

**EXHIBIT 9**  
**INSTRUCTION MANUAL**

## INTERTEK TESTING SERVICES

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### 9.0 Instruction Manual

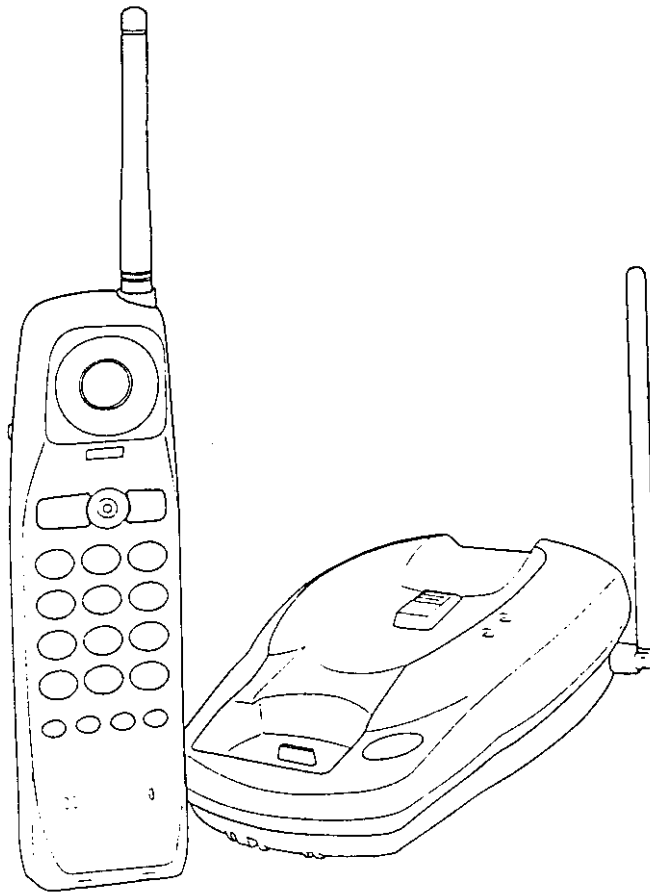
Attached is a preliminary copy of the Instruction Manual.

Please note that the required FCC Information to the User can be found on Page 5 of this manual.

This manual will be provided to the end-user with each unit sold/leased in the United States.



## OWNER'S MANUAL



25-CHANNEL CORDLESS TELEPHONE  
PLEASE READ BEFORE OPERATING THIS EQUIPMENT

**Model: NCP-440A**

 **IMPORTANT**

Read this manual before attempting to setup or use this instrument. It contains important information regarding safe installation and use. Keep this manual for future reference. Also save the carton, packing and proof of purchase to simplify and accelerate any needed action. If you need assistance or service, call 1-800-231-9069.

 **WARNING**

To prevent fire or shock hazard, do not expose this product to rain or any type of excess moisture. If accidentally dropped into water, the AC adaptor should immediately be unplugged from the wall along with the telephone line cord.



**THIS SYMBOL IS INTENDED TO ALERT THE USER OF THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE OWNERS MANUAL.**

# NCP-440A

## CARTON CONTENTS

- NCP-440A Base and Handset
- AC Adaptor (12Vdc, 200 mA, Center Positive)
- Owner's Manual
- Warranty Card
- Memory Index Card

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## **INSTALLATION PRECAUTIONS**

1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

## **IMPORTANT SAFETY INSTRUCTIONS**

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating. These openings should never be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, other similar surface. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by person walking on it.
9. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
11. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified service contractor when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.
12. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - A. When the power supply cord or plug is damaged or frayed.
  - B. If liquid has been spilled into the product.
  - C. If the product has been exposed to rain or water.
  - D. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustments of the other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.

- E. If the product has been dropped or the cabinet has been damaged.
  - F. If the product exhibits a distinctive change in performance.
13. Avoid using telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
  14. Do not use the telephone to report a gas leak in the vicinity of the leak.


### SAVE THESE INSTRUCTIONS

#### BATTERY CAUTION

To reduce the risk of fire or injury to persons, read and follow these instructions:

1. Use only the battery pack type provided with the unit.
2. Do not dispose of the battery in a fire. The cell may explode. Check with local codes for possible special disposal instructions.
3. Do not open or mutilate the battery. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
4. Exercise care in handling the battery in order not to short the battery with conducting material such as rings, bracelets and keys. The battery or conductors may overheat and cause burns.
5. Recharge only the battery provided with or identified for use with this product. The battery may leak corrosive electrolyte or explode if it is not the correct type.
6. Do not attempt to rejuvenate the battery provided with or identified for use with this product by heating them. Sudden release of the battery electrolyte may occur causing burns or irritation to eyes or skin.
7. When inserting the battery into this product, the proper polarity or direction must be observed.

- Reverse insertion of batteries can cause charging that may result in leakage or explosion.
8. Do not store this product, or the battery provided with or identified for use with this product, in a high-temperature areas. Batteries that are stored in a freezer or refrigerator for the purpose of extending shelf life should be stabilized at room temperature prior to use after cold storage.
  9. Disconnect telephone lines before installing batteries.



The RBRC™ seal on the nickel-cadmium (Ni-Cad) battery indicates that Newtech Cordless Phone Retail Sales is voluntarily participating in a program to collect and recycle these batteries at the end of their useful life, when taken out of service within the United States. Please call the RBRC™, toll free at 1-800-8-BATTERY or contact your local recycling center for information on where to return the spent battery.

RBRC™ is a trademark of the rechargeable Battery Recycling Corporation

#### FCC NOTICE

The FCC requires you to be advised of certain requirements involving the use of this telephone.

1. This equipment complies with Part 68 of the FCC rules. On the bottom of this equipment is a label that contains among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. If requested, provide this information to your telephone company.
2. The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your number is called. In most, but not all areas, the sum of RENs of all devices should not exceed five (5).

To be certain of the number of devices you may connect to your line, as determined by REN, you should call your local telephone company to determine the maximum REN for your calling area.

3. If your telephone causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance.

But if advance notice is not practical, you will be notified as soon as possible. You will be advised of your right to file a complaint with the FCC.

