

USER MANUAL

NORDIC ID MORPHIC

Morphic User Manual

VERSION 1.0; APRIL 2010

© Nordic ID Oy
Myllyojankatu 2 A
24100 SALO, FINLAND
tel. +358 2 727 7700 ▪ fax. +358 2 727 7720
www.nordicid.com

Table of Contents

A FEW WORDS OF CAUTION	1	MORPHIC MOBILE	14
TRADEMARKS.....	2	DOCKING CRADLE	15
SAFETY PRECAUTIONS.....	3	2. GETTING STARTED	16
LASER BEAM	3	STEP 1: INSTALLING BATTERY	16
BATTERY	5	STEP 2: ASSEMBLING WALL CHARGER	17
POWER SUPPLY	5	STEP 3: CHARGING HANDHELD	17
MEDICAL DEVICES	5	STEP 4: PUTTING HAND STRAP IN	17
COMPLIANCE WITH SAFETY AND EMC REGULATIONS	6	3. BASIC FUNCTIONALITY	18
IN THE EUROPEAN UNION AND IN THE EFTA		POWER BUTTON	18
COUNTRIES	6	Switching off Moprhic	18
Български	6	Powering up Moprhic	18
Česky	6	Soft-resetting Morp hic	18
Dansk	6	Hard-resetting Morp hic	19
Deutsch	6	KEYPAD	19
Eesti	6	Navigating Window Elements	19
Español	7	Opening Drop-down Menu such as File menu	19
Ελληνική	7	Pressing Function Key	20
Français	7	Keying in Numbers	20
Íslenska	7	Keying in Lower-case Letters	20
Italiano	7	Keying in Upper-case Letters	21
Latviski	7	Keying in White Spaces	21
Lietuvių	7	Keying in Punctuation Marks	21
Nederlands	7	Deleting Keyed-in Character	22
Malti	7	Locking / Unlocking Keypad	22
Magyar	8	Disabling / Enabling Character Repeat	23
Norsk	8	Adjusting Character Repeat Rate and Delay	23
Polski	8	Adjusting Brightness of Backlight	24
Português	8	DISPLAY	25
Română	8	Selecting Backlighting Idle Span	25
Slovensko	8	Adjusting Brightness of Display	26
Slovensky	8	TOUCH SCREEN	26
Suomi	8	Disabling / Enabling Touch Screen	26
Svenska	8	Adjusting Double-tap Sensitivity	27
NATIONAL RESTRICTIONS IN THE EUROPEAN UNION ..	9	Toggling Soft-key Input Panel	28
France	9	Typing with Input Panel	28
Italy	9	Calibrating Touch Screen	28
Latvia	9	VOLUME CONTROL	29
IN THE UNITED STATE OF AMERICA	9	Turning the volume up / down	29
FCC	9	MANAGING SETTINGS	30
В Российской	10	Accessing Control Panel Applet	30
ГОСТ Р	10	Closing Control Panel	31
OTHER REGULATIONS APPLICABLE TO MORPHIC.....	12	Making Changes to Settings Permanent	31
1. INTRODUCTION.....	13	Restoring to Factory Defaults	32
MORPHIC HANDHELD	13	INSTALLING MICRO SD CARD	33
Display & Touch Screen	13	Before you begin	33
Keypad	13	To Open Micro SD-card Holder	33
Hand strap	13	To Put Micro SD-card in Position	33
Connectors	13	To Lock Micro SD-card into position	33
Reader for data capture	14	DOCKING CRADLE	34
Bleeps and Vibrating Alerts	14	Charging Morp hic in Cradle	34
Rechargeable Battery	14	Charging Spare Battery	34
Wall charger	14	Connecting Morp hic to Windows PC	35
Micro SD-card option	14	Connecting Morp hic to LAN	36
		4. MOBILE PHONE.....	37
		INSTALLING SIM CARD	37
		Before you begin	37

<i>To open SIM-card holder</i>	37
<i>To slot SIM card into holder.....</i>	38
<i>To lock SIM card into position</i>	38
USE OF PHONE	38
<i>Opening Phone application</i>	38
<i>Making a Call.....</i>	39
<i>Ending the call.....</i>	39
<i>Receiving a Call</i>	39
5. DATA CAPTURE.....	40
LASER SCANNER	40
<i>Reading with Laser scanner</i>	40
IMAGER.....	41
<i>Reading with Imager</i>	41
<i>Enabling Viewfinder.....</i>	41
CHANGING SCANNING PARAMETERS	42
<i>Selecting Trigger Mode</i>	42
<i>Changing Scan Timeout.....</i>	43
6. A CLOSER LOOK AT	44
WINDOWS CE SHELL	44
<i>Desktop.....</i>	44
<i>Taskbar.....</i>	44
STYLUS AND TOUCH SCREEN	45
PERMANENCE OF SETTINGS	45
FLASH DIRECTORY	46
POWER MANAGEMENT	46
RECHARGEABLE LI-POLYMER BATTERY.....	47
<i>Charging at room temperature.....</i>	47
<i>Ambient temperature</i>	47
<i>Useful life</i>	48
<i>Risk of Overdischarge</i>	48
<i>Long storage.....</i>	48
SYMBOLGY-ENCODED TAG READING.....	48
<i>Laser Scanner.....</i>	48
<i>Imager</i>	49

A FEW WORDS OF CAUTION

i) Nordic ID provides this publication “**AS IS**” without any warranty, either express or implied, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose, and non-infringement. (ii) This publication can include technical inaccuracies or typographical errors. (iii) The information presented in this publication is subject to change without notice. (iv) Nordic ID might change the utilities, applets, or programs described in this publication.

You can have **the latest version** of the manual by visiting Nordic ID's website.

TRADEMARKS

All designations mentioned in this User Manual that are either trademarks or service marks, are the property of their respective owners. Where those designations appear in this manual and Nordic ID was aware of a trademark claim, the designations have been written in initial capital or in capitals.

Microsoft, Windows, Windows Embedded CE, Windows CE, WordPad, Explorer, ActiveSync are registered trademarks or trademarks of Microsoft Corporation, in the United States, in other countries, or both.

NordicID and the NORDICID -logo are registered trademarks of Nordic ID Oy.

SAFETY PRECAUTIONS

LASER BEAM



The NORDICID Morphic with a laser barcode scanner makes it a Class 2 Laser product. The laser scanner uses a low power, visible light diode. As with any very bright light source, such as the sun, the user should avoid staring directly into the light beam. Momentary exposure to a Class 2 laser is not known to be harmful.

The NORDICID Morphic fulfils the regulatory requirements as follows:

- Complies with 21CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.
- EN60825-1:1994+ A1:2002 +A2:2001
- IEC60825-1:1993+A1:1997+A2:2001

Caution: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Although the brief exposure to the visible Class 2 laser beam is not known to be harmful to the eye, the risk always exists that the light beam causes injury to the eye, when the laser beam is aimed even indirectly via a reflecting surface (e.g. mirror) at the eyes. So, always take care when you are reading bar codes or when you troubleshoot bar code scanning problems. Never look in the direction of the bar code scanner from which the scan engine emits the laser beam when you activate the scanning process, nor aim the scanner at the human eye or the eye of any animal.

Caution: EVERY TIME THE SCAN KEY IS PRESSED THE SCANNER STARTS EMITTING LASER BEAM. By default the functioning of the scan key is not conditional on any application being intended to read bar codes and nor is it conditional on the field or the active area on the display in which barcodes can be read or is intended to be read.

Caution: Any key on the NordicID Morphic's keypad with the exception of a power button can control the laser scanner. Besides the scan key or as a substitute for the scan key the scan functionality can be mapped onto any other key on the keypad.

Note of caution about the laser beam in European languages



DANSK

LASERLYF! SE IKKE IND I STRÅLEN! KLASSE 2 LASER!

DEUTSCH

LASERSTRAHLEN! NICHT DIRECT IN DEN LASERSTRAHL SCHAUEN! LASERPRODUKT DER KLASSE 2!

ENGLISH

LASER LIGHT! DO NOT STARE INTO BEAM! CLASS 2 LASER!

ESPAÑOL

LUZ LASER! NO MIRE FIJAMENTE EL HAZ! PRODUCTO LASER DE LA CLASE 2

FRANCAIS

LUMIERE LASER! NE PAS REGARDER LE RAYON FIXEMENT! PRODUIT LASER DE CLASSE 2!

ITALIANO

LUCE LASER! NON FISSARE IL RAGGIO PRODOTTO!

NEDERLANDS

LASERLICHT! NIET IN STRAAL STAREN! KLASSE-2 LASER!

NORSK

LASERLYS! IKKE STIRRINN I LYSSTRÅLEN! LASER, KLASSE 2!

PORTUGUÊS

LUZ DE LASER! NÃO FIXAR O RAIO LUMINOSO! PRODUTO LASER DA CLASSE 2!

SUOMI

VARO LASERSÄDETTÄ! ÄLÄ SUUNTAA SÄDETTÄ SILMIIN! LASER, LUOKKA 2!

SVENSKA

VARNING LASERSTÅLNING! STIRRA EJ IN I STRÅLEN! KLASS 2 LASER!

BATTERY

Use only original, Nordic ID approved rechargeable batteries being intended for the NORDICID Morphic to avoid serious health hazards to you or to your fellow-men, or damage to the surrounding property and to your device.

Cautions:

Under no circumstances must you disassemble the battery casing or damage it. If the battery casing is damaged, for example, the joint of the casing is opened when the battery has fallen onto the floor, dispose of the battery.

If there is any difference from what is usual or expected on the battery such as a change in normal shape, smell of electrolyte and an electrolyte leakage, do not use the battery any longer, but dispose of it.

Do not put the battery into any liquid.

Care shall be taken to handle, and to store the rechargeable battery so that the battery's electrical conductors do not short-circuit. The short circuit causes damage to the battery.

Do not expose the rechargeable battery to direct sunlight, or to other heat sources. The battery temperature cannot go up over 60°C (140°F) without possible consequences for the battery's useful life. The higher temperature may cause damage to the battery, which makes the battery unusable. 100°C (212°F) or higher temperature can cause a battery explosion.

Keep the battery out of the reach of children

POWER SUPPLY

Before charging the rechargeable battery, check that the mains voltage into which you are plugging the power supply (AC/DC adaptor) does not exceed the AC voltage specified on the power supply. The input voltage exceeding the specified voltage on the AC/DC adaptor may destroy the charger unit, and the charger electronics on your hand-held.

