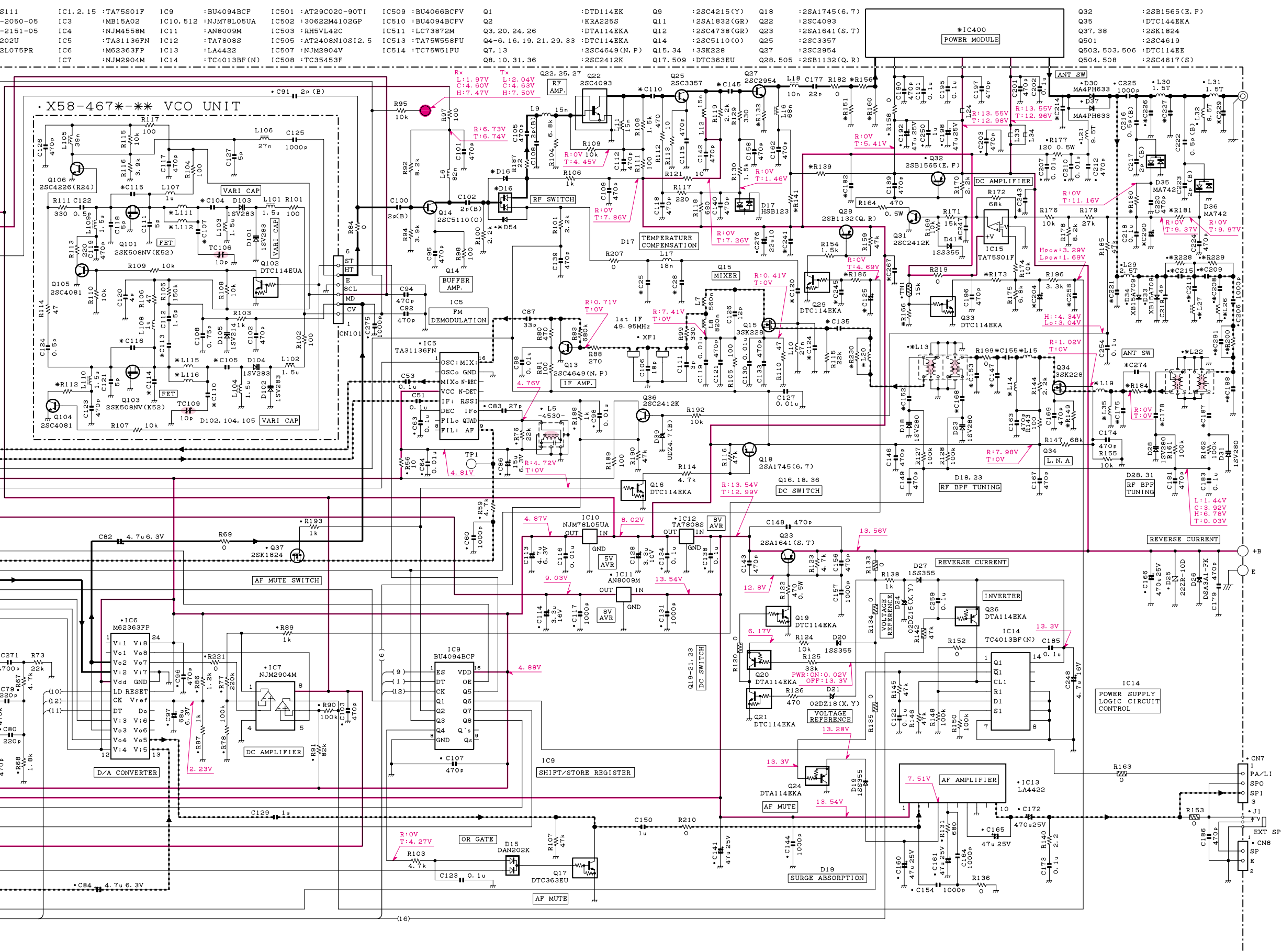
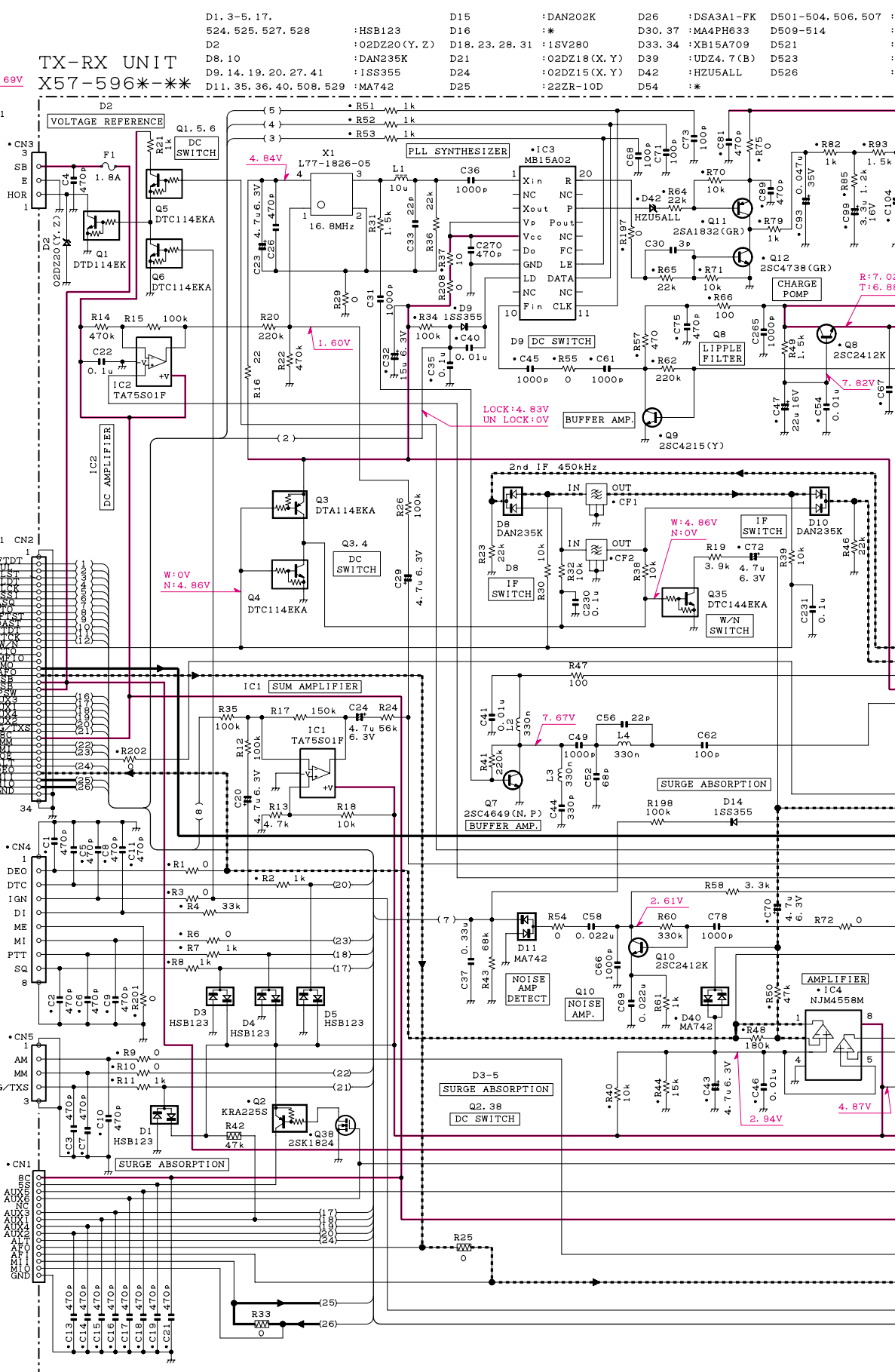
