

Service Manual

Telephone Equipment

KX-TG2340JXS

KX-TGA236JXS

Digital Cordless Answering System
Silver Version

(for Asia, Middle Near East and Other Areas)

Supplement-2

Please file and use this supplement manual together with the service manual for Model No.KX-TG2340JXS, KX-TGA236JXS, Order No.KM40505727CE.

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.

TABLE OF CONTENTS

	PAGE
1 REPLACEMENT PARTS LIST	2
1.1. REFERENCE CHART.....	2
1.2. ORIGINAL AND NEW PARTS COMPARISON LISTS	2
2 SUP-1 (KM40604978SE)	3

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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	Remarks: a. 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 (For RoHS)	

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	<table border="0"> <tr> <td>Original</td> <td>\swarrow</td> <td>Early (before change)</td> </tr> <tr> <td>New</td> <td>\searrow</td> <td>Late (after change)</td> </tr> </table>	Original	\swarrow	Early (before change)	New	\searrow	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.
Original	\swarrow	Early (before change)						
New	\searrow	Late (after change)						
W	<table border="0"> <tr> <td>Original</td> <td>\rightarrow</td> <td>Early (before change)</td> </tr> <tr> <td>New</td> <td>\rightarrow</td> <td>Late (after change)</td> </tr> </table>	Original	\rightarrow	Early (before change)	New	\rightarrow	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.
Original	\rightarrow	Early (before change)						
New	\rightarrow	Late (after change)						
X	<table border="0"> <tr> <td>Original</td> <td>\rightarrow</td> <td>Early (before change)</td> </tr> <tr> <td>New</td> <td>\rightarrow</td> <td>Late (after change)</td> </tr> </table>	Original	\rightarrow	Early (before change)	New	\rightarrow	Late (after change)	New parts only may be used in early or late production sets. Stock new parts.
Original	\rightarrow	Early (before change)						
New	\rightarrow	Late (after change)						
Y	<table border="0"> <tr> <td>Original</td> <td>\rightarrow</td> <td>Early (before change)</td> </tr> <tr> <td>New</td> <td>\rightarrow</td> <td>Late (after change)</td> </tr> </table>	Original	\rightarrow	Early (before change)	New	\rightarrow	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.
Original	\rightarrow	Early (before change)						
New	\rightarrow	Late (after change)						
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

(for KX-TG2340JXS/KX-TGA236JXS)

Ref. No.	Part No.		Part Name & Description	Pcs/ Set	Remarks	Notes	Time of Change (Suffix)
	Original (Old)	New					
BASE UNIT							
PCB1	PQWPG2340JXH	PQWPG2340JXHR	Main P.C.Board Ass'y (RTL)	1	-	8 V	-
IC901	C1CB00001657	C1CB00002285	IC	1	a	4 V	-
Q103	B1BBAP000011	B1BBAP000021	Transistor (Si)	1	-	8 V	-
C447	ECUE1A223KBQ	ECUE1C223KBQ	Capacitor, 0.022 μ F	1	a	4 V	-
C448	ECUE1A223KBQ	ECUE1C223KBQ	Capacitor, 0.022 μ F	1	a	4 V	-
CN101	PQJJ2H003Z	K2LD1YYA0001	Jack	1	-	8 V	-
HANDSET							
IC901	C1CB00001657	C1CB00002285	IC	1	a	4 V	-
Q201	PSVTUMG11NTR	B1GFCFEN0011	Transistor (Si)	1	-	8 V	-
CN201	K1MN22B00096	K1MY22BA0114	Connector	1	-	8 V	-

2 SUP-1 (KM40604978SE)

ORDER NO. KM40604978SE

Service Manual

Telephone Equipment



KX-TG2340JXS KX-TGA236JXS

Digital Cordless Answering System
Silver Version
(for Asia, Middle Near East and Other Areas)

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

Model No.	Order No.	Sup. No.	Countries/Areas
KX-TG2340JXS/KX-TGA236JXS	KM40505727CE	1	Asia, Middle Near East and Other Areas

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.

