

Service Manual

Telephone Equipment

Model No. **KX-TG6023M**
KX-TGA600M

5.8 GHz Expandable Digital Cordless
Phone

Metallic Gray Version

(for U.S.A.)

Supplement-1

Please file and use this supplement manual together with the service manual for Model No. KX-TG6023M/ KX-TGA600M, Order No. KM40703284CE.

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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






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1 REPLACEMENT PARTS LIST

1.1. REFERENCE CHART

Reason for Change	
*The following items (1-8) indicate the reason for change. See the "Notes" column for each part in ORIGINAL AND NEW PARTS COMPARISON LISTS.	
1. Improve performance	Notes: Parts with *1 marking has been changed at the same time. Parts with *2 marking has been changed at the same time. Parts with *3 marking has been changed at the same time. Remarks: *c: To share the parts with other models.
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 ORIGINAL AND NEW PARTS COMPARISON LISTS.		
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:

Alphabets in the "Remarks" column in the following lists correspond to the alphabets in the "Remarks" in REFERENCE CHART.

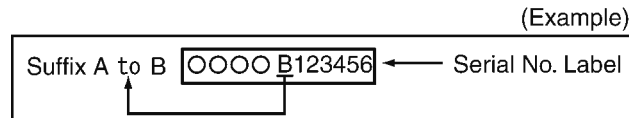
1.2. ORIGINAL AND NEW PARTS COMPARISON LISTS

Change of the Suffix Code

- Base Unit

Suffix Code	Reasons of change
A to B	To share the parts with other models.

Serial No.Label tells you the suffix code as follows



(for KX-TG6023M/KX-TGA600M)

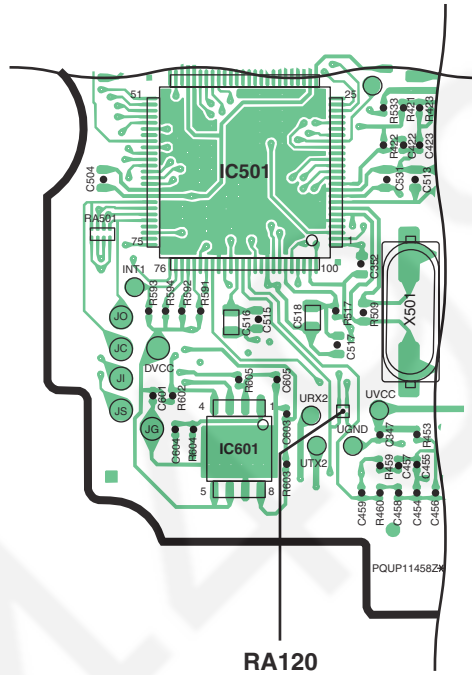
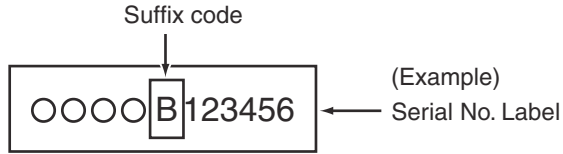