4. Your telephone company may make changes to its facilities, equipment, operations or procedures that could affect the proper operation of your equipment. If they do, you will be given advance notice so as to give you an opportunity to maintain uninterrupted service.

5. If you experience trouble with the telephone, please call 1-800-231-9069 or write to P.O. Box 69-4176 Miami, Fla. 33269-4176 for repair/warranty information. The telephone company may ask you to disconnect this equipment from the network until the problem has been corrected or you are sure that the equipment is not malfunctioning.

6. This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs. (Contact your state public utility commission or corporation commission for information).

**WARNING :** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE :** This equipment has been tested and found to comply with the limits for class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. Some cordless telephones operate at frequencies that may cause interference to nearby TV's and VCR's; to minimize or prevent such interference, the base of the telephone should not be placed near or on top of the TV or VCR; and, if interference is experienced, moving the Cordless Phone farther away from the TV or VCR will often reduce or eliminate the interference. **NOTICE TO HEARING AID WEARERS:** This Cordless Telephone has been registered with the FCC as hearing aid compatible.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

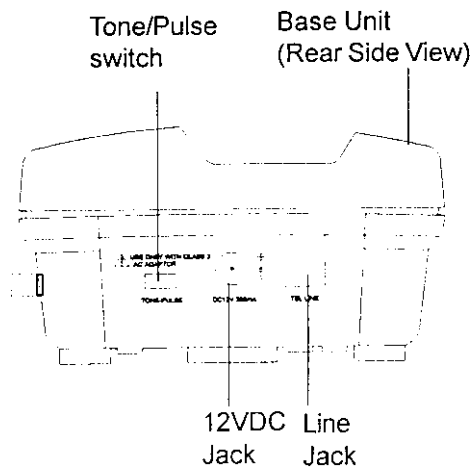
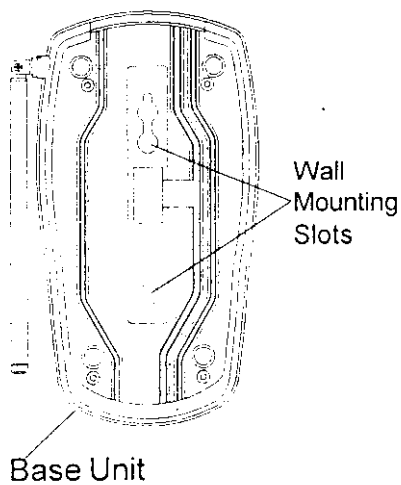
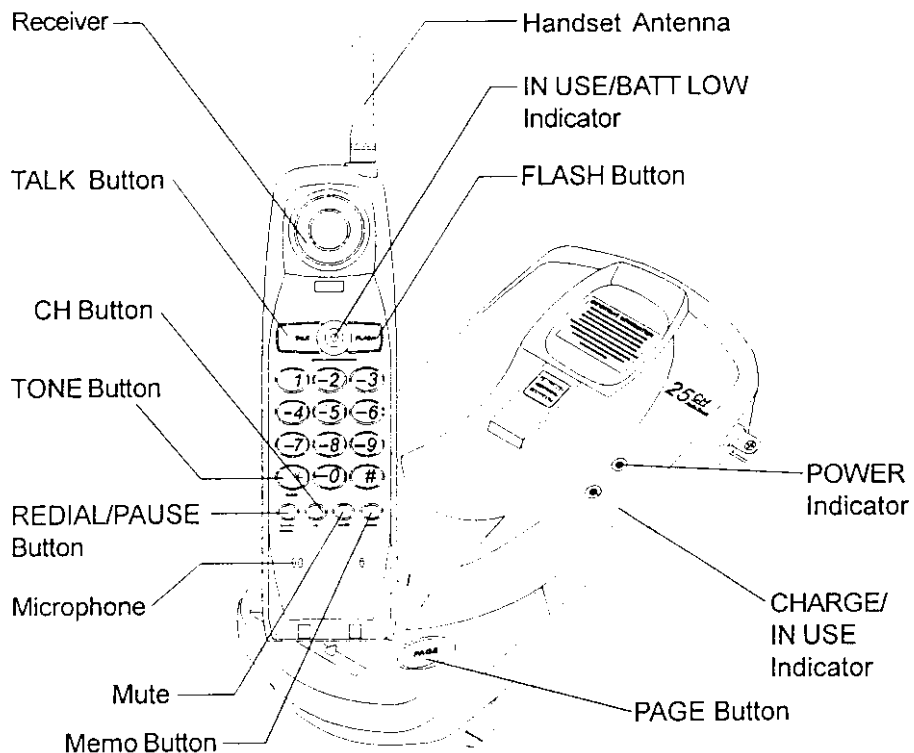
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician.

### **AC ADAPTOR**

Use only with Class 2 Transformer. 120VAC, 12VDC output, 200mA.



## NCP-440A CONTROLS DIAGRAM



## DESCRIPTIONS

### HANDSET CONTROLS :

**Antenna** - A user replaceable, rubber antenna which is designed for best reception.

#### **BATT SAVE / STANDBY Switch** -

Extends the amount of time the handset can remain away from the base unit by disconnecting the handset ringer. When the handset is set to the power BATT SAVE mode, you can still make an outgoing calls, but the handset will not ring.

**Channel (CH) Button** - Used to manually select one of the 10 operating channels when you experience interference on the handset.

**Charge Contacts** - Used for charging handset batteries. Clean periodically with an alcohol moistured swab.

**FLASH Button** - Momentarily hangs up the phone to access custom calling features such as Call Waiting or Three-Way Calling provided by your local phone company.

#### **IN USE / BATT LOW LED**

**Indicator** - Lights solid when handset is in use. Blinks when battery power is low.

**Memory (MEMO) Button** - Used to store 10 phone numbers (up to 16 digits each) or dial any of the stored phone numbers in the 10 memory locations.

**PAUSE Button** - Used to insert a "pause" in the dialing sequence while storing numbers in memory (for use in PABX or long distance services).

**REDIAL Button** - Used to automatically dial the last phone number dialed (up to 64 digits) from the handset.

**TALK Button** - Use to place, receive or terminate a call.

**TONE Button** - Used to temporarily change the dialing mode from Pulse to Tone when dialing in the Pulse mode. Provides Tone function to access special services such as phone banking services.

