

(12/3/98)

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901

USA VERSION

USER'S MANUAL

71 / 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901

USA VERSION

,/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.

,/WARNING

To prevent fire or shock hazard, do not expose this product to rain or any type of moisture.

If accidentally dropped into water, this product should immediately be unplugged from the AC

Outlet and telephone wall jack.

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

- INSTALLATION

PRECAUTION

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

- MAINTENANCE

1. Use a damp cloth to the plastic cabinet. A mild soap will help to remove grease or oil. Never use polish, solvents, abrasives or strong detergents since these can damage the finish.
2. Your phone should be situated away from heat sources such as radiators, heater, stoves or any other appliance that produces heat.

if CAUTION

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

1. Use only the following type and the size battery 600mAh, 3.6V.
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

be toxic if swallowed.

72/82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901
VERSION

USA

4. Exercise care in handling in order not to short the battery with conducting material such as rings, bracelets and keys. The battery or conductor may overheat and cause burns.
5. Recharge only the battery type that is provided with or identified for use with this product. If a different type of battery is used, it may leak or explode.
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 battery may result in leakage or explosion .
8. Remove the battery from this product if the product will not be used for a long period of time(several months or more)since during this time they could leak in the product.
9. Discard the "dead" battery as soon as possible since "dead" battery are more likely to leak in a product.
10. Do not store this product, or the battery provided with or identified for use this product, in

high-temperature areas. Battery 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.

11. Always disconnect all telephone line cords from the wall modular jacks before installing or replacing the battery.

- **IMPORTANT SAFETY INSTRUCTIONS**

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of life 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 outlet before cleaning. Do not use liquid cleaners or aerosol 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 provide for ventilation, to protect it from overheating. These openings should never be blocked or covered. The opening should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. 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.

73 / 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901 USA VERSION

8. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons 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 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 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 instruction.

Adjust only those control that are covered by the operating instructions. Improper adjustments of 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 a 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

FCC NOTICE

The FCC requires that you 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 the(5.0)To be certain of the number of devices you may connect to your line, as determined by the REN, you should call your local telephone company to determine the maximum REN for your calling area.

74 / 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901

USA VERSION

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 change to its facilities, equipment, operations or procedures that could affect the proper operation of your equipment. If they do, you an opportunity to maintain uninterrupted service.
5. If you experience trouble with the telephone, please contact Northwestern Bell Phones for repairwarrantyinformation.
Thetelephonecompanymayaskyoutodisconnectthisequipmentfrom 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 part lines is subject to state tariffs.(Contact your state pubic utility commission or corporation commission for information.)

ACADPTOR: USE ONLY WITH CLASS 2 TRANSFORMER, RATED OUTPUT
9VDC, 300mA,

CARTON CONTENTS

IS-901 Base and Handset.

Rechargeable Ni-Cad Battery (3.6V, 600mAh)

AC Adaptor (CL: 11, DC9V, 300mA)

Telephone Line Cords (Long & Short)

Users Manual

Warranty Card

76 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

**MODEL: IS-901
USA VERSION**

IS-901 CONTROLS DIAGRAM

(illustrations not shown to scale)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Privacy of communications may not be insured when using the phone.

76 / 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

**MODEL: IS-901
USA VERSION**

DIGITAL SPREAD SPECTRUM TECHNOLOGY

The IS-901 features digital Spread Spectrum Technology (DSST) which virtually eliminates noise and other interference while greatly increasing operating range. DSST uniformly spreads the signal over one of 20 independent frequency ranges, or channels, for maximum range and clarity. The base and handset share a pre-assigned digital code which interfering signals do not have, so any noise gets filtered out and the user enjoys reliable, crystal-clear sound quality.

or SPREAD SPECTRUM TECHNOLOGY ADVANTAGES

Smart Channel Hopping - During operation, the IS-901 constantly monitors the transmission for interference. If interference is detected, the phone automatically scans for and hops to the next clear channel. This hopping is instant and does not interrupt normal conversation.

Maximum Security - The security code is changed every 8 uses, selected from one of 16 million different codes making interception virtually impossible.

3 Level Power Output - The IS-901 constantly monitors the strength of the signal from the handset to the base, selecting one of three transmission power levels for maximum range and extended battery life.

INSTALLATION

How to install the Ni-Cad Battery

1. Remove the battery compartment cover of the handset by sliding it down.
2. Connect the battery plug along slot into the handset's battery connector
3. Insert the Ni-Cad battery pack into the battery compartment.
4. Replace the battery compartment cover by sliding it up towards the handset.