Ref. No.	Part No.		Part Name & Description	Pcs/ Set	Remarks	Notes	Time of Change (Suffix)
	Original (Old)	New					
BASE UNIT							
11	PQMC10519Z	-----	MAGNETIC SHIELD, SHEET	0	-	6 -	---
12	PQMC10520Z	-----	MAGNETIC SHIELD, SHEET	0	-	6 -	---
IC501	C2HBBY000070	C2HBBY000077	IC *1	1	*c	4 Y	A to B
IC501	C2HBBY000077	PQWIG6022HKT	IC (Refer to How to replace the IC501 on the base unit) *2	1	*c	4 Y	---
RA120	-----	D1H4R0020002	RESISTOR ARRAY *1	1	*c	5 -	A to B
RA120	D1H4R0020002	-----	RESISTOR ARRAY *2	0	*c	6 -	---
R740,R741,R743	-----	ERJ2GEJ391	RESISTOR, 390Ω *3	3	*c	5 -	---
R742	-----	ERJ2GEJ221	RESISTOR, 220Ω *3	1	*c	5 -	---
R744,R745	-----	ERJ2GEJ102	RESISTOR, 1kΩ *3	2	*c	5 -	---
C741~C743	ECUE1H101JCQ	ECUE1H4R0CCQ	CAPACITOR, 4pF *3	3	*c	4 Y	---
C744,C745	ECUE1H101JCQ	-----	CAPACITOR, 100pF *3	0	*c	6 -	---
E3	PQHX11476Z	-----	PLASTIC PARTS, PET SHEET	0	-	6 -	---
E4	PQMC10520Z	-----	MAGNETIC SHIELD, SHEET	0	-	6 -	---
HANDSET							
125	-----	PQHS10683Z	TAPE, ADHESIVE	1	-	5 -	---
C361	-----	ECUE1H102KBQ	CAPACITOR, 0.001μF	1	-	5 -	---
E105	PQJE10179X	PQJE10179W	LEAD WIRE, FPC	1	*c	4 V	---
E106	B3AFB0000177	PQVD2HS3312Z	LED	1	*c	4 V	---
E106	PQVD2HS3312Z	B3AFB0000211	LED	1	*c	4 V	---
E107	PQHS10683Z	-----	TAPE, ADHESIVE	0	-	6 -	---
CHARGER UNIT							
E202	PQHG10584Z	-----	SPACER	0	-	6 -	---
ACCESSORIES AND PACKING MATERIALS (KX-TG6023M)							
P6	PQXDDS400-8	-----	MAGNET ELECTRIC TRANSDUCER, SECURITY TAG	0	-	6 -	---
ACCESSORIES AND PACKING MATERIALS (KX-TGA600M)							
A102	PQX15656Z	PQX15656Y	INSTRUCTION BOOK	1	*c	4 V	---
P104	PQXDDS400-8	-----	MAGNET ELECTRIC TRANSDUCER, SECURITY TAG	0	-	6 -	---