Cautions:

Use only the Nordic ID approved power supply being intended for the NORDICID Morphic device

Do not use the power supply for any other purposes than for charging the rechargeable batteries on the NORDICID Morphic.

The power supply, your NORDICID Morphic, and its battery charging accessory are designed to charge the Nordic ID approved rechargeable batteries INDOORS ONLY at normal room temperature, or at temperature near that.

MEDICAL DEVICES

Caution: Your NORDICID Morphic can interfere with medical devices such as hearing aids or pacemakers. Keep your Morphic device at least 20 cm (8 inches)

from a pacemaker; otherwise it can prevent the pacemaker from working correctly because of radio signals which wireless communication generates when you use your hand-held.

COMPLIANCE WITH SAFETY AND EMC REGULATIONS

IN THE EUROPEAN UNION AND IN THE EFTA COUNTRIES



Hereby, Nordic ID Oy, declares that the NORDICID Morphic models and its accessories are in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC

Български

NORDICID Morphic отговаря на съществените изисквания и приложими клаузи на Директива 1999/5/EC.

Česky

Nordic ID Oy tímto prohlašuje, že tento NORDICID Morphic je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Dansk

Undertegnede Nordic ID Oy erklærer herved, at følgende udstyr NORDICID Morphic overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Deutsch

Hiermit erklärt Nordic ID Oy, dass sich das Gerät NORDICID Morphic in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.

Eesti

Käesolevaga kinnitab Nordic ID Oy seadme NORDICID Morphic vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Español Por medio de la presente Nordic ID Oy declara que el NORDICID Morphic cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Ελληνική ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Nordic ID Oy ΔΗΛΩΝΕΙ ΟΤΙ NORDICID Morphic ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Français Par la présente Nordic ID Oy déclare que l'appareil NORDICID Morphic est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Íslenska NORDICID Morphic er samkvæmt grunnkröfum og öðrum viðeigandi ákvæðum Tilskipunar 1999/5/EC.

Italiano Con la presente Nordic ID Oy dichiara che questo NORDICID Morphic è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latviski Ar šo Nordic ID Oy deklarē, ka NORDICID Morphic atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių Šiuo Nordic ID Oy deklaruoja, kad šis NORDICID Morphic atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands Hierbij verklaart Nordic ID Oy dat het toestel NORDICID Morphic in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Malti Hawnhekk, Nordic ID Oy, jiddikjara li dan NORDICID Morphic jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.

Magyar	Alulírott, Nordic ID Oy nyilatkozom, hogy a NORDICID Morphic megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Norsk	NORDICID Morphic er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 1999/5/EF.
Polski	Niniejszym Nordic ID Oy oświadcza, że NORDICID Morphic jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.
Português	Nordic ID Oy declara que este NORDICID Morphic está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Română	NORDICID Morphic este in conformitate cu cerintele esentiale si cu alte prevederi relevante ale Directivei 1999/5/EC.
Slovensko	Nordic ID Oy izjavlja, da je ta NORDICID Morphic v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovensky	Nordic ID Oy týmto vyhlasuje, že NORDICID Morphic spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi	Nordic ID Oy vakuuttaa täten että NORDICID Morphic tyypin laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska	Härmed intygar Nordic ID Oy att denna NORDICID Morphic står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

NATIONAL RESTRICTIONS IN THE EUROPEAN UNION

When the Morphic device incorporates an optional 2.4 GHz wideband transmission system (transceiver), it imposes some restrictions on the use of its 2.4 GHz WLAN connectivity in France, Italy, and Latvia where restrictive use applies to 2.4 GHz band.

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the outdoor WLAN set-ups and/or for supplying public WLAN access to telecommunications and/or network services.

The outdoor WLAN set-ups may not be used in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

In Latvia the outdoor usage of the 2.4 GHz band requires an authorization from the Electronic Communications Office.

France

Pour la bande 2,4 GHz, la puissance est limitée à 10 mW en p.i.r.e. pour les équipements utilisés en extérieur dans la bande 2454 - 2483,5 MHz. Il n'y a pas de restrictions pour des utilisations dans d'autres parties de la bande 2,4 GHz. Consultez <http://www.arcep.fr/> pour de plus amples détails.

Italy

Questo prodotto è conforme alla specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una "Autorizzazione Generale". Consultare <http://www.comunicazioni.it/it/> per maggiori dettagli.

Latvia

2,4 GHz frekveču joslas izmantošanai ārpus telpām nepieciešama atļauja no Elektronisko sakaru direkcijas. Vairāk informācijas: <http://www.esd.lv>.

IN THE UNITED STATE OF AMERICA

FCC

Compliance Statement:

This hand-held device and its accessory comply 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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the hand-held equipment and its accessory.

The FCC ID information is printed on the back side of your hand-held. In addition, the device contains the following FCC-approved radio modules with their FCC ID:

MODULE	FCC ID

Compliance Notice:

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

В РОССИИ

ГОСТ Р

Терминал ручной Nordic ID Morphic удостоверяется сертификатом соответствия ГОСТ Р № РОСС FI. AE68. В13015, срок действия с 09.02.2009 до 08.02.2012, выдан органом по сертификации продукции РОСС RU.001.11AE68 ООО "КОРПОРАЦИЯ СТАНДАРТ".

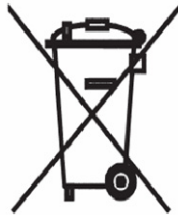
В соответствии с протоколом № 8-МРД-119, выданным 24 декабря 2008 г. испытательной лабораторией ИИР ЭМС ФГУП РЧЦ ЦФО, Nordic ID Morphic отвечает требованиям решения ГКРЧ №07-20-03-001 от 7 мая 2007 г.

Терминал ручной «Nordic ID Morphic» относится к РЭС малого радиуса действия, использование которых разрешается только в пределах зданий, сооружений, закрытых промышленных и складских площадок. Срок действия настоящего решения ГКРЧ до 01.05.2017 г.

В соответствии с п.16 извлечения из списка устройств, для которых обязательна регистрация, Постановлением Правительства РФ от 25 июля 2007 г. N 476 регистрация Nordic ID Morphic не требуется.

OTHER REGULATIONS APPLICABLE TO MORPHIC

In the European Union

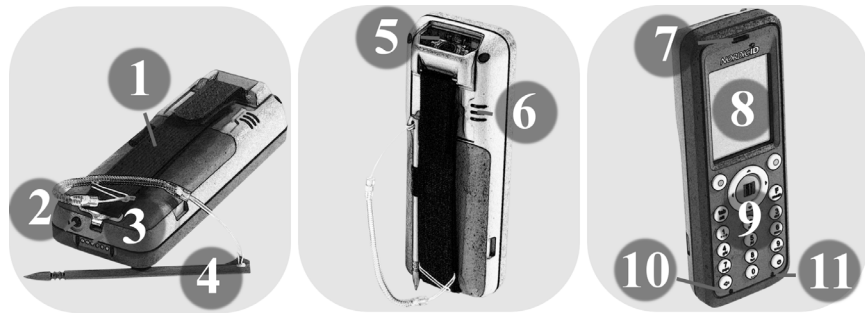


EU DIRECTIVE 2002/96/EC ON WASTE
ELECTRICAL AND ELECTRONIC EQUIPMENT
(WEEE)

The NORDICID Morphic, its batteries and accessories may not be thrown away with everyday rubbish. Please, dispose of this product, its add-ons and accessories in an ecologically sound manner according to the regulation governing your location.

1. INTRODUCTION

MORPHIC HANDHELD



Display & Touch Screen

Your Morphe has a 240-by-320-pixel backlit color screen (8). The screen also provides touch screen property. For tapping the screen the Morphe product box contains a stylus (4).

If you need remove dirt from the screen, wipe it gently with a damp, soft, clean, lint-free cloth.

Keypad

On the Morphe keypad (9) there are two colour-coded keys – green and red – that are intended as contextual keys, meaning that the use of the keys is connected with a particular context in the application. Third colour-coded key is a scan key used for triggering code tag reading by default. In addition, there are alphanumeric keys, navigating keys, a power button, and a special selector key on the keypad.

In the area of the keypad there are also a charging indicator (11) and a handset microphone (10). (To function as a mobile phone there is a need for an earpiece speaker (7) as well which is put on the upper front part of your Morphe, above the screen.)

Hand strap

Your Morphe is fitted with a strap (1) to aid you in holding the device in your hand. The strap is simply called 'hand strap'. It is packed separately in the product box.

Connectors

At the bottom on your Morphe there are two connectors: a socket for the wall charger (2), and an interface for charging Morphe (3) in a docking cradle. Across the same cradle interface, USB and Ethernet is also connected to your Morphe when Morphe is docked in its cradle, assuming that the cradle is connected to other device by means of the USB or Ethernet cable.

CHAPTER ONE - INTRODUCTION

Reader for data capture

At the top of the device there is a window of an optical reader (5). On the other side of the window you may see the optical reader on your Morphic.

Due to fact that transferring information from tags to inside the reader is based on optics, it is recommended keeping the window of the reader clean, and being careful not to scratch the surface. You may compare that window to the lens on the camera. If you need remove dirt from the window, wipe it gently with a damp, soft, clean, lint-free cloth.

Bleeps and Vibrating Alerts

Your Morphic has a speaker for sound effects (6) such as alert, keypad, and warning tones. In addition, there is a vibrating motor inside the cover that applications can also use for letting you know about events with some vibrating pattern, the events like an incoming call, and an ending of code tag reading.

Rechargeable Battery

Morphic is powered by a rechargeable Li-Polymer battery. The battery and a cover of the battery compartment are packed separately in the product box. You have to put together your Morphic before first-time use. You find the battery compartment at the back of Morphic, on the opposite side to the keypad. The battery manufacturer also recommends initially fully charging the battery.

Wall charger

Morphic product box contains a wall charger (a power supply) to charge Morphic handheld – the rechargeable Li-Polymer battery being installed in its compartment, to be precise. There are three AC-adaptors for the wall charger in the box. Before first-time charging you must put together the wall charger by attaching an appropriate AC-adaptor to the wall charger body.

Morphic also works by AC, meaning that the device can be used when it is plugged into the mains.

Micro SD-card option

On your Morphic there is a place for micro SD-card in the battery compartment to add on memory to Morphic.

