LogiScan-600/800/1100
Standard Application 03000 v3.80
Operating Manual
We don’t deliver just our mobile Data Capturing Devices with Standard Software...

but also develop to customers specific

- Applications for this Devices
- PC Applications
- Hardware

and advise you on

- Creating concepts for mobile and stationary data collection
- Queries surrounding Bar Code and RFID
- Hardware problems

Please consult us with your queries or problems at:

aitronic GmbH
Balhorner Feld 10
D-33106 Paderborn
Germany

Telefon: +49 (0) 5251 29816-0
Telefax: +49 (0) 5251 29816-40
Internet: http://www.aitronic.de
E-Mail: info@aitronic.de

Copyright © aitronic GmbH, 2015

All Rights reserved, in particular all extracts which correspond to the translation, the reprint and reproduction by copying or similar methods.

Delivery and technical changes are subject to change.
Edition History

<table>
<thead>
<tr>
<th>Edition</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.02.2010</td>
<td>Adaption for software version 3.01</td>
</tr>
<tr>
<td></td>
<td>Complete revision concerning layout, warnings and symbols</td>
</tr>
<tr>
<td>23.03.2010</td>
<td>Adaption for software version 3.10</td>
</tr>
<tr>
<td>26.07.2010</td>
<td>Description of GPS Test</td>
</tr>
<tr>
<td>12.01.2011</td>
<td>Adaption for software version 3.11</td>
</tr>
<tr>
<td>07.02.2011</td>
<td>Extensions for LogiScan-1100</td>
</tr>
<tr>
<td>02.05.2011</td>
<td>Description Akku/SIM Card Replacement LogiScan-1100</td>
</tr>
<tr>
<td>20.10.2011</td>
<td>Adaption for software version 3.30 (Bluetooth)</td>
</tr>
<tr>
<td>05.03.2014</td>
<td>Software update description of devices which are connected via USB</td>
</tr>
<tr>
<td>27.02.2015</td>
<td>Neues Option-Menü-Item „Feldtrennzeichen“</td>
</tr>
</tbody>
</table>

Other Documents asserting with this one

- Technical Manual LogiScan-600/800/1100
1. **Introduction** ................................................................. 1-1

2. **Security Hints** ............................................................. 2-1
   - Laser Scanner Module .................................................. 2-1
   - Lithium-Polymer and Lithium-Ion Accumulators ............. 2-2

3. **Care Instructions** .......................................................... 3-1
   - Care of the Scanner ..................................................... 3-1
   - Dealing with the Devices Markings .............................. 3-1
   - Repairing Screen Damages ........................................... 3-2

4. **Communication with PC** ............................................. 4-1
   - General ......................................................................... 4-1
   - Software Installation ..................................................... 4-2
   - Cradle for LogiScan-600/800 ......................................... 4-3
   - Docking Station for LogiScan-600/800 .......................... 4-4
   - Cradle for LogiScan-1100 .............................................. 4-5
   - Wireless DECT Communication .................................... 4-6

5. **Introduction to Operation** ........................................... 5-1
   - LogiScan Keyboard ....................................................... 5-1
   - Switching On/Off .......................................................... 5-2
   - LED Display ................................................................... 5-2
   - LCD Display ................................................................... 5-2
   - Navigation in Menus and Masks .................................... 5-4
   - Handling the Scanner .................................................... 5-5
   - Activating Barcode Scanner or Transponder Reader ....... 5-6
   - Scanning Barcodes ......................................................... 5-6
   - Reading Transponder Tags ............................................. 5-7
   - Manual Entries ............................................................. 5-7
   - Deleting Characters ....................................................... 5-7
   - Deleting the Input Field ............................................... 5-7
   - Choosing an Input Field ............................................... 5-8
   - Closing Entry and storing the Record ........................... 5-8

6. **System Functions** .......................................................... 6-1
   - Charging the integrated Accumulator ........................... 6-1
   - Hardware Reset ............................................................ 6-2
   - System Menu ............................................................... 6-3
   - System Error Message „Battery low!“ ............................ 6-4

