ORDER NO. KM40501580CE
J01

Service Manual

Telephone Equipment

Caller ID Compatible

KX-TG2431W
KX-TG2432W
KX-TG2432B
KX-TGA242W
KX-TGA242B

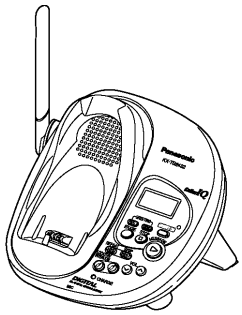
2.4GHz Digital Cordless Answering System

White Version

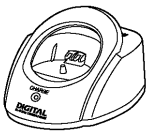
Black Version

(for U.S.A.)

(Handset)



(Base Unit)



(Charger Unit)
Model shown is KX-TG2432.

Configuration for each model

Model No	Base Unit	Handset	Charger Unit
KX-TG2431	1	1 (TGA242)	
KX-TG2432	1	2 (TGA242)	1

	Base Unit	Handset	Charger
Power Supply	AC Adaptor (PQLV19Z, 120 V AC, 60 Hz)	Rechargeable Ni-MH battery (2.4 V, 830 mAh)	AC Adaptor (PQLV19Z, 120V AC, 60Hz)
Receiving/Transmitting Frequency	90 channels within 2,400-2,481MHz	90 channels within 2,400-2,481MHz	—
Receiving Method	Super Heterodyne	Super Heterodyne	—
Oscillation Method	PLL synthesizer	PLL synthesizer	—
Detecting Method	Quadrature Discriminator	Quadrature Discriminator	—
Tolerance of OSC Frequency	13.824MHz±100Hz	13.824MHz±100Hz	—
Modulation Method	Frequency Modulation	Frequency Modulation	—
Spread spectrum Method	Frequency Hopping Spread spectrum	Frequency Hopping Spread spectrum	—
ID Code	19bit	22bit	—
Security Codes	—	1,000,000	—
Ringer Equivalence No. (REN)	0.1B	—	—
Dialing Mode	—	Tone (DTMF)/Pulse	—
Redial	—	Up to 48 digits	—
Speed Dialer	—	Up to 32 digits (Phone book)	—
Power Consumption	Standby: Approx. 2.7W, Maximum: Approx. 5.0W	11 days at Standby, 5 hours at Talk	Standby: Approx. 1.0W, Maximum: Approx. 3.0W
Operating Environment	5°C - 40 °C (41 °F - 104 °F)	5°C - 40 °C (41 °F - 104 °F)	5°C - 40 °C (41 °F - 104 °F)
Dimensions (H x W x D)	Approx. 125mm × 140mm × 135mm ($4^{29}/_{32}$" × $5^{1}/_{2}$" × $5^{5}/_{16}$")	Approx. 167mm × 48mm × 31mm ($6^{9}/_{16}$" × $1^{7}/_{8}$" × $1^{7}/_{32}$")	Approx. 65mm × 85mm × 95mm ($2^{9}/_{16}$" × $3^{11}/_{32}$" × $3^{3}/_{4}$")
Mass (Weight)	Approx. 312 g (0.69 lb.)	Approx. 107 g (0.24 lb.)	Approx. 97 g (0.21 lb.)

- Design and specifications are subject to change without notice.
- The illustrations in this Service Manual may vary slightly from the actual product.

IMPORTANT INFORMATION ABOUT LEAD FREE, (PbF), SOLDERING

If lead free solder was used in the manufacture of this product the printed circuit boards will be marked PbF.
Standard leaded, (Pb), solder can be used as usual on boards without the PbF mark.
When this mark does appear, please read and follow the special instructions described in this manual on the use of PbF and how it might be permissible to use Pb solder during service and repair work.

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⚠ 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.

When you note the serial number, write down all 11 digits. The serial number may be found on the bottom of the unit.

Note:

Because CONTENTS 3 to 6 are the extracts from the Operating Instructions of this model, they are subject to change without notice. Please refer to the original Operating Instructions for further information.

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1 FOR SERVICE TECHNICIANS

ICs and LSIs are vulnerable to static electricity.

When repairing, the following precautions will help prevent recurring malfunctions.

1. Cover plastic parts boxes with aluminum foil.
2. Ground the soldering irons.
3. Use a conductive mat on worktable.
4. Do not grasp IC or LSI pins with bare fingers.

2 CAUTION

Danger of explosion if battery is incorrectly replaced.

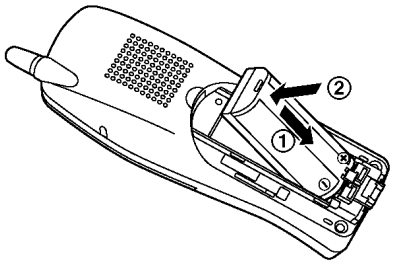
Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer´s Instructions.

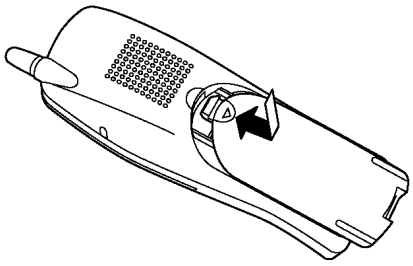
3 BATTERY

3.1. Battery Installation

1 Insert the battery (①), and press it down until it snaps into the compartment (②).



2 Close the handset cover.



3.2. Battery Charge

Place the handset on the base unit or charger for **6 hours** before initial use.

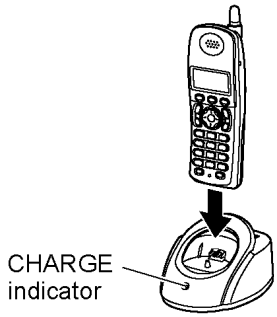
- The unit will beep once, the CHARGE indicator will light, and "**Charging**" will be displayed.
- "**Charge completed**" is displayed when the battery has been fully charged. The CHARGE indicator will remain lit.

Note:

- To ensure the battery charges properly, clean the charge contacts of the handset, base unit, and charger with a soft, dry cloth. Clean if the unit is subject to grease, dust or high humidity.

Base unit

Charger unit (KX-TG2432 only)



3.3. Recharging the Battery

Recharge the battery when:

– "**Recharge battery**" is displayed or flashes on the handset display.

– the handset beeps intermittently while it is in use.

Note:

- Recharge the handset battery for more than 15 minutes, or the display will continue showing the indication.
- If the battery has been discharged, the handset will display "**Charge for 6h**" and when you place the handset on the base unit or charger.

Note for service:

The battery strength may not be indicated correctly if the battery is disconnected and connected again, even after it is fully charged. In that case, by recharging the battery as mentioned above, you will get a correct indication of the battery strength.

3.4. Battery Strength

You can confirm the battery strength on the handset display.

Battery icon	Battery strength
	Fully charged
	Medium
	Low When flashing: needs to be recharged.
	Discharged

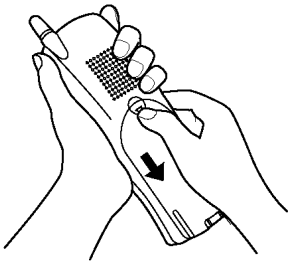
3.5. Battery Replacement

If battery performance diminishes, make sure you have cleaned the charge contacts and fully charged the battery. The battery needs to be replaced if any of the following are displayed after a few phone calls even when you have fully charged the battery.

– "**Recharge battery**"
– (flashing)
– "**Charge for 6h**"
–

- Use only the rechargeable Panasonic battery HHR-P105.

1 Press the notch on the cover firmly and slide it as indicated by the arrow.



2 Replace the old battery with a new one, and close the cover.

Attention:

A nickel metal hydride battery that is recyclable powers the product you have purchased.

Please call 1-800-8-BATTERY for information on how to recycle this battery.

3.6. Battery Performance

After your Panasonic battery is fully charged, you can expect the following performance:

Operation	Operating time
While in use (talking)	Up to 5 hours
While not in use (standby)*1	Up to 11 days
While using the Clarity Booster feature	Up to 3 hours

*1 Handset is off the base unit or charger but not in use.