### BASE CONTROLS:

**12 VDC Jack** - Used for connecting the small plug of the AC adaptor.

**Antenna** - Raise for best reception or retract for storage purposes.

**Charge LED Indicator** - Lights solid when the handset is being charged by the base unit.

**Charge Terminals** - Used for charging handset batteries. Clean periodically with an alcohol moistened swab.

**IN USE LED Indicator** - Lights solid when the handset is in the TALK mode.

**Line Cord** - Used for connecting the telephone to the central office.

**PAGE Button** - Allows you to locate the handset when it is not on the base.

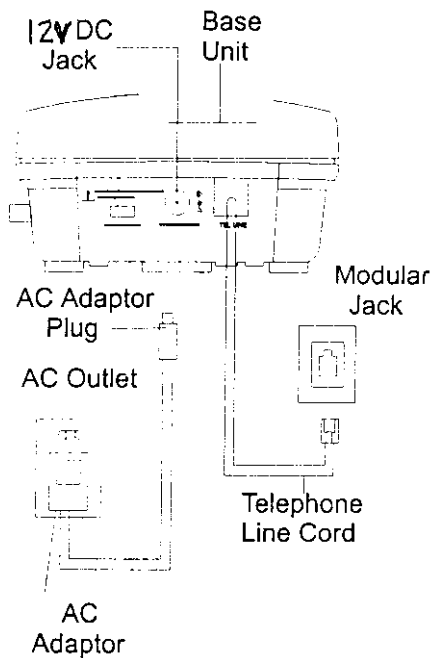
**TONE / PULSE Dialing Switch** - Allows you to switch the dialing mode to either Touch Tone or Pulse dialing.

**RINGER ON-OFF** - Allows you to switch to ON or OFF. Ringer switch must be ON for handset to ring during incoming calls.

**Wall Mount Hook** - Reverse the position for wall mounting purpose.

## INSTALLATION

**⚠ CAUTION :** You must use a Class II, 120 Volt AC / 12 Volt DC Adaptor that delivers at least 200 mA. The center tip must be positive and the plug must correctly fit the machine's DC 12V jack.



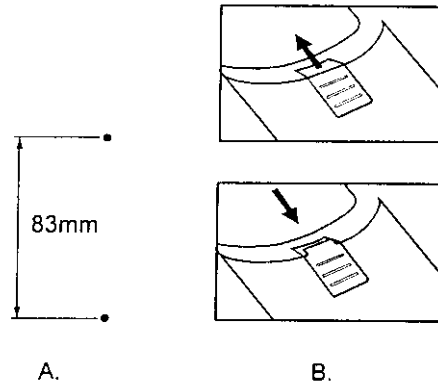
(Fig. 1)

### Desk Top Installation

1. Plug telephone line cord into modular jack.
2. Press until locking lever clicks.
3. Connect AC adaptor into back of the unit and plug directly into standard 120 volt outlet.

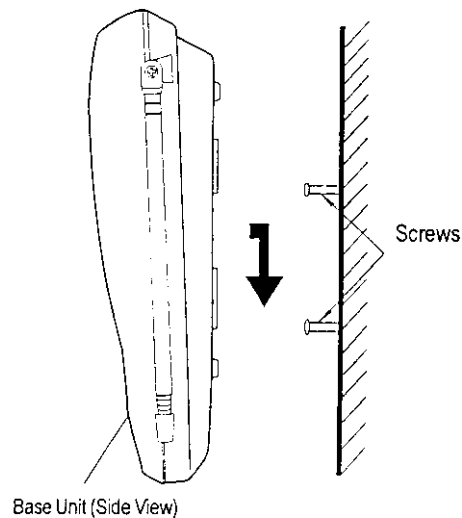
### Wall Mounting

1. Drill two holes with a vertical distance between the two marked positions of 83mm as shown in figure 2A.



(Fig. 2)

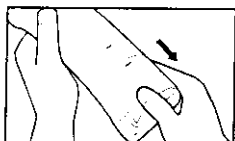
2. Drive a screw into each of the holes. Tighten them to the end of the screw lines, only leaving the smooth part of the screw head outside the wall.
3. Reverse the position of wall mount hook on base as shown in figure 2B.
4. Insert AC adaptor Plug into back of base unit.
5. Plug the telephone line cord into the wall modular jack.
6. Hang the unit onto the screws, then slide it down firmly to fasten the base securely, as shown in figure 3.
7. Plug AC adaptor directly into standard 120 volt outlet.



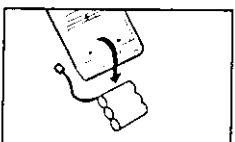
(Fig. 3)

## Battery Replacement

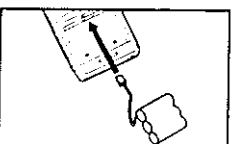
Replace battery every 2 years. Use only a Newtech approved Ni-Cad battery in your cordless phone.



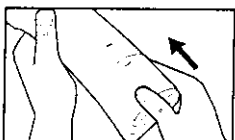
1. Remove battery cover.



2. Remove old battery.



3. Install new battery.



4. Close battery cover. Charge 10-14 hours before first use.

NOTE: Refer to "Maximizing Ni-Cad Battery Life" section on page 12.

For battery replacement please call  
1-800-321-6993 and order Part # WW01

## TELEPHONE OPERATION

### Preparing for Initial Use

1. Charge the Ni-Cad battery as described in the "Maximizing Ni-Cad Battery Life" section on page 12.
2. Raise the antenna on the base unit for best reception.
3. Push the handset TALK button to confirm that you have a dial tone.

4. If you do not get a dial tone, review the steps mentioned in the Installation and Power Connection section of this manual.

NOTE: Refer to the Troubleshooting section of the manual if you still cannot get a dial tone.

### To Place a Call

1. Press the TALK button on the handset. The IN-USE / BATT LOW indicator will flash rapidly while scanning for a clear channel. The indicator will light up solid when it finds a clear channel.
2. Listen for a dial tone.
3. Dial the phone number.

### To Receive a Call

*If the handset is on the base:*

- Since the NCP-440A features "Auto-Answer", simply pick up the handset from the base cradle when the phone rings and start conversation with the caller.