7. **Battery and SIM Card Changing** ................................. 7-1
LogiScan-1100 .......................................................................................... 7-1
LogiScan-600/12 ....................................................................................... 7-3

8. Software Update.................................................................................. 8-1

9. Error Correction – What to do if .................................................... 9-1

10. Accessories...................................................................................... 9-1

  Cradle for LogiScan-600/800 ................................................................. 9-1
  Cradle for LogiScan-1100 ................................................................. 9-1
  Truck Charging Station for LogiScan-600/800 ................................. 9-2
  Charging Station for LogiScan-600/800 ............................................. 9-2
  Belt Holder for LogiScan-600/800 ..................................................... 9-2
  Accesspoint for DECT RF Network ............................................... 9-3

11. Recycling Orders .............................................................................. 11-1
12. Standard Application 03000 .............................. 12-1

Initializations following Cold Start .......................................................... 12-1
Calling System Level ................................................................................. 12-1
Menu: Options ......................................................................................... 12-2
Sub Menu: Transponder Options ............................................................. 12-4
Menu: Admin .......................................................................................... 12-5
Sub Menu: Keyboard Settings ................................................................. 12-7
Sub Menu: DECT Setup .......................................................................... 12-8
GPRS Setup ............................................................................................ 12-9
WLAN Setup .......................................................................................... 12-12
Submenu: GPS Settings ....................................................................... 12-14
GPS Test .................................................................................................. 12-15
Menu: Info ............................................................................................. 12-16
Loading the GPRS/WLAN Parameter Table ............................................. 12-17
Barcode Capturing .................................................................................. 12-19
Reading/Writing Transponder ................................................................. 12-20
Displaying Records ................................................................................. 12-22
Modifying a Record ................................................................................ 12-22
Deleting Records ................................................................................... 12-22
Message „Data Memory full!“ ............................................................... 12-23
Cable bound Data Transmission ............................................................. 12-23
DECT Data Transmission ........................................................................ 12-25
GPRS or WLAN Data Transmission ......................................................... 12-27
Activating the SIM Card after PIN Error ............................................... 12-29
Bluetooth Communication ...................................................................... 12-30
Deleting the Data Memory manually ..................................................... 12-31
Logging .................................................................................................... 12-33
Test Barcodes ......................................................................................... 12-34
1. Introduction

The MDE devices from company aitronic are multi purpose in capturing and recording bar codes, transponder tags and manual data.

The devices come in a range of designs and configurations (refer to Technical Manual LogiScan-600/800/1100).

Before using your MDE devices please read this handbook carefully.

All details in this handbook are without warranty and can be rewritten or altered without prior notification from us. We are constantly engaged in maintaining our products error-free and at highest technical standard. As far as possible our object in view is to design our products compatible with products already in use. Despite painstaking efforts, it is not always possible for us to create, develop or test software to 100 % efficiency or to fully guarantee for every possible situation within working conditions.

For property- or personal damage caused, directly or indirectly, as a consequence of using our devices or software, the company aitronic cannot be held for liability.

This handbook as well as parts of it may not be copied, broadcast or transferred, without the prior consent of the company aitronic. Copying of the accompanying software may only be used for the saving of data, but may not be given to a third party.

Trade-marks and Trade-names in this handbook, which have not been specifically marked by us, are thereby not free from their accompanying rights.

By eventual problems or queries to our products, please do not hesitate to contact us for help or information. Please contact us at:

aitronic GmbH
Balhorn Feld 10
D-33106 Paderborn
Germany

Telephone: +49 (0) 5251 29816-0
Telefax: +49 (0) 5251 29816-40
Internet: http://www.aitronic.de
E-Mail: info@aitronic.de
2. Security Hints

**Laser Scanner Module**

The MDE devices are powered with a low power laser diode for visible laser light. The wavelength is 650 nm and the laser power is 1,2 mW nominal. The laser scanner complies with the regulations of CDRH/IEC Class II.