2 NOTICE

2.1. How to replace the IC501 on the base unit

If the suffix code is B or later (B, C, D...) on the base unit's serial no. label, remove the chip (RA120) simultaneously when replacing IC 501 on the base unit. Otherwise some function does not work properly.

Serial No. label tells you the suffix code as follows.

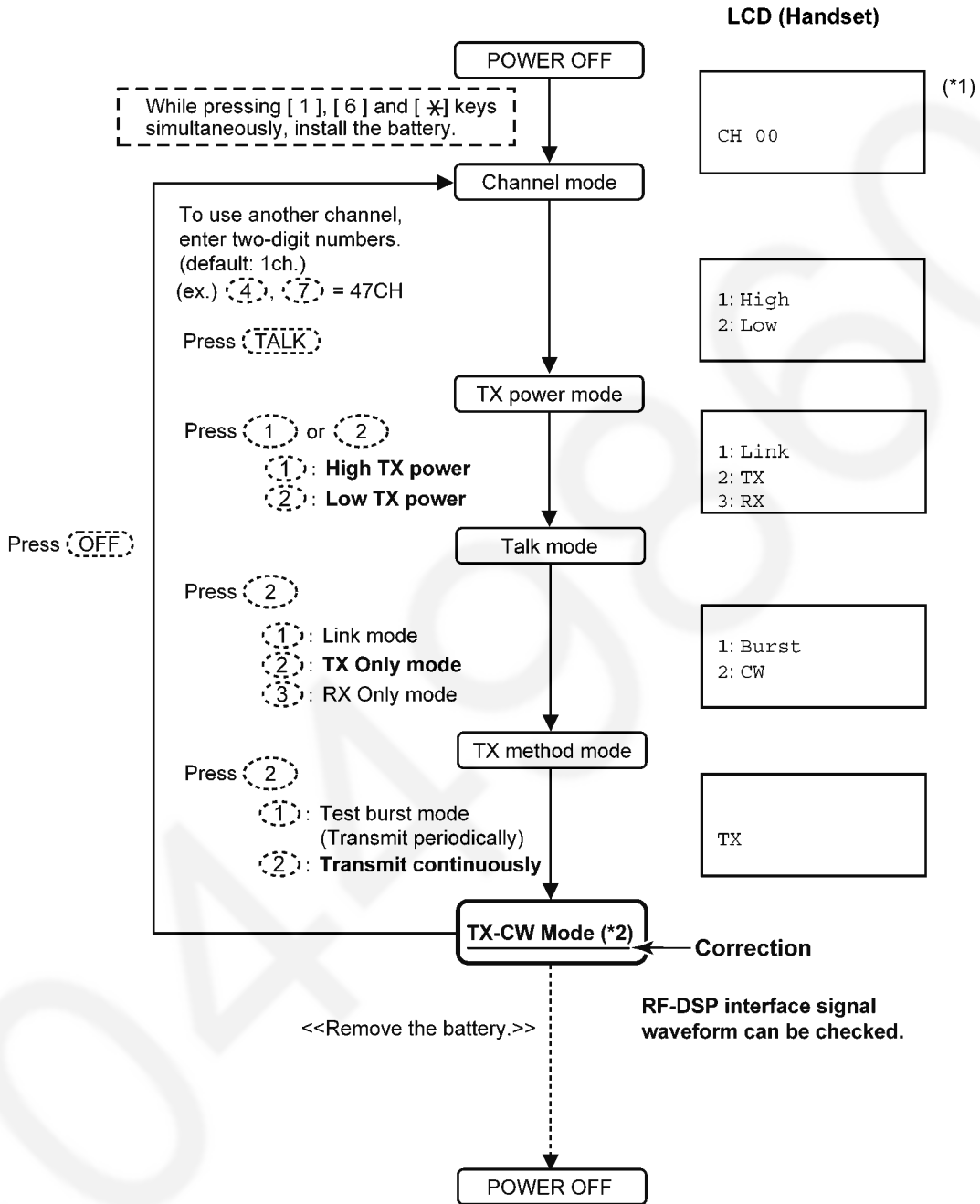


KX-TG60xx CIRCUIT BOARD
Base Unit_Main (Component View)

3 CORRECTION

3.1. TX-CW Mode for Handset

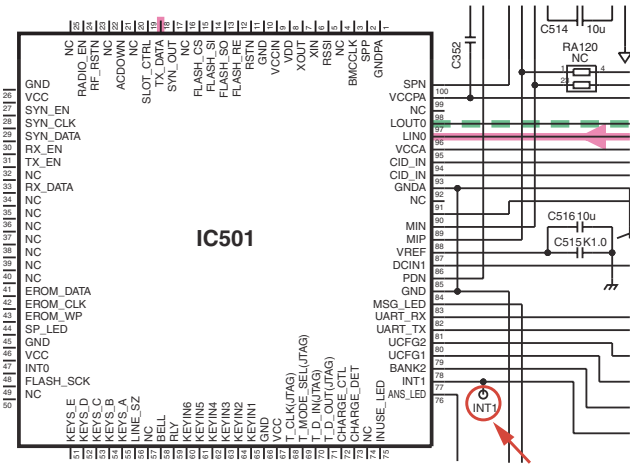
[Changed from original section "8.1.7. TX-CW Mode for Handset"]



