

# Service Manual

Telephone Equipment

Supplement-1

**KX-TG1233JXS**  
**KX-TG1233JXT**  
**KX-TCA122CXS**  
**KX-TCA122CXT**  
**KX-TCA121CXS**  
**KX-TCA121CXT**

Digital Cordless Answering System

Silver Version

Titanium Black Version

(for Middle East)

Please file and use this supplement manual together with the service manual mentioned below.

Model No.	Order No.	Sup. No.	Countries/Areas
KX-TG1233JXS/KX-TG1233JXT KX-TCA122CXS/KX-TCA122CXT KX-TCA121CXS/KX-TCA121CXT	KM40507823CE	1	Middle East

## WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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# Panasonic

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# 1 CHANGES (for RoHS)

## 1.1. SUBJECT

Important Notice (especially in those countries belonging to the European Union):

Some of the new parts introduced by this document are the parts which now comply with the national laws transposed from the EU Directive on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment, effective 1<sup>st</sup> July 2006 in the EU countries.









In order for the product to comply with the RoHS Directive, the six particular substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls, and polybrominated diphenyl ethers) have been either totally eliminated or limited to the concentration level below maximum allowed. Consequently spare parts have been changed to RoHS-compliant parts where applicable.

To ensure compliance with the spare parts application of the RoHS legislation, please make sure to follow the details provided in this manual in ordering spare parts and carrying out repairs.

## 1.2. REPLACEMENT PARTS LIST

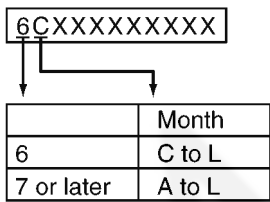
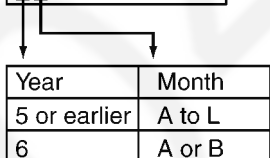
### 1.2.1. REFERENCE CHART

Reason for Change	
*The following items (1-8) indicate the reason for change. See the "Notes" column for each part in <b>ORIGINAL AND NEW PARTS COMPARISON LISTS</b> .	
1. Improve performance	<b>Remarks:</b> *a: To share the parts with other models. *b: Sales company demand. For RoHS-compliant parts marked by *R *1 Use only RoHS parts (new parts) for the production sets which serial No. labels are after 6CXXXXXXXXXX. *2 Either original or RoHS parts (new parts) can be used for the production sets which serial No. labels are before 6BXXXXXXXXXX.
2. Change of material or dimension	
3. To meet approved specification	
4. Standardization	
5. Addition	
6. Deletion	
7. Correction	
8. Other	

Interchangeability Code		
**The following items (V-Z) indicate the Interchangeability. See the "Notes" column for each part in <b>ORIGINAL AND NEW PARTS COMPARISON LISTS</b> .		
V	Original  Early (before change) New  Late (after change)	Original or new parts may be used in early or late production sets. Use original parts until exhausted, then stock new parts.
W	Original  Early (before change) New  Late (after change)	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts where possible, then stock new parts.
X	Original  Early (before change) New  Late (after change)	New parts only may be used in early or late production sets. Stock new parts.
Y	Original  Early (before change) New  Late (after change)	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
Z	Other	

**Note for RoHS:**

Confirm the interchangeability of original and new parts with the serial No. label of the production set.

	Serial No. Label	Interchangeability						
*1	(Example) <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">6CXXXXXXXXXX</div>  <table border="1" style="margin-left: 20px;"> <tr> <td></td> <td>Month</td> </tr> <tr> <td>6</td> <td>C to L</td> </tr> <tr> <td>7 or later</td> <td>A to L</td> </tr> </table>		Month	6	C to L	7 or later	A to L	*1 Use only RoHS parts (new parts).
	Month							
6	C to L							
7 or later	A to L							
*2	(Example) <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">6BXXXXXXXXXX</div>  <table border="1" style="margin-left: 20px;"> <tr> <td>Year</td> <td>Month</td> </tr> <tr> <td>5 or earlier</td> <td>A to L</td> </tr> <tr> <td>6</td> <td>A or B</td> </tr> </table>	Year	Month	5 or earlier	A to L	6	A or B	*2 Either original or RoHS parts (new parts).
Year	Month							
5 or earlier	A to L							
6	A or B							