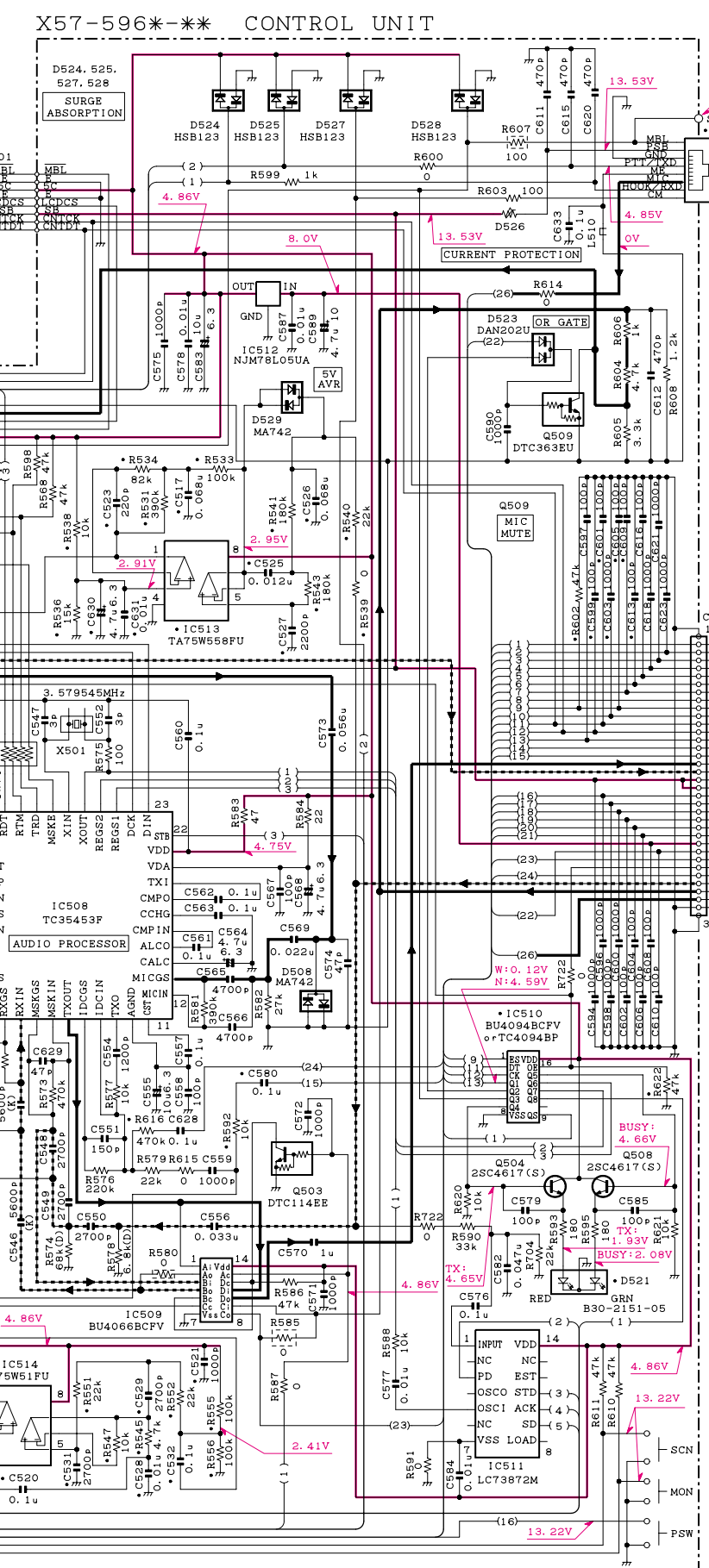
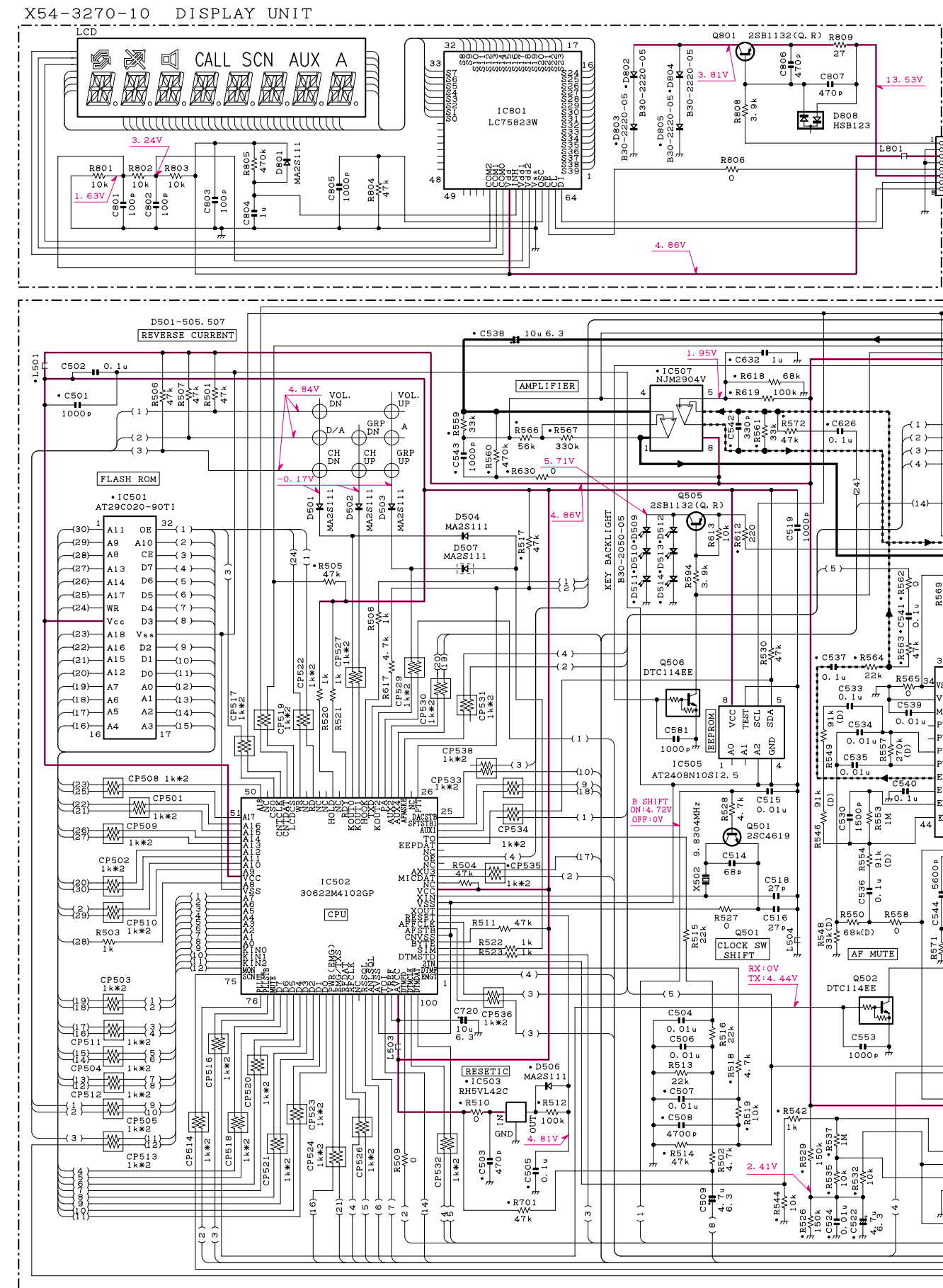
