



knfbReader Mobile
and
kReader Mobile

User Guide

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SECTION 1. INTRODUCTION

Welcome to the world of mobile text recognition reading through our growing family of innovative, life-changing products. This Guide will help you learn to use our Mobile Reader software products known as the kReader Mobile or the knfbReader Mobile, whichever you have purchased. This software is designed for use with the Nokia N82 cellular telephone. Please consult the Nokia Nseries User Guide for Nokia N82 (or specific documentation for other applications you may run on the N82) for instructions to configure and use other features.

SECTION 2. TERMS USED IN THIS GUIDE

"Keypad," followed by a number, Star, or Pound, refers to one of the 12 raised keys on the numeric (telephone) keypad, located on the front panel of the phone, and used also to dial telephone numbers.

"5-Way Scroll key" means the square box with four raised edges, located above Keypad 2 on the front panel of the phone.

"Up," "Down," "Left," or "Right," means one of the raised edges of the 5-way scroll key (top, bottom, left, or right).

"Enter" means the square recessed portion of the 5-way scroll key surrounded by the four directional raised edges.

"Mobile Reader," or "Reader," means the kReader Mobile or the knfbReader Mobile software application being used.

"Mobile Reader Phone" means the cellular telephone used to run the Mobile Reader software.

"Press" means to press quickly and release (but not hold) a key; "long press" means to press, hold, and then release a key.

"Ready prompt," means the Mobile Reader can be used to take a picture of target printed text, including U.S. currency for the knfbReader Mobile only, or the Reader can also be used to access File Explorer, or perform other functions such as View Finder, or the audio Field of View Report for the knfbReader Mobile only.

SECTION 3. LEARNING THE POWER OF YOUR READER

The Mobile Reader software will enable you to read most ordinary printed documents within only a few seconds after taking a picture. The word, "Mobile," means reading on the go. So, don't leave home without your Mobile Reader. Take it with you and use it anywhere you go.

3.1 What the Reader Can Do:

The Reader can read a wide variety of document types you may encounter throughout the day. It performs particularly well for reading printed memos, reports, fliers, and virtually any other kind of document typically printed from a personal computer. It will also read many professionally printed items of various sizes, colors, and styles, including:

- books
- magazines
- most restaurant menus
- utility bills
- printed mailing addresses
- class or conference handouts
- hotel bills
- printed receipts
- business cards

some, but not all, airline boarding passes
labels on packaged foods showing contents and nutrition information
transit brochures and schedules
CD labels

3.2 What the Reader cannot do:

The Reader is programmed to recognize and respond to a wide variety of type styles, printing formats, and lighting conditions. However, as computer software, your Reader is not quite as adaptable as the human brain. You can expect some printed matter to be read accurately with very high reliability, but in other instances the accuracy may be less than you would like. In general you should give the Reader a try with things you need to read. This will help you to learn best what to expect.

The Reader is not designed for use with handwriting or to read scrolling text on a screen or sign. Performance with reading household product containers (food boxes, tea bags, milk containers, detergent bottles, etc.) is likely to be mixed, primarily because the written information on these containers is often artistically presented and may be surrounded by pictures and graphics. Also, the Reader's performance may be far less accurate in other circumstances, including:

- text printed on cylinders with warped or incomplete images (such as soup cans or medicine bottles)
- LED and LCD screens (such as digital clocks, ATM machines, microwave ovens, and cell phone screens)
- telephone keys (including cell phone keys)
- vending machine buttons and instructions
- street signs
- engraved print (such as serial numbers) on machines
- very large printed text
- posted signs such as signs on transit vehicles and signs in shop windows
- conventional, analog clocks

3.3 Factors Affecting Accuracy:

As with human vision, performance of your Reader will vary depending on several factors, including:

- surface reflection and glare
- distance between the Reader and the target text
- text size and variation
- text layout
- curvature of the target
- wrinkles and creases
- background images and colors
- ambient lighting
- shadows
- obstructions (such as cords, fingers, or neckties) between the Reader and the target text

Except for obstructed images, the Reader can generally adjust to a normal amount of variability with each of these factors. Nonetheless, some attention should be given to minimize the impact of any of these factors when getting ready to take a picture.

3.4 Learning to Aim Your Reader:

The Reader is designed to be simple so you can point and shoot, but practice will help in the beginning. Use the training template page supplied with your Reader to practice (see section 10.1 for instructions on how to use the training page and sections 10.2 through 10.5 for additional practice tips). Practicing with the Field of View Report (knfbReader Mobile only) is also recommended. Using a familiar document, printed in clear type on an 8-1/2 by 11 inch white sheet of paper is recommended for your initial practice sessions. Place the document on a flat surface having a plain, dark background. For best contrast with a white practice page (or the training page provided) use a solid dark colored cloth, preferably black with absolutely no pattern. Then, line up your pictures carefully using the Field of View Report (knfbReader Mobile only), or use the View Finder option, and you should be able to obtain excellent results. After some practice with aiming and taking pictures you will begin to know how the Reader responds. You will also be better prepared to analyze and correct conditions you can control when performance does not measure up. A few days of practice and persistence can greatly improve performance.