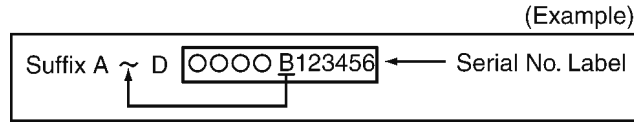
## 1.2.2. ORIGINAL AND NEW PARTS COMPARISON LISTS

### Change of the Suffix Code

• Base Unit

Suffix Code	Reasons of change
A to B	For changing DSP of base unit. There is no change in the replacement parts list.

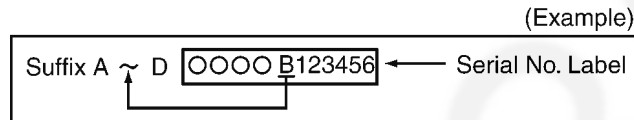
Serial No. Label tells you the suffix code as follows



• Handset

Suffix Code	Reasons of change
A to B	To share with other models. There is no change in the replacement parts list.

Serial No. Label tells you the suffix code as follows



(for KX-TG1233JXS/KX-TG1233JXT/KX-TCA121CXS/KX-TCA121CXT)

Ref. No.	Part No.		Part Name & Description	Pcs/ Set	Remarks	Notes		Time of Change (Suffix)
	Original (Old)	New						
<b>BASE UNIT</b>								
16	PQJT10218Y	<b>PQJT10218V</b>	Charge Terminal (R)	1	R	8	W	-
17	PQJT10219Y	<b>PQJT10219V</b>	Charge Terminal (L)	1	R	8	W	-
IC8	PQWI31233JXH	-----	IC (Flash Memory)	0	-	6	-	A to B
R51	ERJ3GEYJ103	-----	Resistor, 10KΩ	0	-	6	-	A to B
R162,R163, R164	ERJ2GEJ273X	-----	Resistor, 27KΩ	0	-	6	-	A to B
R371,R372, R373	ERJ2GE0R00	-----	Resistor, 0Ω	0	-	6	-	A to B
C103	ECUV1C104KBV	-----	Capacitor, 0.1P	0	-	6	-	A to B
C104	ECUV1H391JCV	-----	Capacitor, 390P	0	-	6	-	A to B
<b>HANDSET</b>								
121	PQHX11299Z	<b>PQHX11394Z</b>	Plastic Parts, Battery Cover Sheet (for KX-TCA121CXS/CXT)	1	b	1	X	-
<b>ACCESSORIES AND PACKING MATERIALS (KX-TG1233JXS/JXT)</b>								
P3	PQPK14870Y	<b>PQPK14870X</b>	Gift Box	1	a	1	V	-

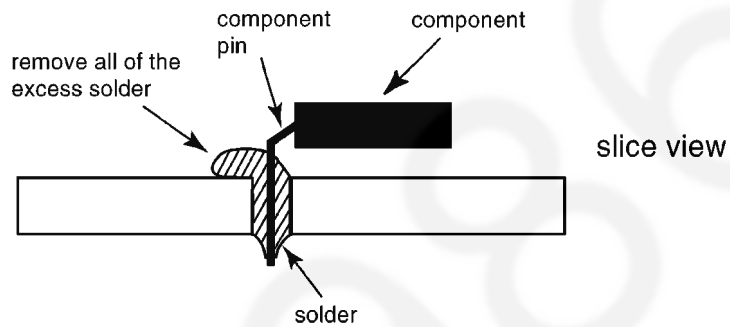
## 2 CORRECTION

### 2.1. ABOUT LEAD FREE SOLDER (PbF: Pb free)

Correction

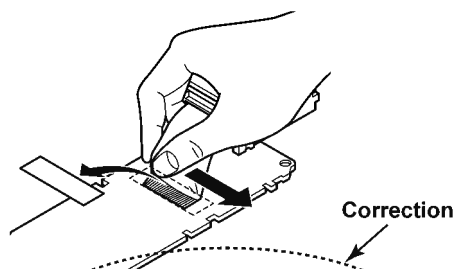
#### Caution

- PbF solder has a melting point that is 50° F ~ 70° F (30° C ~ 40° C) higher than Pb solder. Please use a soldering iron with temperature control and adjust it to 700° F ± 20° F (370° C ± 10° C).
- Exercise care while using higher temperature soldering irons.:  
Do not heat the PCB for too long time in order to prevent solder splash or damage to the PCB.
- PbF solder will tend to splash if it is heated much higher than its melting point, approximately 1100° F (600° C).
- When applying PbF solder to double layered boards, please check the component side for excess which may flow onto the opposite side (See the figure below).