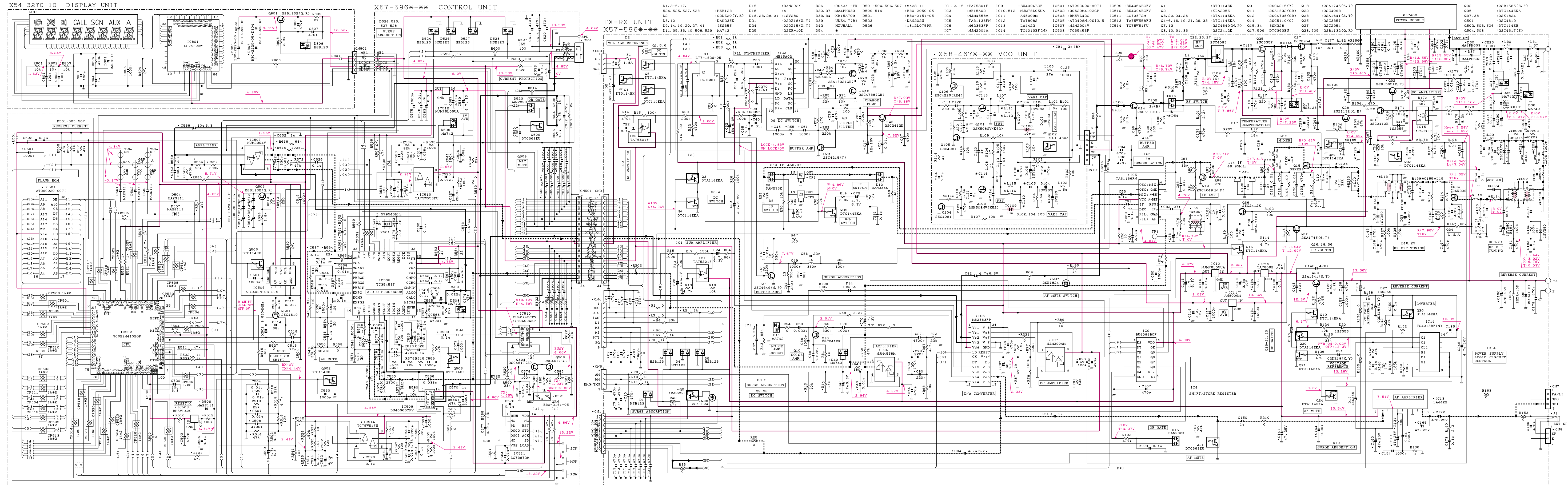
Foil side