3.5 Getting Help:

3.5.1 Press Keypad 1 to activate the Help Mode. This mode allows you to press any key and learn its function. USE Help Mode to get a quick understanding of the location and purpose of each Reader control. Press Keypad 1 again, or Press Keypad Star, to exit Help Mode and return to the Ready Prompt.

3.5.2 You can also access the Users Guide on the Reader itself by Long Pressing Keypad 1 to enter Documentation Explorer as explained in section 7.3.2.

3.5.3 For help with further questions after you have studied this Guide, please contact your dealer for technical support. Then, if your problem persists or your question is not answered, please send an email request for assistance to: support@knfbReader.com or call the K-NFB Reading Technology Reader Technical Support Line toll free at: 1-877-547-1500.

3.5.4 Joining the Reader-users email list maintained by the National Federation of the Blind is also recommended. Reader-users are a growing community of individuals devoted to helping each other by sharing experiences to get the maximum benefit from our cutting-edge technology. To participate on this list or just observe, please send a blank email message to <http://www.nfbnet.org/mailman/listinfo/reader-users>.

SECTION 4. KEYS BY LOCATION

This section will help you learn the location of each key. Use the next section to learn each key's function.

4.1 Above the Numeric (telephone) Keypad:

Upper portion of large, flat, square key, left of the center 5-way scroll key - "Left Selection Key"

Upper flat, rectangular key, right of the center 5-way scroll key - "Right Selection Key"

Curved, slightly rough, far outer edge, left of Left Selection Key - "Send"

Curved, slightly rough, far outer edge, right of Right Selection Key - "End"

Lower portion of large, flat, square key, left of the center 5-way scroll key - "Menu"

Center square, including raised edges and recessed middle portion - "5-way scroll key"

4.2 Numeric (telephone) Keypad:

Keypad 1 - Help

Keypad 2 - File Explorer

Keypad 3 - View Finder

Keypad 4 - Reprocess Image in another reading format (see section 8.9)

Keypad 5 - Manual Save

Keypad 6 - New Document (used in Multiple Paging)

Keypad 7 - Audio Settings

Keypad 8 - Text Navigation Settings

Keypad 9 - Screen Settings

Keypad Star - cancel

Keypad 0 - U.S. Currency Reader (knfbReader Mobile only)

Keypad Pound - Function (must be followed by another key, such as Pound-0 to hear bill orientation for U.S. currency (knfbReader Mobile only) or Pound-9 for a shortcut to User Settings)

4.3 Camera Switch:

Your Mobile Reader Phone has a camera switch which must be open in order to take a picture (see section 8.). The camera Switch slides easily from the closed to the open position and is located immediately above the camera lens on the back panel of the phone.

SECTION 5. KEYS BY FUNCTION

This section will help you learn the function of each key. Use the previous section to learn each key's name and location.

5.1 Above the Numeric (telephone) Keypad:

Left Selection Key - Enter the Options Menu to change User Settings (by pressing Enter at the top of the Menu), or (by pressing Down) you can save or retrieve settings, restore factory defaults, obtain software version and system status information, and exit the Reader.

Right Selection Key - Best method to exit the Reader and return to the opening phone screen.

Send - Accept a call while the Reader is in use.

End - Terminate a call and return to the Reader if the Reader is still in use.

Menu - Press to place the Reader in the background and access a complete list of other available programs; long press Menu again for the list of active programs running in the background and press Enter on the one you want.

5-way Scroll Key - Navigate through and select options as needed to control Reader functions.

5.2 Numeric (telephone) Keypad:

Keypad 1 - Press to enter Help Mode to learn the function of each key; long press to access Reader documentation (including the Users Guide) through Documentation Explorer.

Keypad 2 - Access saved document and image files through File Explorer to read or delete them from the secondary memory.

Keypad 3 - Press to turn View Finder on and see the target image through the display screen; press again to turn View Finder off.

Keypad 4 - Reprocess a captured image in another reading format (see section 8.9).

Keypad 5 - Press once to save a document file when the Reader is set to save files manually; or press twice to save both the document and the original image taken by the camera before the text was processed.

Keypad 6 - Close one document and begin a new document when the Reader is set to multiple paging.

Keypad 7 - Change reading speed and volume using audio settings.

Keypad 8 - Set text navigation length to control forward or backward movement when reading and reviewing text.

Keypad 9 - Use Screen Settings to choose size of displayed text or to switch the display entirely off.

Keypad Star - Cancel any function and return to the Ready prompt.

Keypad 0 - Take a picture of U.S. currency and speak the denomination (knfbReader Mobile only)

Keypad Pound - Press to activate additional functions or shortcuts, such as Pound followed by 0 to hear the bill orientation of U.S. currency (knfbReader Mobile only) or Keypad Pound followed by 9 for User Settings.

5.3 Mobile Reader Phone Camera Switch:

Open or close the lens cover (see section 8.).

SECTION 6. FIRST TIME USE

6.1 Preparation:

Four initial steps must be completed in order for your Reader to be used. These steps, other than acceptance of the End User License Agreement, are normally performed by your dealer.