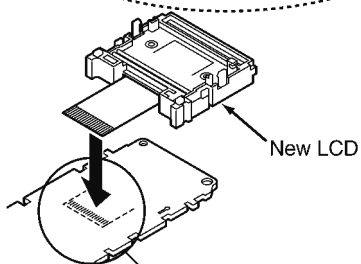
## 2.2. HOW TO REPLACE THE HANDSET LCD

①

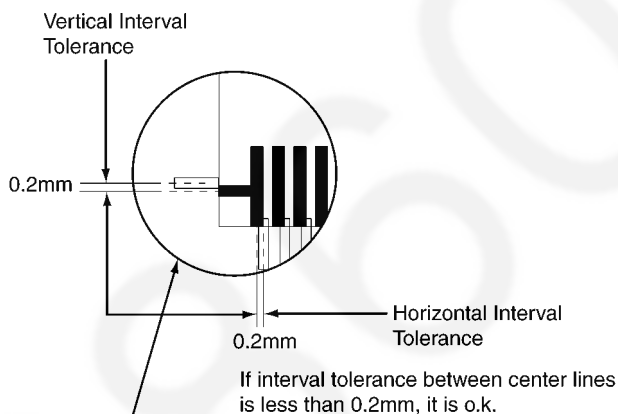


Remove the tape and peel off the FFC (Flexible Flat Cable) from the LCD, in the direction of the arrow. Take care to ensure that the foil on the P.C. Board is not damaged.

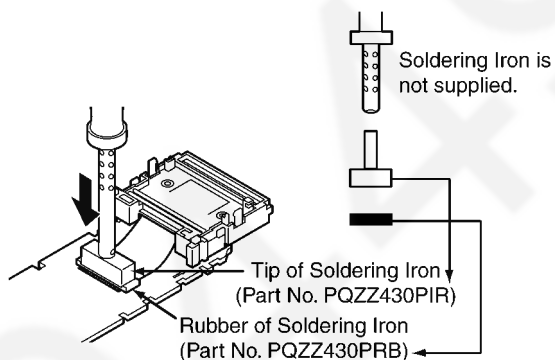
②



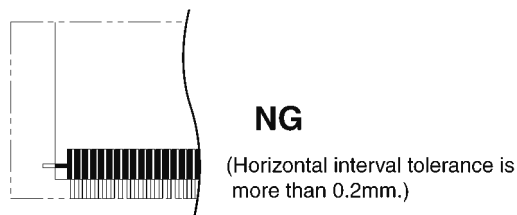
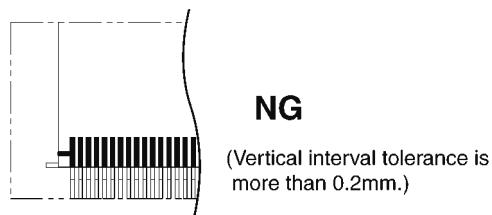
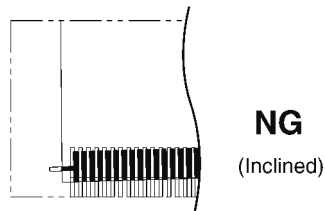
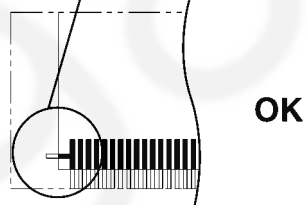
Fit the Heatseal of a New LCD to the P.C. Board.



