

(DRAFT COPY)

Text Only

**RADIOSHACK MODEL 43-1107A (FCC ID: AAO4301107A) - USER MANUAL
AND OPERATIONAL DESCRIPTION**

USER MANUAL

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Introduction

Your 900 MHz cordless phone is designed and engineered to exacting standards for reliability, long life, and outstanding performance.

Features

900 MHz Extended Range Technology

40 Channel Autoscan

9-Number Memory Dialing

3 One-Touch Priority Keys

Desk or Wall Mountable

Tone/Pulse Dialing

Handset Volume Control

32 Digit Redial

Page/Find

AutoTalk

AutoStandby

7 Hours Talk Time

Hearing Aid Compatible

Your 900 MHz cordless phone includes AutoTalk and AutoStandby. AutoTalk allows you to answer a call by just removing the handset from the base so you don't have to waste time pushing buttons or flipping switches. AutoStandby allows you to hang up by simply returning the handset to the base.

The UltraClear Plus true compander circuitry virtually eliminates background noise. This innovative technology, together with 40 different channels, provides you with the best possible reception during all your conversations.

To protect you against misbilled calls which might result from your phone being activated by other equipment, your phone has Random Code digital security which automatically selects one of over 65,000 digital security codes for the handset and base. Also, the AutoSecure feature electronically locks your phone when the handset is in the base.

To get the most from your phone, please read this owners manual thoroughly. Also, be sure to complete the product registration form and mail it in.

Included with Your Phone

This Owners Manual

Other Printed Material

Precautions and Important Safety Instructions

Controls and Functions

1.talk - answers or places calls

2.* /tone - switches to tone dialing in pulse dial mode

3.redial - redials the last number

4.pause - adds a timed pause in a memory dialing sequence

5.talk/batt - LED indicates when phone is in use or the battery is low

6.flash - accesses call waiting (if available)

7.mem - enters or recalls numbers in memory

8.volume - sets both the ringer and earpiece volumes

9.chan - selects another channel for clearer reception

10.m1, m2, m3 - accesses stored numbers in memory locations 1, 2, and 3

for one-touch dialing

11.handset retainer - holds handset in base for wall mounting.

12.status LED - indicates the phone is in use or the handset is charging

13.page/find - locates the handset

Installation

Charging the Battery Pack

The rechargeable Nickel-Cadmium battery pack must be fully charged before using your phone for the first time. Before plugging the phone line into your new phone, you must charge the battery for approximately 15-20 hours without interruption.

1. Remove the handset battery cover.

2. Plug the battery's cable into the handset and place the battery pack inside the battery compartment.

3. Replace the battery cover.

Charging the Handset

Place the handset on the base to charge. (The handset can charge in either the face-up or face-down position.)

Low Battery Indicator

When the battery pack in the handset is low and needs to be charged, the batt LED flashes every 3 seconds. If this occurs while you are on the phone, you will hear an alert tone. Complete your call as quickly as possible, and return the handset to the base for charging.

Cleaning the Battery Contacts

To maintain a good charge, it is important to clean all battery contacts on the handset and base about once a month. Use a pencil eraser or other contact cleaner. Do not use any liquids or solvents.

Selecting a Location

Before choosing a location for your new phone, read the Installation Considerations included in the Precautions and Important Safety Instructions brochure. Note: Raise the antenna on the base to get best communication range.

Setting the Dial Mode Switch

Desk or Tabletop Installation

- 1.Plug the AC adapter cord into the 9V DC input jack on the base.
- 2.Wrap the AC adapter cord inside the molded strain-relief.
- 3.Plug one end of the long telephone cord into the TEL LINE jack on the base.
- 4.Place the telephone cord into the right molded channel cord holder.
- 5.Plug the other end of the telephone cord into the telephone wall jack.
(Remember, the phone must be fully charged before you can use it.)
- 6.Plug the AC adapter into a standard 120V AC wall outlet that is not controlled by a wall switch.
- 7.Raise the antenna on the base.

Wall Installation

Setting the Handset Retainer for Wall Mounting

1. Remove the handset retainer on the base by sliding it upward.
2. Flip the retainer over so the tab is facing up.
3. Slide the retainer back onto the base.

Mounting on a Standard Wall Plate

The phone is designed to be mounted on a standard AT&T or GTE wall plate.