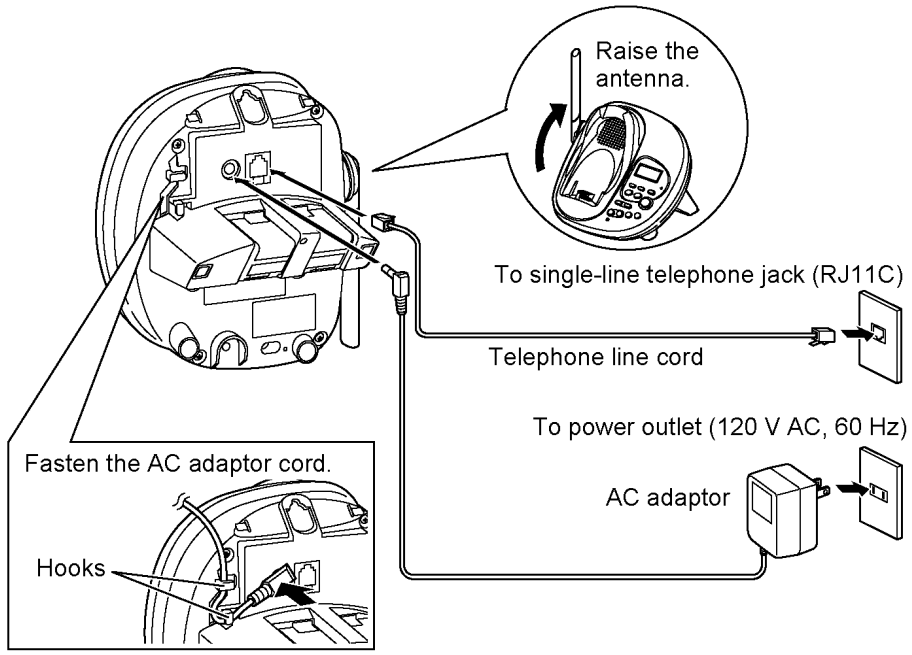
Note:

- Battery power is consumed whenever the handset is off the base unit or charger, even when the handset is not in use. The longer you leave the handset off the base unit or charger, the shorter you can actually talk on the handset. Actual battery performance depends on a combination of how often the handset is in use and how often it is not in use.
- Once the battery is fully charged, you do not have to charge it again until "**Recharge battery**" is displayed or flashes. This will maximize the battery life.

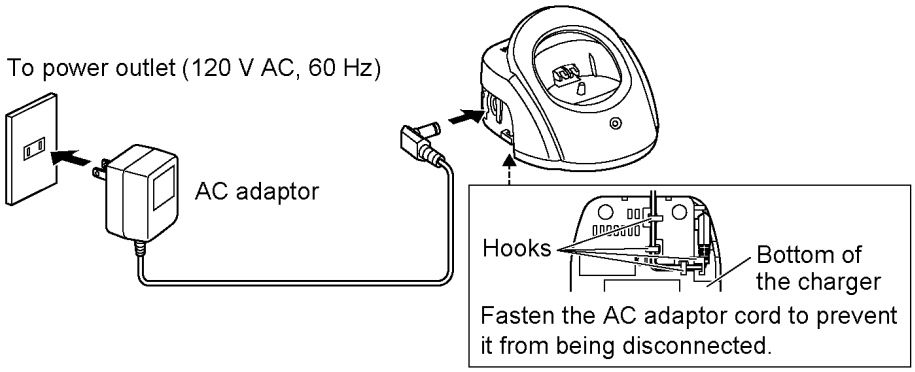
4 SETTINGS

4.1. Connections

Base unit



Charger unit (KX-TG2432 only)

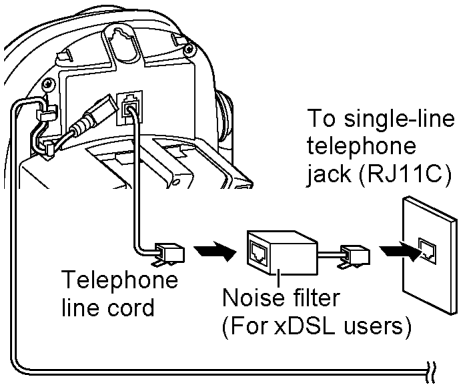


Note:

- Use only the included Panasonic AC adaptor PQLV19Z.
- The AC adaptor must remain connected at all times. (It is normal for the adaptor to feel warm during use.)
- The AC adaptor should be connected to a vertically oriented or floor-mounted AC outlet. Do not connect the AC adaptor to a ceiling-mounted AC outlet, as the weight of the adaptor may cause it to become disconnected.
- The unit will not work during a power failure. We recommend connecting a standard telephone to the same telephone line or to the same telephone jack using the Panasonic KX-J66 T-adaptor. Emergency power can be supplied to the unit by connecting a Panasonic battery back-up power supply KX-TCA200.

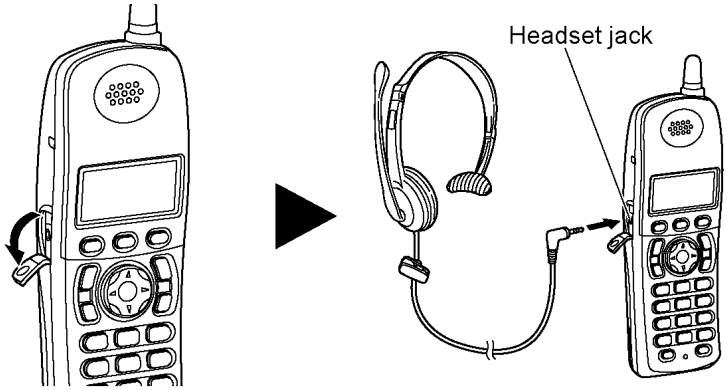
If you subscribe to an xDSL service

- Please attach a noise filter (contact your xDSL provider) to the telephone line between the base unit and the telephone line jack in the event of the following:
  – Noise is heard during conversations.
  – Caller ID features do not function properly.



4.2. Connecting an Optional Headset

Connecting an optional headset to the handset allows hands-free phone conversations. Please use only a Panasonic KX-TCA60, KX-TCA86, KX-TCA88, KX-TCA88HA, KX-TCA91, KX-TCA92, or KX-TCA98 headset.



• Model shown is KX-TCA86.

Note:

- To switch to the speakerphone, press 【】. To return to the headset, press 【】.

5 ANSWERING SYSTEM

The unit contains an answering system which can answer and record calls for you when you are unavailable to answer the phone.

Important:

- Only 1 person can access the answering system (listen to messages, record a greeting message, etc.) at a time.
- When callers leave messages, the unit records the day and time of each message. Make sure the date and time have been set.
- You can select the caller's recording time.

5.1. Recording Your Greeting Message

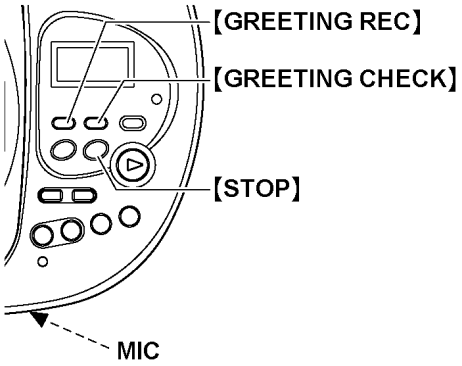
You can record your own greeting message (max. 2 minutes) that will be played when the answering system answers a call. If you do not record a greeting message, a pre-recorded greeting message will be used.

Sample greeting message: "*This is (your name). We are unable to answer the phone right now. Please leave a message after the beep. Thank you.*"

1 Press **【GREETING REC】**.
- The unit announces "*To record greeting, press record again.*"

2 Within 10 seconds, press **【GREETING REC】** again.

3 After the unit beeps, speak clearly about 20 cm (8 inches) away from the MIC.
- The display will show the elapsed recording time.



4 To stop recording, press **【GREETING REC】** or **【STOP】**.

Note:

- If the greeting message is less than 1 second long, the unit beeps 6 times and announces, "*Your greeting was not recorded. Record your greeting again.*"

To play back the greeting message

Press **【GREETING CHECK】**.

Erasing your greeting message

Press **【GREETING CHECK】**, and then press **【ERASE】** while your greeting message is playing.

- If you do not re-record your greeting message, the unit will use a pre-recorded greeting message.

Pre-recorded greeting message

If you do not record a greeting message, one of 2 pre-recorded messages will be played when a call is received depending on the caller's recording time.

– When the recording time is set to "**1min**", "**2min**", or "**3min**":
"*Hello, we are not available now. Please leave your name and phone number after the beep. We will return your call.*"

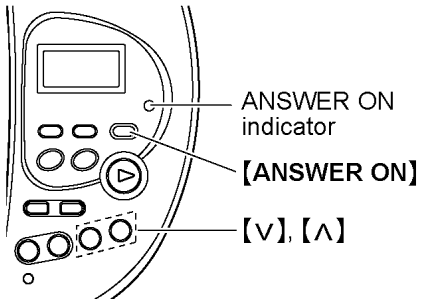
– When the recording time is set to "**Greeting only**":
"*Hello, we are not available now. Please call again. Thank you for your call.*"

To play back the pre-recorded greeting, press **【GREETING CHECK】**.