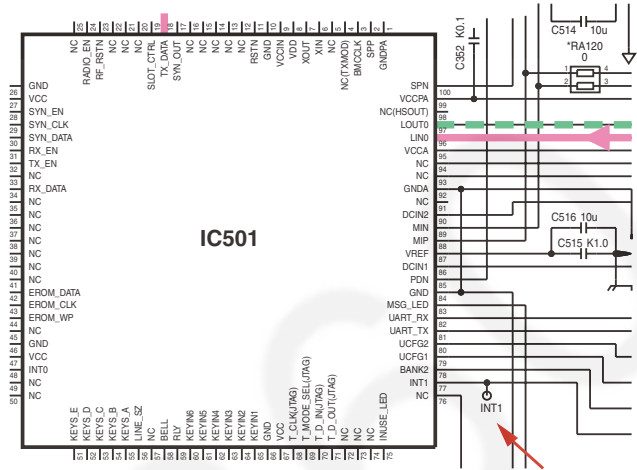
3.2. Schematic Diagram (Base Unit_Main)

[Changed from original section "13.2. Schematic Diagram (Base Unit_Main)"]

3.2.1.



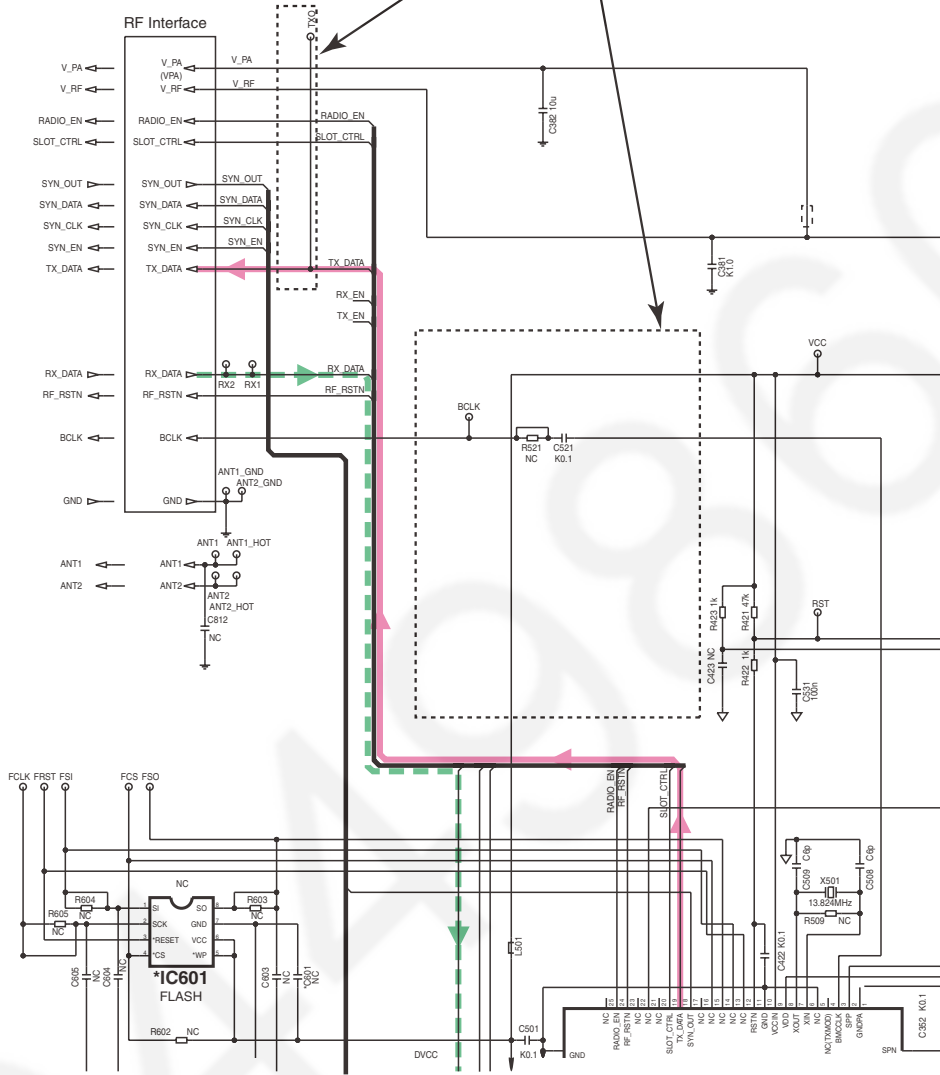
IC501
(C2HBBY000070)