1. Plug the AC adapter into the base.
2. Place the AC adapter cord inside the left molded channel cord holder.
3. Plug a short telephone cord into the TEL LINE jack on the base.
4. Place the telephone cord into the right molded channel cord holder and plug the other end of the cord into the wall jack. (Remember, the phone must be fully charged before you can use it.)
5. Place the base on the two posts of the wall plate and slide downward to secure.
6. Plug the AC adapter into a standard 120V AC wall outlet that is not controlled by a wall switch.
7. Raise the antenna on the base to get best communication range.

Mounting Directly on a Wall

If you do not have a standard wall plate, you can mount the phone directly on a wall. Before mounting your cordless telephone, consider the following:

Select a location away from electrical cables, pipes, or other items behind the mounting location that could cause a hazard when inserting screws into the wall.

Make sure the wall material is capable of supporting the weight of the base and handset; otherwise, damage to the unit could result.

Use #10 screws with anchoring devices suitable for the wall material where the base will be placed.

1. Insert the screws, with their appropriate anchoring devices, 3/16 inches apart. Allow 3/16 of an inch between the wall and screw heads for mounting the phone.

2. Plug the AC adapter into the base.

3. Place the AC adapter cord inside the left molded channel cord holder.

4. Plug one end of the long telephone cord into the TEL LINE jack on the base.

5. Place the telephone cord into the right molded channel cord holder.

6. Place the base on the screws and push down until its firmly seated.

7. Plug the other end of the telephone line into the telephone wall jack.

(Remember, the phone must be fully charged before you can use it.)

8. Plug the AC adapter into a standard 120V AC wall outlet that is not controlled by a wall switch.

9. Raise the antenna on the base to get best communication range.

Setting Up Your Phone

Raising the Antenna

Before using your phone, be sure to raise its antenna to the vertical position.

Adjusting Ringer/Volume Controls

Ringer Tone and Volume

1. While the phone is not in use, press volume .
2. The phone has two ringer tones, each with two volume levels. Press volume again until you hear the ringer tone and volume level you want.

Setting the Handset Earpiece Volume

1. While you are on a call, press volume .
2. The phone has two receiver volume levels, one soft and one loud. Press volume again until you hear the volume level you want.
3. Plug the AC adapter into a standard 120VAC wall outlet that is not controlled by a wall switch.
4. Place the handset upright in the charging cradle. (The handset can be placed in the charger with the keypad facing either the front or back of the charging cradle.) The charge LED lights while the unit is charging.

Using Your Phone

Making and Receiving Calls

Storing a Number in Memory

Your 900 MHz cordless phone has 9 memory locations for storing important telephone numbers.

1. Remove the handset from the base and press mem. The talk LED flashes and you hear a beep.
2. Enter the phone number you want to store (up to 16 digits).
3. Press mem and enter a number (1-9) on the keypad for the memory location you want to use.

You hear a long beep and the talk LED goes out indicating the number has been stored successfully.

If you select any keys other than 1-9, the handset will beep rapidly and no number will be stored.

Entering a Pause in Memory Dialing

If you would like to use a phone number stored in memory to access voice mail, for example, you can store a pause in the phone number sequence.

To use this function, follow steps 1 and 2 in Storing a Number in Memory, then press the pause button on the handset to place a pause in the phone number sequence.

Follow the remaining steps in the Storing a Number in Memory section to complete the operation.

Storing Mixed Tone/Pulse Numbers

If your phone is set up for pulse dialing, you can store a mixed mode number (up to 16 digits) to easily access long distance services.

1.Remove the handset from the base and press mem. The talk LED flashes and you hear a beep.

2.Enter the number to be dialed in pulse mode.

3.Press the */tone button on the handset. The */tone button counts as one digit and enters a pause.

4.Enter the number(s) to be dialed in tone mode.

5.Press mem and a number (1-9) on the keypad for the memory location you wish to use. You hear a long beep and the talk LED goes out.

Dialing a Stored Number

To dial a phone number stored in memory, press talk, then press mem and the memory location (0-9). Your phone will dial the stored number.

One-Touch Dialing

Your phone is equipped with three One-Touch Priority keys for instant dialing (m1, m2, and m3). You cannot store phone numbers directly into m1, m2, and m3. They are only used to dial phone numbers stored into memory locations 1, 2, and 3 on the keypad.