5.2. Turning the Answering System On/Off

Press **[ANSWER ON]**.

- When the answering system is turned on, the ANSWER ON indicator lights and the unit announces "*Answer set*" and the day and time.
- When the answering system is turned off, the ANSWER ON indicator turns off and the unit announces "*Answer off*".



5.3. Caller's Recording Time

You can change the maximum message recording time allotted to each caller.
"**1min**", "**2min**" or "**3min**" (default): Caller messages are limited to 1 minute to 3 minutes.
"**Greeting only**": The unit plays the greeting message but does not record caller messages.

1 Press **[MENU]**.
2 Scroll to "**Initial setting**" by pressing **[▼]** or **[▲]**, then press **[►]**.
3 Scroll to "**Set answering**" by pressing **[▼]** or **[▲]**, then press **[►]**.
4 Scroll to "**Recording time**" by pressing **[▼]** or **[▲]**, then press **[►]**.
5 Press **[▼]** or **[▲]** repeatedly to select the desired setting.
- You can also select the recording time by pressing **[1]** to **[3]**, or **[0]** ("**Greeting only**").

6 Press **[Save]**, then press **[OFF]**.

Note:

- If message memory becomes full, the unit will automatically switch to the "**Greeting only**" mode.

5.4. Message Alert

You can select whether or not the message indicator on the handset will flash when new messages have been recorded. The default setting is OFF.

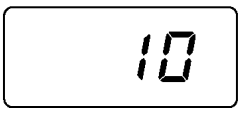
1 Press **[MENU]**.
2 Scroll to "**Initial setting**" by pressing **[▼]** or **[▲]**, then press **[►]**.
3 Scroll to "**Message alert**" by pressing **[▼]** or **[▲]**, then press **[►]**.
4 Press **[▼]** or **[▲]** repeatedly to select "**On**" or "**Off**".
5 Press **[Save]**, then press **[OFF]**.

Note:

- The message indicator will not flash for new messages while the handset is in use.
- While message alert is on, battery operating time will be shortened.

5.5. Listening to Messages

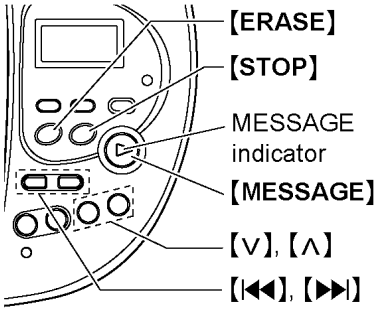
When new messages have been recorded:
– The MESSAGE indicator on the base unit will flash.
– The message indicator on the handset will flash slowly if the message alert feature is turned on.
The base unit display will show the number of messages (old and new) recorded by the answering system.
Example: The total number of recorded messages is 10.



5.5.1. Listening to messages using the base unit

Press **【MESSAGE】**.

- The unit will announce the number of new messages and will play back the new messages.
- When you have no new messages, the unit will announce "*No new messages. All message playback*", and will play back all messages.



Note:

- The display shows the message number during playback.
- During playback, the unit will announce the day and time that each message was recorded. **(Voice time/day stamp)**
- At the end of the last message, the unit announces "*End of final message*".

Erasing a specific message

Press **【ERASE】** while listening to the message you want to erase.

Erasing all messages

1 Press **【ERASE】** while the base unit is not being used.
- The unit will announce "*To erase all messages, press ERASE again.*"

2 Within 10 seconds, press **【ERASE】** again.
- The unit will announce "*No messages*".

Note:

- Caller information for the erased messages will remain in the caller list.

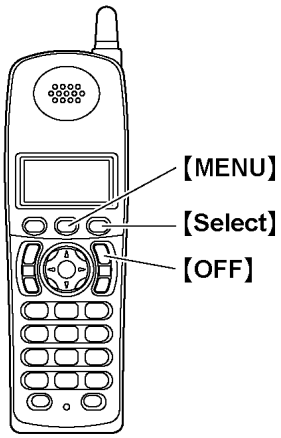
5.5.2. Listening to messages using the handset

When new messages have been recorded, "**New message**" is displayed.

1 Press **【MENU】**.

2 Press **【Select】** at "**Message play**".

- The unit will announce the number of new messages, and will play back the new messages.
- To switch to the receiver and to listen to the messages with privacy, press **【📞】**. You can switch back to the speaker by pressing **【🔊】**.
- When you have no new messages, the unit will announce "*No new messages. All message playback*", and will play back all messages.
- After the last message is played back, the unit's voice guidance starts. Follow the guidance as necessary.



3 Press **【OFF】** when finished.

Note:

- Adjust the speaker or receiver volume using **【▼】** or **【▲】**.
- At the end of the last message, the unit announces "*End of final message*".

5.5.3. Answering system commands

You can also operate the answering system by pressing dial keys.
To use the following commands, press **【MENU】**, then press **【Select】** at "**Message play**".

Key	Command
【1】 or **【◄】**	Repeat message (during playback)*1
【2】 or **【►】**	Skip message (during playback)
【4】	Play new messages
【5】	Play all messages
【8】	Turn answering system on
【9】	Stop playback*2
【0】	Turn answering system off
【CLEAR】 or **【✳】【4】**	Erase this message (during playback)
【✳】【5】	Erase all messages

*1 If pressed within the first 5 seconds of a message, the previous message will be played.

*2 To resume operation, press a command key within 15 seconds, or the voice guidance will start.

5.6. Remote Operation

Using a touch tone phone, you can call your phone number from outside and access the unit to listen to messages. The unit's voice guidance will prompt you to press certain dial keys to perform different operations.

Important:

- In order to operate the answering system remotely, you must first set a remote code. This code must be entered each time you operate the answering system remotely.

5.6.1. Using the answering system remotely

1 Dial your phone number from a touch tone phone.
- If the ring count is set to "**Toll saver**", the number of rings you hear will indicate whether or not you have new messages.

2 After the greeting message starts, enter your remote code.
- The unit will announce the number of new messages, and will play back the new messages.

3 After 3 seconds, the voice guidance will start. Follow the voice guidance as necessary.

4 When finished, hang up.

Note:
- When you press a key, press firmly.
- You can hang up at any time.
- You can ignore the voice guidance and control the unit using remote commands.

Voice guidance

During remote operation, the unit's voice guidance will prompt you to press **[1]** to perform a specific operation, or press **[2]** to listen to more available operations. Operations are presented by voice guidance in the following order:
- Play back all messages
- Play back new messages
- Record a message
- Erase all messages

Note:
- If you do not press any dial keys within 10 seconds after a voice guidance prompt, the unit will announce, "*Thank you for your call*" then disconnect your call.
- If less than 3 minutes of recording time is available, the unit will announce the remaining recording time after the last message is played back.
- If the unit announces "*Memory full*", erase unnecessary messages.

5.6.2. Remote Code

A remote code must be entered when operating the answering system remotely. This code prevents unauthorized parties from listening to your messages remotely. Store any 2-digit number (00–99). The default setting is "**11**".

1 Press **[MENU]**.

2 Scroll to "**Initial setting**" by pressing **[▼]** or **[▲]**, then press **[►]**.

3 Scroll to "**Set answering**" by pressing **[▼]** or **[▲]**, then press **[►]**.

4 Scroll to "**Remote code**" by pressing **[▼]** or **[▲]**, then press **[►]**.

5 Select the desired remote code by entering a 2-digit number (00–99).

6 Press **[Save]**, then press **[OFF]**.

Note:
- To confirm the remote code, repeat steps 1 to 4. Press **[OFF]** when finished.

5.6.3. Remote commands

You can press dial keys to access certain answering system functions without waiting for the voice guidance to prompt you.

Key	Remote command
【1】	Repeat message (during playback)*1
【2】	Skip message (during playback)
【4】	Play new messages
【5】	Play all messages
【9】	Stop*2
【0】	Turn answering system off
【✳】【4】	Erase this message (during playback)
【✳】【5】	Erase all messages

*1 If pushed within the first 5 seconds of a message, the previous message will be played.

*2 To resume operation, enter a remote command within 15 seconds, or the voice guidance will start.

5.6.4. Turning on the answering system remotely

If the answering system is off, you can turn it on remotely.

1 Dial your phone number.

2 Let the phone ring 15 times.

- The unit will answer your call with the greeting message.
- You can hang up, or if you call from a touch tone phone, you can enter your remote code and begin remote operation.