MORPHIC MOBILE

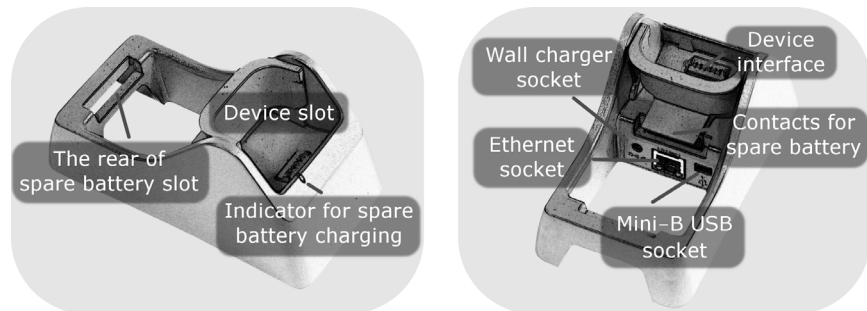
Your Morphic handheld can function as a GSM mobile phone. There are two essential components on the Morphic that make it possible for you to put your Morphic to phone use: a SIM.card holder and a phone application, over and above the above-mentioned handset microphone and earpiece speaker

The cellular radio makes it possible for Morphic to attach to your mobile operators GPRS service as well. In this context, the term 'GPRS' does not mean

CHAPTER ONE - INTRODUCTION

the speed on the air interface of a cellular network but the packet data network of your mobile operator that allows, for example, the Internet access.

DOCKING CRADLE



There is a cradle available for Morpich device. The cradle is not essential for the use of Morpich, but it supplements Morpich's connectivity options with USB and Ethernet LAN. The cradle also incorporates the features as follows: charging the Morpich device, and charging a spare battery.

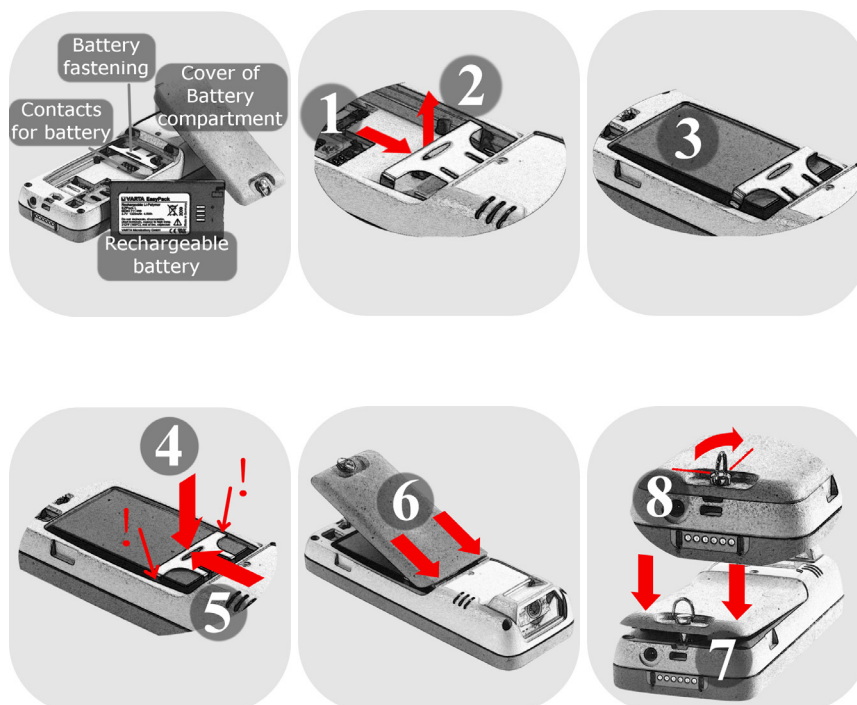
2. GETTING STARTED

Before you can use Moprhic you need to fit together the battery, the cover of the battery compartment, and your Morphic device. In addition, you need to assemble the wall charger. However, if you have a SIM card, or a micro SD card, or both of them, it is straightforward to install them before installing the battery.

Installing Micro SD card; see page 33

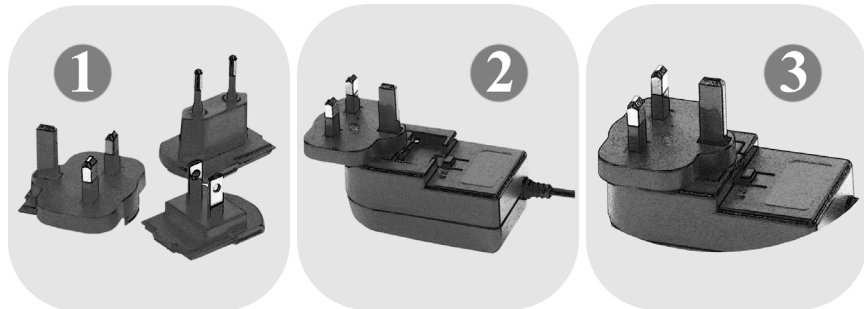
Installing SIM card; see page 37

STEP 1: INSTALLING BATTERY

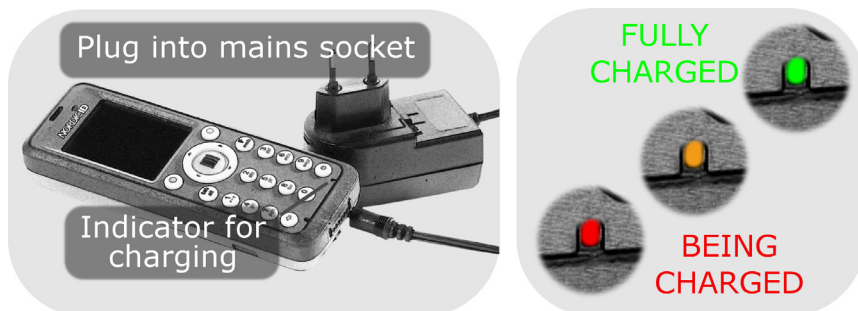


CHAPTER TWO - GETTING STARTED

STEP 2: ASSEMBLING WALL CHARGER



STEP 3: CHARGING HANDHELD



STEP 4: PUTTING HAND STRAP IN



3. BASIC FUNCTIONALITY

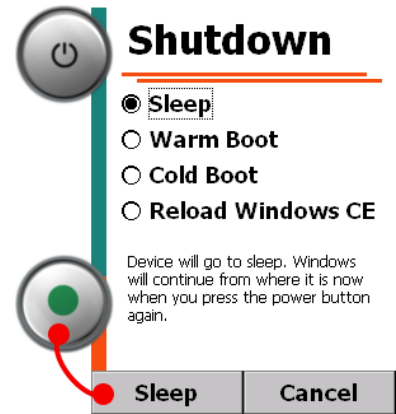
POWER BUTTON

Switching off Morphic

When you need to switch off your Morphic you place it in a suspended state, not completely shut down it.

To switch off Morphic:

1. Press the power button. Shutdown dialog box appears on the screen
2. Press the green key. Morphic system gets to sleep



Note that suspending Morphic does not succeed if Morphic is being charged.

Powering up Morphic

To power up Morphic:

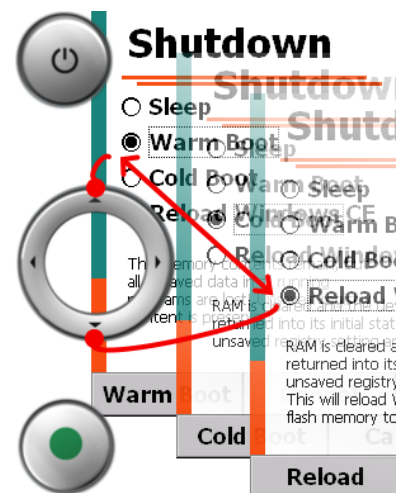
Press the power button. Your Morphic system resumes.

Soft-resetting Morphic

It is possible that you may need to soft-reset your Morphic. For example, if some setting requires rebooting the device to take effect, you need warm-boot your device. However, if you want to go back to the previous settings, that is, to start again from scratch, for example, you may either cold boot your Morphic or reload Windows CE.

To soft-reset Morphic:

1. Press the power button. Shutdown dialog box opens on the screen
2. Select the type of software reset using the navigating ring
3. Press the green key. You soft-reset Morphic and it reboots



CHAPTER THREE - BASIC FUNCTIONALITY

Hard-resetting Morphic

If your Morphic hangs, you need hard-reset it.

To hard-reset Morphic:

Press and hold down the power button until the screen goes blank and Morphic reboots.

KEYPAD

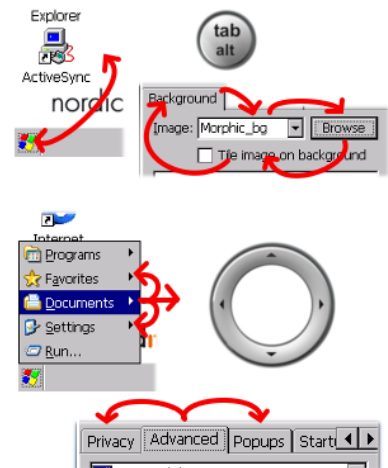
Note! This section describes the default functionality of the keys on the keypad. Because the keys are designed to be customized according to the needs of an application the following may not apply to your Morphic in every detail.

Navigating Window Elements

On the keypad there is a tab (/alt) key and a navigating ring (cursor movement keys). When pressed they instructs

Windows CE to move an input focus from one control item to another. The context directs how a keystroke is interpreted.

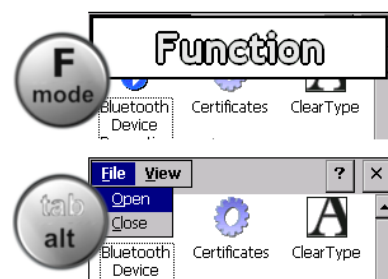
The interaction between the keys and the graphical user interface is based on the input focus principle. Only one window can have the input focus at a time, that is, to receive key events when keys are pressed. In fact, the smallest units of input focus are window controls (the elements making up window functionality) within the window like a property page.



Opening Drop- down Menu such as File menu

To open drop-down menu:

1. Press the F/mode key to select first a function mode
2. Press the tab/alt key to open the first menu on the menu bar
3. Navigate menus and their items by the navigating ring



CHAPTER THREE - BASIC FUNCTIONALITY

Pressing Function Key

To press function key:

1. Press the F/mode key to select first a function mode
2. Press the key with the figure that identifies a particular function key.