IC501
(C2HBBY000077)

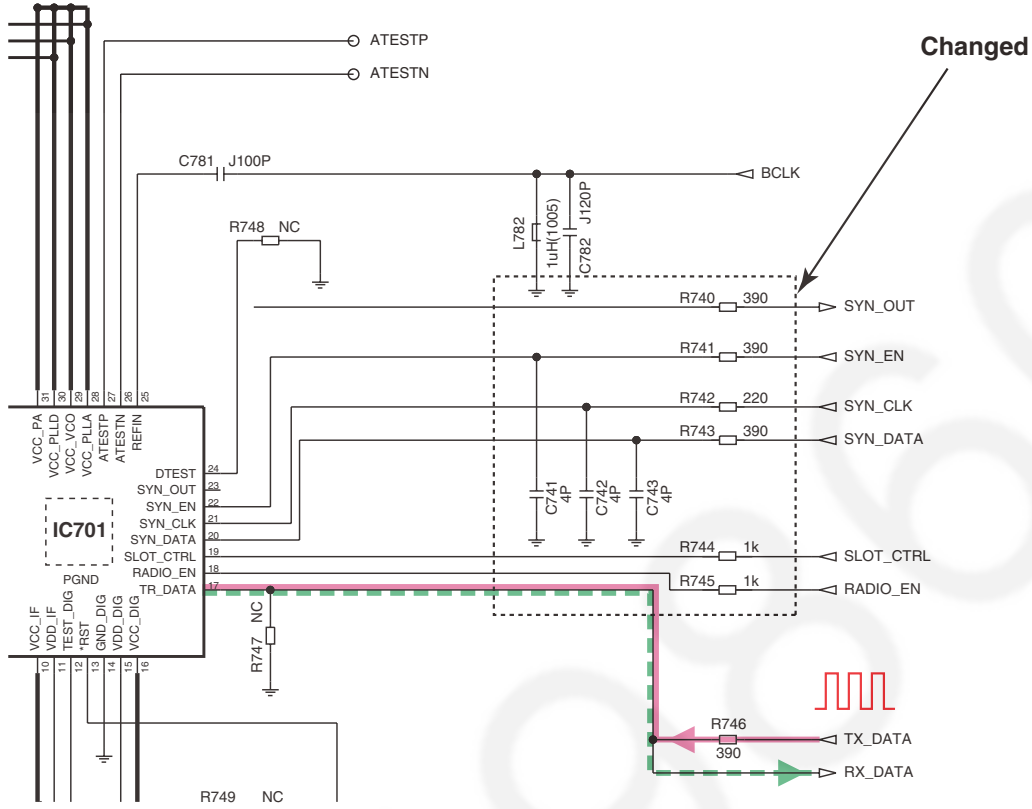
3.2.2.