NOTE : The Ni-Cad battery must be fully charged at least 12 hours before initial use. Please refer to the "Charging the Battery(Full Charge)" section.

0 DESKTOP CONNECTION

1. Plug the telephone line cord into the telephone line jack at the rear of the base unit.
2. Connect the other end of the line cord into a modular telephone jack located on your wall.

77 / 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901

USA VERSION

0 POWER CONNECTION

CAUTION : You must use a Class 11, 120 Volt AC/9 Volt DC adaptor that delivers at least 300 milliamps. The center tip the machine's DC9V jack.

1. Plug the AC Adaptor into a standard AC outlet.
2. Plug the adaptor plug into the DC 9V jack on the rear of the base.

CHARGING THE BATTERY (FULL CHARGE)

Once the base unit has power connection, place the handset in its cradle on the unit.

NOTES : THE Ni-Cad battery is continuously charged when the handset is on the

cradle of the base unit.

PREPARING FOR INITIAL USE

1. Ensure that the Ni-Cad battery is installed and fully charged before initial use.
2. Check phone line and power connections.
3. Adjust the unit antenna for reception.
4. Push the handset TALK button to confirm that you have a dial tone. If you do not get a dial tone, please refer to the Troubleshooting chart.

TELEPHONE OPERATION

0 TONE/PULSE(T/P)Switch

- @ If your home is equipped with touch-tone dialing service, set the T/P switch to T(Tone)
- @ If you only have rotary(pulse) dialing service, set the T/P switch to P(Pulse).

To Place a Call (TALK Mode)

1. Press the TALK button on the handset. The IN-USE indicator will light up solid when it finds a clear channel.
2. Listen for a dial tone.
3. Once you hear the dial tone, enter the telephone number on the handset keypad.

To Receive a Call

If the handset is on the base.

Since the IS-901 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.

To End a Call (Standby Mode)

If you picked up the handset from the base unit.

Since the IS-901 features "Auto-Standby," simply return the handset to the base to end the call.

The IS-901 will automatically go to standby mode.

78 / 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901

USA VERSION

TROUBLESHOOTING

SYMPTOM	SOLUTION
	<ul style="list-style-type: none"> @ Check for the telephone line connectors that they are pushed in firmly unit they click.
No dial ring	<ul style="list-style-type: none"> @ Check the Ni-Cad battery pack connection inside the battery compartment on the handset. @ If you had a power failure or had unplugged the base unit, replace the handset
No power on the Handset unit	<ul style="list-style-type: none"> @ Check the Ni-Cad battery pack connection inside the battery compartment on the handset. @ The handset rechargeable Ni- Cad battery pack may need to be charged. @ Make sure the charging on both the base unit and the handset are in contact
Does not charge	<ul style="list-style-type: none"> during charging. @ The charging contacts may need to be cleaned with an alcohol-moistened cloth. @ The Ni-Cad battery pack may need to be discharged first before a full charge. @ Raise or reposition the antenna on the base or handset.
Range is limited	<ul style="list-style-type: none"> @ Move the base unit so that is centrally located in your residence or office and make sure that the base unit is not located near appliances.
Calls received	<ul style="list-style-type: none"> @ The handset rechargeable Ni-Cad battery pack may need charging.
Flutters or fades	<ul style="list-style-type: none"> @ You may be out of normal operating range. Move closer to the base unit. @ When storing phone numbers, make sure that the handset is in the standby position. Cannot store or recall phone numbers from @ When recalling stored number, check first for a dial tone.

memory @ Always use two digits when entering / recalling
memory index number.

PAGE does not @ Check the Ni-Cad battery pack connection
inside the battery compartment on

operate the handset.

82/82

900MHz DSSS DIGITAL CORDLESS TELEPHONE

MODEL: IS-901 USA VERSION

- Low Battery Condition (BATT LED)

If the handset BATT LED indicator starts flashing, return the handset to its cradle on the base - unit to charge the handset. For a full charge, please follow the directions described on the section "CHARGING THE BATTERY(FULL CHARGE) on page 78 of this user manual.

- 16 Million Combination Digital Security Coding

The IS-901 uses a digital coding security system to prevent unauthorized use of your telephone line by other cordless phones nearby. The IS-901 has 16 million possible security code combinations, which is randomly generated every eight times the TALK button is pressed or handset is picked up from the base unit.