As with other strong light sources the user should not look directly or indirectly into the laser beam. It is not known that an occasional exposure to CDRH-Class-II-laser light can be damaging to eyesight.

The necessary safety labels can be found under the laser light window.

Never try to open any of the laser components or attempt to carry out maintenance on the device. The laser safety regulations could be violated. Repair of the laser module is done exclusively in our workshop.
Lithium-Polymer and Lithium-Ion Accumulators

These security hints should support you when handling with lithium-ion accumulators. The following list doesn’t claim completeness. For damages which occur when using, storing and/or charging the accumulators we don’t take over any liability. In the following list lithium-polymer and lithium-ion accumulators are called accumulators.

► Charge the accumulators exclusive with the delivered charging device. Pay attention to the security hints to this charging device.
► Don’t leave the accumulators unattended when charging.
► Prevent overheating the accumulators. Cells which become warmer than about 60 °C may destroy themselves and/or may begin to burn or may explode.
► Don’t short the accumulators.
► Don’t put the accumulators into water or expose them to moisture.
► Don’t store the accumulators near to fire, at warm locations, in the sun or near to burnable materials.
► Keep exchange accumulators at a secure location outside the reach of children.
► Don’t remove fix installed accumulators. Don’t open exchange accumulators and/or put them together with other packs or solder them together with other packs.
► If you don’t need an exchange accumulator anymore you should keep it at a secure place (i.e. LiPo Security Case).
► Damaged, deformed or blown up accumulators or accumulators which were used in a damaged device shouldn’t be used any further. Small damages which can’t be seen at a first look at may lead to heavy damages and consequences.
► If an accumulator should begin to burn don’t never extinguish with water. Pay attention to the following hints concerning the behaviour in case of fire.
Should the accumulators have caught fire never quench with water. The following steps are absolutely required:

- Keep cool and carefully take action. Lock the danger area.
- Immediately arrange that all persons leave the burning area against the wind
- If possible arrange the removal of all burnable objects out of the danger area.
- Don’t inhale flue gases and fume – Contamination Danger!
- Don’t never try to extinguish with water – Explosion Danger!
- Suitable extinguish substances are: dry sand, fire extinguisher, extinguish ploids, fitting fire resistant covers.
- Get near to the burning location with following wind and doughty and according to the prescription apply the extinguish substances. That means apply the extinguish sand completely and all at once across the burning location and cover the location airtight.
- Clear the burn location not before complete cool down and a waiting time of at least 2 hours and do the waste disposal according to the administrative prescription. Wear protection gloves.
- If you have some doubts concerning your extinguish tries call the fire brigade to help you.

By disposal of the used batteries or accumulators, adherence to the regulations concerning battery disposal (see section Recycling Orders) should be observed.
3. Care Instructions

Your data capturing device with integrated laser scanner module is a high grade and robust unit consisting of electronic and laser optic components. A faulty treatment of this device may considerable affect function and efficiency. To guarantee long and constant operation you should consider the following care instructions!

Care of the Scanner

The red scanner screen of your MDE devices and the inner resided scanner module form an optical unit. This screen is provided with a special coating. A damage of this coating i.e. by scratches may lead to problems when scanning barcodes. Because of this a clean and moist cloth should be used when cleaning this screen. Rough dirt may be removed with a soft brush. Cleaning agents may not be used for the screens care and cleaning.

Terminal of the LogiScan family have an aluminum case. All other terminals from ours have a plastic case. Although both are robust materials for cleaning only a soft cleaning agent should be used.

Dealing with the Devices Markings

The attached marking labels (warning and security labels) may not be removed by principle. It is the legitimation to operate with this terminal. Making the terminals data plate or the data plates information (i.e. the serial number) unrecognizable should be avoided. Missing information on the data plate may lead to a more difficult identification. This may lead further to problems which couldn’t be solved by telephone. In this case the terminal must be sent in.