CONTENTS

	Page		Page
1 CHANGES (for RoHS)	2	2.3. Base unit (Changed from original section 13.8.1. Base unit)	7
1.1. SUBJECT	2	2.4. TDD Frame Format (Changed from original section 14.2.1. TDD Frame Format)	7
1.2. REPLACEMENT PARTS LIST	3	2.5. Signal Flowchart in the Whole System (Changed from original section 14.3. Signal Flowchart in the Whole System)	8
2 CORRECTION	5	2.6. BLOCK DIAGRAM (Handset) (Changed from original section 18 BLOCK DIAGRAM (Handset))	9
2.1. Test Link Mode (Changed from original section 13.1.3. Test Link Mode)	5		
2.2. Test Link Mode (Changed from original section 13.2.3. Test Link Mode)	6		

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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 1st 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 ORIGINAL AND NEW PARTS COMPARISON LISTS.	
1. Improve performance	Remarks: For RoHS-compliant parts marked by *R *1 Use only RoHS parts for the production sets which serial No. labels are after 6CXXXXXXXXXX. *2 Either original or RoHS 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 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:

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

	Serial No. Label	Interchangeability Code
*1	(Example) 6C C Q A 001 001 ↓ ↓ 6 Month 7 or later C to L A to L	X
*2	(Example) 6 B C Q A 001 001 ↓ ↓ Year Month 5 or earlier A to L 6 A or B	W

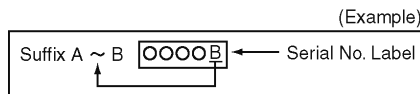
1.2.2. ORIGINAL AND NEW PARTS COMPARISON LISTS

Change of the Suffix Code

- Handset

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

Serial No.Label tells you the suffix code as follows



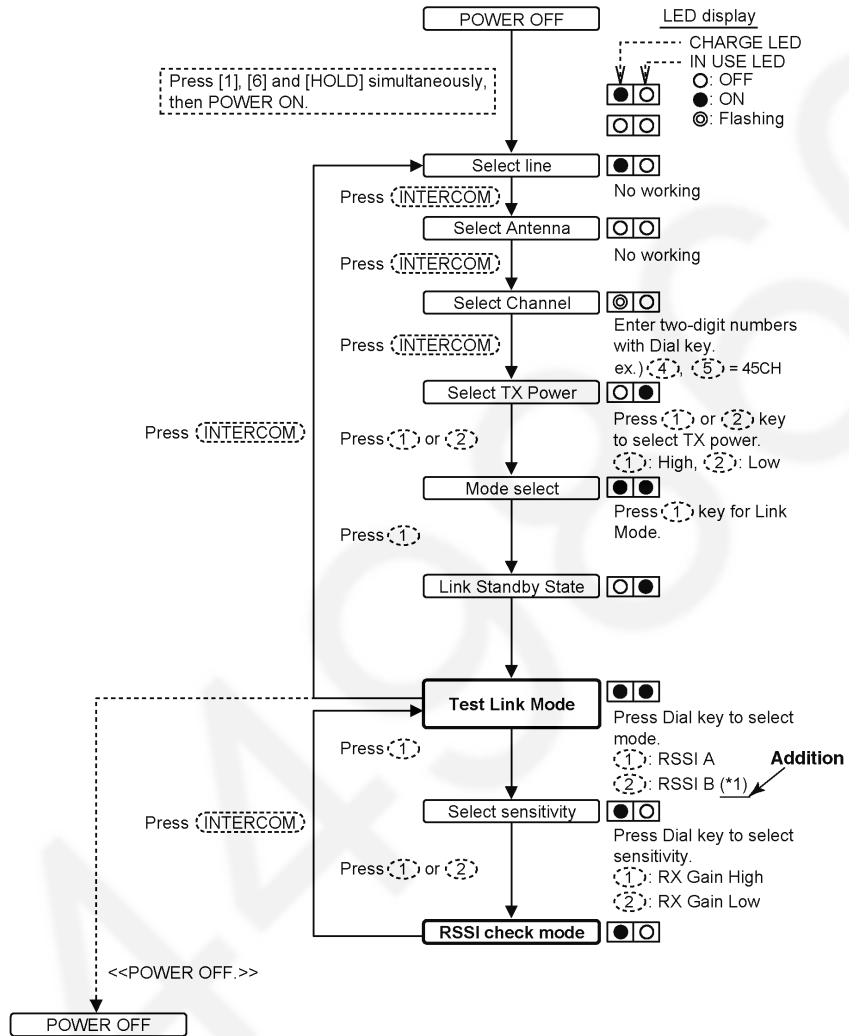
1.2.3. ORIGINAL AND NEW PARTS COMPARISON LISTS

(for KX-TG2340JXS/KX-TGA236JXS)

