

User Guide for Nokia Field Force NFC Shell for Nokia 5140 and Nokia 5140i

9249001

Issue 1

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FOR YOUR SAFETY

Read these simple guidelines. Not following them may be dangerous or illegal. Read the complete user guide for further information.



QUALIFIED SERVICE

Only qualified personnel may repair this device.



WATER-RESISTANCE

Your device is not water-resistant. Keep it dry.



CONNECTING TO OTHER DEVICES

When connecting to other devices, read its user's guide for detailed safety instructions. Do not connect incompatible products.

1. Overview

Nokia Field Force NFC shell allows you to use touch to quickly and conveniently access various services with your Nokia 5140/5140i phone. By touching Radio Frequency Identification (RFID) tags, you can access different services based on your personal configuration.

Nokia Field Force NFC Kit contains the following:

- Two Nokia Field Force NFC shells
- One Java™ application called Service Discovery (pre-installed in the shell)
- Two tags to identify objects and tasks

Your device and its enhancements may contain small parts. Keep them out of reach of young children.

This Nokia Field Force NFC shell is designed to be used in the Nokia 5140/5140i phone that is available separately. For more information about the Nokia 5140/5140i phone, see www.nokia.com.

For examples of how you can use your Nokia Field Force NFC shell within the Nokia Field Force Solution for easy, fast and real-time data capture, see www.nokia.com/fieldforce.



Note: This user guide contains information and instructions for Nokia Field Force NFC shell. For instructions on how to use your Nokia 5140/5140i phone, see the phone's user guide.

■ Nokia Field Force NFC shell

Nokia Field Force NFC shell contains the RFID reader that enables you to read tags and to write into them with your Nokia 5140/5140i phone. The RFID reader is located inside the lower part of the back cover of the shell (dark area in the picture).

The Nokia Field Force NFC shell also stores the Service Discovery application, and the Cover browser application. When you install the Nokia Field Force NFC shell, the Cover browser application is automatically downloaded to the phone, after which you can use it to download the Service Discovery application.



Note: The Nokia Field Force NFC shell is only compatible with the Nokia 5140/5140i phone. Do not try to use it with other phones.

The RFID reader in the Nokia Field Force NFC shell takes its power from the phone battery. Using the RFID reader may drain the phone battery faster.

■ Service Discovery application

The Service Discovery application is used for accessing services (such as call dialling, web browsing and SMS sending) with your Nokia 5140/5140i phone.

The Service Discovery application enables you to read shortcuts from tags, save shortcuts to phone memory, write shortcut information into a tag, and give shortcuts to another Nokia 5140/5140i phone with Nokia Field Force NFC shell. For instructions, see [Service Discovery application, 11](#).

■ Tags

Nokia Field Force NFC shell comes with two tags, which are used to identify objects and tasks.



Note: The tags may set off the Electronic Article Surveillance (EAS) alarms used, for example, for theft-protection in shops.

■ What are RFID and NFC?

RFID

RFID technologies use radio waves to automatically identify individual objects. By emitting a short-range radio signal, the RFID reader device supplies power to an otherwise inactive RFID tag, allowing the device to read the tag or write data to the tag's memory.

The RFID reader is a short-range device (reading range 0-5 cm) and it converts the radio waves returned from the RFID tag into a format that can then be passed on to an application in the phone.

To transmit data from the RFID tag to the RFID reader, Nokia Field Force NFC shell uses the radio frequency 13.56 MHz, which is the most widely used globally available frequency for RFID.

NFC

NFC (Near Field Communication) is a short-range radio frequency technology that evolved from a combination of contactless RFID and interconnection technologies. The NFC device allows users to read small amounts of data from tags, as well as to communicate with other devices, by a simple touch.

2. Installation



Note: Before removing the cover, always switch off the power from your phone and disconnect the charger and any other device. Avoid touching electronic components while changing the covers. Always store and use the device with the covers attached.

To install the Nokia Field Force NFC shell:

1. Remove the original covers of your Nokia 5140/5140i phone, and install the upper and lower part of the Nokia Field Force NFC shell as instructed in the sales package of Nokia Field Force NFC Kit.
2. Switch on the phone, and make sure that the time and date are set correctly in the phone.