*If the handset is out of the base:*

- Press the TALK button on the handset and start conversation with the caller.

NOTE: When the handset is set to the BATT SAVE ON mode, you can still make outgoing calls, but the handset will not ring.

### To End a Call

Since the NCP-440A features "Auto-Standby," simply return the handset to the base or press the TALK button if you are away from the base unit.

### Last Number Redial

If you get a busy signal, you can use the Redial function to automatically dial the last phone number dialed.

1. Pick up the handset and press the TALK button.
2. Listen for a dial tone.
3. Press the REDIAL button to automatically dial the last phone number you dialed.

### Flash Function

Used to access custom calling features such as Call Waiting or Three-Way Calling provided by your local phone company. Consult your local phone company for more details.

### Pause Function

In some cases, such as PABX or long distance service, a pause may be needed in the dialing sequence. Pressing the PAUSE button once on the handset inserts a 2-second delay between dialed numbers. Pause(s) can be inserted into the programmed dialing sequence in memory dialing.

### Mixed Mode Dialing (Temporary ToneDialing)

If you have pulse dialing, to access special services (Bank by phone, etc), require a touch tone signal. Press the TONE button to switch from Pulse to Tone dialing temporarily. Pulse dialing mode resumes when the call is ended.

### Channel Selection (25 Channels)

#### Channel Scan (Auto-Scan)

- If you are receiving a call or dialing out and TALK is pressed, the unit auto-scans for the best channel available.

#### Channel Scan (Manual)

- If the existing channel becomes noisy or starts having interference, press the CH button on the handset. The unit will automatically scan for the best channel available.

**NOTE:** It takes about 2 seconds for the unit to scan to the next clear channel.

### Memory Dialing

You can store and recall up to 10 phone numbers (up to 16 digits each) from the handset. A memory index card is provided to record the stored numbers.

#### Storing Telephone numbers

1. Make sure that the handset is in the standby mode (IN USE / BATT LOW indicator is off and the base unit LINE LED indicator is off).
2. Press the memory (MEMO) button on the handset.
3. You will hear one beep.
4. Enter the telephone number you want to store (maximum of 16 digits) on the handset.
5. Press the MEMO button once again.
6. Press a memory location where you want to store the phone number (0 to 9) You will hear one confirmation beep.
7. Write the name of the person or company beside the corresponding memory index card that is provided with the unit.
8. Repeat steps 1 to 6 to store additional telephone numbers.

#### Example:

To store the number 123-9876 under index number 1 on the keypad:

1. Press MEMO button.
2. Enter 123-9876.
3. Press MEMO button again.
4. Press ① on the keypad.
5. You have stored 123-9876 in memory location 1.

#### NOTES:

- The maximum number of digits that can be stored for each phone number is 16 digits both in pulse and tone mode. The limit is only 15 digits when using Mixed Mode Dialing.
- Pauses can be programmed into a memory dialing sequence. Each pause occupies one digit. If you are using switchboard system to access an outside line, press the PAUSE button on the handset to store a pause.

#### *Recalling a Number from Memory*

1. Press the **TALK** button on the handset.
2. Press the **MEMO** button on the handset.
3. Press the index number (0 - 9) on the keypad for the number you have stored. The stored number will be dialed automatically.

#### *Example:*

To recall the number 123-9876 stored under index number 1 on the keypad:

1. Press the **TALK** button.
2. Press **MEMO** Button.
3. Press **1** on the keypad.
4. The unit will automatically dial 123-9876 stored in memory.

#### *Changing Stored Phone numbers*

1. Follow the steps described in the Memory Dialing section "Storing Telephone Numbers."
2. The new phone number will automatically replace the previous one.

#### **Page Function**

If you have misplaced the handset, press the **PAGE** button on the base unit. Each press of this button will activate the handset to sound 4 short beeps, provided that the handset is on standby mode and located within transmitting range.

#### **65,536 Combination Security Code**

The NCP-440A uses a digital coding security system to prevent unauthorized use of your telephone line by other cordless phones nearby. The NCP-440A has 65,536 possible security code combinations. Each combination of the code is randomly generated every time the handset is picked up.

#### *Resetting Security Code and Channel Information.*

Communication between the handset and base unit may not be possible in any of the following situations:

1. After power failure.
2. After relocating the base unit by disconnecting the AC adaptor.
3. After replacing the handset battery.
4. The handset goes out of range from the base unit.

To reset, place the handset on the cradle of the base unit for five seconds.

## **TECHNICAL INFORMATION**

This cordless telephone uses radio frequencies to allow mobility. There are certain difficulties in using radio frequencies with a cordless telephone. While these are normal, the following could affect the operation of your system.

**Noise:** Electric pulse noise is present in most homes at one time or another. This noise is most intense during electrical storms. Certain kinds of electric equipment such as light dimmers, fluorescent bulbs, motors, and fans also generate noise pulses. Because radio frequencies are susceptible to these noise pulses, you may occasionally hear them in your handset. Generally they are a minor annoyance and should not be interpreted as a defect in your system.

**Range:** Because radio frequencies are used, location of the base unit can affect operating range. Try several locations in your home or business and pick the one that gives you the clearest signal.

**Interference:** Some electronic devices operate in and/or generate interference near the operating frequencies of your cordless telephone. While several protection circuits are used to prevent unwanted signals, there may be periods

when these unwanted signal cause interference. If interference occurs frequently, it can be minimized or eliminated by lowering the height of your base antenna or by relocating the base unit. You can check for interference before selecting the final base unit location by plugging in the phone

### **Improving Cordless Reception**

Follow these guidelines to improve cordless sound quality:

- Select an area to install the NCP-440A where it is closest to the center of your home or office. This will improve the operating range of the unit.
- Keep the base unit away from electrical equipment. Radio Frequency Interference (RFI) is sometimes generated by these appliances, which can cause a degradation in cordless reception.
- Keep the handset batteries charged as much as possible. Weak handset batteries can limit the range of cordless operation.

### **MAINTENANCE**

Your phone should be situated away from heat sources such as radiators, heaters, stoves or any other appliances that produces heat.