- 1.To instantly dial phone numbers stored in memory locations 1, 2, or 3, simply press m1, m2, or m3. (There is no need to press talk, the phone will automatically dial.)
2. If no phone number was stored in memory locations 1, 2, or 3 on the keypad, pressing m1, m2, or m3 will do nothing.

Chain Dialing

After dialing a number you may be requested to enter a special access code, for example, when performing a banking transaction.

- 1.Store the access code into one of the memory locations(1-9).
- 2.Dial the main number.
- 3.Press mem and the memory location of the access code at the appropriate time.

Erasing a Stored Number

- 1.Remove the handset from the base.
- 2.Press mem twice.
- 3.Press the memory location number (1-9) you want to clear. You hear a long beep confirming that you have erased the number.

Replacing a Stored Number

Remember, your phone has 9 memory locations, represented by the numbers 1-9 on the keypad. If you store a phone number in one of these locations, then attempt to store a different number in the same location later, the new number will replace the previous one.

Selecting a Different Channel

If you encounter interference while using your phone, you can manually change the phone's channel for clear operation. Interference can come from appliances or other phones in your home. This function works only when the phone is in use.

The **chan** button on the handset allows you to choose between 40 factory set channels. During the course of a conversation, if you hear static or noise which makes it difficult to hear, press **chan**. The talk LED flashes, indicating the phone is changing to another channel.

Using the Flash Button

Use **flash** for accessing services such as call waiting. If you receive a call during your conversation, press the flash button on the handset. Press **flash** again to return to the previous call.

Using the Page/Find Feature

The Page/Find feature sends a signal from the base to the handset causing it to beep. This is useful for locating the handset when it is away from the base. To use this feature, press page/find on the base. The handset beeps for 60 seconds. (Press and hold the page/find button to get a continuous beep.)

On the handset press talk to end the page. Press talk again if you do not wish to make a call.

Traveling Out of Range

When you begin to move too far from the base, you will first hear a clicking sound. As you travel further out of range, the voice transmission will begin to break up. If you pass the range limits of the base, your call will terminate.

OPERATIONAL DESCRIPTION

(superscript: CIRCUIT DESCRIPTION AND)
(superscript: DIGITAL SECURITY CODE INFORMATION)

UC-219ZL AAO4301107A 43-1107A

(superscript: Equipment Description)
(superscript: =====)

(superscript: Your 900MHz cordless telephone is a telephone terminal device that is designed for voice operation in a similar fashion to an ordinary residential or business telephone without the inconvenience and restraint of a handset cord.)

(superscript: This device consists of a base unit and a handset. The base unit is connected to a standard telephone modular jack (USOC RJ 11C Type) and is supplied electric power from a standard AC power line by using with the AC Adapter. The handset is powered from an internal battery pack.)

(superscript: Your 900MHz cordless telephone operates by means of a full duplex radio frequency TX/RX system in 902 - 928 MHz band. These radio frequency systems operate in accordance with Part 15 of the FCC Rules.)

(superscript: Your 900MHz cordless telephone has been specifically designed to comply with the requirements set forth in Part 68 of the FCC Rules as well as the Part 15 requirements.)

(superscript: Circuit Description and Operating Frequency)
(superscript: =====)

(superscript: Overview)

(superscript: This equipment is a Cordless Telephone System which operates within the 900MHz ISM band. This equipment consists of a base unit and a handset. The base unit is connected to a telephone network, and has transmitter and receiver circuits which are served to communication with the handset. The handset also has a transmitter and receiver portions in addition to regular dialing circuit.)

(superscript: Both the handset and the base unit have PLL circuits which enable to communicate in an empty channel. Pressing the CH key on the handset can last the communications moving into other open channel without cutting the line even if interfered by interruption on talks.)