Further we recommend for the attachment of additional information (i.e. department or personal numbers) labels with plastic back. Simple paper back labels aren’t durable enough. In that way sticking parts may smudge the scanner screen. In this case on one hand the scanner function will be affected, on the other hand cleaning without ignoring the above instructions isn’t possible because a solvent would be required.
Repairing Screen Damages

In case of overstress the screen may be loosen. We explicitly attention to that self repairing with short time glue may affect the screen in such strong way that the casing must be changed.

At this point we want to explicitly attention to that we don't overtake guarantee for damages which are the consequence of wrong dealing with the MDE devices.
4. Communication with PC

General

The communication between MDE device and a PC can be performed **cable bound** (via communication cable or docking station) or, assumed the MDE device is equipped with a DECT module, **wireless** via a DECT Accesspoint.

Software updates in principal are possible only **cable bound**.

All MDE devices are available with DECT module. The kind of the cable bound connection may vary depending on the type of MDE device and will be described in the further course of this chapter.
Software Installation

For cable bound communication between MDE device and PC the program MTWin has to be installed.

In order to run MDE device software updates the installation of M16Start is required.

For wireless communication the program WinDECT is required.

For subscription of MDE devices with DECT modules at the DECT Accesspoint the program DECTOR II is required.

**MTWin**
For the installation of MTWin open SETUP.EXE in directory MTWin of the enclosed CD and follow the installation instructions.

**M16Start**
For the installation of M16Start please follow the following steps
- Open SETUP.EXE in index M16Start of the enclosed CD and follow the installation instructions.
- In EXPLORER under View/Order Options/File Type link file extension „MOT“ to MT16START.EXE.

M16Start may also be executed with the following command line parameters:

M16Start [-COM=comport] filepath

comport may be: 1...n (COMn) or nn.nn.nn.nn:port (IP address)

**WinDECT**
Directory WinDECT from the CD has to be copied to any directory of your PC. There must be unrestricted access rights for this directory.

**DECTOR II**
Directory DECTOR from the CD has to be copied to any directory of your PC.
**Cradle for LogiScan-600/800**

The cradle deals for connection of a LogiScan-600/800 to a RS-232 interface of a PC and for charging of the integrated accumulator.

For debugging during application development a special UDS docking station with 6 PTR contacts is available (refer to next page).

**Setup Operation**

1. Switch off your computer
2. Connect the MDE device via the mains adapter cable to the mains supply with a voltage 100 – 220 V alternating current
   1. Connect the other end of the 9 pin SUBD connector to your computer’s RS-232 interface.
3. Switch on your computer and start MTWin respectively your user software program.
4. Put the MDE device into the docking station.
5. The MDE device now is ready for data transfer and the integrated accumulator will be charged.
Docking Station for LogiScan-600/800

The docking station (with 4 PTR contacts) deals for connection of a LogiScan-600/800 to a RS-232 interface of a PC and for charging of the integrated accumulator.

For debugging during application development a special docking station with 6 PTR contacts is available.

Setup Operation

1. Switch off your computer
2. Connect the MDE device via the mains adapter cable to the mains supply with a voltage 100 - 220V alternating current
3. Connect the other end of the 9 pin SUBD connector to your computers RS-232 interface.
4. Switch on your computer and start MTWin respectively your user software program.
5. Put the MDE device into the docking station.
6. The MDE device now is ready for data transfer and the integrated accumulator will be charged.
Cradle for LogiScan-1100

The cradle deals for connection of a LogiScan-1100 to a RS-232 interface of a PC and for charging of the integrated accumulator. The cradle is equipped with a RS-232- and an USB interface. Optional the cradle may be equipped with a LAN- or LAN/ WLAN module.