### ***Cleaning the unit***

Use a slightly damp cloth to clean the plastic cabinet. Never use polish, solvents, abrasives or strong detergents since these can damage the finish.

### ***Maximizing Ni-Cad Battery Life***

Repeated use or recharge of Ni-Cad batteries without periodic full discharge results in reduced usable charge time. When you notice the

usable charge duration decreasing, fully discharge the Ni-Cad battery and recharge as discribed:

### ***Discharging***

1. Unplug the telephone line cord from base unit.
2. Make sure that the AC adaptor is connected.
3. Press the TALK button of the handset (IN USE/BATT LOW indicator should light).
4. Place the handset out of the base cradle to start discharging.
5. Once the IN USE/BATT LOW indicator starts flashing, it means that the battery level is low. Let it fully discharge for 12 hours. Once the Ni-Cad battery is fully discharge, you may now charge the battery to its full capacity.

### ***Charging***

1. Make sure the AC adaptor and telephone line cord is connected to the base unit.
2. Place the handset on the base cradle. The CHARGE indicator will steadily light up on the base.
3. Leave the handset charging on the base for 12 hours continuously to get a maximum charge.
4. The NCP-440A is now ready for use. Discharge and charge the Ni-Cad battery again once you notice a decrease in the useable charge time.

## TROUBLESHOOTING

SYMPTOM	SOLUTION
No dial tone	<ul style="list-style-type: none"> <li>• Check for the telephone line cord connection into the modular jack on your wall. Make sure it is plugged firmly.</li> <li>• If you had a power failure or had unplugged the base unit, replace the handset on the base unit for three to five seconds to reset the system.</li> </ul>
Does not ring	<ul style="list-style-type: none"> <li>• Check the BATT SAVE ON/STANDBY switch on the handset. Setting this switch to the BATT SAVE ON mode disengages the ringer to conserve the battery power. Switch to STANDBY to activate the handset ringer.</li> <li>• You may have exceeded the Ringer Equivalence Number (REN) limit of how many phones can be connected to the same line. The REN total of all devices (printed on the bottom label of each unit) should not exceed five (5). Disconnect the appropriate units to lower the REN total.</li> </ul>
No power on the Handset unit	<ul style="list-style-type: none"> <li>• Check for the Ni-Cad battery pack connection inside the battery compartment on the handset.</li> <li>• The handset rechargeable Ni-Cad battery pack may need charging. Refer to the Maintenance section on how to discharge and charge the Ni-Cad battery pack.</li> </ul>
Does not charge	<ul style="list-style-type: none"> <li>• Make sure that the charging contacts on both the base and the handset are in contact during charging.</li> <li>• The charging contacts may need cleaning with alcohol-moistened cloth.</li> <li>• The Ni-Cad battery pack may need to be discharged first to charge it fully. Refer to the Maintenance section on how to discharge and charge the Ni-Cad battery pack.</li> <li>• The Ni-Cd battery may not be able to be re-charged any longer. To order a new battery, please call 1-800-321-6993. The part number is WW01.</li> </ul>
Range is limited	<ul style="list-style-type: none"> <li>• Raise or reposition the antenna on the base unit.</li> <li>• Move the base unit so that it is centrally located in your residence or office and make sure that the base unit is not located near appliances.</li> <li>• Refer to the Technical Information section regarding range.</li> </ul>
Calls received flutters or fades	<ul style="list-style-type: none"> <li>• The handset rechargeable Ni-Cad battery pack may need charging. Refer to the Maintenance section on how to discharge and charge the Ni-Cad battery pack.</li> </ul>
Interference on reception	<ul style="list-style-type: none"> <li>• Choose an alternate channel using the CH button on the handset.</li> </ul>



INTERTEK TESTING SERVICES

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**EXHIBIT 10**  
**SECURITY CODE INFORMATION**

## INTERTEK TESTING SERVICES

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### 10.0 Security code information

The telephone has an internal security code with 65,536 possible combinations. Each time you pick up the HANDSET, the code is randomly set to a new combination.

Communication between HANDSET and BASE UNIT may not be possible in any of the following situation:

1. After a power failure.
2. After relocation the BASE UNIT by disconnecting the AC adaptor.
3. After replacing the HANDSET battery.
4. The Handset goes out of range from Base unit

To reset, place the HANDSET on the BASE UNIT for 2 to 5 seconds.

**EXHIBIT 11**  
**AUTOMATIC CHANNEL SELECTION**

## INTERTEK TESTING SERVICES

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### 11.0 Automatic Channel Selection

The mechanism of automatic channel selection is attached in the following page.