- Channel Operation

0 20 Independent Channel

Unlike other cordless phones reputed to have hundreds of channels(which is deceiving due to channel overlapping), the IS-901 features true 20 independent channels. Overlapping channels may increase the number of channel, but interference also occurs in multiple channels because of channel overlapping. On the contrary, the IS-901's 20 independent channels exclusively keep their own space, allowing the auto scan feature to find the clearest channel before it goes to TALK mode.

0 Smart Channel Hopping

During operation, the IS-901 constantly monitors the transmission for interference. If interference is detected, the IS-901 automatically scans and hops to the next clear channel. This channel hopping is instant and does not interrupt

normal conversation.

- Resetting Security Code and Channel Information

Communication between the handset and, base unit may be lost in any of the following situations: @ After a power failure

- @ After relocating the base unit by disconnecting the AC adaptor.
- @ After replacing the handset battery.
- @ The handset goes out of range from the base unit.

To reset or re-establish the link between the handset and base, place the handset on the cradle of the base unit for at least two to five seconds. Also ensure that the handset power is set to the on start before returning is to the cradle of the base unit.

81 / 82

900MHz DSSS DIGITAL CORDLESS TELEPHONE MODEL: IS-901 USA VERSION

NOTES:

- @ The maximum number of digits that can be stored for each phone is 16 digits both in pulse and tone mode. The limit is only 15 digits when using Mixed Mode Dialing.
- @ Pauses can programmed into a memory dialing sequence. Each pause occupies one digit. If you are using a switchboard R/P button on the handset to store a pause.
- @ Always enter two digits (01 -20)when storing or calling memory index number.

0 Recalling a Number from Memory

1. Press the TALK button on the handset and listen for a dial tone.
2. Press the MEMO button on the handset.
3. Enter the index number (01-20) on the keypad for the number you have stored.
The stored number
4. Will be dialed automatically.

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

-Adjustable Handset Volume Control(VOLA/VOLV)

You can adjust or handset receive volume by pressing the VOLA or VOLV button.

0 To Adjust the Handset Receiver Volume

1. Press the TALK button and listen for a dial tone.
2. Press **VOLA** repeatedly to increase the handset receiver volume. Press **VOLV** repeatedly to lower the handset receiver volume.

NOTE: The handset will chime when the maximum/minimum limit for adjusting the volume level is reached. A total of 4 volume levels are available.

- User Selectable Ringer Tones

There are four user-selectable ringer tones available for the IS-901.

1. While in the standby mode, press the FLASH button.
2. Press a key (1 TO 4) to select a ringer tone mode.

- Out of Range Detection.

If you use the handset too far away from the base unit during a call, the handset will alert you by audible warning beeps. Once you hear these warning beeps, move closer to the base unit to be within normal operating range.

NOTE: If you do not move within several seconds after the first Out-of-Range warning beeps sounds, the handset and the base unit will return to the standby mode.

80 /
82

900MHz DSSS DIGITAL CORDLESS TELEPHONE
MODEL: IS-901
USA VERSION

If you picked up the handset away from the base unit:

Press the TALK button to end the call if you were away from the base when you picked up the call. The IS-901 will to standby mode.

0 Last Number Redial (R/P)

If you get a busy signal, you can use the Redial function to automatically dial the last phone number dialed (up to 32 digits).

1. Pick up the handset and press the TALK button.
2. Listen for a dial tone.
3. Press the Redial/Pause(R/P) button to automatically dial the last phone number you dialed.

· **Pause Function(R/P)**

In some case, such as PBX or long distance service, a pause may be needed in the dialing sequence. Pressing the R/P button on the handset insert a 2second delay between dialed numbers. Pause(s) can be inserted into the programmed dialing sequence in memory dialing.

0 **Flash Function (FLASH)**

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 details.

0 **Mixed Mode Dialing(*)**

Accessing special services(bank by phone, etc), requires touch tone signals. If you have only pulse dialing available in your area, press the * button to switch from Pulse to Tone dialing temporarily. Pulse dialing mode resumes when the call is ended.

0 **Memory Dialing(MEMO)**

You can store and recall up to 20 phone numbers(up to 16 digits each) from the handset.

Storing Telephone Number

1. Make sure the handset is in standby mode (IN-USE indicator is off)
2. Press the MEMO button on the handset. The IN-USE LED will begin flashing.
3. Enter the telephone number you want to store (maximum of 10 digits) on the handset.
4. Press the MEMO button once again.
5. Enter a two digits memory index number (01-20) where you want to store the phone number. The INUSE LED will hear two confirmation beeps.
6. Repeat steps 1 to 5 to store additional telephone number.