The shell automatically installs the Cover browser application in the *Applications > Collection* menu in your phone. The shell also contains the Service Discovery application that you can now install. Installation may take several minutes.

If you do not install the Service Discovery application when installing the Nokia Field Force NFC shell, you can install it later using the Cover browser application. This is done as follows:

3. Select *Menu > Applications > Collection > Cover browser > Open*.
4. Select *Service Discovery*. The application is downloaded into the Collection submenu in the phone. Downloading may take a few minutes.

■ Check the phone's network settings

Ensure that your Nokia 5140/5140i phone has the correct settings for using SMS and GPRS.

For information on the availability of an SMS or a GPRS service, related fees, and appropriate settings, contact your network operator or service provider.

3. Tags

■ Tag features

Nokia Field Force NFC shell uses non battery-powered (passive) tags. Use the following tag types: MIFARE® Standard, MIFARE® Standard 4k and MIFARE® Ultralight.


Nokia Field Force NFC shell contains two tags. If you need more tags, please contact your vendor for compliant MIFARE® tags.

■ Place tags

You can place tags on any non-conductive material, such as glass, plastic, or wood.

Do not place tags on metal or other conductive surfaces, as it may prevent the RFID reader from being able to read the tags.

■ Touch tags with RFID reader

The RFID reader is located on the back of the lower part of the Nokia Field Force NFC shell, inside the area marked with .

When using the RFID reader, touch the tag with that area at close proximity. The reading range is typically 0-5 cm, depending on the tag type and size.



4. Service Discovery application

■ Start and close the application



Note: If the application is not active when you touch a tag with the RFID reader, the phone automatically starts the application.

To manually start an application:


Press **Menu** > **Applications** > **Collection** > **Service Discovery** > **Open**. *Please touch tag* is displayed.



Note: If you receive an incoming call while using an application, you can answer the call normally and continue using the application after ending the call.

You can view basic information about the application in the *Please touch tag* view: select **Options** > **About**.

To close the application:

In the *Please touch tag* view either press **Exit** or press .

■ Change application language

You can change the user interface language of the Service Discovery application by changing the language in your Nokia 5140/5140i phone.

The supported languages are English, German, French, Spanish, Italian, Finnish, Norwegian, Polish, Danish, Dutch, Portuguese, and Swedish. If an unsupported language is selected as the phone language, the default language English is used for the application.

■ Read, view, and save a shortcut

Touching a tag with the RFID reader launches a shortcut contained in the tag.

To read a tag:

1. Touch the tag with the RFID reader.

The phone displays the shortcut defined in the tag. If the Service Discovery application is not on when reading a tag, the RFID shell recognises the presence of a tag and launches the application.



Note: If the tag contains no information the phone gives an error message: *No shortcut on tag*, and prompts you to select a service shortcut to write to the empty tag: *Please select shortcut to write*. If the tag is empty and you do not yet have any shortcuts stored in your phone's memory, the phone prompts you to create a shortcut: *Please create a shortcut for writing*. If the empty tag is write-protected, the phone indicates this with the message: *Tag is write protected*.

2. Depending on the type of the shortcut, the phone either makes a phone call or sends an SMS to the predefined phone number, or connects to the predefined web site over a GPRS connection.

Before completing the function defined in the shortcut, the phone asks you for a confirmation. To confirm, press **OK**, to decline, press **Cancel**.

3. To view the shortcut you read, perform step 1 and select **Options > Details**.
4. To save the shortcut you read into the phone memory, perform step 1 and select **Options > Details > Save**.

■ Create and edit a shortcut

You can create new shortcuts, and edit shortcuts saved in the phone memory. In the latter case, the old shortcut information and all related log data is deleted.

To create a shortcut:

1. In the *Please touch tag* view, select: **Shortc. > Add**.

The options for the shortcut types you can create are displayed.

If you already have shortcuts in your phone memory, you start creating new shortcuts by selecting **Shortc.** > **Options** > **Add** in the *Please touch tag* view.

2. Select the type of shortcut you wish to create.
3. Enter the information for all the shortcut fields:

Having edited a field, press **OK**. If you wish to move back to a field you have already edited, select **Options** > **Back**.