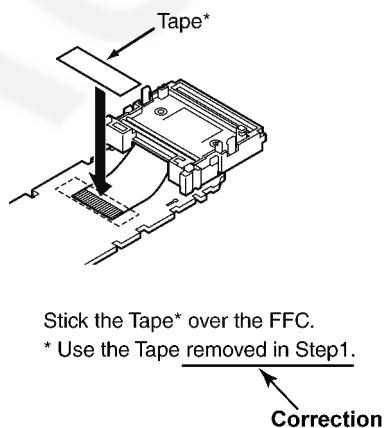
③



Press the Heatseal with the Tip of Soldering Iron for about 5 to 8 seconds (in case of 60W soldering iron).



④



Stick the Tape\* over the FFC.  
\* Use the Tape removed in Step1.

## 2.3. THINGS TO DO AFTER REPLACING IC

### Cautions:

Some of the content on this page may not apply to models from some countries. The contents below are the minimum adjustments required for operation.

Correction

### 2.3.1. Base Unit

Addition

Before making the following adjustment, ensure you have carried out **PC Setting (P.30)** in The Setting Method of JIG (Base Unit).

IC		Necessary Adjustment
BBIC	Programs for Voice processing, interface for RF and EEPROM	1. Default batch file: Execute the command "default". 2. Country version batch file: Execute the command "TCD240XXrevYY". (*1) 3. Clock adjustment: Refer to Check Point (F). (*2)
EEPROM	Adjustment parameter data (country version batch file, default batch file, etc.)	1. Change the address "0000" of EEPROM to "55". 2. Default batch file: Execute the command "default". 3. Country version batch file: Execute the command "TCD240XXrevYY". (*1) 4. Clock adjustment: Refer to Check Point (F). (*2)
FLASH1	Voice prompt data (vary depending on country version)	No need to adjust.
FLASH 2	Program	No need to adjust.

### 2.3.2. Handset

Addition

Before making the following adjustment, ensure you have carried out **PC Setting (P.37)** in The Setting Method of JIG (Handset).

IC		Necessary Adjustment
BBIC	Programs for Voice processing, interface for RF and EEPROM	1. Default batch file: Execute the command "default". 2. Default batch file (remaining); Execute the command "TCA121 DEFrevYY". (*3) (Except for KX-TCA121/122 FX and KX-TCA121/122 RU). 3. Country version batch file: Execute the command "TCA121XXrevYY". (*3) 4. Clock adjustment: Refer to Check Point (J). (*4) 5. 1.8 V setting and battery low detection: Refer to Check Point (A), (H) and (I). (*4)
EEPROM	Adjustment parameter data (country version batch file, default batch file, etc.)	1. Change the address "0015" of EEPROM to "55". 2. Default batch file: Execute the command "default". 3. Default batch file (remaining): Execute the command "TCA121DEFrevYY". (*3) (Except for KX-TCA121/122 FX and KX-TCA121/122 RU). 4. Country version batch file: Execute the command "TCA121XXrevYY". (*3) 5. Clock adjustment: Refer to Check Point (J). (*4) 6. 1.8 V setting and battery low detection: Refer to Check Point (A), (H) and (I). (*4)

## 2.4. REPLACEMENT PARTS LIST

### 29.1.2. Main P.C.Board Parts

Note:

(\*1) When replacing IC3 or IC4, data need to be written to it with PQZZTG1233JX. Refer to **Base Unit (P.39)** of **THINGS TO DO AFTER REPLACING IC.**

(\*2) When replacing IC4, follow the procedure in the "Note:" in **CIRCUIT BOARD (BASE UNIT MAIN) (P.85)**

← Addition

Ref. No.	Part No.	Part Name & Description	Remarks
PCB1	PQWP11233JXH	MAIN P.C.BOARD ASS'Y (RTL)	
		(ICs)	
IC1	C0DBZGE00007	IC	
IC3	PQWID300NEHR	IC (EEPROM) (*1)	
IC4	C1CB00002180	IC (BBIC) (*1) (*2)	← Addition
IC6	PQWI21233JXH	IC (FLASH MEMORY)	
IC7	C1BB00000265	IC	
IC8	PQWI31233JXH	IC (FLASH MEMORY)	

## 2.5. SCHEMATIC DIAGRAM (BASE UNIT\_MAIN)