Reader preparation steps are:

registration

product selection

acceptance of the End User License Agreement

software activation

6.2 Registration:

6.2.1 Registration of your Reader provides K-NFB Reading Technology, inc. with information to identify you as the owner of the Mobile Reader product purchased by you or on your behalf. This is very important so we can contact you in the future when upgrades or changes to your Reader are announced.

6.2.2 Registration requires providing your contact information together with the serial number of your Reader as shown on the product package which includes your Reader software.

6.2.3 Your Reader must first be registered in order for activation of your software to proceed.

6.3 Product Selection:

6.3.1 Product Selection is essential in order for the Reader to provide the form of presentation you need.

6.3.1.1 The product Selection prompt will be presented on your Reader the first time you start it unless your dealer has already selected the product on your behalf.

6.3.1.2 Press Keypad 1 at the Product Selection prompt to choose the kReader Mobile if you need an audio-visual reading assistant to help with tracking and processing conventionally printed text; or

6.3.1.3 Press Keypad 3 at the Product Selection prompt to choose the knfbReader Mobile if you need a text recognition Reader that converts printed text into full-word synthetic speech for the blind, with the option of a synchronized large print display for the visually impaired.

6.3.2 Please contact your authorized dealer if you need to change the product selection.

6.4 End User Licensing Agreement:

The End User License contains the terms and conditions that apply to your use of the Reader. The Agreement is your personal authorization to use this product. Therefore, your informed acceptance is required before the Reader software can be used.

6.4.1 The Licensing Agreement prompt is the first prompt after product selection or the first prompt presented if the product selection has already been made before you receive the Reader.

6.4.2 Press Keypad 1 at the Licensing Agreement prompt to accept or press Keypad 3 to decline.

6.5 Software Activation:

A software activation prompt will appear after acceptance of the Licensing Agreement unless your dealer has already completed this step on your behalf.

6.5.1 If the Activation prompt appears, copy the Software Code spoken by the Reader and contact your dealer to request a matching Activation Code.

6.5.2 Follow the instructions spoken at the Activation prompt to enter the Activation Code you receive from your authorized dealer, and your Mobile Reader software should begin to operate.

6.6 Beginning at the Ready Prompt:

The Ready prompt is the place where the Reader will begin the next time you start it. "Ready" means you can shoot pictures to capture and read text, get help, enter File Explorer, or perform all of the other functions described in this Guide. Remember that the camera switch (see section 8.) must be open before a picture can be taken. If the Reader fails to operate as described in this section, Please contact your authorized dealer to confirm that your Reader has been registered and the software has been activated.

SECTION 7. READER COMMANDS

7.1 Start the Reader from the Opening Phone Screen:

7.1.1 Press Menu, select Applications and press Enter; select Reader and press Enter; or

7.1.2 The Reader can be started from a Left or Right Selection Key shortcut or from a shortcut on the opening phone screen by using the phone's "Personalization" options

See the Nokia Nseries User Guide, Nokia N82 for instructions on personalization.

7.2 Stop the Reader to Return to the Opening Phone Screen:

7.2.1 Press Right Selection Key (best method); or

7.2.2 Press Left Selection Key, then press Up, followed by Enter to exit.

7.3 Get Help:

7.3.1 Press Keypad 1 to enter Help Mode and press any key to learn its function; or

7.3.2 Long press Keypad 1 to navigate through and read this Users Guide using Documentation Explorer.

7.3.2.1 Press Up or Down to navigate through the Documentation Explorer directory.

7.3.2.2 Press Right to enter and read a document.

7.3.2.3 Press Up followed by Right while in a document to access the table of contents, and press Up or Down to move from section to section.

7.3.2.4 Press Enter to access a section from the table of contents.

7.3.2.5 Long press Keypad 1 to exit a document and return to Documentation Explorer.

7.3.2.6 Press Keypad Star to exit a document or Documentation Explorer and return to the Ready prompt.

7.4 Shoot a Picture and Read:

7.4.1 Press Down to take a picture and read printed text; or

7.4.2 Press Up to hear an optional Field of View Report to line up the picture before pressing Down (knfbReader Mobile only); or

7.4.3 Press Keypad 3 for View Finder to see an image of the target text and line up the picture before pressing Down. Press Keypad 3 again or just press Down to take a picture to turn View Finder off.

7.5 Cancel Image Processing:

Press Keypad Star twice to cancel both processing and reading and return to the Ready prompt.

7.6 Cancel Reading to Return to the Ready Prompt:

Press Keypad Star once to cancel reading (or twice if image processing has not finished) and return to the Ready Prompt.

7.7 Navigate Through Text:

7.7.1 Press Enter to pause or resume text reading without canceling; or

7.7.2 Press Up to go to beginning of text; or

7.7.3 Press Down followed by Down again to go to end of text; or

7.7.4 Press Right or Left to jump forward or backward by the text segment chosen.

7.7.5 Press Keypad 8, followed by Right or Left to cycle through the text segment options, settings include:

read by document

read by page

read by paragraph

read by sentence

read by line

read by word

read by character.