6 TROUBLESHOOTING

6.1. General Use

Problem	Cause & solution
The unit does not work.	• Make sure that the battery is installed correctly (*1). • Check the connections (*2). • Fully charge the battery (*3). • Clean the charge contacts and charge again (*3). • Unplug the base unit's AC adaptor to reset the unit. Reconnect the adaptor and try again. • Re-install the battery (*1) and fully charge it.
The display shows "**No link to base. Move closer to base, try again.**" and an alarm tone sounds.	• The handset is too far from the base unit. Move closer and try again. • Plug in the base unit's AC adaptor. • Raise the base unit antenna. • If the above remedies do not solve the problem, the handset may have lost communication with the base unit. Register the handset again.
I cannot hear a dial tone.	• Confirm that the telephone line cord is connected (*2). • Disconnect the unit from the telephone line and connect a known working telephone. If the working telephone operates properly, contact our service personnel to have the unit repaired. If the working telephone does not operate properly, contact your telephone company.

Cross Reference:

(*1) **Battery Installation** (P.4)

(*2) **Connections** (P.6)

(*3) **Battery Charge** (P.4)

6.2. Programmable Settings

Problem	Cause & solution
I cannot program items.	• Programming is not possible while the handset and base unit are being used. • Do not pause for over 1 minute while programming. • Move closer to the base unit. • While another user is listening to messages or the answering system is answering a call, you cannot program. Try again later.
While programming, the handset starts to ring.	• A call is being received. Answer the call and start again from the beginning after hanging up.

6.3. Making/Answering Calls, Intercom

Problem	Cause & solution
Static is heard, sound cuts in and out. Interference from other electrical units.	● Move the handset and the base unit away from other electrical appliances. ● Move closer to the base unit. ● Raise the base unit antenna. ● Turn on the clarity booster feature. ● If your unit is connected to a telephone line with xDSL service, we recommend connecting a noise filter between the base unit and the telephone line jack. Contact your xDSL provider for details.
The handset does not ring.	● The ringer volume is turned off. Adjust it.
I cannot make a call.	● The dialing mode may be set incorrectly. Set the dial mode to match the type of telephone service you have (tone or pulse). ● If the base unit (including answering system) or the other handset is in use, you may not be able to make a call. Try again later. ● While listening to messages using the handset, you cannot make a call. Exit by pressing **【OFF】**.
I cannot redial by pressing **【REDIAL】**.	● If the last number dialed was more than 48 digits long, the number will not be redialed correctly. ● If you press **【REDIAL】** after you have started dialing, this button functions as the **【PAUSE】** button. To redial, do not dial any numbers before pressing **【REDIAL】**.
I cannot have a conversation using the headset.	● Make sure that an optional headset is connected properly (*4). ● If "SP-phone" is displayed on the handset, press 【 】 to switch to the headset.
I cannot make long distance calls.	● Make sure that you have long distance service.
I cannot page the handset or base unit.	● The called handset is too far from the base unit. ● The called unit is in use. Try again later.

Cross Reference:

(*4) **Connecting an Optional Headset** (P.7)

6.4. Phonebook

Problem	Cause & solution
I cannot store an item in the phonebook.	● You cannot store an item in the phonebook while the handset is in talk, speakerphone or intercom mode, or while listening to messages. ● Do not pause for over 1 minute while storing.
While storing an item in the phonebook, the handset starts to ring.	● A call is being received. Answer the call and start again from the beginning after hanging up.
Copying stopped with an item displayed.	● The destination handset may have lost communication with the base unit, or the destination handset user may have pressed 【 】 or 【 】. The displayed phonebook item was not copied to the handset. Press **【OFF】**. Confirm that the destination handset is in standby mode (i.e., not in use) and try again.
The display exits the phonebook while searching.	● The handset automatically exits after 1 minute of inactivity.

6.5. Caller ID

Problem	Cause & solution
The handset does not display the caller's name and/or phone number.	● You have not subscribed to Caller ID service. Contact your telephone company to subscribe. ● If your unit is connected to any additional telephone equipment such as Caller ID box or wireless telephone jack, disconnect the unit from the equipment and plug the unit directly into the wall jack. ● If your unit is connected to a telephone line with xDSL service, we recommend connecting a noise filter between the base unit and the telephone line jack. Contact your xDSL provider for details. ● The name display service may not be available in some areas. Contact your telephone company for details. ● Other telephone equipment may be interfering with this unit. Disconnect the other equipment and try again. ● The caller requested not to send caller information (*7). ● If a call is being transferred to you, the caller information will not be displayed. ● Generally caller information is displayed from the 2nd ring.
The caller list/incoming phone numbers are not edited automatically.	● The Caller ID number auto edit feature is turned off. Turn it on and try again. ● You need to call back the edited number to activate Caller ID number auto edit.
I cannot dial the phone number edited in the caller list.	● The phone number you dialed might have an incorrect edited pattern (for example, the long distance "1" or the area code is missing). Edit the phone number with another pattern.
The display exits the caller list while searching.	● The handset automatically exits after 1 minute of inactivity.

6.6. Answering System

Problem	Cause & solution
I cannot listen to messages from a remote location.	● A touch tone phone is required for remote operation. ● Press the remote code correctly and press each key firmly (*5). ● The answering system is off. Turn it on (*6).
The other party complains that they cannot leave a voice message.	● The recording time is set to "**Greeting only**". Select "**1min**", "**2min**", or "**3min**" (*7). ● The memory is full. Erase unnecessary messages (*8).
"FULL" flashes and the ANSWER ON indicator flashes rapidly. No new messages are recorded.	● Message memory is full. Erase unnecessary messages (*8).
I cannot operate the answering system.	● Someone is operating the answering system. ● If someone is talking on a conference call, you cannot operate the answering system. Try again later.
During message playback, the unit rings and cancels playback.	● A call is being received. Answer the call and start again from the beginning after hanging up.
The message indicator on the handset flashes slowly.	● New messages have been recorded. Listen to the new messages (*8) or turn the message alert off (*9).
When you play back messages or turn on the answering system, the base unit and handset announce the day and time incorrectly.	● Set the date and time again.

Cross Reference:

(*5) **Remote Code** (P.12)

(*6) **Turning the Answering System On/Off** (P.9)

(*7) **Caller's Recording Time** (P.9)

(*8) **Listening to messages using the base unit** (P.10)

(*9) **Message Alert** (P.9)

6.7. Battery Charge

Problem	Cause & solution
"**Recharge battery**" is displayed, [▭] flashes or the handset beeps intermittently.	● Fully charge the battery (*10).
"**Charge for 6h**" and [▭] are displayed and the handset does not work.	● The battery has been discharged. Fully charge the battery (*10).
I charged the battery fully, but "**Recharge battery**" is still displayed and/or [▭] continues to flash, or "**Charge for 6h**" and [▭] are displayed.	● Clean the charge contacts and charge again (*10). ● The battery may need to be replaced (*11). If you install a new battery, fully charge it (*10).
The CHARGE indicator does not go out after the battery has been charged.	● This is normal.
The handset display is blank.	● Confirm that the battery is properly installed. ● Fully charge the battery (*10).

Cross Reference:

(*10) **Battery Charge** (P.4)

(*11) **Battery Replacement** (P.5)

6.8. Power Failure

Problem	Cause & solution
The unit will not function.	● This product is not designed to make calls in the event of a power failure. We recommend connecting a standard telephone to the same telephone line in the event that emergency calls need to be made during a power failure (*12).

Cross Reference:

(*12) **Connections** (P.6)

7 REPLACEMENT PARTS LIST

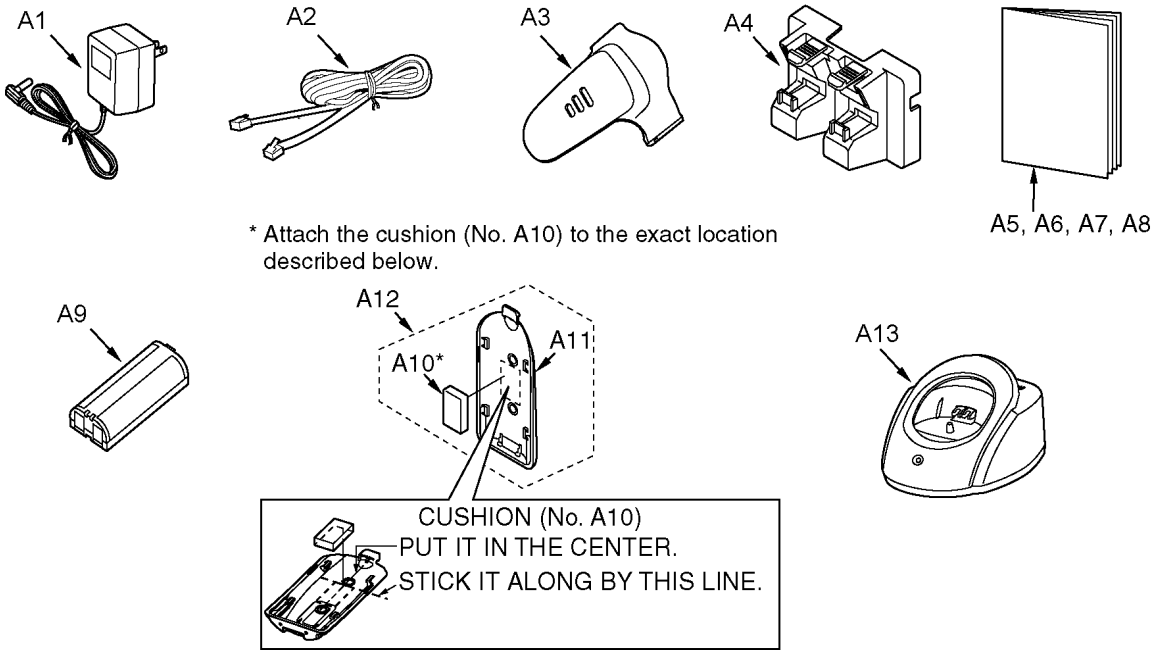
Note:

1. Important safety notice

   Components identified by the ⚠ mark indicates special characteristics important for safety. When replacing any of these components, only use specified manufacture´s parts.