Setup Operation

1. Switch off your computer
2. Connect the MDE device via the mains adapter cable to the mains supply with a voltage 100 – 220 V alternating current
3. Connect the other end of the 9 pin SUBD connector to your computers RS-232 interface.
4. Switch on your computer and start MTWin respectively your user software program.
5. Put the MDE device into the docking station.
6. The MDE device now is ready for data transfer and the integrated accumulator will be charged.
Wireless DECT Communication

For wireless DECT communication a DECT Accesspoint and the software package WinDECT is required. The DECT Accesspoint is available with RS-232 or optional with LAN connection.

Setup Operation

1. Switch off your computer
2. Connect the mains adapter cable to the mains supply with a voltage 100 - 220V alternating current
3. Connect the 9 pin SUBD connector to the RS-232 interface of your PC respectively connect a LAN cable.
4. Check the settings (COM interface or LAN) in file WINDECT.INI.
5. Switch on your PC and start WinDECT respectively your user application.
6. Switch on your MDE device. When after a few seconds the DECT lock symbol appears at the status lines right side at the bottom of the LCD the MDE device is ready to communicate with the PC.

If in face of active DECT Accesspoint there appears no DECT lock symbol in the MDE devices status line, the MDE device has to be subscribed at the DECT Accesspoint. For this need the following steps are required:

Subscription of a MDE device at the DECT Accesspoint

1. Terminate WinDECT.
2. Start the program DECTOR II and choose the concerning DECT Accesspoint.
3. Call the MDE device system level with function SHIFT ESC.
4. Perform DECTOR-II function Subscription on Air.
5. Call the MDE devices menu function Admin/DECT/SubsOnAir.
6. After a few seconds the MDE device should display the message „Subscription performed“.
7. This procedure has to be performed for each MDE device as the case may be.
8. Terminate DECTOR II, start the MDE devices application again with menu function and start WinDECT again.
### 5. Introduction to Operation

#### LogiScan Keyboard

<table>
<thead>
<tr>
<th>Button</th>
<th>with ↑ key released</th>
<th>with ↑ key pressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>0...9</td>
<td>Digits 0 - 9</td>
<td>Functions F0...F9</td>
</tr>
<tr>
<td>①</td>
<td>Switching on/off</td>
<td>-</td>
</tr>
<tr>
<td>MENU</td>
<td>Calling up menus</td>
<td>Toggling Overwrite/Insert Mode</td>
</tr>
<tr>
<td>ESC</td>
<td>In input mask: Change from Edit&lt;br&gt;⇒Focus ⇒Non Focus ⇒Edit&lt;br&gt;Change from Scroll ⇒New input</td>
<td>Terminating the application and changing to operating system level</td>
</tr>
<tr>
<td></td>
<td>In menu list: previously chosen Menu-Item</td>
<td>In menu list: select first menu item</td>
</tr>
<tr>
<td></td>
<td>In input mask: previously chosen Input mask</td>
<td>In input mask: select first Input field</td>
</tr>
<tr>
<td></td>
<td>Scrolling through the memory: previously chosen record</td>
<td>Scrolling through the memory: select first record</td>
</tr>
<tr>
<td>▲</td>
<td>In menu list: select next menu item</td>
<td>In menu list: select last menu item</td>
</tr>
<tr>
<td></td>
<td>In input mask: select next input field</td>
<td>In input mask: select last input field</td>
</tr>
<tr>
<td></td>
<td>Scrolling through the memory: select next record</td>
<td>Scrolling through the memory: select last record</td>
</tr>
<tr>
<td>F1</td>
<td>free for application</td>
<td>free for application</td>
</tr>
<tr>
<td>F2</td>
<td>free for application</td>
<td>free for application</td>
</tr>
<tr>
<td>F3</td>
<td>free for application</td>
<td>free for application</td>
</tr>
<tr>
<td>F4</td>
<td>free for application</td>
<td>free for application</td>
</tr>
<tr>
<td>F4</td>
<td>(only LogiScan-1100)</td>
<td>(only LogiScan-1100)</td>
</tr>
<tr>
<td>↑</td>
<td>Changing to Alpha Mode</td>
<td></td>
</tr>
<tr>
<td>DEL</td>
<td>New input: Delete input field</td>
<td>Scrolling: Delete/Recover Records</td>
</tr>
<tr>
<td></td>
<td>New input: Delete digit/character</td>
<td>New entry</td>
</tr>
<tr>
<td>ENTER</td>
<td>Concludes input or activates chosen menu item</td>
<td>Input field will be deleted, if this isn’t empty. If input field is empty and it isn’t the first field, the whole input mask will be erased.</td>
</tr>
</tbody>
</table>
Switching On/Off