7.8 Identify U.S. currency (knfbReader Mobile only):

7.8.1 Press Keypad 0 to take a picture of U.S. currency and read the denomination;

7.8.2 Press Keypad Pound followed by Keypad 0 to check bill orientation.

7.9 Reprocess an Image in Another Reading Format:

7.9.1 Press Keypad 4 to reprocess a captured image (other than an image of U.S. currency) for reading in another format; or

7.9.2 Press Left Selection Key followed by enter for User Settings, and Down for Reading Format choices to select the default reading format you prefer. Press Right or Left to choose Books Articles and Labels, or Bills and Memos reading formats.

7.10 Save Captured Text and Image Files:

7.10.1 Press Keypad 5 once to save captured text in a retrievable XMT file readable on the Reader and a corresponding TXT file used to transfer captured text to printers, Braille embossers, or other computer devices; or

7.10.2 Press Keypad 5 twice to save the document files and an image file of the captured text; or

7.10.3 Set the Reader to save document and image files automatically (see section 7.15 for automatic saving options).

7.11 Retrieve Saved Files:

7.11.1 Press Keypad 2 for File Explorer to retrieve and read saved document files in the XMT format or to reprocess a previously saved image.

7.11.2 Press Left repeatedly to go to the root directory in File Explorer, then press Up or Down to locate the Reader Documents, Reader Images, or Reader Text Files directories. Press Right to enter a directory.

7.11.3 Press Up, and Down to locate folders named by date in a directory or to find files named by sequential numbers within each date folder.

7.11.4 Press Right to enter a folder or file in the directory or press Enter twice to select and enter the folder or file.

7.11.5 Press Right or Left before entering a folder or file once it has been selected to read the folder or file name character by character.

7.11.6 Press Keypad Star to exit File Explorer or to close a saved document and return to the Ready prompt.

7.12 Delete Saved Document and Image Files:

7.12.1 Press Keypad 2 for File Explorer and follow the steps used to retrieve saved documents or images; then

7.12.2 Press Keypad Pound to delete a folder or file. When the folder or file name is presented, then press Pound again when prompted to confirm.

7.12.3 Press Keypad Star to exit File Explorer and return to the Ready prompt.

7.13 Change Settings:

7.13.1 Press Left Selection Key followed by Enter, or press Keypad Pound followed by Keypad 9, to access and change user settings.

7.13.2 Press Right or Left to cycle through options for each setting and press Keypad Star to exit settings and return to the Ready prompt.

7.13.3 Settings include

- camera Flash

- reading format

- file saving options

- auto Exit

- voice

- language

- speed

- volume

- document paging

- text navigation settings

text display

orientation

7.13.4 Save settings to secondary memory as explained in section 7.25, and retrieve saved settings from secondary memory as explained in section 7.26.

7.14 Capture and Read Multiple Page Documents:

7.14.1 Change Document Paging setting to Multiple Pages (see section 7.14);

7.14.2 Press Keypad Star to go to the Ready prompt and press Down to take a picture.

7.14.3 Press Down to capture the next image in succession as soon as the previous image has finished processing.

Note: It is not necessary to read the entire text from each captured image before taking the next picture of a multi-page document. Use the 5-way Scroll Key to navigate through and read all pages of the document which remain available as a single document in multiple paging.

7.14.4 Press Keypad 6 to reset multiple paging to page 1 and begin a new document with the next captured image.

7.15 Change File Saving Options:

7.15.1 Press Left Selection Key followed by Enter, or use the Keypad Pound-9 shortcut, for User Settings; then

7.15.2 Press down to locate File Saving Options.

7.15.3 Press Right or Left to cycle through the following options

only save documents automatically

always save documents and images automatically

no automatic saving, save files manually.

7.15.4 Press Keypad Star to exit settings and return to the Ready prompt.

7.16 Change Auto Exit Time:

7.16.1 Press Left Selection Key followed by Enter, or use the Keypad Pound-9 shortcut, for Settings; then

7.16.2 Press Down to locate Auto Exit.

7.16.3 Press Right or Left to cycle through the following auto exit times

1 minute

3 minutes

5 minutes

10 minutes

15 minutes

never exit automatically.

7.16.4 Press Keypad Star to exit settings and return to the Ready prompt.

7.17 Change to Another Available Voice:

Locate available voice options currently in your Reader, or added in future software updates, by going to the Voice prompt under User Settings. Choose the voice you most prefer from the available options by pressing Right or Left. Please note that the first release of the Mobile Reader announced in January

2008 includes only one voice, but additional voices can be expected in future upgrades. Note also that restarting the Reader may be necessary to activate a different voice.

7.18 Change to Another Available Language:

Locate available languages currently in your Reader, or added in future software updates, by going to the Language prompt under User Settings. Choose the language you prefer from the available options by pressing Right or Left. Please note that the first release of the Mobile Reader announced in January 2008 includes English as the only language, but additional languages can be expected in future upgrades. Note also that restarting the Reader may be necessary to activate a different language.