2. ISO code (Example: ABS-94HB) of the remarks column shows quality of the material and a flame resisting grade about plastics.

Ref. No.	Part No.	Part Name & Description	Remarks
A1	PQLV19Z	AC ADAPTOR	⚠
A2	PQJA10075Z	CORD, TELEPHONE	
A3	PQKE10393Z1	HANGER, BELT CLIP (for KX-TG2431W) (for KX-TG2432W)	PC+ABS-HB
A3	PQKE10393Z2	HANGER, BELT CLIP (for KX-TG2432B)	PC+ABS-HB
A4	PQKL10067Z1	STAND, WALL MOUNT (for KX-TG2431W) (for KX-TG2432W)	PS-HB
A4	PQKL10067Z2	STAND, WALL MOUNT (for KX-TG2432B)	PS-HB
A5	PQQX14383Y	INSTRUCTION BOOK	
A6	PQQW13542Z	QUICK GUIDE (for English)	
A7	PQQW13543Y	QUICK GUIDE (for Spanish)	
A8	PQQW13518Z	LEAFLET, openLCR	
A9	HHR-P105	BATTERY	
A10	PQHS10681Y	SPACER, BATTERY	
A11	PQKK10586Z1	LID, BATTERY COVER (for KX-TG2431W) (for KX-TG2432W)	ABS-HB
A11	PQKK10586Z2	LID, BATTERY COVER (for KX-TG2432B)	ABS-HB
A12	PQYNTG2421WR	LID, BATTERY COVER ASS´Y (for KX-TG2431W) (for KX-TG2432W)	ABS-HB
A12	PQYNTG2432BR	LID, BATTERY COVER ASS´Y (for KX-TG2432B)	ABS-HB
A13	PQLV30029ZW	CHARGER UNIT (for KX-TG2432W)	
A13	PQLV30029ZB	CHARGER UNIT (for KX-TG2432B)	



8 FOR SCHEMATIC DIAGRAM

8.1. Base Unit (SCHEMATIC DIAGRAM (BASE UNIT_MAIN))

8.1.1. Acoustic Testing Mode

Press “STOP”, “ ▶▶ ” and “ ^ ” simultaneously, and insert the plug of AC adaptor.
● No beep sound.
It is easier to measure the transmit level with acoustic testing mode.

Notes:

1. DC voltage measurements are taken with voltmeter from the negative voltage line.

Important Safety Notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified parts.

2. This schematic diagram may be modified at any time with the development of new technology.

8.2. Handset (SCHEMATIC DIAGRAM (HANDSET_MAIN))

Notes:

1. DC voltage measurements are taken with an oscilloscope or a tester with a ground.
2. The schematic diagrams and circuit board may be modified at any time with the development of new technology.

8.3. Charger Unit (SCHEMATIC DIAGRAM (CHARGER UNIT))

Notes:

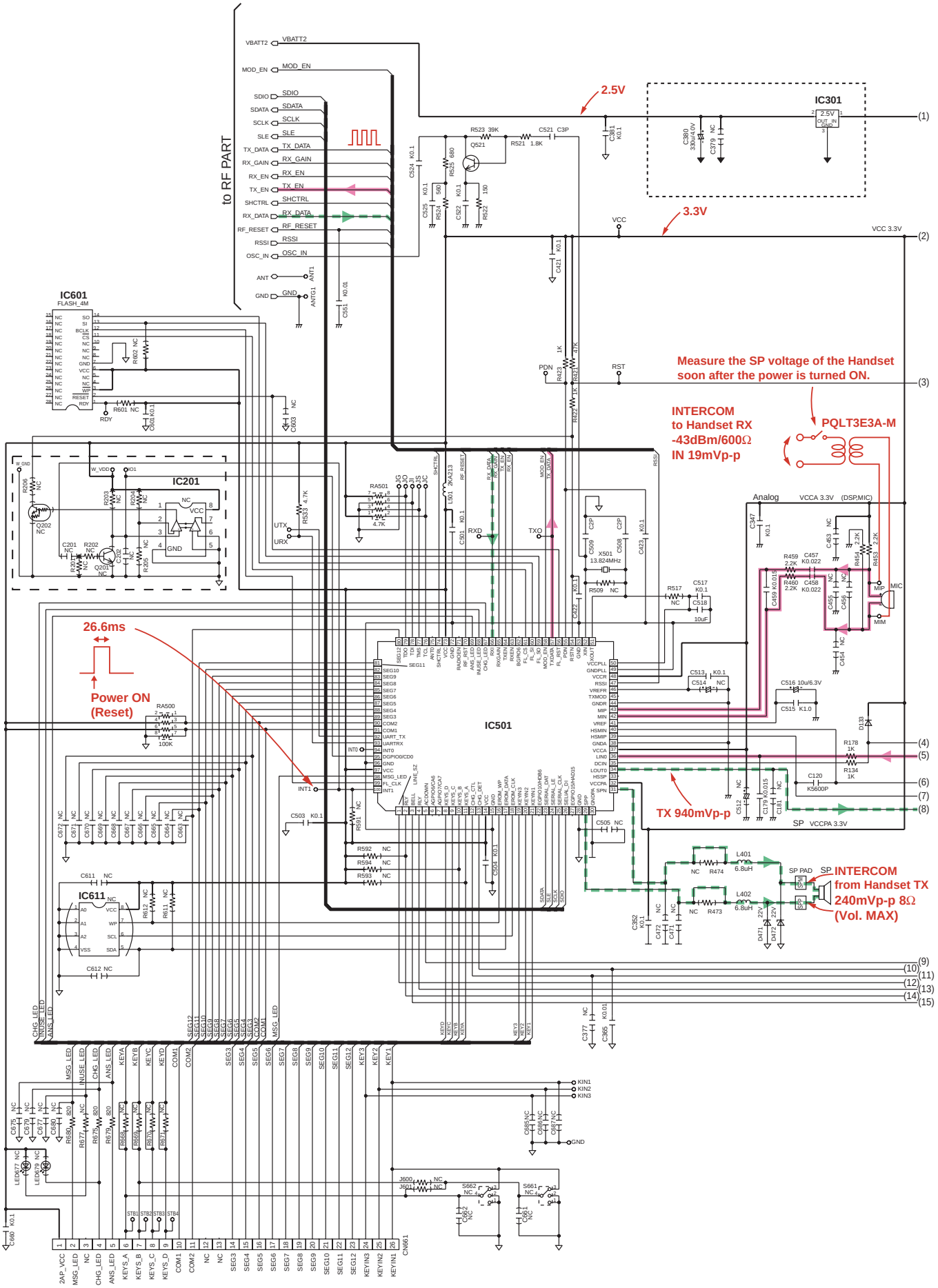
1. DC voltage measurements are taken with voltmeter from the negative voltage line.

Important Safety Notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only the manufacturer's specified parts.