The MDE device is switched on when button \( \bigcirc \) or button SCAN is pressed. Switching off is done by pressing button \( \bigcirc \) again. When no action (e.g. keyboard entry) takes place during a distinct period of time (adjustable by system menu Admin/System/Power) the MDE device switches off automatically itself in order to preserve the integrated accumulator and to ensure a longer life span.

LED Display

The two coloured LEDs above the LCD display show the following states

<table>
<thead>
<tr>
<th>Left LED</th>
<th>Right LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulator Charging State&lt;br&gt;Look for details: System Functions/Accumulators</td>
<td>Scanner/Transponder switched off&lt;br&gt;Barcode/Transponder Tag scanned&lt;br&gt;Scanner/Transponder switched on</td>
</tr>
</tbody>
</table>

LCD Display

On the LCD display a maximum of 6 rows x 20 characters can be displayed. The uppermost row is used as a headline respectively a menu bar. The bottom row is used as a status bar (see picture below). 4 rows are available for application input masks. When using the MDE device as shown in the following display layout more than a total of 6 rows are shown to be available. It is possible to scroll this area in order to show the other available functions, e.g. menu lists with more than 5 items.
The following information/symbols appear in the status bar:

\[ n \] Nr. (1...m) the indicated record by scrolling through the data file. By new entries \( n = \) number of saved records + 1.

\[ \text{aaa} \] By a new entry the word „New“ is shown, by scrolling through the data file the abbreviation „Rec“ is shown.

\[ \text{} \] This symbol indicates that the communication adapter is connected to the MDE device.

\[ \text{} \] MDE device with DECT RF module: DECT module initialization in progress.

\[ \text{} \] MDE device with DECT RF module: DECT module initialization completed.

\[ \text{} \] MDE device with DECT RF module: DECT RF connection to an Accesspoint is established.

\[ * \] At devices with GPS this symbol shows that GPS coordinates are available.

\[ \text{} \] Integrated accumulators charge state.

\[ \text{●} \] This symbol appears when the MDE device is in Alpha Mode.

\[ \text{■} \] This symbol appears when the MDE device is in Overwrite Mode.
Navigation in Menus and Masks

Menus
By operating the following buttons the following functions are activated:

ESC Leaves the actual menu and returns to the next higher level in the menu hierarchy.

LEFT ARROW ➔ Moves backwards or forwards to the next Menu-Item

ENTER Concludes input or activates chosen menu-item, respectively the next sub menu.

Input Masks
With the operation of input masks during the collection of data the following modes are possible:

Non Focus No Cursor and no focus mark is displayed. The buttons activate the following function:

ENTER Change to Focus Mode.
ESC Change to Focus Mode.
LEFT ARROW ➔ Scroll through the data memory.

Focus No cursor is displayed, but a dotted line is displayed as a focus mark below the focused input field. The buttons activate the following functions:

ENTER Change to Edit Mode.
ESC Change to Non Focus Mode
LEFT ARROW ➔ Moves backwards or forwards to the next input field.