7.19 Change Reading Speed:

7.19.1 Press Keypad 7 for Audio Settings followed by Left to decrease or Right to increase speed; or

7.19.2 adjust the reading speed under User Settings by pressing Right to increase or Left to decrease speed.

7.19.3 Press Keypad Star to exit Audio Settings or User Settings and return to the Ready prompt.

7.20 Change Volume:

7.20.1 Press Keypad 7 for Audio Settings followed by Down for Volume, then press Right to increase or Left to decrease volume; or

7.20.2 adjust the volume under User Settings by pressing Right to increase or Left to decrease volume.

7.20.3 Press Keypad Star to exit Audio Settings or User Settings and return to the Ready prompt.

7.21 Change Text Navigation Settings:

7.21.1 Press Keypad 8 for Text Navigation Settings and press Right or Left to cycle through the choices; or

7.21.2 Adjust text reading length by going to Text Navigation Settings under User Settings.

7.21.3 Text Navigation Settings include:

- read by document
- read by page
- read by paragraph
- read by sentence
- read by line
- read by word
- read by character.

7.21.4 Press Keypad Star to exit Text Navigation Settings or User Settings and return to the Ready prompt.

7.21.5 Press Right or Left when reading a document to jump forward or back by the Text Navigation Setting chosen; Press Right for forward or Left for back.

7.22 Change Screen Settings

7.22.1 Press Keypad 9 for screen settings and press Right or Left to cycle through the options; or

7.22.2 adjust text size or turn display off by going to Screen Settings under User Settings and press Right or Left to cycle through the options.

7.22.3 Display options include:

- text size, small
- text size, medium
- text size, large
- text display, off.

7.22.4 Press Keypad Star to exit Screen Settings or User Settings and return to the Ready prompt.

7.23 Change Screen and Scroll Key Orientation (see section 8.10):

7.23.1 Press Left Selection Key followed by Enter, or use the Keypad Pound-9 shortcut, for User Settings; then

7.23.2 Press down to locate the Orientation prompt.

7.23.3 Press Right or Left to cycle through the following options

- portrait
- landscape
- auto

7.23.4 If the Orientation setting is changed from Portrait to Landscape (or from Landscape to Portrait) the Mobile Reader Phone must be rotated to the new Orientation immediately so the arrow keys can be used as intended.

7.23.5 Press Keypad Star to exit settings and return to the Ready prompt.

7.24 Change Camera Flash Settings:

7.24.1 Adjust Camera Flash settings by going to User Settings and pressing Right or Left to cycle through the options.

7.24.2 Flash settings include:

- always on
- off
- auto.

7.24.3 Press Keypad Star to exit Camera Flash Settings and return to the Ready prompt.

7.25 Save Settings to Secondary Memory:

Press Left Selection Key followed by Down to locate the "Save Settings to Secondary Memory" prompt and press Enter.

7.26 Retrieve Settings from Secondary Memory:

Press Left Selection Key followed by Down to locate the "Load Settings from Secondary Memory" prompt and press Enter.

7.27 Restore Factory Default Settings:

Press Left Selection Key followed by Down to locate the "Restore Factory Defaults" prompt and press Enter.

7.28 Get Secondary Memory Status and Other System Information:

Press Left Selection Key followed by Down to locate the "About the Application" prompt and press Enter.

SECTION 8. CAPTURING AND READING TEXT

The term "capture" refers to the process of taking a picture which results in a digital image of printed text. Once captured by your Reader's camera, the digital image is processed in several ways to improve the quality of the image and convert the result into audible and visually displayed text. Capturing and Reading text is the most basic and important function of your Reader. Remember that the Camera Switch (see section 4.3) must be placed in the open position before a picture can be taken. The Camera Switch is in the open position if you slide it as far as you can to the right when the camera lens on the back panel of the phone is facing you. After you confirm that the Camera Switch is open, the following sections will help you achieve best results.

8.1 Arranging Your Space and Material:

Your Reader has been designed to be taken anywhere and used in almost any situation imaginable. However, its performance can be affected by things the camera sees, including the surrounding background colors and pattern of the reading surface. When possible, clearing a space for the target document to be placed on a plain (preferably solid black) contrasting background with absolutely no pattern will optimize performance.

8.2 Lining Up the Picture:

Place the text you want to read on a flat surface in front of you and put the Reader in the middle of the target. Then lift the Reader on a level plane about 10 inches above the target. It is important for the Reader to be close to the text while still seeing all four edges of the target. A distance of 15 inches or more between the Reader and the document is generally too great and will often increase the amount of unintelligible text. A distance of less than 10 inches between the Reader and the target will often result in text being cut off. Please note that pictures of small documents, such as business cards, can be taken at distances much closer than 10 inches while still having all four edges of the target in the image. It will help to have the Reader lined up so pictures of small items, such as business cards, occupy the center of the image, to emphasize the target and minimize the impact of the background on image processing. Keeping the Reader level over the document is also most important. Practice with the training page provided in your Reader package to learn the distance and placement of the Reader above the page for best results.