Changed



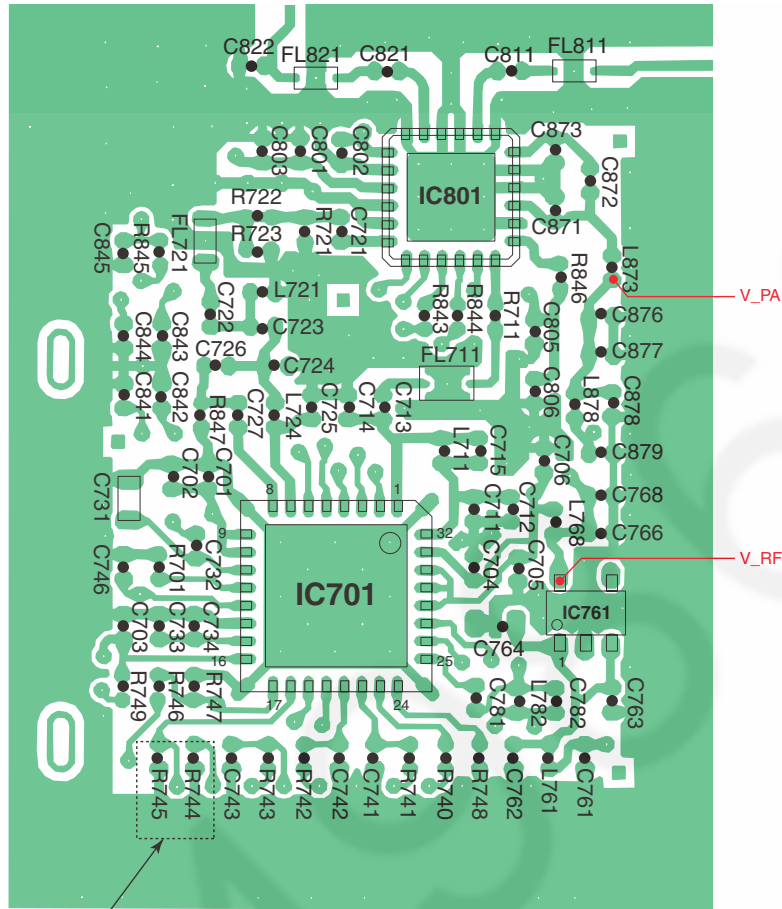
3.3. Schematic Diagram (Base Unit_RF Part)

[Changed from original section "13.3. Schematic Diagram (Base Unit_RF Part)"]



3.4. Circuit Board (Base Unit_RF Part)

[Changed from original section “14.2. Circuit Board (Base Unit_RF Part)”]



Correction

3.5. IC501

[Changed from original section “15.1.1. IC501”]

90	DCIN2	A.I	--	--	--
91	NC	A.O	--	--	--
92	GND A	GND	--	--	--
93	CID_INP	A.I	--	--	--
94	CID_INN	A.I	--	--	--
95	VCCA	VCC	--	--	--
96	LIN0	A.I	--	--	--
97	LOUT0	A.O	--	--	--
98	NC	A.O	--	--	--
99	VCCA	VCC	--	--	--
100	SPN	A.O	--	--	--

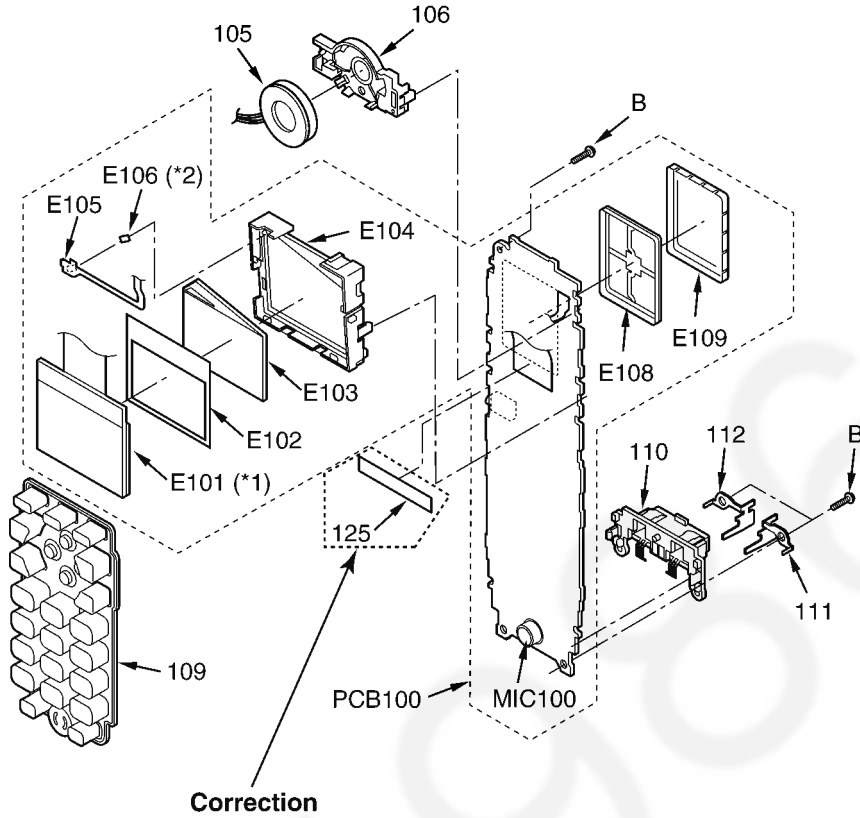
Note:

- The mark “*” in the I/O column means the port is controlled by the firmware.

Deletion

3.6. Cabinet and Electrical Parts (Handset)

[Changed from original section "16.2. Cabinet and Electrical Parts (Handset)"]



3.7. Main P.C. Board Parts

[Changed from original section "16.5.1.2. Main P.C. Board Parts"]

Note:

(*1) When you have replaced IC501 or IC611, or X501, make the adjustment.

Refer to **Check and Adjust Frequency (Base Unit)** (P.78).

(*2) When replacing IC701 or IC801, refer to **How to Replace the LLP (Leadless Leadframe Package) IC** (P.70).

Addition → (*3) If the suffix code is B or later (B, C, D...) on the base unit's serial no. label, remove the chip (RA120) simultaneously when replacing IC 501 on the base unit. Otherwise some function does not work properly.

Ref. No.	Part No.	Part Name & Description	Remarks
PCB1	PQWP1TG6021H	MAIN P.C.BOARD ASS'Y (with ANTENNA P.C.B) (RTL)	
PCB1-1	PQWP2TG6021H	MAIN P.C.BOARD ASS'Y (without ANTENNA P.C.B) (RTL)	
		(ICs)	
IC300	C0DBAGZ00023	IC	s
IC331	C0DBFGD00017	IC	
IC501	PQWIG6022HKT	IC (*1) (*3) Addition	
IC611	PQWITG6021MH	IC (EEPROM) (*1)	
IC701	C1CB00002618	IC (*2)	
IC761	C0CBABE00029	IC	
IC801	C1CB00002629	IC (*2)	

3.8. Cabinet and Electrical Parts

[Changed from original section "16.5.2.1. Cabinet and Electrical Parts"]

116	PQHS10622Z	SPACER, SPEAKER NET	
117	PQKE10471Y2	COVER, EP CAP	
118	PQMC10514Z	MAGNETIC SHIELD, ANTENNA	
119	PQKF10729Z4	CABINET COVER	ABS-HB
120	PQGT19418Z	NAME PLATE	
121	HHR-P107	BATTERY	
122	PQHS10681Y	SPACER, BATTERY	
123	PQKK10600Z4	LID, BATTERY COVER	ABS-HB
124	PQYNTG3032BR	LID, BATTERY COVER ASS'Y	ABS-HB
125	PQHS10683Z	TAPE, ADHESIVE	

Addition

3.9. Main P.C.Board Parts

[Changed from original section "16.5.2.2. Main P.C.Board Parts"]