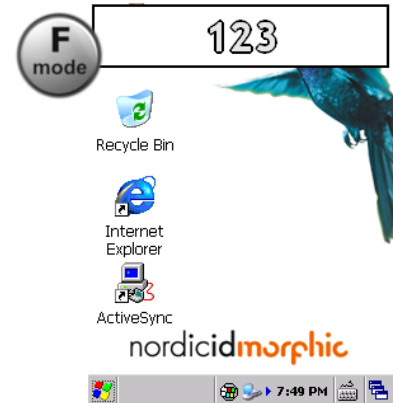
Keying in Numbers

If you want keying in numbers only using the alphanumeric keys, you can set the keys to a numeric mode. (See also the text box below)

To key in numbers only:

Press the F/mode key in succession until you see the '123' within the rectangle on the upper part of the screen.

Now each key with the figure enters only number in every key press. If you hold down the key, it inserts its number to a text field again and again until you release the key (an auto-repeat property).



Note! In the lower-case and upper-case mode the key printed a figure on it enters the number only if you press and hold down the key for a little while. At the same time cursor advances to the next position.

Keying in Lower-case Letters

To enter lower cases using the alphanumeric keys you need to set the keys to the lower-case mode.

To key in lower cases:

Press the F/mode key consecutively until you see the 'abc' text within the rectangle on the upper part of the screen. The alphanumeric keys are set to lower-case mode.

In the lower-case mode, pressing in rapid succession an alphanumeric key it enters next character (if letter in the alphabetical order) in the position of cursor until the number printed on the key appears. After that the character sequence starts again from the beginning. After a



CHAPTER THREE - BASIC FUNCTIONALITY

brief pause in consecutive keystrokes or stopping the key pressing in succession the cursor advances to the next position and the character which appeared on the screen before the pause stays in the entry area.

Keying in Upper-case Letters

To enter upper cases using the alphanumeric keys you need to set the keys to

the upper-case mode.

To key in upper cases:

Press the F/mode key in succession until you see the 'ABC' text within the rectangle on the upper part of the screen. The alphanumeric keys are in the upper case mode.

The alphanumeric keys in the upper-case mode works in the same way as they do in the lower-case mode, see the explanation above.



Keying in White Spaces

For making spaces between words there is the key printed '0' on it on the keypad. Be aware

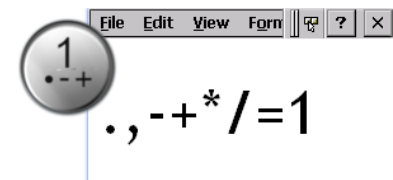
that the key does not work as 'space bar' when the alphanumeric keys are in the numeric mode. In addition, the key inserts a space and figure '0' when pressed in rapid succession. To insert tabs into text, press the 'tab' key. To begin a new line the green key typically functions as a 'return key' in the context of writing.



Keying in Punctuation Marks

The key printed the figure '1' on it generates full stop, and comma. In addition, using the key you may key in the signs

as follows: hyphen, plus, asterisk, slash, equals sign, and figure '1'.



CHAPTER THREE - BASIC FUNCTIONALITY

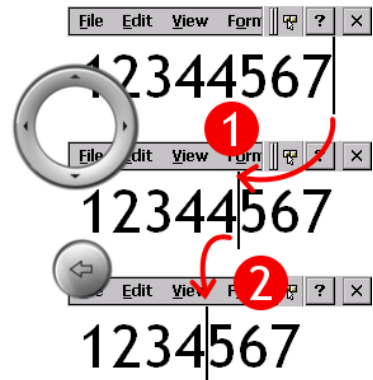
To key in punctuation marks:

1. If need be, check that the alphanumeric keys are not in the numeric mode by pressing the 'F/mode' key in succession to set the keys either to the 'abc' or 'ABC' mode according to your preference.
2. Press the key '1' in rapid succession until the sign of your choice appears on the screen.

Deleting Keyed-in Character

To remove a slip:

1. Move the cursor after the character to be deleted using the navigating ring
2. Press the 'backspace' key in the bottom left-hand corner in the keypad area.



Sometimes you may need to remove more than one character such as a whole line. If that is the case, press the 'backspace' key and hold it down until the number of characters you need to delete is removed from the screen.

Locking / Unlocking Keypad

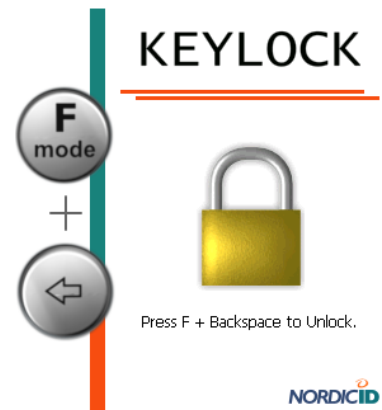
key.

To unlock keypad

Hold down the F/mode key while pressing the backspace key.

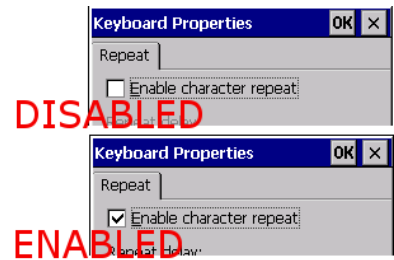
To lock keypad:

Hold down the F/mode key while pressing the backspace



Disabling / Enabling Character Repeat

When you want to use the key on the keypad without or with the auto-repeat property, you can switch off/on the property using the control panel applet called 'Keyboard'. Be aware that the on-off control applies to all the keys on the keypad.



Before you begin:

1. Open Control Panel
2. Open 'Keyboard' control panel applet

To disable auto-repeat property:

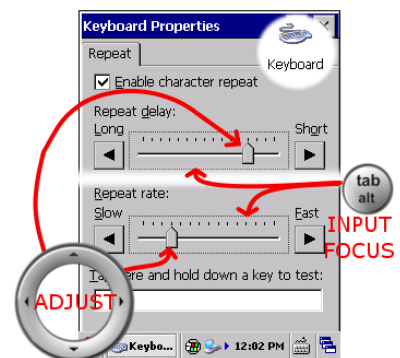
1. Remove the check mark from the square next to the 'Enable character repeat' text either by tapping on the square, or by pressing the 'space bar' – the key printed a figure '0' on it – in all the modes excluding the numeric one.
2. Press the green button. The auto-repeat mode is disabled.

To enable auto-repeat property:

1. Put a check mark in the square next to the 'Enable character repeat' text either by tapping on the square, or by pressing the 'space bar'.
2. Press the green button. The auto-repeat mode is enabled.

Adjusting Character Repeat Rate and Delay

There are two adjustable attributes that relate to the auto-repeat feature. The first one – a repeat delay – determines how long a key needs to be held down until the auto-repeat kicks in. The second – a repeat rate – directs the speed how quickly a character appears one after the other on the screen.



Before you begin:

1. Note that it is easiest to check the auto-repeat attributes when the keypad is in the numeric mode.
2. Open Control Panel
3. Open 'Keyboard' control panel applet

To adjust repeat delay:

1. Press the 'tab/alt' key in succession until you have set the input focus to the slider of the 'Repeat delay'.

2. Adjust the 'Repeat delay' using the navigating ring.
3. Move the input focus to the edit field on the lower part of the 'Repeat' property page to check the effect on the 'Repeat delay'.
4. Press the green button once you are satisfied with the repeat delay. The adjustment is in use.

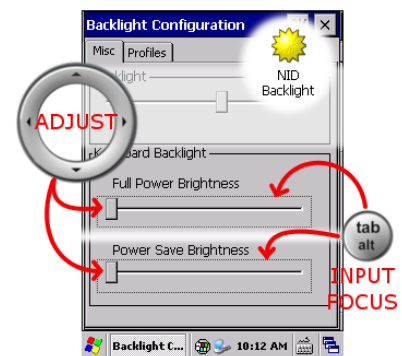
To adjust repeat rate:

1. Press the 'tab/alt' key in succession until you have set the input focus to the slider of the 'Repeat rate'.
2. Adjust the 'Repeat rate' using the navigating ring.
3. Move the input focus to the edit field on the lower part of the 'Repeat' property page to check the effect on the 'Repeat rate'.
4. Press the green button once you are satisfied with the repeat rate. The adjustment is in use.

Adjusting Brightness of Backlight

Keypad incorporates a backlight feature in the keys. With the adjusting sliders you can fade in and out the

brightness of the keypad backlight for two power states. Roughly speaking, you can put the backlit keys to use with the adjusted brightness both for the situation when Morphic is the center of your activity – 'full power brightness', and for the situation when it is still waiting for your inputs – 'power save brightness'.



Before you begin:

1. Open Control Panel
2. Open 'NID Backlight' control panel applet

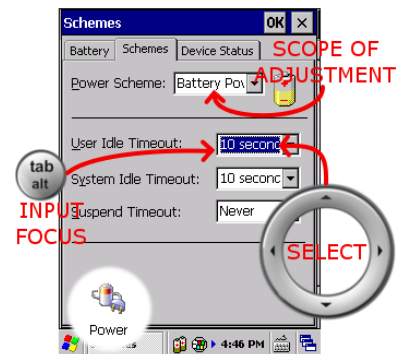
To adjust the brightness of the keypad backlight

1. Press the 'tab/alt' key in succession until you have set the input focus to the slider of your choice being either 'Full Power Brightness', or 'Power Save Brightness'.
2. Adjust brightness using the navigating ring. The keypad backlight responds to your adjusting and you see immediately the brightness level.
3. Press the green button once you are satisfied with the brightness level. The adjustment is in use.

DISPLAY

Selecting Backlighting Idle Span

If you want the screen to be backlit (that is, to be bright) for longer or shorter period after leaving your Morphec idling, you can make adjustment to a backlighting idle span – a 'User Idle Timeout' – using the 'Power' control panel applet.



Before you begin:

1. Open Control Panel
2. Open 'Power' control panel applet
3. Press the tab/alt key in succession until the input focus is on the 'Battery' text on the tab for first property page
4. Press the right arrow of the navigating ring to switch to the 'Schemes' property page

To select backlighting idle span:

1. Press the tab/alt key to set the input focus to the 'Power Scheme:' field
2. If need be, select the scope of the change(, meaning that a new backlighting idle span can apply to the device powered either by the battery or by the mains)
3. Press the tab/alt key to set the input focus to the 'User Idle Timeout:' field
4. Select the 'User Idle Timeout' value of your choice using the navigating ring. (Be aware that an unexpected 'never' value disables the feature, meaning that the backlight is on up to the point you switch off your Morphec.)
5. Press the green button. The new backlighting idle span is in use.