8.3 Get a Field of View Report (knfbReader Mobile only):

The Field of View Report is an optional procedure intended to help you with lining up the picture to capture text. Hold the Reader over the target document as described in section 8.2 and press Up to hear the report. Please note that the Reader will take a picture of the target document but must still be held steady in position over the document until you press Down to capture the image for reading. It is ideal, but not essential, for the Field of View Report to say, "All four edges are visible. Seventy percent filled." For best results, move the Reader slightly to improve your aim if needed and press Up again to check the result. This procedure may be repeated several times to get the best alignment before taking the picture. Regardless of the specific report you receive, your goal should be to move and hold the Reader as close to the target as you can while still keeping all four edges of the document in the image. This will normally be about 10 inches above a standard 8-1/2 inch page and even closer for smaller documents.

8.4 Use View Finder to See the Target On the Screen:

View Finder gives those who can use it a visual option for lining up the Reader. Press Keypad 3 to switch the View Finder on and press Keypad 3 again, or just press Down to take a picture and turn View Finder off.

8.5 Shoot the Picture:

8.5.1 Press Down to shoot the picture and hold the Reader steady for about two seconds until the shutter snaps. The Reader can then be moved to any position while text processing continues.

8.5.2 Press Keypad Star to cancel while the image is still being processed, and press Keypad Star again, after the "processing canceled" message, to return to the Ready prompt.

8.6 Read the Audible and Visual Text:

If image processing is not canceled, text reading should normally begin within approximately 20 seconds after the shutter snaps. This occurs automatically while image processing is completed.

8.7 Text Navigation:

Press Right to jump forward, or Left to jump backward, by the Text Navigation setting chosen (see section 7.21 for Text Navigation Settings). Text Navigation will not operate while image processing continues.

8.8 Saving Text:

Any text presented can be saved after processing is finished. Text not saved can still be read until another picture is taken. Press Keypad 5 once to save a document and Keypad 5 twice to save the captured image of the document.

8.9 Change Presentation Format:

Press Keypad 4 to reprocess a captured image and present the text in the alternate format available; formats are:

- books, articles, and labels
- bills and memos.

8.9.1 Use books, articles, and labels for text with columns, complex formats, or where text is printed on a curved surface (including the curved portion of a page near the spine of a book).

8.9.2 Use bills and memos for text to be read from right to left in a linear, top to bottom presentation.

8.10 Change Screen and Scroll Key Orientation:

8.10.1 Using Landscape, rather than Portrait Orientation of the Reader can increase the line length of displayed text on the screen.

8.10.2 The Orientation can be fixed as Portrait or Landscape, or the Orientation can be changed on the fly with the rotation of the Reader using the Auto setting.

8.10.3 If the Orientation is changed from Portrait to Landscape, with the screen on the left and the keys on the right, the Left Arrow key also changes to Down, Up and Down change to Right and Left, and Right changes to Up.

8.10.3.1 Change Orientation under User Settings as explained in section 7.23.

8.10.3.2 Note that the Mobile Reader Phone must be rotated immediately to use the arrow keys in the proper orientation as soon as a new selection is made.

8.10.4 The Auto setting requires the following specific motions to change the Orientation

8.10.4.1 Hold the Mobile Reader Phone on a parallel plane with a table or desk;

8.10.4.2 Rotate the phone 90 degrees to the left so the screen is on the left and the keys are on the right; and

8.10.4.3 finally, using a gentle and even motion, gently tilt and hold the Mobile Reader Phone perpendicular to the reading surface until the Orientation changes automatically. The change will be shown on the screen as the image rotates. A verbal confirmation message is also provided to confirm the orientation of the arrow keys. Repeat the phone movement procedure if necessary until the Orientation changes.

8.10.5 Set Orientation to one of the fixed settings (Portrait or Landscape) to prevent unintended changes as the Mobile Reader Phone is moved.

SECTION 9. RECOGNIZING AND ORGANIZING U.S. CURRENCY (knfbReader Mobile only)

9.1 Getting the Denomination:

Press Keypad 0 to capture an image of U.S. currency, and the denomination will be spoken automatically. Hold a bill about 12 inches away from and oriented vertically to the Reader or, for best results, place the bill on a flat surface, using a vertical orientation.

9.2 Getting the Bill Orientation:

Press Keypad Pound followed by Keypad 0 for the bill orientation, such as "The image is rotated left, the bill is backside up." This feature is particularly important in sorting currency for use with automated transaction machines.

SECTION 10. PRACTICE TIPS

10.1 Using the Training Page:

Use the training page supplied in your Reader package to learn the best distance and placement of the Reader above a standard 8-1/2 by 11 inch page. Your Reader is programmed to give you distance and orientation information when it sees the training page. The Reader will not read the text on the training page, instead, it will tell you the distance between the Reader and the training page and the orientation of the Reader relative to the center of the page. The Reader will then tell you how to move for the best result, suggesting you move some distance up, down, left, right, forward, or back. Practicing with this page can give you a better understanding of how it feels when you are holding the Reader in the best position above the page. Here are the step-by-step instructions:

10.1.1 Locate the training page: it is approximately 8 inches by 10 inches on heavyweight paper with a cut corner. The cut is about 1/2 inch long. Although the training page is slightly smaller than 8-1/2 by 11 inches, the Reader will be giving you position information as if the page was 8-1/2 by 11 inches.