● Connect 1 and 4



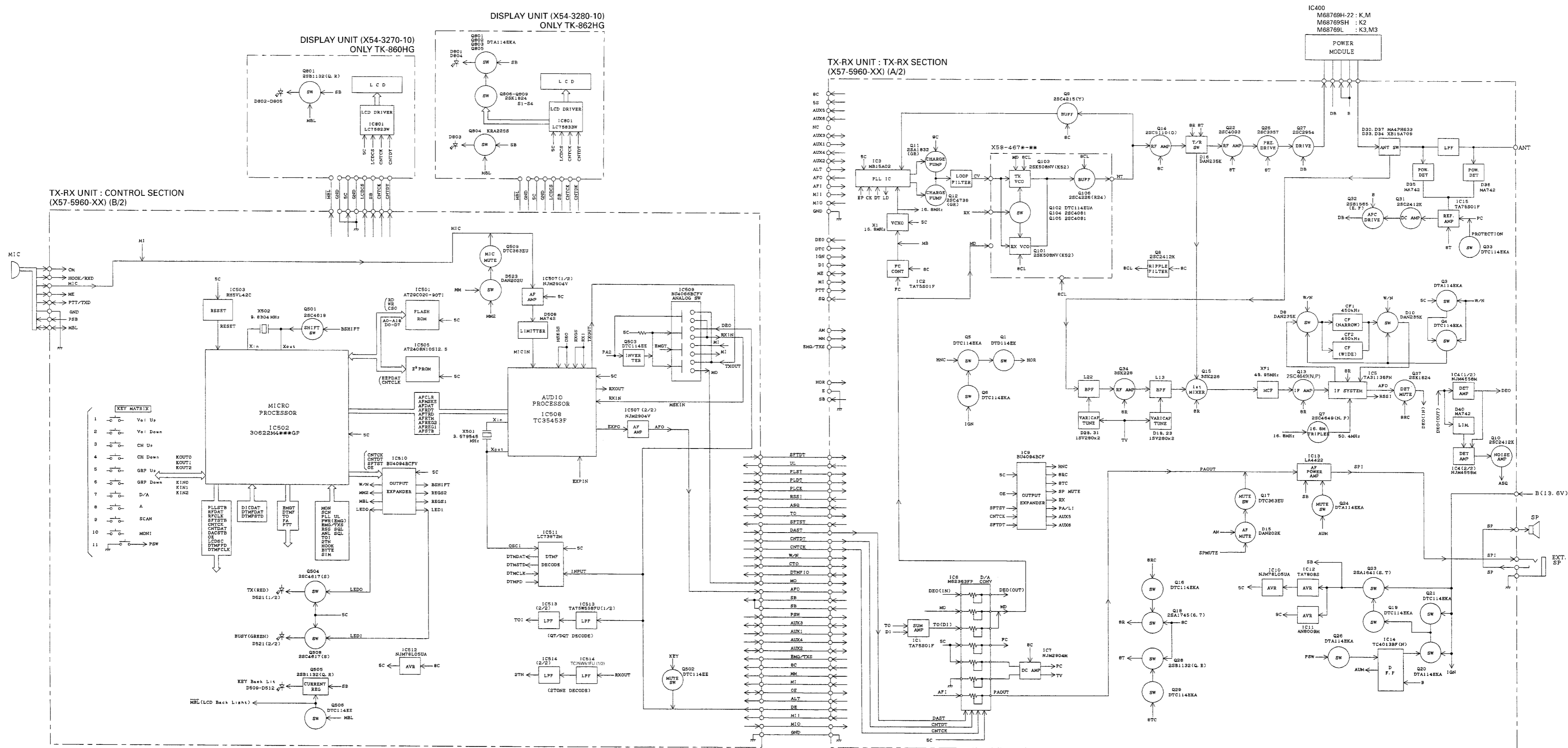
SCHEMATIC DIAGRAM TK-860HG

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



| X54-3270-10 | | | | | | | | | | | | | | | X57-596** | | | | | | | | | | | | | | | X57-596** | | | | | | | | | | | | | | | X58-467** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | D1 | D2 | D3 | D4 | D5 | D6 | D7 | D8 | D9 | D10 | D11 | D12 | D13 | D14 | D15 | IC1 | IC2 | IC3 | IC4 | IC5 | IC6 | IC7 | IC8 | IC9 | IC10 | IC11 | IC12 | IC13 | IC14 | IC15 | IC16 | IC17 | IC18 | IC19 | IC20 | IC21 | IC22 | IC23 | IC24 | IC25 | IC26 | IC27 | IC28 | IC29 | IC30 | IC31 | IC32 | IC33 | IC34 | IC35 | IC36 | IC37 | IC38 | IC39 | IC40 | IC41 | IC42 | IC43 | IC44 | IC45 | IC46 | IC47 | IC48 | IC49 | IC50 | IC51 | IC52 | IC53 | IC54 | IC55 | IC56 | IC57 | IC58 | IC59 | IC60 | IC61 | IC62 | IC63 | IC64 | IC65 | IC66 | IC67 | IC68 | IC69 | IC70 | IC71 | IC72 | IC73 | IC74 | IC75 | IC76 | IC77 | IC78 | IC79 | IC80 | IC81 | IC82 | IC83 | IC84 | IC85 | IC86 | IC87 | IC88 | IC89 | IC90 | IC91 | IC92 | IC93 | IC94 | IC95 | IC96 | IC97 | IC98 | IC99 | IC100 | IC101 | IC102 | IC103 | IC104 | IC105 | IC106 | IC107 | IC108 | IC109 | IC110 | IC111 | IC112 | IC113 | IC114 | IC115 | IC116 | IC117 | IC118 | IC119 | IC120 | IC121 | IC122 | IC123 | IC124 | IC125 | IC126 | IC127 | IC128 | IC129 | IC130 | IC131 | IC132 | IC133 | IC134 | IC135 | IC136 | IC137 | IC138 | IC139 | IC140 | IC141 | IC142 | IC143 | IC144 | IC145 | IC146 | IC147 | IC148 | IC149 | IC150 | IC151 | IC152 | IC153 | IC154 | IC155 | IC156 | IC157 | IC158 | IC159 | IC160 | IC161 | IC162 | IC163 | IC164 | IC165 | IC166 | IC167 | IC168 | IC169 | IC170 | IC171 | IC172 | IC173 | IC174 | IC175 | IC176 | IC177 | IC178 | IC179 | IC180 | IC181 | IC182 | IC183 | IC184 | IC185 | IC186 | IC187 | IC188 | IC189 | IC190 | IC191 | IC192 | IC193 | IC194 | IC195 | IC196 | IC197 | IC198 | IC199 | IC200 | IC201 | IC202 | IC203 | IC204 | IC205 | IC206 | IC207 | IC208 | IC209 | IC210 | IC211 | IC212 | IC213 | IC214 | IC215 | IC216 | IC217 | IC218 | IC219 | IC220 | IC221 | IC222 | IC223 | IC224 | IC225 | IC226 | IC227 | IC228 | IC229 | IC230 | IC231 | IC232 | IC233 | IC234 | IC235 | IC236 | IC237 | IC238 | IC239 | IC240 | IC241 | IC242 | IC243 | IC244 | IC245 | IC246 | IC247 | IC248 | IC249 | IC250 | IC251 | IC252 | IC253 | IC254 | IC255 | IC256 | IC257 | IC258 | IC259 | IC260 | IC261 | IC262 | IC263 | IC264 | IC265 | IC266 | IC267 | IC268 | IC269 | IC270 | IC271 | IC272 | IC273 | IC274 | IC275 | IC276 | IC277 | IC278 | IC279 | IC280 | IC281 | IC282 | IC283 | IC284 | IC285 | IC286 | IC287 | IC288 | IC289 | IC290 | IC291 | IC292 | IC293 | IC294 | IC295 | IC296 | IC297 | IC298 | IC299 | IC300 | IC301 | IC302 | IC303 | IC304 | IC305 | IC306 | IC307 | IC308 | IC309 | IC310 | IC311 | IC312 | IC313 | IC314 | IC315 | IC316 | IC317 | IC318 | IC319 | IC320 | IC321 | IC322 | IC323 | IC324 | IC325 | IC326 | IC327 | IC328 | IC329 | IC330 | IC331 | IC332 | IC333 | IC334 | IC335 | IC336 | IC337 | IC338 | IC339 | IC340 | IC341 | IC342 | IC343 | IC344 | IC345 | IC346 | IC347 | IC348 | IC349 | IC350 | IC351 | IC352 | IC353 | IC354 | IC355 | IC356 | IC357 | IC358 | IC359 | IC360 | IC361 | IC362 | IC363 | IC364 | IC365 | IC366 | IC367 | IC368 | IC369 | IC370 | IC371 | IC372 | IC373 | IC374 | IC375 | IC376 | IC377 | IC378 | IC379 | IC380 | IC381 | IC382 | IC383 | IC384 | IC385 | IC386 | IC387 | IC388 | IC389 | IC390 | IC391 | IC392 | IC393 | IC394 | IC395 | IC396 | IC397 | IC398 | IC399 | IC400 | IC401 | IC402 | IC403 | IC404 | IC405 | IC406 | IC407 | IC408 | IC409 | IC410 | IC411 | IC412 | IC413 | IC414 | IC415 | IC416 | IC417 | IC418 | IC419 | IC420 | IC421 | IC422 | IC423 | IC424 | IC425 | IC426 | IC427 | IC428 | IC429 | IC430 | IC431 | IC432 | IC433 | IC434 | IC435 | IC436 | IC437 | IC438 | IC439 | IC440 | IC441 | IC442 | IC443 | IC444 | IC445 | IC446 | IC447 | IC448 | IC449 | IC450 | IC451 | IC452 | IC453 | IC454 | IC455 | IC456 | IC457 | IC458 | IC459 | IC460 | IC461 | IC462 | IC463 | IC464 | IC465 | IC466 | IC467 | IC468 | IC469 | IC470 | IC471 | IC472 | IC473 | IC474 | IC475 | IC476 | IC477 | IC478 | IC479 | IC480 | IC481 | IC482 | IC483 | IC484 | IC485 | IC486 | IC487 | IC488 | IC489 | IC490 | IC491 | IC492 | IC493 | IC494 | IC495 | IC496 | IC497 | IC498 | IC499 | IC500 | IC501 | IC502 | IC503 | IC504 | IC505 | IC506 | IC507 | IC508 | IC509 | IC510 | IC511 | IC512 | IC513 | IC514 | IC515 | IC516 | IC517 | IC518 | IC519 | IC520 | IC521 | IC522 | IC523 | IC524 | IC525 | IC526 | IC527 | IC528 | IC529 | IC530 | IC531 | IC532 | IC533 | IC534 | IC535 | IC536 | IC537 | IC538 | IC539 | IC540 | IC541 | IC542 | IC543 | IC544 | IC545 | IC546 | IC547 | IC548 | IC549 | IC550 | IC551 | IC552 | IC553 | IC554 | IC555 | IC556 | IC557 | IC558 | IC559 | IC560 | IC561 | IC562 | IC563 | IC564 | IC565 | IC566 | IC567 | IC568 | IC569 | IC570 | IC571 | IC572 | IC573 | IC574 | IC575 | IC576 | IC577 | IC578 | IC579 | IC580 | IC581 | IC582 | IC583 | IC584 | IC585 | IC586 | IC587 | IC588 | IC589 | IC590 | IC591 | IC592 | IC593 | IC594 | IC595 | IC596 | IC597 | IC598 | IC599 | IC600 | IC601 | IC602 | IC603 | IC604 | IC605 | IC606 | IC607 | IC608 | IC609 | IC610 | IC611 | IC612 | IC613 | IC614 | IC615 | IC616 | IC617 | IC618 | IC619 | IC620 | IC621 | IC622 | IC623 | IC624 | IC625 | IC626 | IC627 | IC628 | IC629 | IC630 | IC631 | IC632 | IC633 | IC634 | IC635 | IC636 | IC637 | IC638 | IC639 | IC640 | IC641 | IC642 | IC643 | IC644 | IC645 | IC646 | IC647 | IC648 | IC649 | IC650 | IC651 | IC652 | IC653 | IC654 | IC655 | IC656 | IC657 | IC658 | IC659 | IC660 | IC661 | IC662 | IC663 | IC664 | IC665 | IC666 | IC667 | IC668 | IC669 | IC670 | IC671 | IC672 | IC673 | IC674 | IC675 | IC676 | IC677 | IC678 | IC679 | IC680 | IC681 | IC682 | IC683 | IC684 | IC685 | IC686 | IC687 | IC688 | IC689 | IC690 | IC691 | IC692 | IC693 | IC694 | IC695 | IC696 | IC697 | IC698 | IC699 | IC700 | IC701 | IC702 | IC703 | IC704 | IC705 | IC706 | IC707 | IC708 | IC709 | IC710 | IC711 | IC712 | IC713 | IC714 | IC715 | IC716 | IC717 | IC718 | IC719 | IC720 | IC721 | IC722 | IC723 | IC724 | IC725 | IC726 | IC727 | IC728 | IC729 | IC730 | IC731 | IC732 | IC733 | IC734 | IC735 | IC736 | IC737 | IC738 | IC739 | IC740 | IC741 | IC742 | IC743 | IC744 | IC745 | IC746 | IC747 | IC748 | IC749 | IC750 | IC751 | IC752 | IC753 | IC754 | IC755 | IC756 | IC757 | IC758 | IC759 | IC760 | IC761 | IC762 | IC763 | IC764 | IC765 | IC766 | IC767 | IC768 | IC769 | IC770 | IC771 | IC772 | IC773 | IC774 | IC775 | IC776 | IC777 | IC778 | IC779 | IC780 | IC781 | IC782 | IC783 | IC784 | IC785 | IC786 | IC787 | IC788 | IC789 | IC790 | IC791 | IC792 | IC793 | IC794 | IC795 | IC796 | IC797 | IC798 | IC799 | IC800 | IC801 | IC802 | IC803 | IC804 | IC805 | IC806 | IC807 | IC808 | IC809 | IC810 | IC811 | IC812 | IC813 | IC814 | IC815 | IC816 | IC817 | IC818 | IC819 | IC820 | IC821 | IC822 | IC823 | IC824 | IC825 | IC826 | IC827 | IC828 | IC829 | IC830 | IC831 | IC832 | IC833 | IC834 | IC835 | IC836 | IC837 | IC838 | IC839 | IC840 | IC841 | IC842 | IC843 | IC844 | IC845 | IC846 | IC847 | IC848 | IC849 | IC850 | IC851 | IC852 | IC853 | IC854 | IC855 | IC856 | IC857 | IC858 | IC859 | IC860 | IC861 | IC862 | IC863 | IC864 | IC865 | IC866 | IC867 | IC868 | IC869 | IC870 | IC871 | IC872 | IC873 | IC874 | IC875 | IC876 | IC877 | IC878 | IC879 | IC880 | IC881 | IC882 | IC883 | IC884 | IC885 | IC886 | IC887 | IC888 | IC889 | IC890 | IC891 | IC892 | IC893 | IC894 | IC895 | IC896 | IC897 | IC898 | IC899 | IC900 | IC901 | IC902 | IC903 | IC904 | IC905 | IC906 | IC907 | IC908 | IC909 | IC910 | IC911 | IC912 | IC913 | IC914 | IC915 | IC916 | IC917 | IC918 | IC919 | IC920 | IC921 | IC922 | IC923 | IC924 | IC925 | IC926 | IC927 | IC928 | IC929 | IC930 | IC931 | IC932 | IC933 | IC934 | IC935 | IC936 | IC937 | IC938 | IC939 | IC940 | IC941 | IC942 | IC943 | IC944 | IC945 | IC946 | IC947 | IC948 | IC949 | IC950 | IC951 | IC952 | IC953 | IC954 | IC955 | IC956 | IC957 | IC958 | IC959 | IC960 | IC961 | IC962 | IC963 | IC964 | IC965 | IC966 | IC967 | IC968 | IC969 | IC970 | IC971 | IC972 | IC973 | IC974 | IC975 | IC976 | IC977 | IC978 | IC979 | IC980 | IC981 | IC982 | IC983 | IC984 | IC985 | IC986 | IC987 | IC988 | IC989 | IC990 | IC991 | IC992 | IC993 | IC994 | IC995 | IC996 | IC997 | IC998 | IC999 | IC1000 | IC1001 | IC1002 | IC1003 | IC1004 | IC1005 | IC1006 | IC1007 | IC1008 | IC1009 | IC1010 | IC1011 | IC1012 | IC1013 | IC1014 | IC1015 | IC1016 | IC1017 | IC1018 | IC1019 | IC1020 | IC1021 | IC1022 | IC1023 | IC1024 | IC1025 | IC1026 | IC1027 | IC1028 | IC1029 | IC1030 | IC1031 | IC1032 | IC1033 | IC1034 | IC1035 | IC1036 | IC1037 | IC1038 | IC1039 | IC1040 | IC1041 | IC1042 | IC1043 | IC1044 | IC1045 | IC1046 | IC1047 | IC1048 | IC1049 | IC1050 | IC1051 | IC1052 | IC1053 | IC1054 | IC1055 | IC1056 | IC1057 | IC1058 | IC1059 | IC1060 | IC1061 | IC1062 | IC1063 | IC1064 | IC1065 | IC1066 | IC1067 | IC1068 | IC1069 | IC1070 | IC1071 | IC1072 | IC1073 | IC1074 | IC1075 | IC1076 | IC1077 | IC1078 | IC1079 | IC1080 | IC1081 | IC1082 | IC1083 | IC1084 | IC1085 | IC1086 | IC1087 | IC1088 | IC1089 | IC1090 | IC1091 | IC1092 | IC1093 | IC1094 | IC1095 | IC1096 | IC1097 | IC1098 | IC1099 | IC1100 | IC1101 | IC1102 | IC1103 | IC1104 | IC1105 | IC1106 | IC1107 | IC1108 | IC1109 | IC1110 | IC1111 | IC1112 | IC1113 | IC1114 | IC1115 | IC1116 | IC1117 | IC1118 | IC1119 | IC1120 | IC1121 | IC1122 | IC1123 | IC1124 | IC1125 | IC1126 | IC1127 | IC1128 | IC1129 | IC1130 | IC1131 | IC1132 | IC1133 | IC1134 | IC1135 | IC1136 | IC1137 | IC1138 | IC1139 | IC1140 | IC1141 | IC1142 | IC1143 | IC1144 | IC1145 | IC1146 | IC1147 | IC1148 | IC1149 | IC1150 | IC1151 | IC1152 | IC1153 | IC1154 | IC1155 | IC1156 | IC1157 | IC1158 | IC1159 | IC1160 | IC1161 | IC1162 | IC1163 | IC1164 | IC1165 | IC1166 | IC1167 | IC1168 | IC1169 | IC1170 | IC1171 | IC1172 | IC1173 | IC1174 | IC1175 | IC1176 | IC1177 | IC1178 | IC1179 | IC1180 | IC1181 | IC1182 | IC1183 | IC1184 | IC1185 | IC1186 | IC1187 | IC1188 | IC1189 | IC1190 | IC1191 | IC1192 | IC1193 | IC1194 | IC1195 | IC1196 | IC1197 | IC1198 | IC1199 | IC1200 | IC1201 | IC1202 | IC1203 | IC1204 | IC1205 | IC1206 | IC1207 | IC1208 | IC1209 | IC1210 | IC1211 | IC1212 | IC1213 | IC1214 | IC1215 | IC1216 | IC1217 | IC1218 | IC1219 | IC1220 | IC1221 | IC1222 | IC1223 | IC1224 | IC1225 | IC1226 | IC1227 | IC1228 | IC1229 | IC1230 | IC1231 | IC1232 | IC1233 | IC1234 | IC1235 | IC1236 | IC1237 | IC1238 | IC1239 | IC1240 | IC1241 | IC1242 | IC1243 | IC1244 | IC1245 | IC1246</ |