(superscript: 1. Handset)

(superscript: 1) Local Frequencies and Intermediate Frequencies)

(superscript: TX VCO Frequency: 902.052464 MHz to 904.002470 MHz)

(superscript: RX 1st Local Freq.: 936.552559 MHz to 938.502564 MHz)

(superscript: RX VCO Frequency: 936.552559 MHz to 938.502564 MHz)

(superscript: RX 2nd Local Freq.: 10.100 MHz)

(superscript: 1st Intermediate Frequency: 10.555 MHz)

(superscript: 2nd Intermediate Frequency: 455 kHz)

(superscript: 2) Communication Link to Base unit)

(superscript: RX Circuit:)

(superscript: An incoming RF signal from the base unit is received through the antenna. RX VCO frequency shown above is produced by PLL IC (IC502) and RX VCO (IC502 1/2). Then, this frequency is the RX 1st Local frequency.)

(superscript: This 1st local signal is applied to the 1st Mixer (IC502) which produces 1st IF of 10.555MHz.)

(superscript: The 1st IF signal (10.555MHz) is mixed with 2nd local frequency of 10.1MHz to produce the 2nd IF of 455kHz at IC401. AF signal demodulated by IC401 is amplified by the audio amplifier (Q401/Q403/Q405/Q406) to drive a speaker.)

(superscript: TX Circuit:)

(superscript: TX VCO signal is generated at the PLL circuit and the TX VCO (IC502 2/2). Meanwhile, voice signal from the microphone (MC401) modulates the TX VCO signal at IC502. This modulated signal is the TX RF frequencies as listed above.)

(superscript: Then, the TX RF signal is amplified by RF AMP (Q506/Q507) and fed into the antenna through a band pass filter (FT501).)

(superscript: 3) Dialing Signal)

(superscript: When this equipment is in Talk Mode, the transmitting circuit and dialing circuit are activated to make outgoing call. In this condition, when any number keys are pressed, the CPU (IC404) generates corresponding dial pulse codes.)

(superscript: 2. Base Unit)

(superscript: 1) Local Frequencies and Intermediate Frequencies)

(superscript: TX VCO Frequency : 925.997470 MHz to 927.947465 MHz)

(superscript: RX 1st Local Freq.: 891.497564 MHz to 893.447559 MHz)

(superscript: RX VCO Frequency : 891.497564 MHz to 893.447559 MHz)

(superscript: RX 2nd Local Freq.: 10.100MHz)

(superscript: 1st Intermediate Frequency: 10.555 MHz)

(superscript: 2nd Intermediate Frequency: 455 kHz)

(superscript: 2) Communication Link to Handset)

(superscript: RX Circuit:)

(superscript: An incoming RF signal from the handset is received through the antenna.)

(superscript: RX VCO frequency shown above is produced by PLL IC (IC202) and RX VCO (IC202 1/2). Then, this frequency is the RX 1st Local frequency. This 1st local signal is applied to the 1st Mixer (IC202) which produces 1st IF of 10.555MHz.)

(superscript: Then, the 1st IF signal (10.555MHz) is mixed with 2nd local frequency of 10.100MHz to produce the 2nd IF of 455kHz at IC3, and also AF output is obtained by IC3. The demodulated signal by IC3 contains a security code, and the code is fed to the CPU.)

(superscript: TX Circuit:)

(superscript: TX VCO signal is generated at the PLL circuit and the TX VCO (IC202 2/2). Meanwhile, voice signal from Telephone Network through the Hybrid Transformer (T1) modulates the TX VCO signal at IC202. This modulated signal is the TX RF frequencies as listed above. Then, the TX RF signal is amplified by RF AMP (Q206/Q207) and fed into the antenna through a band pass filter (FT201).)

(superscript: 3) Dialing Signal)

(superscript: Dial pulse code sent from the handset is demodulated by IC3 as mentioned above, and is fed into the CPU to control RL1.)

(superscript: 4) Telephone Interface Circuit)

(superscript: Outgoing voice signal to telephone network is amplified by IC1 and Q3. This signal is delivered to the telephone interface circuit through the Hybrid Transformer (T1).)

(superscript: Incoming voice signal also goes through T1, then it is amplified by Q4 and IC1 2/2 to a proper level for frequency modulation, then it is fed to the TX circuit. To protect the TX/RX circuits from a metallic surge, the surge absorbing capacitor (C20) is provided at the secondary circuit of the Hybrid Transformer (T1).)

(superscript: 5) Bell Signal)

(superscript: An alerting signal (Bell signal) is detected by means of a Photo Coupler (IC4) which has a sufficiently high impedance.)