**25 CHANNEL - AUTOMATIC CHANNEL SELECTION MECHANISM  
( MODEL: NCP-440A)**

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**TALK MODE**

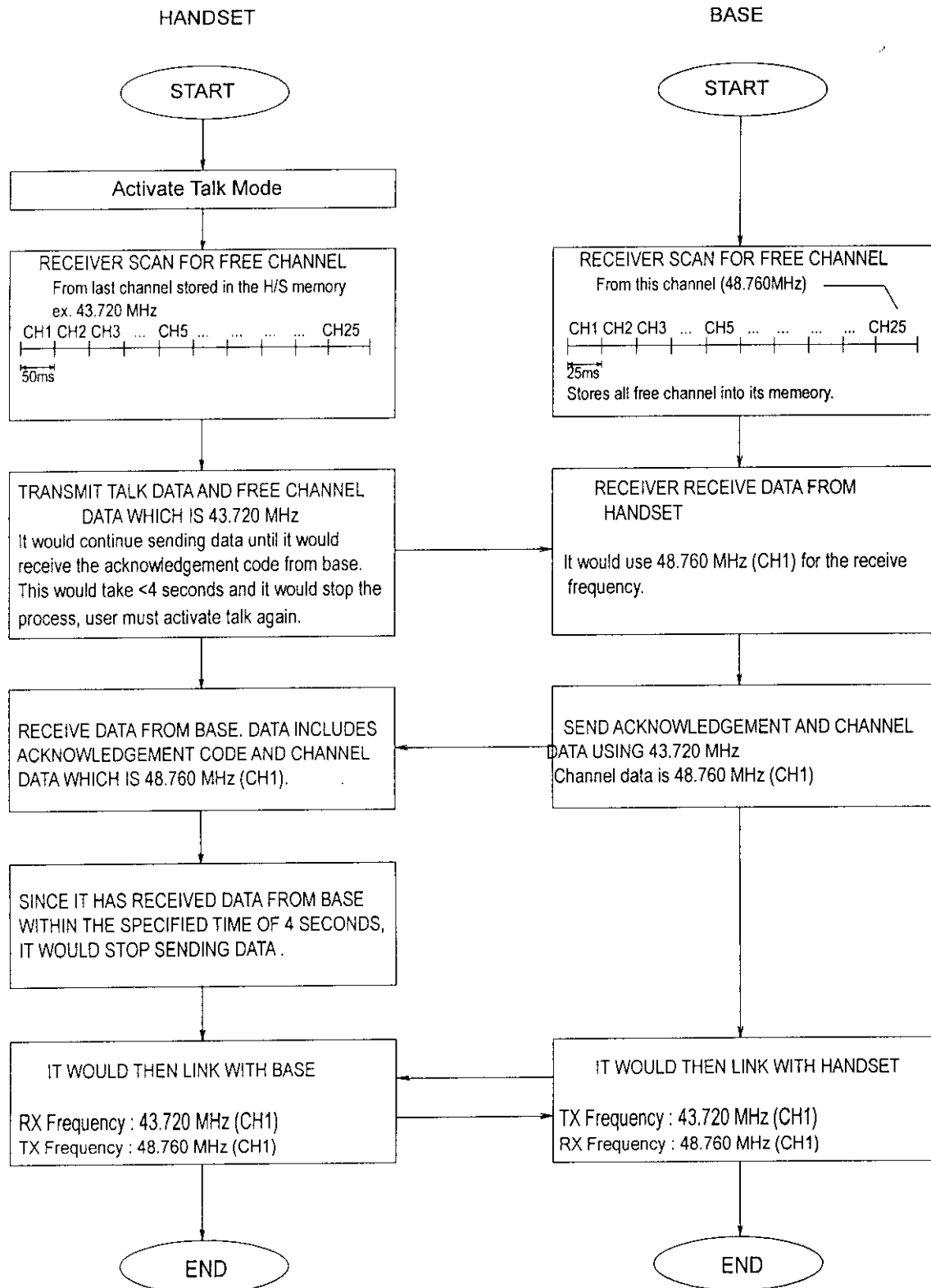
During the activation of talk, the handset receiver scan each channel from its last linked receiver channel for about 50ms, looking for free channel. Once a receiver found a free channel, the handset transmit talk instruction with receiver's free channel information to base to use this channel as a transmit channel.

Also, the base receiver scan for a clearest channel from channel 1 to 25 (25ms per channel). Once the base receiver received data from its handset during its scanning it will stop the scan and acknowledge data with its clearest receiver channel information then handset transmit and base receiver will change the channel to link. The handset and base unit's receiver scan and find separately their receiver's clearest channel. If all transmit channels of base and handset are occupied (all busy), handset and base will link at channel 15 (default channel).

Channel Number	Base Transmitter (MHz)	Handset Transmitter (MHz)
1	43.720	48.760
2	43.740	48.840
3	43.820	48.860
4	43.840	48.920
5	43.920	49.020
6	43.960	49.080
7	44.120	49.100
8	44.160	49.160
9	44.180	49.200
10	44.200	49.240
11	44.320	49.280
12	44.360	49.360
13	44.400	49.400
14	44.460	49.460
15	44.480	49.500
16	46.610	49.670
17	46.630	49.845
18	46.670	49.860
19	46.710	49.770
20	46.730	49.875
21	46.770	49.830
22	46.830	49.890
23	46.870	49.930
24	46.930	49.990
25	46.970	49.970

TALK MODE

CONDITION 1 : All channels are unoccupied (Free channel)