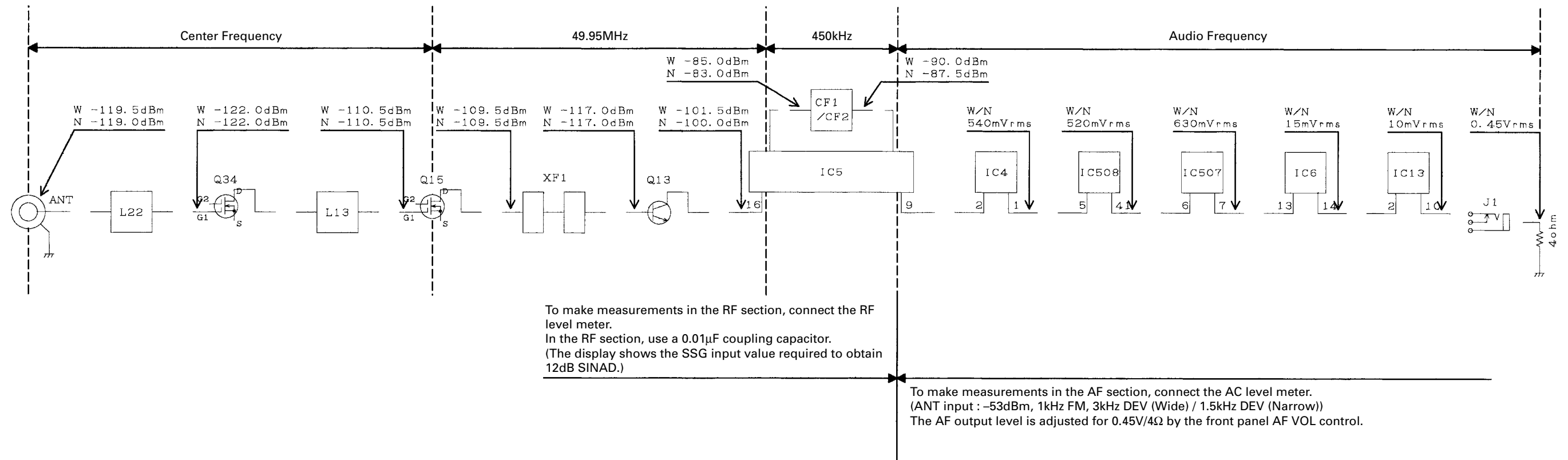
BLOCK DIAGRAM



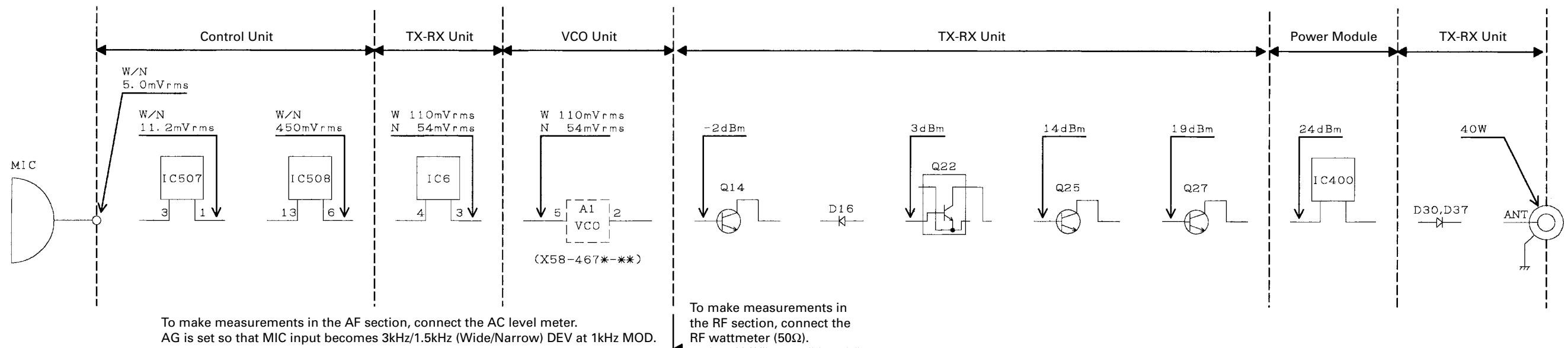
TK-860HG/862HG TK-860HG/862HG

LEVEL DIAGRAM

Receiver Section



Transmitter Section



TK-860HG/862HG

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 | SMRO : 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 | Receiver audio signal input. |
| 13 | MII | Transmit audio signal input. |
| 14 | MIO | Transmit audio signal output. |
| 15 | GND | Ground |

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

| Pin No. | Name | Function |
|---------|--------|---|
| 1 | SFTDT | Serial data for IC9 (Shift register). |
| 2 | UL | Lock detect. |
| 3 | PLST | Strobe signal for IC3 (PLL IC). |
| 4 | PLDT | Serial data for IC3 (PLL IC). |
| 5 | PLCK | Clock pulse for IC3 (PLL IC). |
| 6 | RSSI | Receive signal strength indicator. |
| 7 | ASQ | Analog squelch. |
| 8 | TO | Transmit sub-tone signal output. |
| 9 | SFTST | Strobe signal for IC9 (Shift register). |
| 10 | DAST | Strobe signal for IC6 (Shift register). |
| 11 | CNTDT | Control serial data for IC6. |
| 12 | CNTCK | Control clock pulse for IC6. |
| 13 | W/N | Change signal of wide or narrow. |
| 14 | CTO | Received sub-tone signal. |
| 15 | DTMFIO | DTMF signal. |
| 16 | MO | Modulation signal. |
| 17 | AFO | Receiver audio signal. |
| 18 | SB | Switched B. |
| 19 | SB | Switched B. |
| 20 | PSW | Power switch. |
| 21 | AUX3 | Optional unit control signal. |
| 22 | AUX1 | Optional unit control signal. |
| 23 | AUX4 | Optional unit control signal. |
| 24 | AUX2 | Optional unit control signal. |
| 25 | EMG | 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 | Ground. |

CN3 (TX-RX Unit)

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

CN4 (TX-RX Unit)

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

CN5 (TX-RX Unit)

| Pin No. | Name | Function |
|---------|------|---|
| 1 | AM | Speaker mute input, active high. |
| 2 | MM | MIC mute input, active high |
| 3 | EMG | 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 |

*1 : SmarTrunk OMNI mode

*2 : MDT mode

*3 : Emergency mode

SPECIFICATIONS

GENERAL

| | | | |
|-----------------------------------|--|---------------------------------|-----------------------|
| Frequency Range | K,M : 450 to 490MHz | K2 : 485 to 512MHz | K3,M3 : 400 to 430MHz |
| Number of Channels | TK-862HG : Maximum 8 channels | TK-860HG : Maximum 128 channels | |
| Number of Groups | TK-860HG : Maximum 128 groups | | |
| Channel Spacing | Wide : 25kHz | Narrow : 12.5kHz | |
| PLL Channel Stepping | 5, 6.25kHz | | |
| Operating Voltage | 13.6V DC \pm 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 | 40MHz | | |

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

| | | |
|--------------------------------|---------------------|-----------------------|
| Sensitivity (12dB SINAD) | Wide : 0.28 μ V | Narrow : 0.35 μ V |
| Selectivity | Wide : 80dB | Narrow : 65dB |
| Intermodulation | Wide : 75dB | Narrow : 63dB |
| Spurious Responce | 85dB | |
| Audio Power Output | 4.0W | |
| Frequency Stability | \pm 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 | \pm 2.5ppm | |

TK-860HG/862HG

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