2. This schematic diagram may be modified at any time with the development of new technology.

Memo

9 SCHEMATIC DIAGRAM (BASE UNIT_MAIN)



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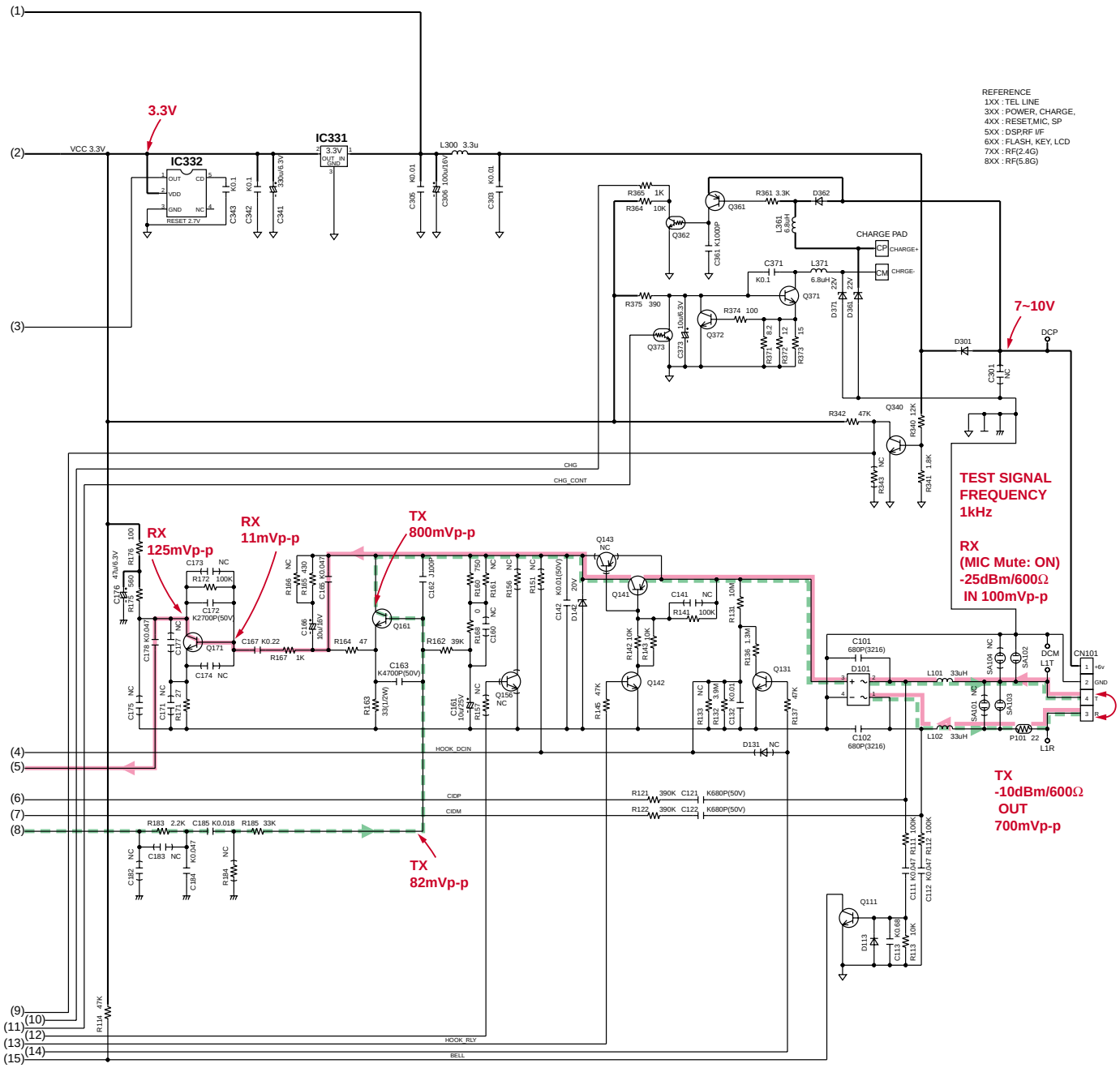
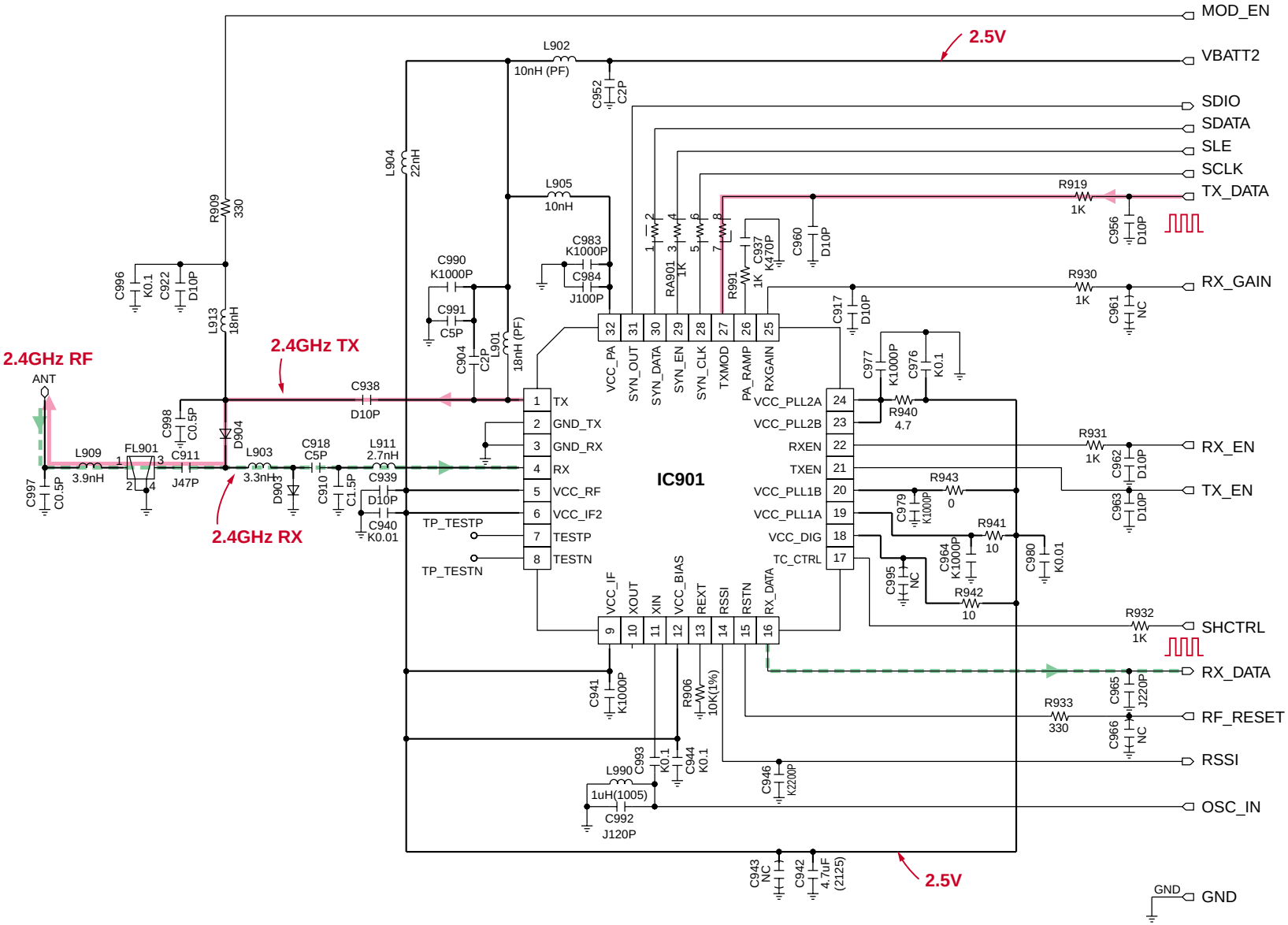


NC: No Components

KX-TG2431/2432 SCHEMATIC DIAGRAM (Base Unit_Main)