- **Call** - enter the name of the shortcut and the number to which the phone call is to be made.
- **URL** - enter the name of the shortcut and the URL.
- **SMS** - enter the name of the shortcut, the number to which the SMS is to be sent, and the SMS text content.

When defining phone numbers for the **Call** and **SMS** functions, you can also use a phone number defined in your phone's **Contacts**:

1. When editing the phone number field, select **Options** > **Search**.
2. Select a contact on the list and press **Select**.
3. When the phone number is displayed, press **OK**.

If you later edit or delete the contact, this does not affect the information stored in the application in any way.

To edit a shortcut:

4. To edit a shortcut; in the *Please touch tag* view, select **Shortc.** > **Options**, scroll to the shortcut you want to edit and select **Edit**.
5. Edit the fields and select **OK**.

When editing the shortcut information, if you wish to return to the previous information field, select **Options** > **Back**. Selecting **Options** > **Back** in the first information field takes you back to the **Shortc.** field and restores the shortcut information to what it was before editing. If you wish to change the phone function for the shortcut, you must define the shortcut again.

■ Give a shortcut

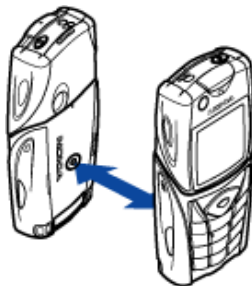
To give a shortcut into a compatible phone:

1. In the *Please touch tag* view, select **Shortc..**
2. Scroll to the shortcut you want to give and select **Options > Give.**

The phone displays the text: *Please touch other phone.*

3. Hold your phone 0-5 centimetres from the shortcut recipient's phone so that the NFC logos face each other (see picture).

If giving a shortcut succeeded, the phone displays the message: *Giving successful.* If giving a shortcut failed, the phone displays an error message.



■ Launch a shortcut and write into a tag

To launch a shortcut:

1. In the *Please touch tag* view, select **Shortc..**
2. Scroll to the shortcut you want to launch and select **Launch.** The phone asks for a confirmation to perform the shortcut function. To confirm, press **OK**, to decline, press **Cancel.**

To write into a tag:

3. To write shortcut into a tag with the phone's keypad, perform step 1, scroll to the shortcut which you want to write, and select **Options > Write.** The phone displays the text: *Please touch tag.*
4. Hold your phone on the tag into which you want to write. If writing the shortcut succeeded, the phone displays the message: *Writing successful.* If the writing failed, the phone displays an error message. You can overwrite the shortcut information in the tags you have created as many times as you wish.

■ Delete a shortcut

To delete a shortcut:

1. In the *Please touch tag* view, select **Shortc..**
2. Select the shortcut you wish to delete and select **Options > Delete**. If you wish to delete all shortcuts, select **Options > Delete all**.
3. When the phone asks you for a confirmation, press **OK**.

Information about the shortcut and all related log data is deleted.

■ View the log

In the Service Discovery application log, you can view the phone calls that have been made, the SMS messages that have been sent, and the web sites that have been connected to through the application. The log stores the 20 most recent log events.

To view the log:

1. In the *Please touch tag* view, select **Options > Log**.
A list of the events logged for the tag is displayed. Events are listed in chronological order, starting with the most recent event.
2. To delete a logged event, select the log event you wish to delete and select **Options > Delete**.
3. If you wish to delete all logged events, select **Options > Delete all > OK**.
4. To view detailed information about a logged event, select the event on the list and press **Details**.

Care and maintenance

Your device is a product of superior design and craftsmanship and should be treated with care. The suggestions below will help you protect your warranty coverage.

- Keep the device dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the device in dusty, dirty areas. Its moving parts and electronic components can be damaged.
- Do not store the device in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the device in cold areas. When the device returns to its normal temperature, moisture can form inside the device and damage electronic circuit boards.
- Do not attempt to open the device other than as instructed in this guide.
- Do not drop, knock, or shake the device. Rough handling can break internal circuit boards and fine mechanics.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the device.
- Do not paint the device. Paint can clog the moving parts and prevent proper operation.
- Use a soft, clean, dry cloth to clean any light sensors lenses.

If the device is not working properly, take it to your nearest authorized service facility for service.