Ref. No.	Part No.		Part Name & Description	Pcs/ Set	Remarks	Notes	Time of Change (Suffix)
	Original (Old)	New					
BASE UNIT							
PCB1	PQWPG2340JXH	PQWP2340JXHR	Main P.C. Board Ass'y (RTL)	1	*R	8	-
Q103	B1BBAP000011	B1BBAP000021	Transistor (Si)	1	*R	8	-
CN101	PQJJ2H003Z	K2LD1YYA0001	Jack	1	*R	8	-

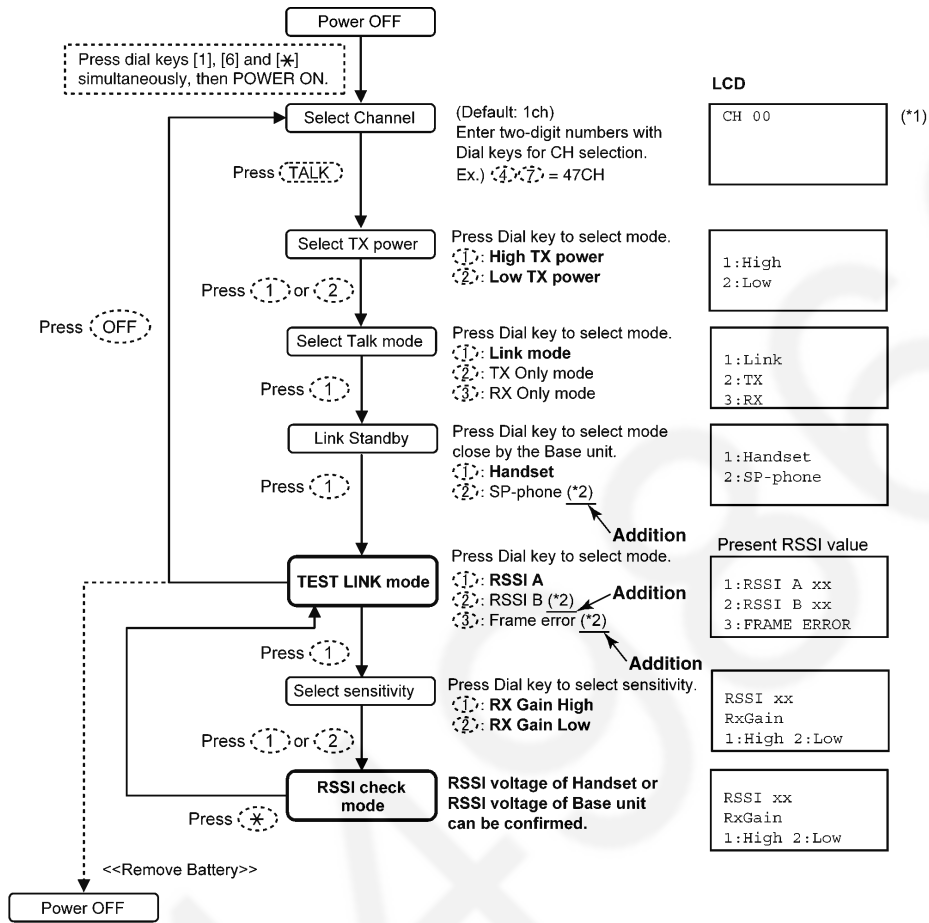
2 CORRECTION

2.1. Test Link Mode (Changed from original section 13.1.3. Test Link Mode)



Note:
 (*1) for factory use only. **Addition**

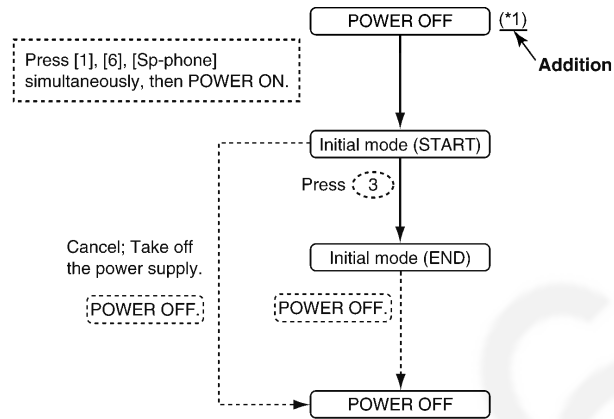
2.2. Test Link Mode (Changed from original section 13.2.3. Test Link Mode)