10 SCHEMATIC DIAGRAM (BASE UNIT_RF PART)



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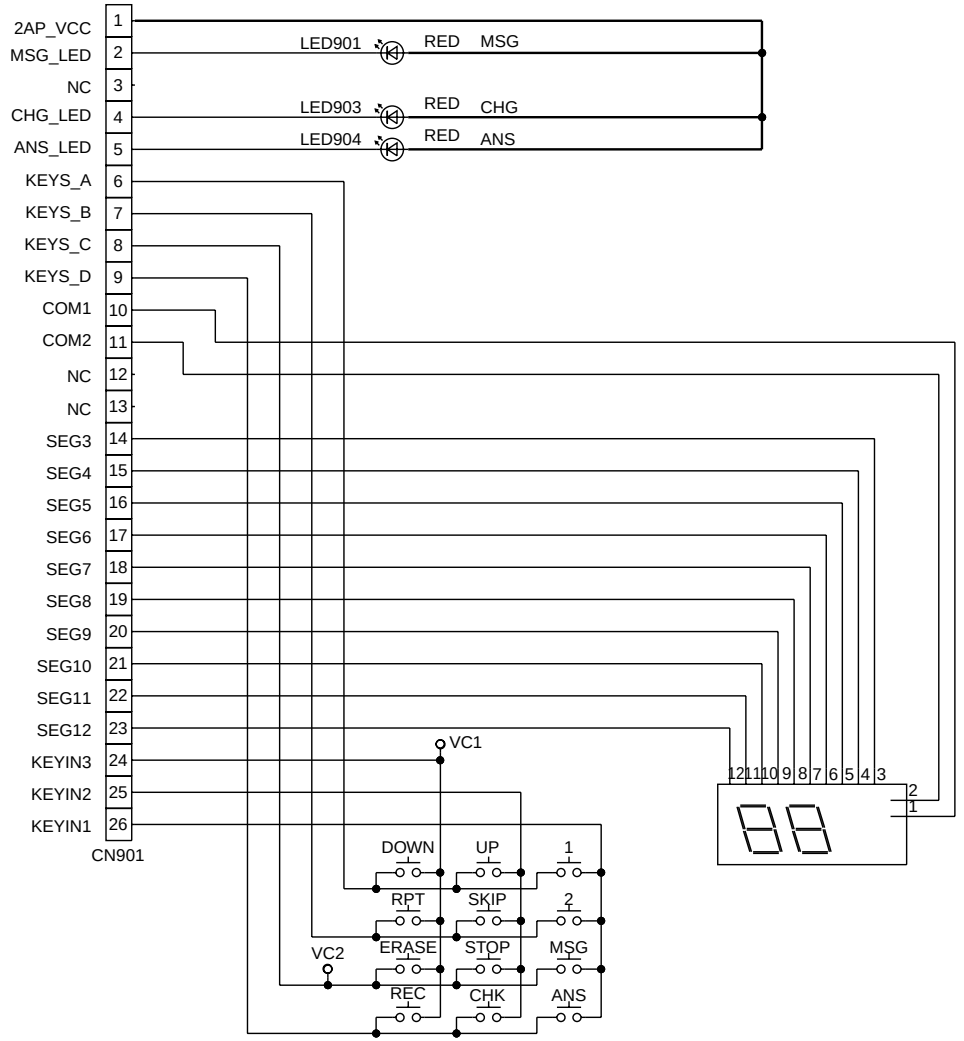
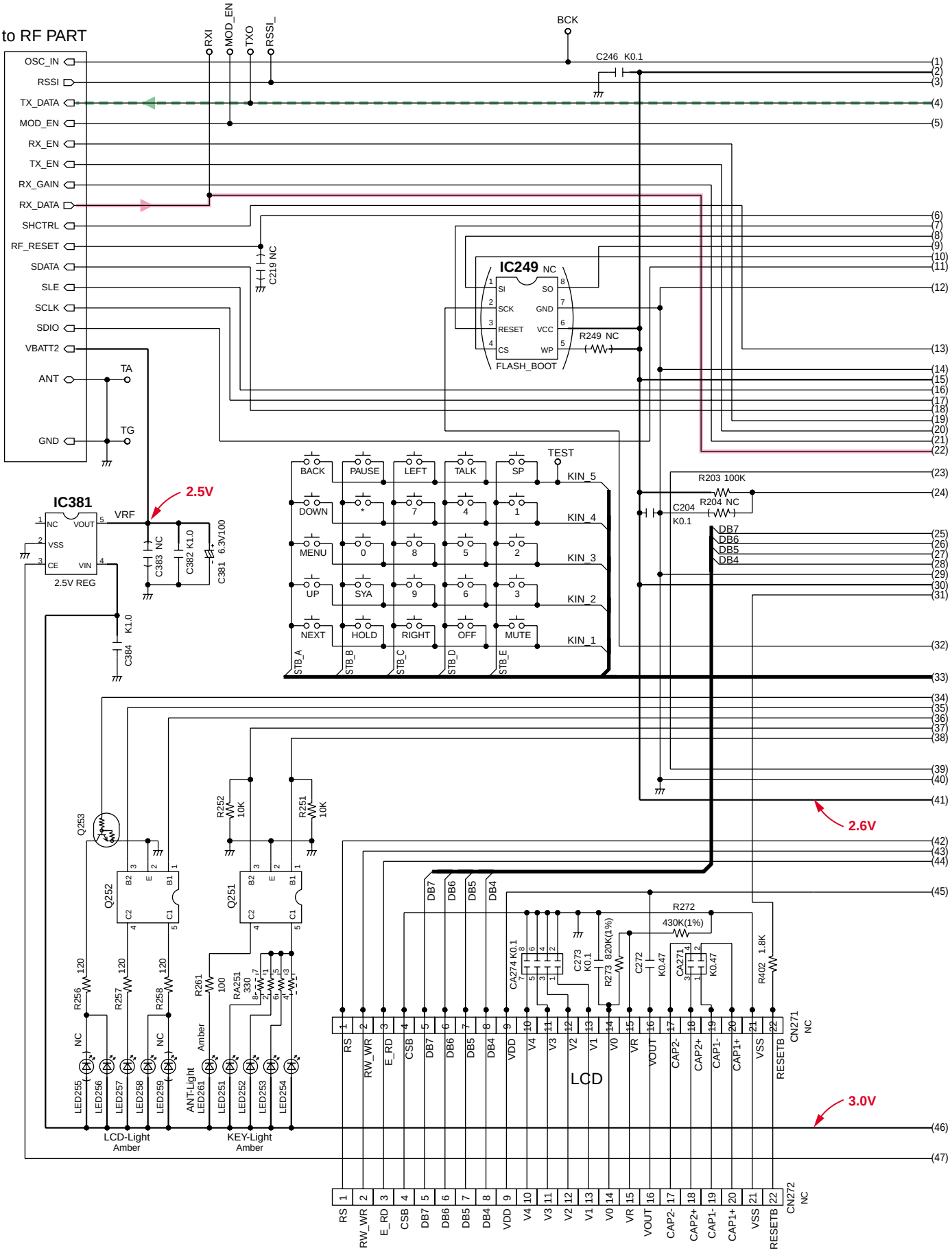
KX-TG2431/2432 SCHEMATIC DIAGRAM (Base unit_RF Part)

11 SCHEMATIC DIAGRAM (BASE UNIT_OPERATION)



KX-TG2431/2432 SCHEMATIC DIAGRAM (Base Unit_Operation)