CHAPTER THREE - BASIC FUNCTIONALITY

Adjusting Brightness of Display

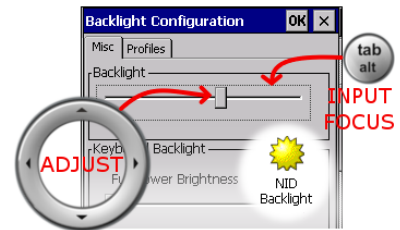
control panel applet.

Before you begin:

1. Open Control Panel
2. Open 'NID Backlight' control panel applet

To adjust the brightness of the display

1. Press the 'tab/alt' key in succession to set the input focus to the 'Backlight' slider
2. Adjust brightness using the navigating ring. The backlit screen responds to your adjusting and you see immediately the brightness level.
3. Press the green button once you are satisfied with the brightness level. The adjustment is in use.



TOUCH SCREEN

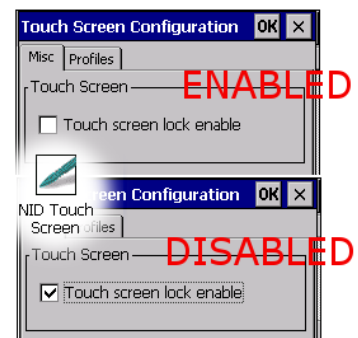
Disabling / Enabling Touch Screen

On the Morphic the touch screen can be deactivated. Be aware that after disabling the touch screen you cannot enable it any longer by tapping a checkbox. If you want to enable the touch screen again you have the following choices:

- a) Using the keypad to uncheck the box next to the 'Touch screen lock enable' text
- b) Cold-booting your device, assuming that you have not made the change permanent
- c) Resetting your Morphic to the factory defaults, if you have made the disabled state permanent.

Before you begin:

1. Open Control Panel
2. Open 'NID Touch Screen' control panel applet



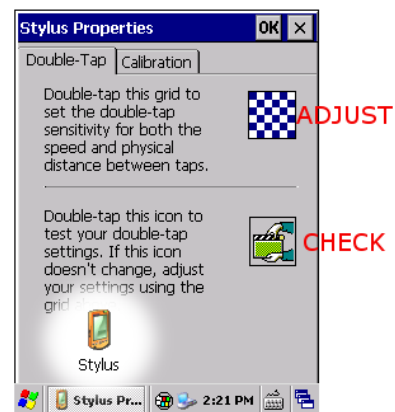
To disable touch screen:

1. On the 'Misc' property page, check the box next to the 'Touch screen lock enable' text by tapping on the box. The applet asks you to confirm that it's OK to proceed.
2. Tap on the 'Yes' button in the pop-up window
3. Press the green key. The touch screen is disabled.

Adjusting Double-tap Sensitivity

Double-tapping is measured against the maximum time between two screen-taps in succession, and against the area the taps occur on the screen.

Concerning the elapsed time between two taps you define the longest period between the taps the system view as the double-tap. To put it another way, the elapsed time between the taps in succession being longer than you fix using a 'Stylus' applet are not double-taps. However, the time between successive tapping to be a double-tap is limited to certain maximum value by the system.



Before you begin:

1. Open Control Panel
2. Open 'Stylus' control panel applet

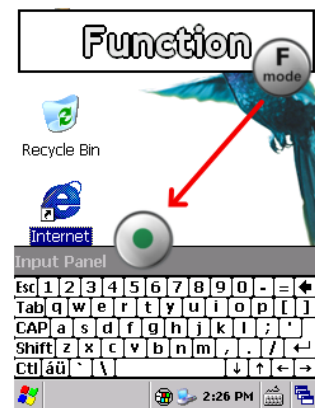
To adjust double-tap sensitivity:

1. On the Double-Tap property page, tap two times in your moderate tempo the area of the check pattern
2. Test the double-tap sensitivity with the series of two taps in succession in the check area below the adjustment area.
3. If a success rate is good, tap on the 'OK' button on the title bar, if not, re-adjust.

CHAPTER THREE - BASIC FUNCTIONALITY

Toggling Soft-key Input Panel To toggle soft-key input panel:

1. Press the F/mode key
2. Press the green key



Typing with Input Panel

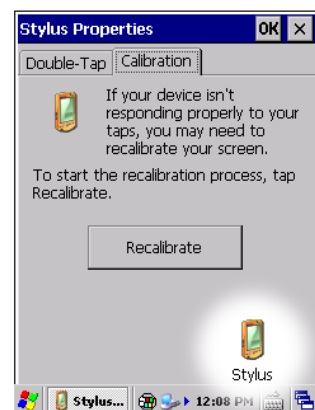
Tapping on the soft keys of the Input Panel characters appear in the entry area in the same way as if they were inserted through the alphanumeric keypad. The main logic of the soft-key input panel is similar to a conventional keyboard.



Calibrating Touch Screen

Before you begin:

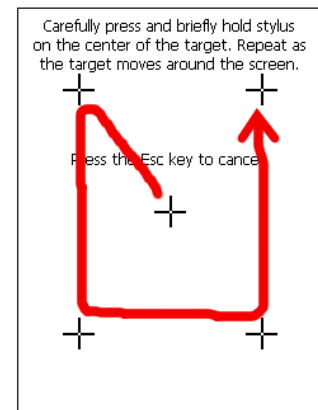
1. Open Control Panel
2. Open 'Stylus' control panel applet
3. Tap on the 'Calibration' tab
4. Tap on the 'Recalibrate' button. The calibration starts.



CHAPTER THREE - BASIC FUNCTIONALITY

To calibrate touch screen:

1. Tap with the stylus on the centre of the reference points showed on the screen, until the calibration utility stops showing a new reference point, that is, after tapping the fifth reference point
2. Tap the 'OK' button on the title bar, the calibration is completed



VOLUME CONTROL

Turning the volume up / down

If the sound effects are too loud, or not loud enough, there is a volume control to turn the volume on your

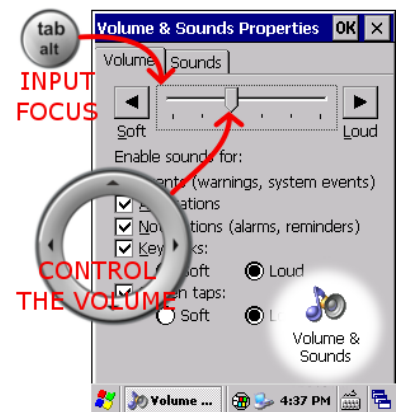
Morphic up / down. (The slider controls the speaker volume, not the earpiece volume.)

Before you begin:

1. Open Control Panel
2. Open 'Volume & Sounds' control panel applet

To turn the volume up / down:

1. Press the tab/alt key until the input focus is set to the slider
2. Turn the volume up or down using the navigating ring. The slider gives you immediate feedback on the volume level
3. Once the volume is OK, press the green key to close the applet



MANAGING SETTINGS

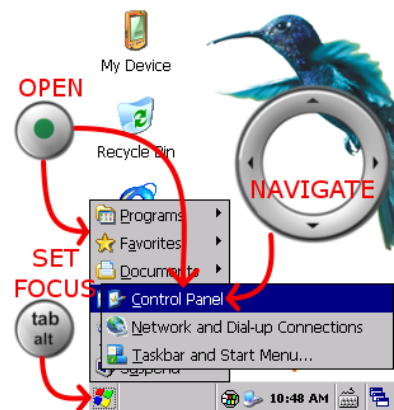
Every configurable property explained in this manual is accessed through a Control Panel. The settings can be also made available to you in another way, but it is an application affair. The Control Panel serves as a platform level means of gaining access to system parameters with help of its applets.

With the control panel applet the adjustments made to the properties of Morphic system are temporary in nature if you do not make the changes permanent by saving them. Because of that there is also a means to get rid of the settings made permanent, meaning that your Morphic defaults to its factory settings.

Accessing Control Panel Applet

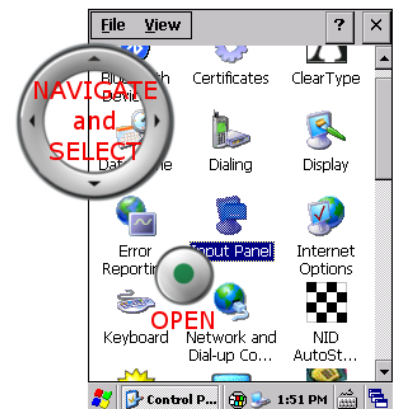
To open Control Panel:

1. Press the tab key to set the input focus to the start button.
2. Press the green key to open the start menu.
3. Select the Control Panel submenu item using the navigating ring.
4. Press the green key to open the Control Panel



To open control panel applet:

1. Select the control panel applet of your choice using the navigating ring
2. Press the green key to open the selected applet

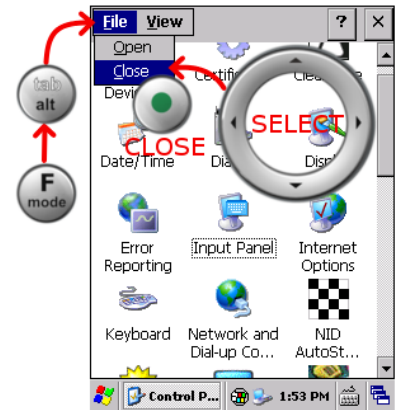


CHAPTER THREE – BASIC FUNCTIONALITY

Closing Control Panel

To close Control Panel:

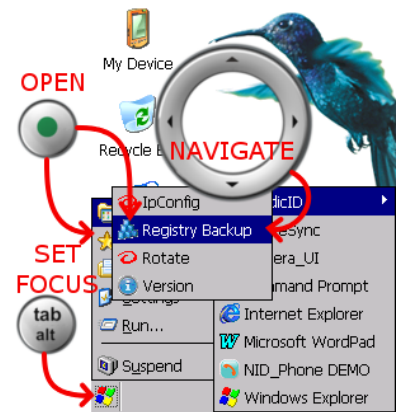
1. Press the F/mode key to select the alt mode of the tab/alt key
2. Press the tab/alt key to open the File menu of the Control Panel
3. Select the Close menu item using the navigating ring
4. Press the green key to close the Control Panel