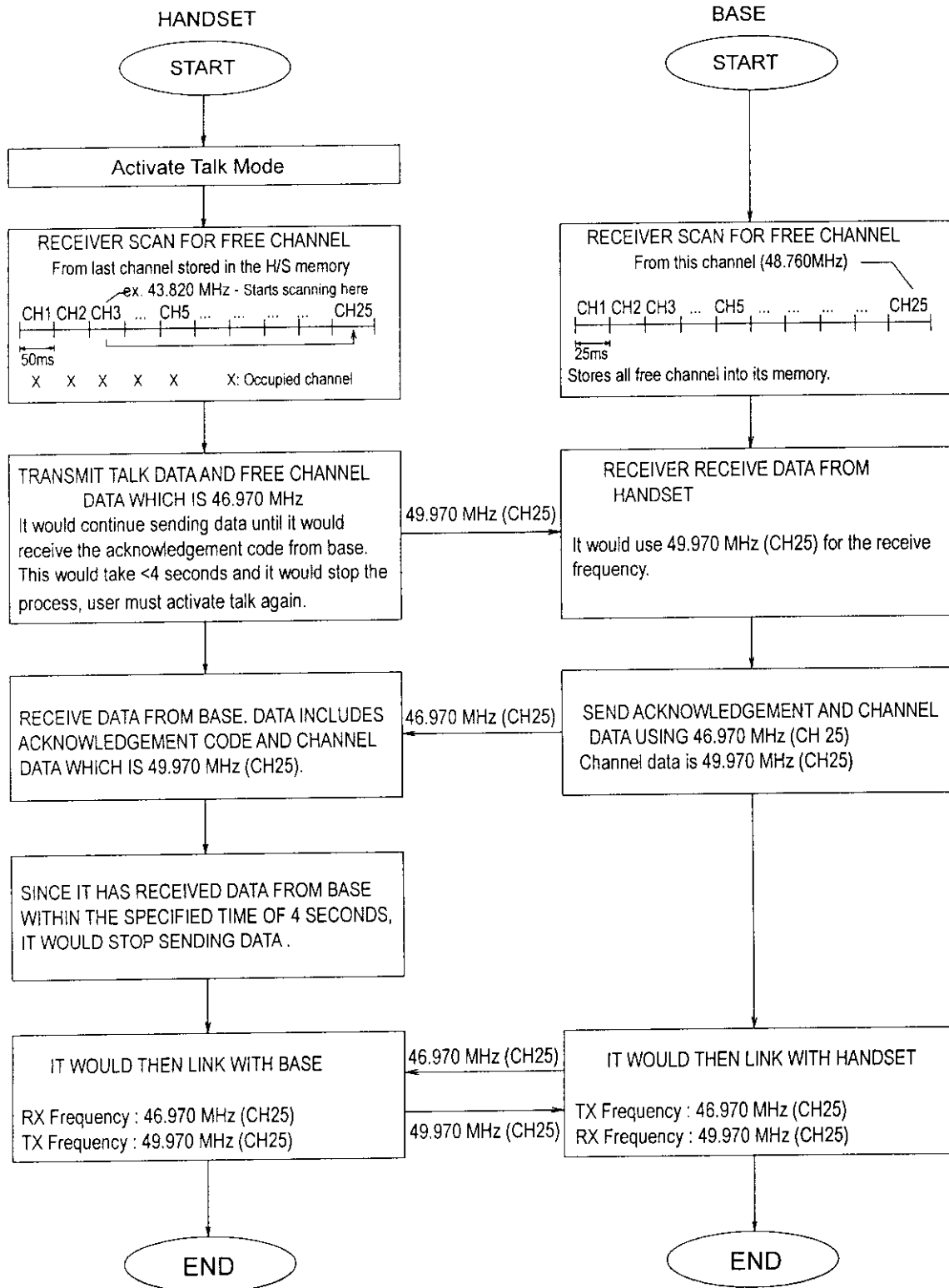


**TALK MODE**

CONDITION 2 : Multi channel on the base TX frequency are occupied.

- Ex. CH 1: 43.720 MHz    CH 4: 43.840 MHz
- CH 2: 43.740 MHz    CH 5: 43.920 MHz
- CH 3: 43.820 MHz

CH 3: 43.820 MHz - Stored channel during the last link in handset memory

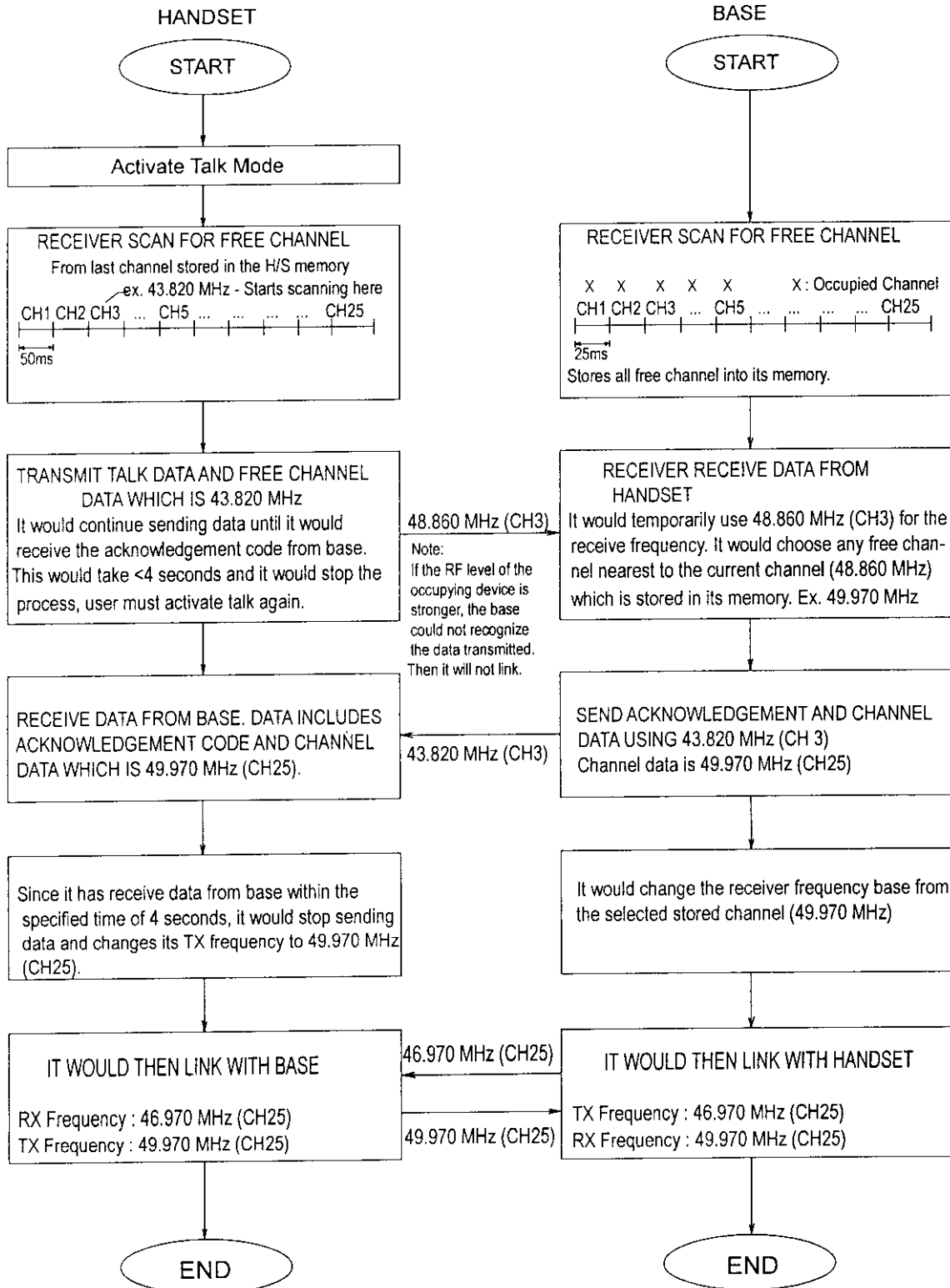


**TALK MODE**

CONDITION 3 : Multi channel on the Handset TX frequency are occupied.