12 SCHEMATIC DIAGRAM (HANDSET_MAIN)



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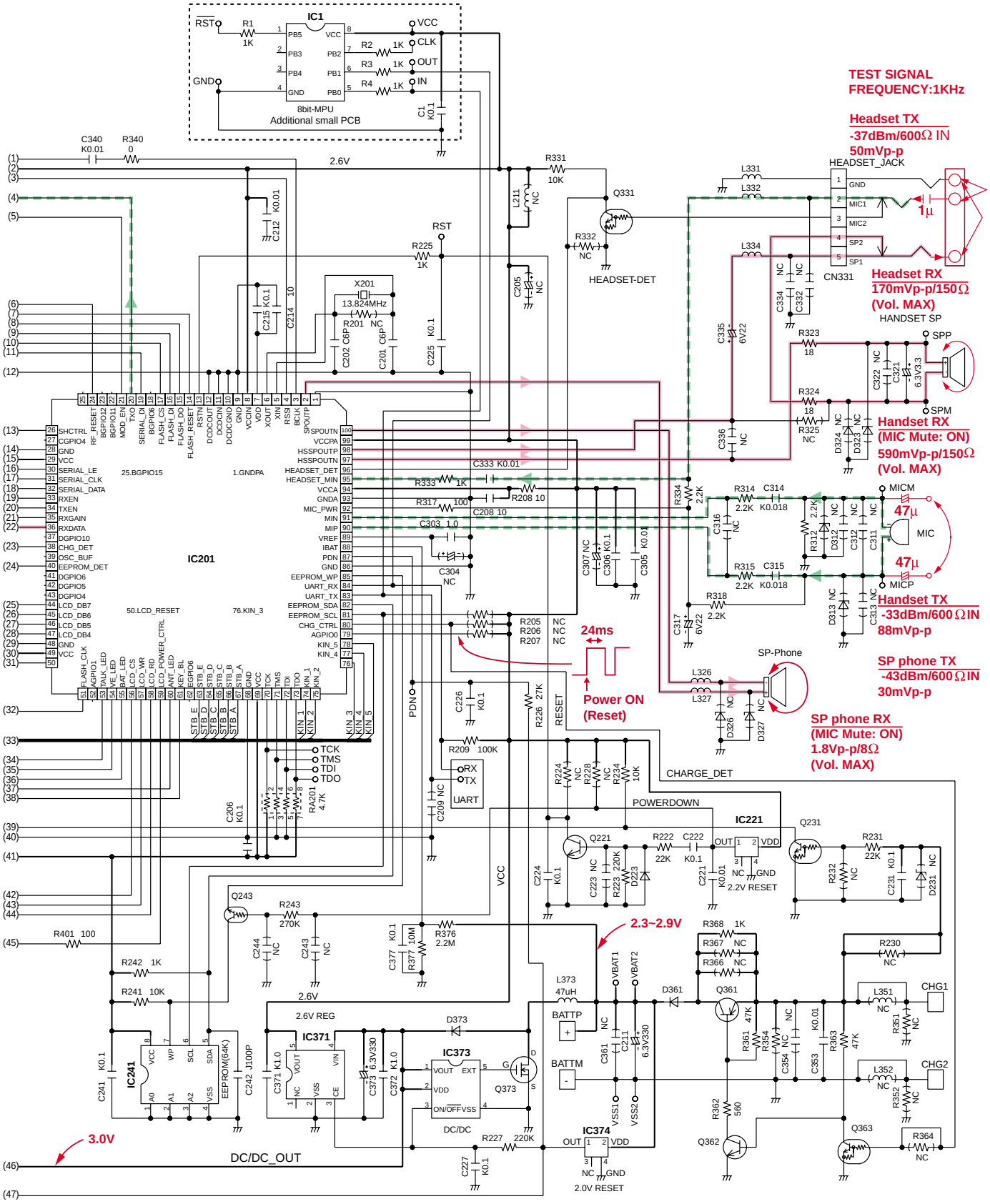
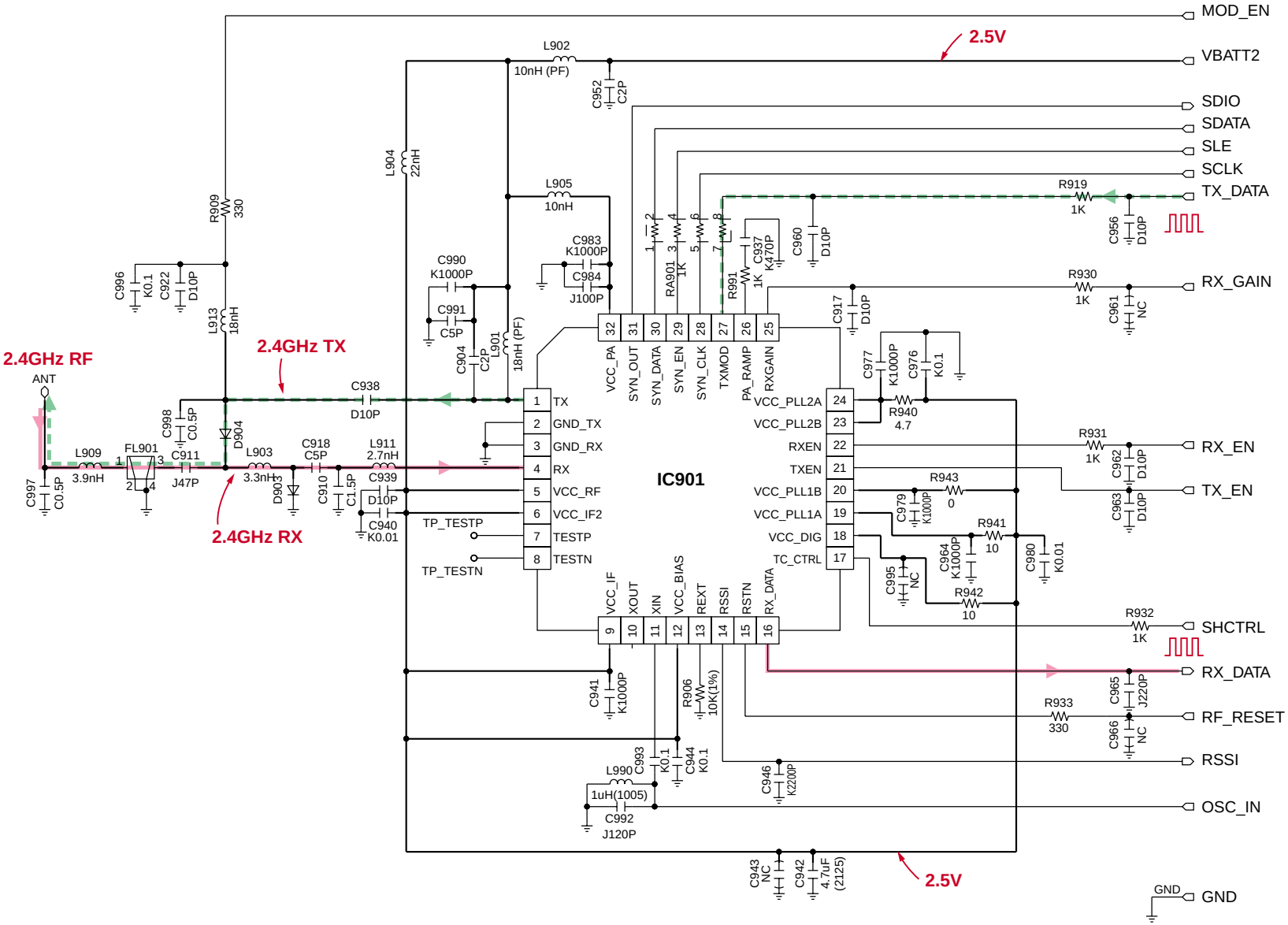


NC: No Components

KX-TGA242 SCHEMATIC DIAGRAM (Handset_Main)

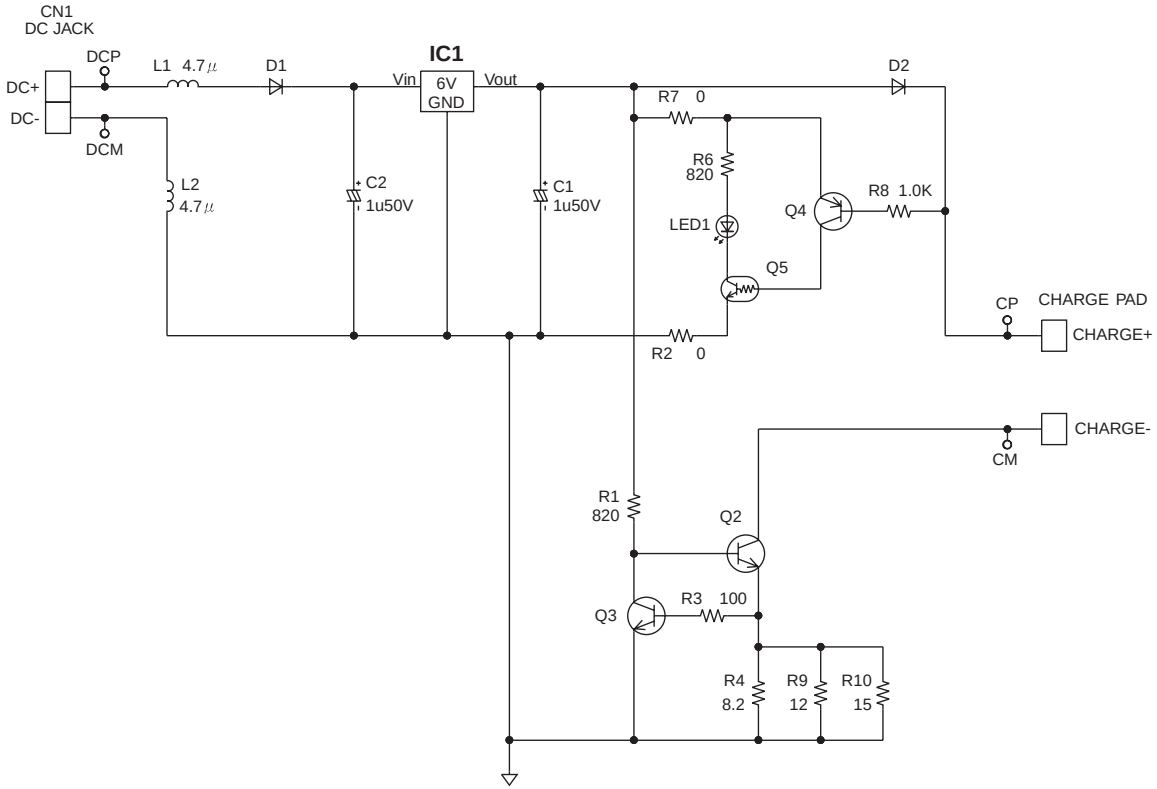
13 SCHEMATIC DIAGRAM (HANDSET_RF PART)



NC: No Components

KX-TGA242 SCHEMATIC DIAGRAM (Handset_RF Part)

14 SCHEMATIC DIAGRAM (CHARGER UNIT)



SCHEMATIC DIAGRAM (Charger Unit)