Making Changes to Settings Permanent

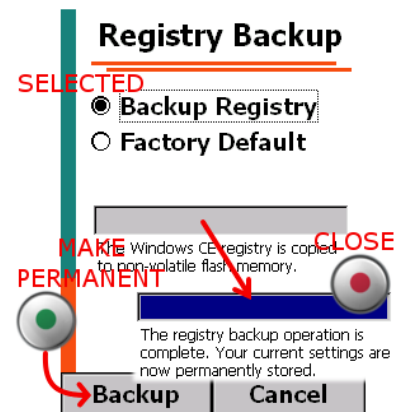
Before you begin, open Registry Backup maintenance utility:

1. Press the tab/alt key to set the input focus to the start button
2. Press the green key to open the start menu.
3. Select the Registry Backup submenu item under the Programs/NordicID menu using the navigating ring.
4. Press the green key to open the Registry Backup



To make changes to settings permanent:

1. Once the utility window is opened on the screen, check that the 'Backup Registry' item is selected, if not, select using the navigating ring
2. Press the green key to make settings permanent, that is, to back up your changes to the settings
3. Wait until the utility informs you on the completion of the operation
4. Press the red key to close the utility

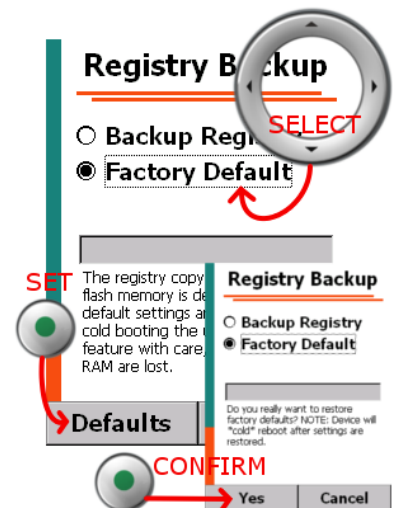


Restoring to Factory Defaults

Before you begin:

Be aware that the following series of steps ends in reboot of your Morphic. The content of volatile RAM memory is lost. For that reason it is recommended that you close every running program before restoring your Morphic to factory settings. After rebooting you need also to re-calibrate the touch screen.

To open a Registry Backup maintenance utility, see the 'Making Your Changes to Configuration Settings Permanent' section above.



To restore your Morphic to factory defaults:

5. Once the utility window is opened on the screen, select the 'Factory Default' item using the navigating ring
6. Press the green key. The utility asks you to confirm that it's OK to proceed
7. Press the green key. Your Morphic is set to factory defaults. After that the system reboots.
8. Once the system is up and running again you have to calibrate the touch screen. The calibration is a straightforward operation, if need be, see the calibration steps in the 'TOUCH SCREEN' section

INSTALLING MICRO SD CARD

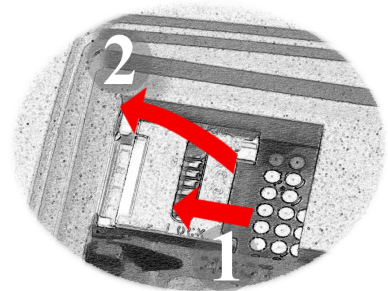
Before you begin

You can find the holder of micro SD card in the battery compartment.

1. If the wall charger is plugged in, unplug your unit first
2. If the battery is installed, open the battery cover and remove the battery

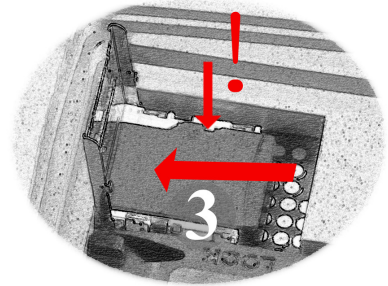
To Open Micro SD-card Holder

1. Slide the cover of the SD-card holder in the direction of the device bottom to unlock the cover
2. Open the cover by lifting it up with your thumb on its edge on the side of the battery compartment



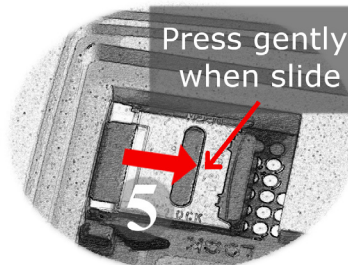
To Put Micro SD-card in Position

3. Put the card in position so that the indentations on the card and on the holder fit together on the side of the wall of the compartment



To Lock Micro SD-card into position

4. Press the SD-card near the hinged side of the holder's cover with the index finger of one hand to keep the card in position while you start closing the cover with the index finger of other hand



5. Press the cover with the card gently against the holder while you lock the cover into position by sliding it in the direction of the battery fastening

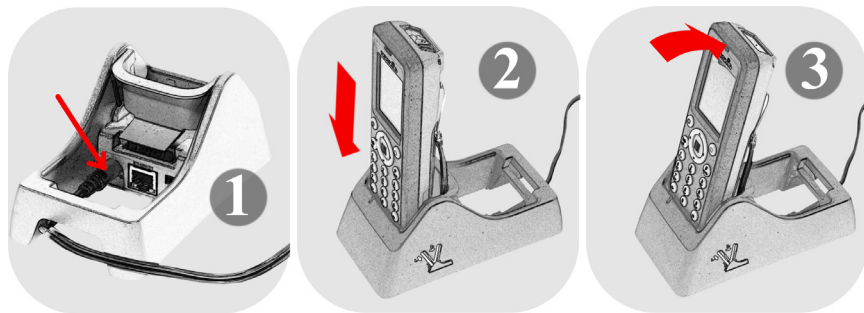
DOCKING CRADLE

Charging Morphic in Cradle

Before you begin:

You need to have the assembled wall charger available with the correct AC adapter attached to it.

Be aware that you can use the same wall charger for charging your Morphic in its docking cradle, and for charging Morphic without the docking cradle, meaning that the lead from the wall charger is plugged into the charger socket on your Morphic device.



To charge Morphic in its cradle:

1. Plug the docking cradle into mains by plugging the lead from the wall charger into the charger socket on the cradle, and plugging the wall charger into mains socket
2. Put your Morphic in its slot on the docking cradle in an upright position, more or less
3. Dock it by slanting the Morphic backwards in its slot so that the Morphic locks into position with the help of the indents on its sides.

Depending on the power state of the Morphic, charging starts immediately, or after your Morphic boots up. In the bottom right hand corner of the keypad, the charging indicator shows the charging process as follows:

- RED indicates charging
- ORANGE still means charging but the process is finishing
- GREEN shows fully charged device.

Charging Spare Battery

Before you begin:

1. You need the battery intended for your Morphic
2. You need the assembled wall charger available with the correct AC adapter attached to it.

CHAPTER THREE – BASIC FUNCTIONALITY

3. Plug the lead from the wall charger into the charger socket on the cradle

Be aware that the wall charger included in the Morphic product box can be used with the docking cradle as well.



To charge spare battery:

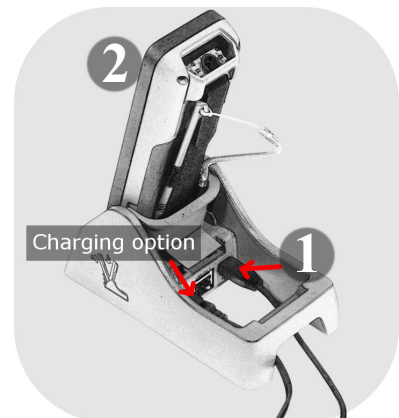
1. Insert the contact end of your spare battery into its slot, under the peak sticking out above the contacts for the battery on the cradle
2. Slot the battery by pressing the other end of the battery into the slot
3. Plug the wall charger into the mains, if it is not already plugged in.
4. Check that the battery charging starts. The charging indicator in the rim of the device slot should give RED light to show that charging is in progress. When the indicator turns GREEN, the spare battery is fully charged.

Connecting Morphic to Windows PC

Before you begin:

1. Be aware that your Morphic can operate across the USB link in different modes. Some of those modes require add-on software installed on your Windows workstation like ActiveSync in Windows XP system. The following instruction steps expect that your Morphic and Windows workstation can communicate with each other when the USB link is established between them.

2. In addition, be aware that the docking cradle can be plugged into mains while you connect it to your Windows PC using the USB cable, if your Morphic needs to be charged as well.
3. You need to have the USB cable with the Mini-B connector at the other end.



CHAPTER THREE – BASIC FUNCTIONALITY

To connect Morpic to Windows PC:

1. Connect the Mini-B connector of a USB cable to the docking cradle and the cable's other end to the USB socket on your Windows PC
2. Dock your up-and-running Morpic into the docking cradle. The USB link establishing starts and it is finished in a moment. What follows depends on the USB profile selected on your Morpic.

For example, when Morpic acts as an USB mass storage device you see it as an USB memory dongle on your PC system, meaning that you see the Flash directory off the root of the Windows CE file system on your Morpic.

Connecting Morpic to LAN

Before you begin:

1. You need to have an Ethernet cable with the RJ-45 plugs at the both ends, that is, a standard Ethernet cable.
2. You need to have the assembled wall charger available with the correct AC adapter attached to it. (The Ethernet interface on the docking cradle is powered by the wall charger only.)
3. Be aware that the type of the Ethernet interface on the docking cradle is a 10/100BASE-TX, that is, a standard Ethernet interface on the devices.
4. Be aware that the following instructions assume IP-address assigning to your Morpic to have been determined. In other words, your Morpic either receives an IP-address from LAN, or it has been assigned to a static IP-address for IP-networking.



To connect Morpic to LAN:

1. Plug the docking cradle into mains by plugging the lead from the wall charger into the charger socket on the cradle, and by plugging the wall charger into mains
2. Connect the RJ-45 plug to the RJ-45 socket on the docking cradle, and the other end of the cable to the RJ-45 socket of your wired Ethernet system.
3. Dock your up-and-running Morpic into the docking cradle. The initialization of TCP/IP-protocol stack starts and it is finished in a moment. After that your Morpic is ready for networking across the LAN.

4. MOBILE PHONE

On your Morphic, there is a phone feature as an application, meaning that the Morphic is not a typical mobile phone but the mobile phone is one feature of the Morphic among others.