Note:
(*1) LCD displays the Channel number.
(exception: default/ CH00 = 1ch.)
(*2) for factory use only.

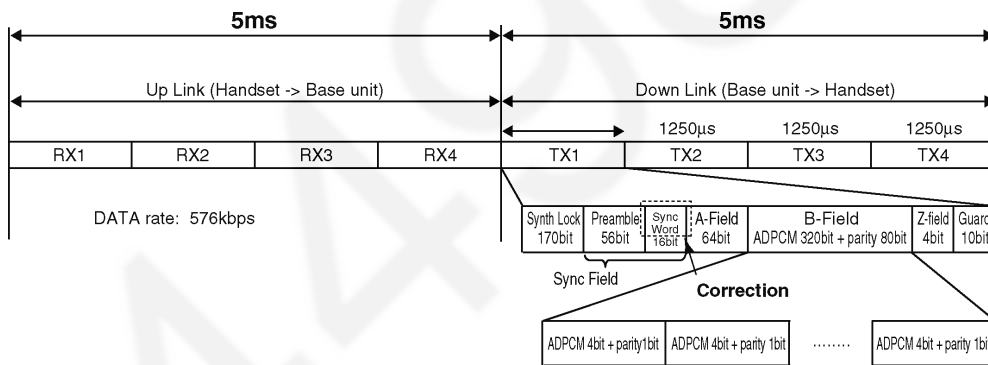
← Addition

2.3. Base unit (Changed from original section 13.8.1. Base unit)



Note:
 (*1) Telephone line must be connected.
 Addition

2.4. TDD Frame Format (Changed from original section 14.2.1. TDD Frame Format)



Sync Field (72Bit): Preamble56Bit + SyncWord16Bit
 Base set (handset) adjusts the timing of reception so that reception of base set (handset) can correspond to transmission of handset (base unit). It is necessary for sync-field that handset gets synchronization.
 A - field (64bit) : Each kinds of DATA: ch data, line condition, etc
 B - field (320bit + 80bit) : Sound data + parity
 Z - Filed (4Bit) : Parity Check

2.5. Signal Flowchart in the Whole System (Changed from original section 14.3. Signal Flowchart in the Whole System)

Reception

CN101 of the base unit is connected to the TEL line, and signal is entered through the bridge diode D101. While talking, the relay (Q104) is turned ON and amplified at the Q150, then led to DSP (IC501). The DSP encodes ADPCM and TDD/TDMA with FHSS to TX-DATA. The TX-DATA signal is entered to IC901 of RF UNIT, and modulated to 2.4GHz. The RF signal is fed into Tx/Rx switch (D904). The RF signal is passed through filter (FL901) and fed to ANTENNA.

As for the handset, RF signal from the antenna passes through filter (FL901), then is routed by Tx/Rx switch (D904) and led to IC901. The RF signal is amplified by LNA and down-converted to IF signal in IC901. The IF signal passing through internal filter is demodulated into RX-DATA, then enters DSP (IC201). The DSP performs TDD/TDMA and ADPCM decoding to convert the RX-DATA into the voice signal, then it is output to the speaker.