10.1.2 Place the training page on a flat and uncluttered reading surface in front of you, using a solid (preferably black) cloth for best performance.

10.1.3 Place the training page in portrait orientation, with the notch in the upper right corner.

10.1.4 Put the Reader in Bills and Memos format. Go to settings; reading format; select Bills and Memos.

10.1.5 Hold the Reader approximately 10 inches above the training page and press Down to hear the results. Continue to hold the Reader above the page while the distance and orientation information is spoken. If the Reader does not respond "Training page detected", the page may be upside down.

10.1.6 Move the Reader to the position recommended, and try another picture.

10.2 Using the Field of View Report for Learning (knfbReader Mobile only):

The Field of View Report can help you to line up pictures, but it does not process or recognize printed text. Therefore, the information you receive is a general view of the target, looking primarily for the outer edges of a document, the size of the image as reported by the percentage of the visual screen filled, and the rotation of the Reader relative to the target.

10.2.1 To use the Field of View Report, follow the directions given in section 8.3. Practice repositioning the Reader and pressing Up repeatedly until the Reader says "All four edges are visible." It is ideal if the percentage filled is 70 percent or higher assuming a standard 8-1/2 by 11 inch page as your practice target. However, the number you hear may not always be accurate. Therefore, your goal should be to move the Reader as close to the target as you can while still keeping all four edges in the image.

10.2.2 Target documents smaller than a standard page can be read just fine even though the percentage of the screen filled by the image may be far below 70 percent. However, the image will often process faster if the target fills the center rather than being offset. A target that fills the center of the image will minimize the surrounding background and emphasize the document to be read.

10.2.3 Note that the size of the image increases as the Reader is held closer to the target and decreases as you hold it further away. Also, closer and larger images may require changing the position of the Reader above the target so all four edges continue to be visible.

10.2.4 Note also that the angle of the Reader (presented as "orientation relative to the page") is provided in the Field of View Report. Rotating the Reader to obtain a low number (like 0 degrees for a portrait image, or 90 degrees for a landscape image) may be best, but is not essential for accurate processing.

10.3 Achieving the Best Image:

While the Field of View Report can be useful, especially for practice, the information can sometimes be misleading and is certainly not essential for capturing high quality images. If during practice you cannot seem to get the Reader to see all four edges of a standard 8-1/2 by 11 inch page, even after moving the Reader from side to side, forward or back, try raising it to a greater distance above the target. This will decrease the size of the image but allow the camera to view the target at a wider angle. Then, when the Field of View shows all four edges are visible, move the Reader closer to the target while keeping it centered so all edges are still being seen. Your practicing goal should be to achieve the largest image practicable, with a report that all four edges are visible. Raising or lowering the Reader and moving it slightly from side to side while keeping it level (not tilted) over the target is recommended to achieve this result. Practice with the training page to get a feel for the best reading position above the page is also recommended.

10.4 Using View Finder:

Persons who can see images through the screen may want to turn on View Finder with Keypad 3 for a quick look at the target before snapping the picture. The screen will show what the Reader sees. This can be helpful to optimize image fill (the portion of the screen filled by the target text) and thereby increase processing quality.

10.5 Best Performance Tips:

Sharp pictures are essential for best performance. This requires holding the Reader still after pressing Down to take a picture. If you find that this is a problem, use both hands or brace your elbows on the reading surface, provided that the Reader is still held far enough from the target to see all four edges. Distance from the target can greatly affect the text recognition quality. Most, but not all, documents should be approximately 10 inches from the Reader. The Reader can be held closer for documents smaller than a standard 8-1/2 by 11 inch page.

SECTION 11. RETRIEVING SAVED FILES

11.1 Saving files:

Text you have captured may be saved to your Reader memory card and later recovered as explained in this section. Unsaved text will be discarded as soon as the next image is captured. File saving options are available under User Settings, as shown in section 7.15, and may be set to automatic or

manual. The manual-save option requires pressing Keypad 5 once to save a document or twice to save the document and its associated image. Use of automatic saving may be more convenient but may also delay the text presentation after the picture is taken.

11.2 Retrieving files:

Use File Explorer to find your saved files. File Explorer allows you to select files to open for review. Press Keypad 2 to enter and begin navigating through the directories (see section 7.11 for a list of the File Explorer navigation commands).

11.3 Transferring Saved Files:

11.3.1 Files saved in your Reader may be transferred to a compatible computer using a communications program known as Nokia PC Suite (contact your dealer or see the Nokia Nseries User Guide, Nokia N82 for PC connection instructions). A version of Nokia PC Suite accessible to blind people using screen reader software can be found at www.blindsea.com by following the "Mobile Corner" link to Third Edition Third-Party Software.

11.3.2 After your phone and computer are connected with Nokia PC Suite installed on the computer, saved files in your Reader can be found on the memory card (not the phone memory) of your Mobile Reader Phone. These files can be located using the File Manager available in Nokia PC Suite. However, for people using screen reader software, using Windows Explorer, My Computer, or another comparable program may be more accessible to locate and enter the N82 directory and the memory card subdirectories.