Before you can use your Morphic as a phone, you need to install SIM card. After installing the SIM card, and the battery, and closing the battery cover, your Morphic phone is at the ready as soon as the Morphic is up and running and you have opened the phone application once.

Note that the application is still subject to finalization.

INSTALLING SIM CARD

Before you begin

You can find the holder of SIM card in the battery compartment.

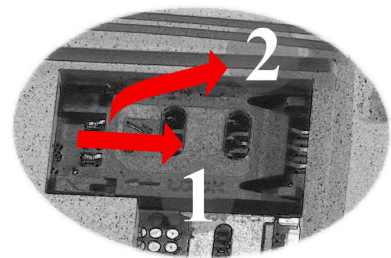
1. If the wall charger is plugged in, unplug your unit first
2. If the battery is installed, open the battery cover and remove the battery

To open SIM-card holder

1. Slide the cover of the SIM card holder in the direction of the device bottom to

unlock the holder

2. Open the holder by lifting the cover up with your thumb on its edge on the side of the battery compartment

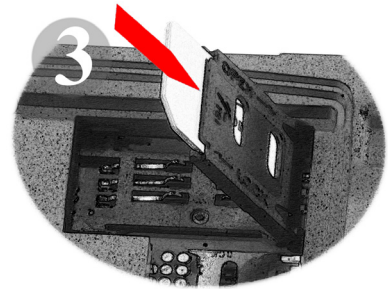


CHAPTER FOUR – MOBILE PHONE

To slot SIM card into holder

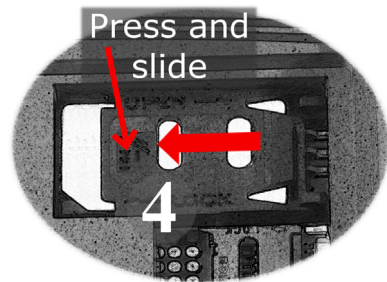
cover

3. Put your SIM card in the slot in the opened



To lock SIM card into position

4. Close the cover with the index finger and lock the SIM card into position by pressing the cover with the card against the holder contacts, and by sliding the cover in the direction of the battery fastening

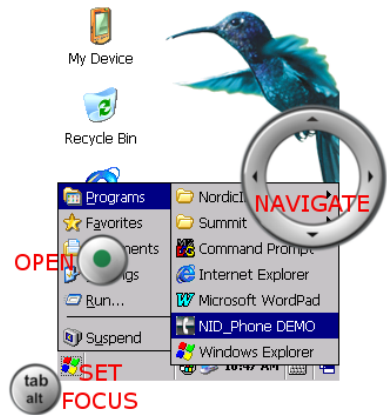


USE OF PHONE

Opening Phone application

To open phone application:

1. Press the tab/alt key to set the input focus to the start button
2. Press the green key to open the start menu.
3. Select the NID Phone DEMO submenu item under the Programs menu using the navigating ring.
4. Press the green key to open the NID Phone
5. If the Phone application prompts you to enter the PIN code of the SIM card, enter the PIN code and press the green key. If the code insertion succeeds the application gives you the following message: 'Code Accepted'
6. Wait a moment until the 'Code Accepted' message disappears from the screen



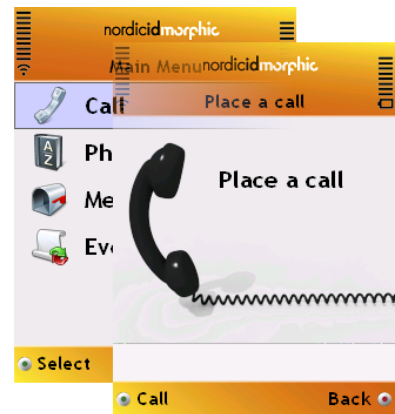
Now the phone is at the ready, and you may hide the window of the Phone application by pressing the red key after the 'Code Accepted' message has disappeared from the screen.

Making a Call Before you begin:

1. Open the NID Phone application; see the 'Opening Phone application' section above.
2. You may need to enter the PIN code of the SIM card before making a call

To make a call:

1. In the 'Main Menu', select the 'Call' menu item using the navigating ring, if not selected
2. Press the green key to open a 'Place a call' window on the screen
3. In the 'Place a call' window, enter a phone number
4. Press the green key to call



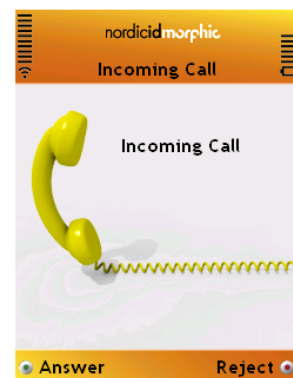
Ending the call To end the call:

1. Press the red key to hang up. The Phone application tells you that the call is terminated
2. Wait a moment, the 'Call Terminated' message disappears from the screen, and the Phone application returns to the 'Main Menu'.

Receiving a Call When someone is calling you, the 'Incoming Call' window of the phone pops up on the screen and your Morphic starts ringing.

To receive a call:

Press the green key.



5. DATA CAPTURE

On the Morphic there are two reader options available for machine-readable, optical tag information. A laser reader illuminates the tag with laser beam and, by default, expects that the bar code's spaces reflect more light than the bars. This reader is also referred to as 'bar code reader' or to as 'laser scanner'. The other reader option is based on digital camera technology, and the reader system is commonly referred to as 'imager'.

LASER SCANNER

Reading with Laser scanner

Laser scanner is an orientation-dependent reader due to the fact that it scans the laser spot in a straight line. To succeed in reading a bar code the visible laser line shall sweep through all of the bars and spaces of a bar code.



Before you begin:

You must have the window of your application visible on the screen, and the field that shall receive a series of characters must have a cursor (or at least an input focus).

To read a tag:

Be aware that operational modes of the scan button have an effect on how the laser scanner acts during the reading. The following steps outline the operation.

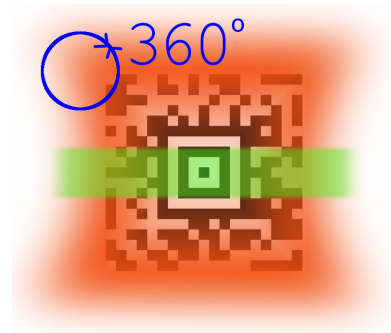
1. Point your Morphic's reader towards a bar code tag and press the scan key.
2. Aim the sweeping laser at the bar code so that the visible line passes over all of the bars of the bar code.
3. If the reading does not succeed immediately, move smoothly your Morphic in the direction of the bar code tag

Note! Reading is the best possible at a distance of 5 - 50 cm from a bar code.

IMAGER

Reading with Imager

No matter how you orient your Morphic towards a code label, the imager succeeds in reading both the one dimensional and the two dimensional code labels, assuming that a shot includes the whole symbol being good enough to be decoded.



Before you begin:

You must have the window of your application visible on the screen, and the field that shall receive a series of characters must have a cursor (or at least an input focus).

To read a tag:

Be aware that operational modes of the scan button have an effect on how the imager acts during the reading. The following steps outline the operation.

1. Point your Morphic's reader towards a code tag and press the scan key
2. Aim the green flashing light at the code symbol on the label
3. If the reading does not succeed immediately, move smoothly your Morphic in the direction of the code symbol

Note! Reading is the best possible at a distance of 10 - 20 cm from a code label.

Enabling Viewfinder

If you want to aim the imager reader through the screen, you may enable a viewfinder to see the area that the imager is capturing.



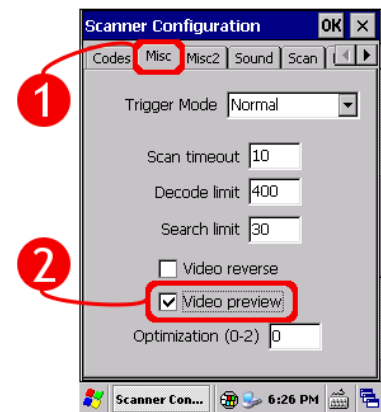
Before you begin:

1. Open Control Panel
2. Open 'NID Scanner' control panel applet

CHAPTER FIVE - DATA CAPTURE

To enable Viewfinder:

1. In the NID Scanner applet, select a 'Misc' property page
2. On the Misc page, tap on a 'Video preview' checkbox to check it.
3. Tap on the 'OK' button. The viewfinder is enabled.



CHANGING SCANNING PARAMETERS

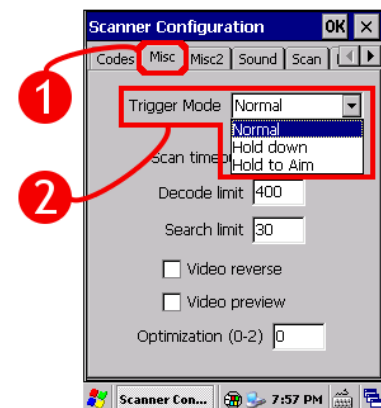
Selecting Trigger Mode

yourself.

Before you begin:

1. Open Control Panel
2. Open 'NID Scanner' control panel applet

The scan key has three operational modes. You may try all of them to find a suitable one for



To select trigger mode:

1. In the NID Scanner applet, select a 'Misc' property page
2. On the Misc page, select a 'Trigger Mode' of your choice within the list.
3. Tap on the 'OK' button. The trigger mode is in operation.

Changing Scan Timeout

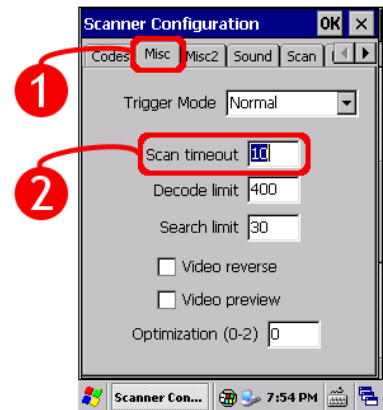
You may adjust how long the reader tries to decode a code label before it stops trying.

Before you begin:

1. Open Control Panel
2. Open 'NID Scanner' control panel applet

To change scan timeout:

1. In the NID Scanner applet, select a 'Misc' property page
2. On the Misc page, enter a timeout value (in seconds) in the 'Scan timeout' field.
3. Tap on the 'OK' button. New timeout is put to use.