- Ex. CH 1 : 48.760 MHz    CH 4 : 48.920 MHz
- CH 2 : 48.840 MHz    CH 5 : 48.020 MHz
- CH 3 : 48.860 MHz

CH 3 : 43.820 MHz - Stored channel during the last link in handset memory



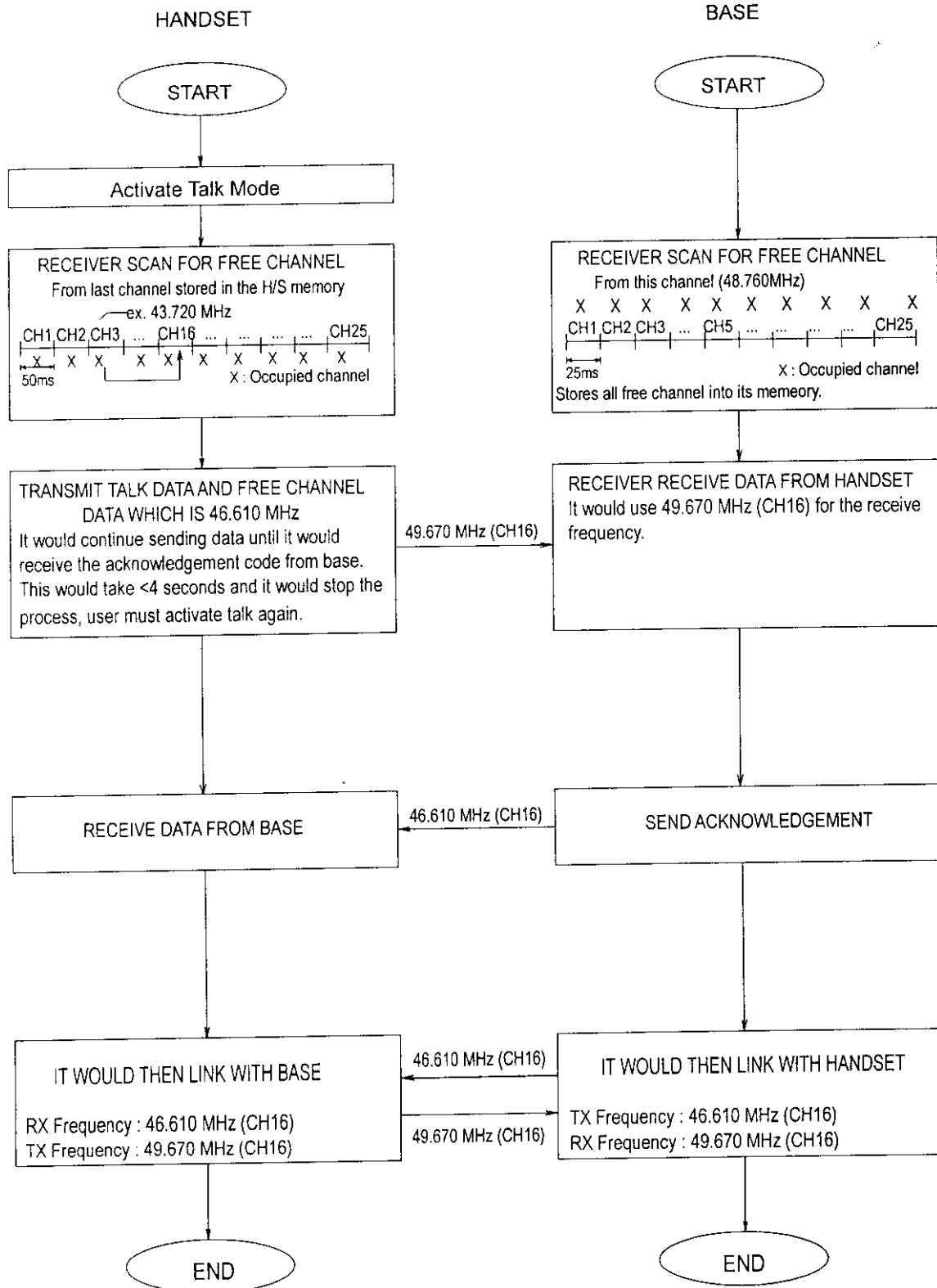




**TALK MODE**

CONDITION 5 : All TX channels of Handset and Base are occupied (All Busy)

CH3 : 43.820 MHz - Stored channel during the last link in Handset memory.



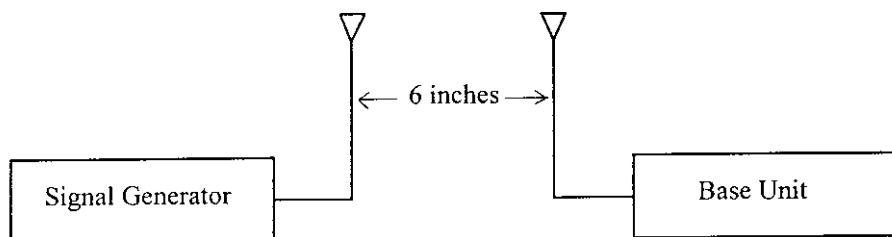
## NCP-440A AUTOMATIC CHANNEL SELECTION

The following tests were performed to show the incorporation of automatic channel selection.

### **Equipment Used to Perform Tests**

- JUNGJIN JSG-1051B Signal Generator
- Interference Signal 1KHz, 5KHz deviation

### **Test Set-Up**



### **Test Procedures**

1. Set signal generator at a certain channel (e.g. channel 1), then turn the generator off.
2. Turn on the phone, set the phone at the same channel as in step 1, then turn off the phone.
3. Turn on the signal generator.
4. Turn on the phone, investigate and record the locked channel. If scan functions correctly, it will lock to any channel, but not the one in step 1.
5. Repeat Step 1-4 for 25 channels

**Test Results**

INTERFERENCE CHANNEL AT	PHONE PRE-SET CHANNEL AT	PHONE AUTO-SCAN TO CHANNEL AT -13 dBm
1	1	2
2	2	3
3	3	4
4	4	5
5	5	7
6	6	7
7	7	8
8	8	9
9	9	10
10	10	11
11	11	12
12	12	14
13	13	14
14	14	15
15	15	16
16	16	17
17	17	18
18	18	19
19	19	20
20	20	22
21	21	22
22	22	23
23	23	24
24	24	25
25	25	1

**Summary**

The phone under test has an automatic selection mechanism that will prevent establishment of a link on any occupied frequency channel.