11.3.3 The memory card directory which contains your Reader's saved files is called "KReader", which also has one subdirectory called UserDir. Enter KReader and UserDir to reach the additional subdirectories called "Reader Documents," "Reader Images," and "Reader Text Files." These are exactly the same directories you will find by entering File Explorer on your Reader itself.

11.3.4 The files stored under Reader Text Files, designated with a TXT extension, are intended for use with other computers, printers, Braille notetakers, and embossers. Files found under Reader Documents contain markup codes intended for use with your Reader only. Files stored as Reader Images are the digital pictures of your target text. These files are essential in making a visual analysis to determine why a particular document is not read as expected.

11.3.5 Follow the instructions for Nokia PC Suite to transfer files from your Mobile Reader Phone to your PC; or

11.3.6 if you enter the memory card using Windows Explorer, My Computer, or another comparable program, transfer files from the memory card to your computer using the standard procedure for copying files from one directory to another.

SECTION 12. MAINTAINING AND UPGRADING YOUR READER

12.1 Camera Flash and Lens:

The need to keep the camera flash and lens clean and free from finger-prints must be emphasized. The flash and lens are located on the back panel of the N82 just below the slide switch that controls the lens cover. Aside from the lens cover, which you can leave in the open position, thin plastic filters called "polarizers" have been placed over both the flash and the lens of the camera to improve reading results. The polarizers are especially important to reduce glare caused by light from the flash reflecting back to the camera from a glossy surface.

12.1.1 One polarizer must be installed on the Mobile Reader Phone to cover the camera flash and a separate one to cover the lens. The polarizers are installed by means of an adhesive backing which sticks firmly to the surface of the case on the phone surrounding both the flash and the lens. Care must be taken to insure that each polarizer is cleaned with a soft dry cloth routinely, as much as several times a day, depending on use. You should also inspect the polarizers during cleaning to insure that

both of them remain securely in position and have not been inadvertently removed. Misalignment of the polarizers will cause poor reading results because the images seen by the camera will not be clear.

12.1.2 Please contact your dealer for any help you may need to install or obtain replacement polarizers. Your dealer has been trained to align and install the polarizers for best results.

12.2 Obtaining a Case for Best Protection:

Consider placing your Mobile Reader Phone in a carrying case when not in use. Small carrying cases appropriate to the size of the Nokia N82 are widely available from digital camera or cellular telephone suppliers. Use of a case suited to the size of the N82 will help to keep the polarizers clean and properly positioned.

12.3 Software Upgrades:

12.2.1 Upgrades to the software are expected to be a regular feature of your Mobile Reader product. The planned upgrades will improve performance and add new features over time. This will help to keep your Reader up to date and best suited to meet your needs.

12.2.2 Installation of an upgrade will be performed upon request by your dealer or you can download each new software version announced by going to the software upgrade page at www.knfbreader.com and following the instructions provided.

12.2.3 Software upgrades are compressed zip files which must be unzipped on your computer after the download is complete. Once unzipped, the software package includes a Nokia program installation file which must be opened to install the files on the phone after the phone has been connected to the computer with the supplied USB connection cable. Contact your dealer or see the Nokia Nseries User Guide, Nokia N82 for PC connection instructions.

12.2.4 Please note that installing programs on your Mobile Reader phone also requires prior installation of the Nokia PC Suite communications program as explained in section 11.3.1 and in the PC Connections section of the Nseries User Guide, Nokia N82. For persons who use screen reader software, an accessible version of Nokia PC Suite can be found at www.blindsea.com. Follow the "Mobile Corner" link to Third Edition Third-Party Software.

12.2.5 Once installed on your computer, Nokia PC Suite is initiated whenever the cable is connected between your computer and the USB port on the phone.

12.2.6 With your computer connected to your Mobile Reader Phone through the supplied USB cable and Nokia PC Suite, proceed to install your new Reader software by pressing Enter on the name of the Nokia installer file provided in the download package, then press Enter again to confirm that you want to install the software. From that point forward, the installation will proceed automatically with periodic prompts on the phone which require you to press the Left Selection Key to make an affirmative response.

12.2.7 The software installation is complete when the phone confirms that fact and returns to the opening phone screen. At that point you are ready to use the Reader with its upgraded capabilities, after confirming acceptance of the Licensing Agreement again (see section 6.4). Then, when the Reader is at the Ready prompt you can verify that the software has been updated by pressing LEFT Selection Key followed by Down to locate "About the Application," and press Enter.

SECTION 13. LIMITED WARRANTY

Your Mobile Reader software includes the Warranty provisions set forth in the End User License, and does not extend to any features or functions of your Mobile Reader Phone other than the Mobile Reader Product purchased through a K-NFB Reading Technology authorized dealer. To obtain support or warranty service, please call your dealer or contact K-NFB Reading Technology Inc.

Send an email request to: support@knfbreader.com

Call the K-NFB Reading Technology Reader Tech Support Line toll free at: 1-877-547-1500