6. A CLOSER LOOK AT ...

WINDOWS CE SHELL

Windows CE shell is a default shell of the Morphic. The shell provides the graphical user interface that has two main window components to interact with the system as follows: a desktop window, and a taskbar window. Typical interaction is a program invoking. Both the shell window components have that property, but the way it is implemented differs.

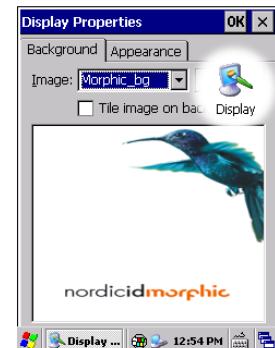
From the perspective of the input focus (keypad navigating) you may use the tab key to switch between the taskbar and the desktop.



Desktop

Desktop is the area in which applications are represented as icons. To invoke an application you may either double-tap on the icon of the application, or select it using the navigating ring, and after that pressing the green key.

The desktop has its own context menu which you can get to appear on the screen by tapping and holding with the stylus in the desktop area. In addition, the desktop incorporates some adjustable properties to which you can gain access either through the context menu or through a 'Display' control panel applet.



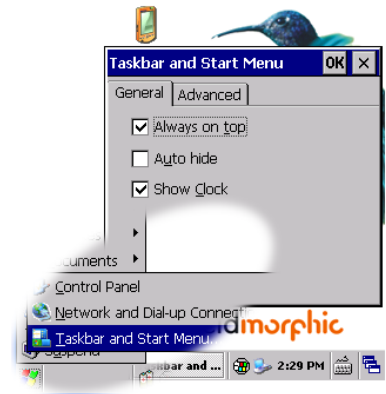
Taskbar

The main window element of the taskbar is a 'Start' button. The start button opens a start menu to invoke the applications and the system facilities listed as menu items.



The next most interesting visible feature of the taskbar is probably its annunciator area. Its purpose is to provide the screen area for the subsystems to notify you of their status using icons. It is also possible that with a tap on the annunciator icon you can get further information about the status and even more. One example of the subsystems is a Date / Time which shows time in the annunciator area. A tap on the time field opens a Date / Time property page.

The taskbar holds some properties that can be changed, if need be. The page of the properties is available either through the start menu or through the context menu of the taskbar.



STYLUS AND TOUCH SCREEN

The simplest way to navigate through the Windows CE shell and the utility windows is to use the touch screen. For the touch-screen navigating Morphic is equipped with a stylus, a pen without ink capability.

The stylus and the touch screen are the means being in some way analogues to a mouse. A tap of the stylus on the screen produces the same result as a left mouse button click on a Windows PC.

A right mouse button click is not so obvious. In the Windows CE desktop window a right click is to tap and hold with the stylus. However, this method does not produce the same effect on the taskbar. To 'right click' the taskbar needs to hold down the 'alt' key while tapping on the taskbar. So, it is up to the Windows CE application to choose a sequence as a right mouse click.

PERMANENCE OF SETTINGS

The Windows Embedded CE running on the Morphic has the database used to store configuration information (that is, the settings) for the system itself and for the applications. The database is called registry as in all versions of Windows.

On your Morphic the implementation of the registry is RAM-based, meaning that the Windows CE maintains the registry in its RAM-based file system. This matter has consequences for the persistence of the registry keys and values, if changed, deleted, or created.

Although the RAM device on your Morphic is battery backed, meaning that the registry data base retains its state when the device is turned off, the registry data does not persists on cold boots, without mentioning the hardware resets. It's also possible that the device remains lying idle for long enough so that all the batteries on the device run down and the registry settings vanish.

On the Morphic, one of the save-and-restore methods of the Windows CE is applied to the registry so that the changes to the contents of the RAM-based

registry can be stored in a non-volatile memory, if need be. The Windows CE system checks for the up-to-date registry information during booting up, and if the updated registry file is available within the non-volatile memory the system initializes the registry database in its RAM-based file system accordingly.

When you need to make your changes to the settings permanent on the Morphic, there is a Registry Backup utility for the purpose of saving the settings in the non-volatile memory.

FLASH DIRECTORY

On your Morphic, there is a 'Flash' directory off the root of the file system that has a special role in the Morphic system. This directory is intended for device customizing purposes, but it can be also used for Windows CE system maintenance to bring update, upgrade, and bug fix patches to the system through *.PAK files. The Flash directory is a dedicated part of a 'Customizer' technology on your Morphic, and it can contain, if need be, either customization or system maintenance .PAK files, or both.



Your Morphic system reads the contents of the Flash directory, when you cold-boot your device. According to the contents of every .PAK file in the directory the Windows CE system of your Morphic is upgraded/updated during booting up.

With the .PAK files it is straightforward to customize your Morphic. Implicit in this approach is the possibility that two .PAK files include the same registry key with different value, or the same executable file being of different version, which may cause some unexpected behaviour on your device after you cold-boot it. In the case of the executable file, it is enough that there is the same file in two .PAK files no matter what the executable versions of the files are.

You can find the Flash directory on your Morphic, for example, by double-tapping on the My Device icon in the desktop window, which launches a file browser program. The file browser shows the root of the file system in its main window, and among the directories and folders you can also see the Flash directory. A double-tap on the Flash directory icon opens the contents of the directory in the file browser window.

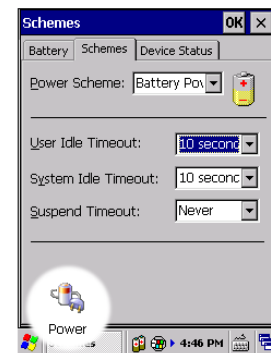
POWER MANAGEMENT

A so called power manager (PM) controls on power-related things on your Morphic. One of the tasks of the PM is to save battery energy by reducing power consumption. The rationale behind that is based on the inactivity of a user or the system.

By default the PM commands that the backlight of the screen shall be turned off, when the device remains idle without any user input either key press or stylus tapping on the screen for the specified period of time. On the contrary, if a user or a user application action occurs it is up to the PM to activate the system. For instance, if the screen is turned off, the PM directs the system to turn on the screen with the adjusted, maximum backlight brightness when the user presses some key, or taps on the screen (assuming that the touch screen is not disabled, nor the Morphic is suspended).

The PM reduces power consumption in three steps, so that the device has four power levels as follows: 'On', 'UserIdle', 'SystemIdle', and 'Suspended'. If your Morphic remains idle for a while it reaches the 'Suspended' power level via the 'UserIdle' and 'SystemIdle' levels. For this transition from the 'On' state to the 'Suspend' state the PM uses three inactivity timers. If all the three timers expire the PM suspends the Morphic. To put it another way, using the power button is not the only way to switch off the device. By default the PM has always tendency to power down the device to save energy when it is running on battery.

You have control over the PM by adjusting three timers using the 'Power' control panel applet. You can set each timer to predefined timeout values. In that way you may control how quickly the PM directs the system to enter a lower power levels when you leave your Morphic idling. It is also possible to disable each timer by assigning a predefined 'never' value to the timer. For example, there is a 'User Idle Timeout' field. If you select the 'never' in the field, your Morphic stays the 'On' state no matter how long your Morphic is idling.



RECHARGEABLE LI-POLYMER BATTERY

Charging at room temperature

degradation of battery performance.

The manufacturer of the rechargeable Li-Polymer battery recommends that the battery should be charged indoors at 20°C temperature, or at temperature near that ($\pm 2^{\circ}\text{C}$). Continual charging at high or low temperature even within specified allowable temperature range may cause

Ambient temperature

The ambient temperature has an effect on how long the fully charged Li-Polymer battery is able to power your device. A rule of thumb is that the colder is using conditions the shorter is operating time of the device powered by the fully

charged battery.

Useful life

Every charge/discharge cycle has an effect on the Li-Polymer battery's ampere-hour capacity. The fully charged battery, which is charged many times before, runs down more rapidly in use than the battery just brought into use.

After 500 charge/discharge cycles, if the battery has been run with care enough, the battery's ampere-hour capacity should be still more than two-thirds of its original one. However, the charge/discharge cycle is the conception being ambiguous. Accordingly, between short operating periods it is not reasonable to recharge the battery.

Risk of Overdischarge

When the battery runs down, do not leave the device with the flat battery, or the battery which has run down lying idle without recharging the battery. The discharged battery may overdischarge due to self discharge. After overdischarging the battery does not preserve its performance properties. In the worst-case scenario, the battery is damaged and cannot store energy any longer.

Long storage

If you do not use your Morphic for a long time, remove the battery from its battery chamber. The battery may not be flat nor be fully charged for long-time storage. The manufacture says that an ideal charge is about 60% of the battery's full capacity.

SYMBOLY-ENCODED TAG READING

Laser Scanner

The laser beam is convenient for reading linear, one dimensional symbologies but not two dimensional ones. The one dimensional symbology tag is commonly referred to as bar code. One of the main factors of the bar code having an effect on the read range of the laser scanner is the thinnest bar and space width that is used to print the bar code. Typically the 'size' of the printed bar code is expressed as the width of its narrow elements (both bars and spaces). The width is measured in mils – thousandths of an inch. (For example, 40 mils in inches are 0.04, in millimeters it is 1.01.)

The bar code scanner on your Morphic is capable of reading all the supported barcode types of any mils from the shortest distance of 5cm, approximately. The longest read distance varies according to the size of a bar code. The distance ranges from 14cm with the 4-mil bar codes to 80cm with the 20-mil and larger bar codes in size. There are also other factors that may have an influence on the read range, such as how well the dimensions of a printed bar code are in compliance with the printing tolerances according to the specification of a particular bar code type.

Imager

In reading either one or two dimensional symbology tags with the imager the range between the shortest and the longest read distance has to do with the size of the code information in mils (about the mils, see the 'Laser Scanner' section above) as well as with the depth of field effect. In photography, the depth of field effect refers to plane of focus from near to far within image. With the imager it means the range in which a code tag remains in focus if the reader draws away from the tag or draws closer to the tag. As a rule of thumb, the larger is the size of the code in mils the wider is the range in which the code tag is in focus, that is, the range in which the imager can succeed in reading the code being good enough to decode.

The above-mentioned read range of the imager in concrete terms: between the 6-mil tag and the 35-mil tag the shortest read distance varies from 11 cm to 5 cm, respectively. Correspondingly, the longest read distance varies from 16 cm with the 6-mil tag to 33 cm with the 35-mil tag. In addition, how well a code tag is in compliance with the printing tolerances has an effect on the read range of the imager, as it is with the laser reader.