(superscript: 6) Power Supply Circuit)

(superscript: The power supply circuits are composed of Q7, Q11 and a zener diode type D11 and D13. These are voltage regulator circuits to stabilize input voltage from the AC Adapter to attain a stable operation.)

(superscript: Digital Security Code Information)

(superscript: =====)

(superscript: 65536 Digital Security Code)

(superscript: This cordless telephone system automatically selects a different security code from 65536 possible discrete digital codes each time the cordless telephone is used.)

(superscript: Furthermore, the security code can be changed randomly by pressing PAGE button on the base unit when the handset is placed in the base unit.)

(superscript: [APPENDIX] TEST MODE AND OPERATION FREQUENCY)

(superscript: TEST MODE)

(superscript: This cordless telephone has test mode function which enable to perform TX/RX testing.)

(superscript: Test Mode for Base Unit)

(superscript: To enter the test mode, connect the AC Adapter to the unit while)

(superscript: pressing the PAGE button. When test mode is set up, and the LINE LED lights. The unit is set for CH 19 (926.897468MHz) Transmitting mode.)

(superscript: To change the transmitting frequency, change the TONE/PULSE switch position to TONE side and then press the PAGE button during the unit is set the TX Test mode, so that the channel is changed from CH 19 to CH 20. Every pressing the CHANNEL key, channel is changed as below.)

(superscript: 19 20 21 40 1 2 3 - - - 39 40 1 2 3 4 ---)

(superscript: To cancel the test mode, place the Handset in the Base Unit, so that the STATUS LED lights and the equipment is set for normal operation mode (Standby mode).)

(superscript: Or, disconnect the AC Adapter and connect it again, so that the test mode is easily canceled.)

(superscript: Test Mode for Handset)

(superscript: First, disconnect the battery pack. Then, connect the battery pack again while pressing # and * keys. When test mode is set up, long beep tone is heard and the TALK LED lights. The unit is set for CH 21 Transmitting mode. Every pressing the CHANNEL key, channel is changed as below.)

(superscript: 21 20 19 40 1 2 3 - - - 39 40 1 2 3 4 ---)

(superscript: To cancel the test mode, press the TALK key.)

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CARE AND MAINTENANCE:

Modifying or tampering with 43-1107A internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it. If your 43-1107A is not performing as it should, take, it to your local RadioShack store for assistance. If the trouble is affecting the telephone line, the phone company can ask you to disconnect your 43-1107A until you have resolved the problem.

FREQUENCY TABLE

CH	Portable(TX Frequency)	Base(TX Frequency)
1	902.052464MHz	925.997470MHz
2	902.102465MHz	926.047470MHz
3	902.152465MHz	926.097470MHz
4	902.202465MHz	926.147470MHz
5	902.252465MHz	926.197470MHz
6	902.302465MHz	926.247469MHz
7	902.352465MHz	926.297469MHz
8	902.402465MHz	926.347469MHz
9	902.452465MHz	926.397469MHz
10	902.502466MHz	926.447469MHz
11	902.552466MHz	926.497469MHz
12	902.602466MHz	926.547469MHz
13	902.652466MHz	926.597469MHz
14	902.702466MHz	926.647468MHz
15	902.752466MHz	926.697468MHz
16	902.802466MHz	926.747468MHz
17	902.852467MHz	926.797468MHz
18	902.902467MHz	926.847468MHz
19	902.952467MHz	926.897468MHz
20	903.002467MHz	926.947468MHz
21	903.052467MHz	926.997467MHz
22	903.102467MHz	927.047467MHz
23	903.152467MHz	927.097467MHz
24	903.202468MHz	927.147467MHz
25	903.252468MHz	927.197467MHz
26	903.302468MHz	927.247467MHz
27	903.352468MHz	927.297467MHz
28	903.402468MHz	927.347466MHz
29	903.452468MHz	927.397466MHz
30	903.502468MHz	927.447466MHz
31	903.552468MHz	927.497466MHz
32	903.602469MHz	927.547466MHz
33	903.652469MHz	927.597466MHz
34	903.702469MHz	927.647466MHz
35	903.752469MHz	927.697466MHz
36	903.802469MHz	927.747465MHz
37	903.852469MHz	927.797465MHz
38	903.902469MHz	927.847465MHz
39	903.952470MHz	927.897465MHz
40	904.002470MHz	927.947465MHz