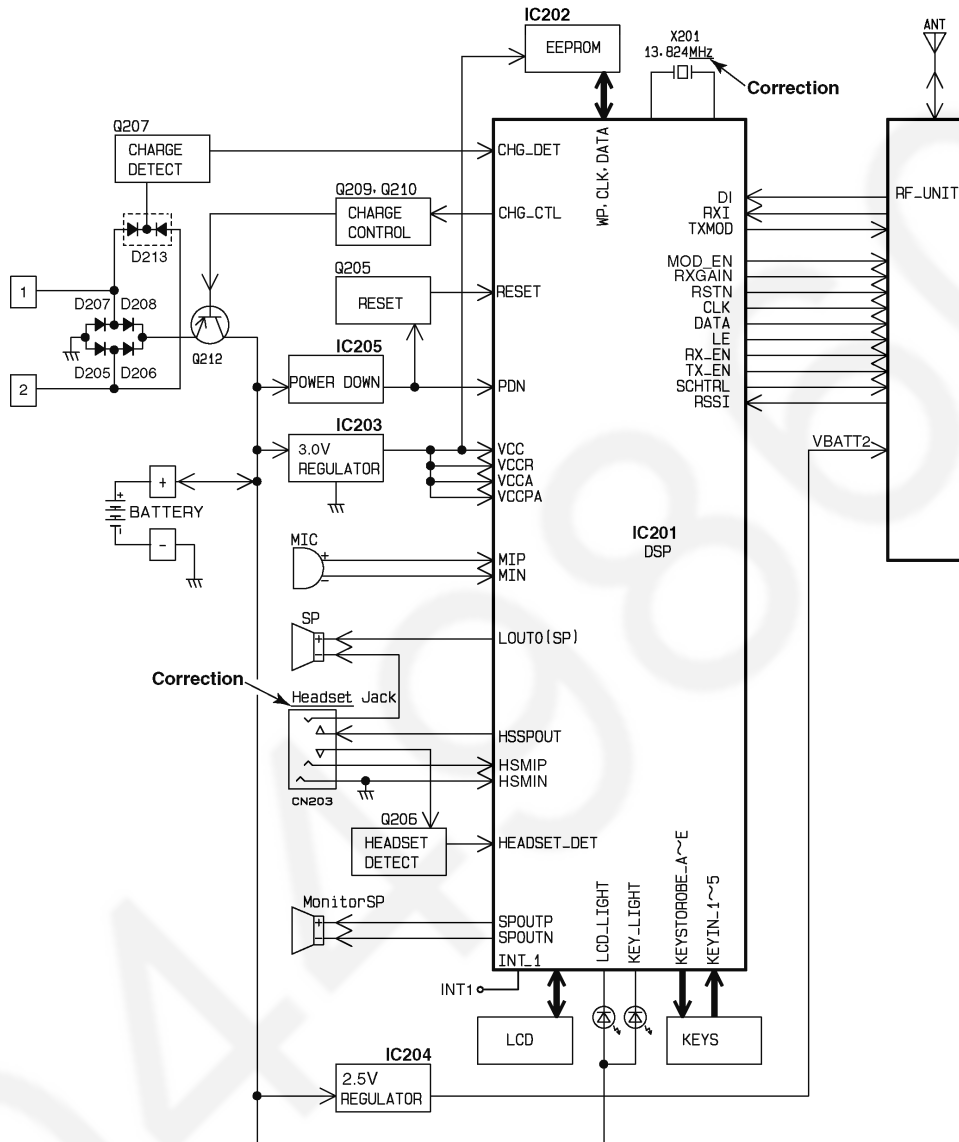
Transmission

The voice signal entering from the microphone is led to DSP (IC201). The DSP encodes ADPCM and TDD/TDMA with FHSS to TX-DATA. The TX-DATA signal enters IC901 of RF UNIT, and is modulated to 2.4GHz. The RF signal is fed into Tx/Rx switch (D904). The RF signal is passed through filter (FL901) and fed to ANTENNA.

As for the base unit, RF signal from the antenna passes through filter (FL901), then is routed by Tx/Rx switch (D904) and led to IC901. The RF signal is amplified by LNA and down-converted to IF signal in IC901. The IF signal passing through internal filter is demodulated into, then enters DSP (IC501). The DSP performs TDD/TDMA and ADPCM decoding to convert the RX-DATA into the voice signal. The voice signal is amplified at the TX amplifier (Q161), then output to the TEL line CN101 through the relay (Q104) and bridge (D101).

Correction

2.6. BLOCK DIAGRAM (Handset) (Changed from original section 18 BLOCK DIAGRAM (Handset))



T.F
KXTG2340JXS
KXTGA236JXS