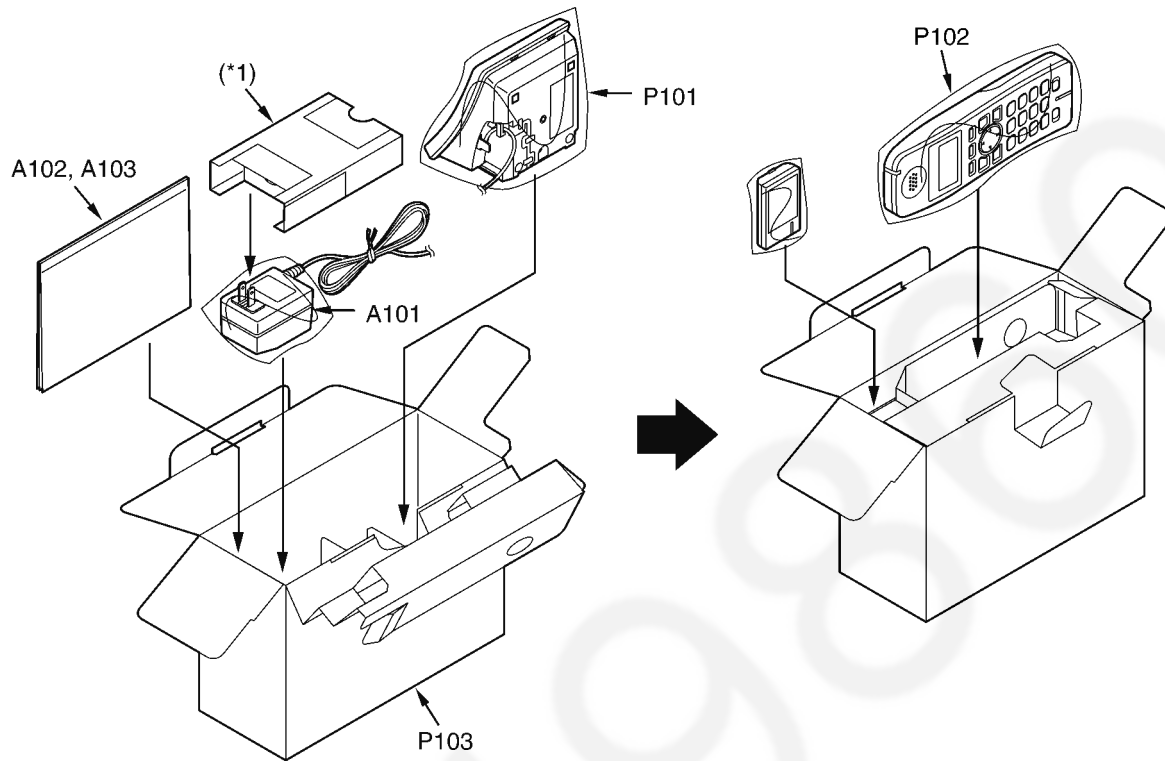
		(OTHERS)	
MIC100	L0CBAY000018	MICROPHONE	
E101	L5DCBY000011	LIQUID CRYSTAL DISPLAY (*3)	
E102	PQHX11453Z	COVER, LCD COVER SHEET	
E103	PQHR11279Z	TRANSPARENT PLATE, LCD PLATE	PMMA-HB
E104	PQHR11278Z	GUIDE, LCD	PS-HB
E105	PQJE10179X	LEAD WIRE, FPC	
E106	B3AFB0000177	LED	
E107	PQHS10683Z	TAPE, ADHESIVE	
E108	PQMC10507Z	MAGNETIC SHIELD, FRAME	
E109	PQMC10508Z	MAGNETIC SHIELD, COVER	
CN431	K2HD103D0001	JACK	
X501	H0J138500003	CRYSTAL OSCILLATOR (*1)	

Deletion

4 ADDITION

4.1. KX-TGA600M

[Added into original section "16.4.2. KX-TGA600M"]



Note:

(*1) These pads are pieces of Ref No. P103 (GIFT BOX).

4.2. KX-TGA600M

[Added into original section "16.5.4.2. KX-TGA600M"]

Ref. No.	Part No.	Part Name & Description	Remarks
A101	PQLV208V	AC ADAPTOR	⚠
A102	PQQX15656Y	INSTRUCTION BOOK (*1)	
A103	PQQW15385Z	LEAFLET	
P101	XZB13X19C03	PROTECTION COVER (for Charger Unit)	
P102	XZB08X25B02	PROTECTION COVER (for Hand-set)	
P103	PQPK15643Z	GIFT BOX	