Edit The Cursor is displayed in the chosen input field. The buttons activate the following function:

ENTER Completes the input and changes to the next input mask. Completing the entry in the last input field, data will be stored.
ESC Change to Focus Mode
SHIFT MENU Change from Insert to Overwrite Mode and vice versa.
LEFT ARROW ➔ Move backward or forward along the line of characters within the input field.
Alpha Entry
In input fields accepting alpha input switching to alpha mode can be done by pressing key ↑. At the right bottom of the display the character ↑ will be shown. After that input must be performed as with a handy: With keys 0...9 (the keys are labeled with 3 alpha characters) the desired alpha character can be entered. Pressing a key the first time the first character appears. If the key is pressed again within 1 second the entered character will be overwritten by the second character and so on. If another key is pressed within 1 second the entered character will be overtaken.

Handling the Scanner
Hold the scanner in direction of a light surface and press the button SCAN. Now you should see the red laser beam reflected on the surface and the LED top right above the display should light up.

Hold the scanner in the direction of a bar code and press the button SCAN. Consider the following advices:
- Vary the scanner position so that the laser beam crosses the middle of the bar code and overlaps both sides. The larger the bar code is the further away from the bar code the scanner must be held. Position the scanner as near as possible to bar codes which are printed high density.
- Do not hold the scanner at a right angle above the bar code. In this position the laser beam (especially on smooth and strong reflective surfaces) can be directly reflected back into the scanner optic which could lead to difficulty in decoding the bar code or make it impossible to read it.

When the scanner has read the bar code
- a decoding beep can be heard (default setting: short double beep),
- the MDE devices LED positioned right above the display switches to green for a short time (default setting: 3 seconds)
- and the laser beam switches off.

If scanning of bar codes should be unsuccessful please read chapter Unsuccessful scanning.

What do the sounds mean
Observe the decoding beep (default setting: short double beep). This means that the bar code has been successfully read.

A longer sound (error sound) means that the chosen function respectively the chosen bar code is not permitted.
If nothing functions
In the case that all the previous instructions have been followed and still scanning of bar codes has been unsuccessful:
• Make sure that the accumulators are fully charged.
• Ensure that the MDE device is set up for the type of bar code you are trying to read.
• Ensure that the bar code you are trying to read is not damaged or not dirty. Examine the print quality of the bar codes.

Should all these tests have been performed and the bar codes can’t still be read, please contact your dealer for further information.

Activating Barcode Scanner or Transponder Reader

By means of options menu item Transponder switching from barcode to transponder capturing can be performed.

Client specific applications generally activate barcode scanner respectively transponder reader depending on the actual input fields properties, so that switching isn’t required by the user.

Scanning Barcodes

If there were transponder tags captured before with the Standard Program switching to barcode capturing by means of options menu item Transponder is required.

Hold down key SCAN and direct the scanner beam to the barcode to be read. Choose the destination between MDE device and barcode in that way that the scanner beam totally covers the barcode.

The MDE device responds to a successful scanning with the decoding beep and shows the scanned article number.
Reading Transponder Tags

If there were barcodes captured before with the Standard Program switching to transponder capturing by means of options menu item Transponder is required.

Hold the device so that the red bar code scanner window near to the transponder tag and press the button SCAN.

The MDE device responds to a successful reading with the decoding beep and shows the read transponder id.

Manual Entries

Enter article number and quantity by using the buttons 1...9. The cursor marks the position of the next digit to be entered.

Input of alpha characters can be done by switching to alpha mode by means of key ▲. Then alpha input can be done by means of keys 0...9. The concerning key must be pressed such often until the desired alpha character is shown. Alpha mode can be left by pressing key ▲ again.

Use button DEL to delete the digit left to the cursor.

By pressing button ENTER the article number entry is closed and the cursor jumps to the quantity field.

Pressing button ENTER during quantity input entry is closed and the record is stored. The input mask will be cleared for the entry of the next article number.

Deleting Characters

By pressing button DEL the character left to the cursor will be deleted.

Deleting the Input Field

By holding down the button ▲ and pressing button DEL at the same time the actual input field will be deleted.
Choosing an Input Field

To navigate around in the input mask button ESC must be pressed first in order to change into Focus Mode. The focused input field is marked by a dotted underline. Now it is possible to move around the input mask backward or forward by pressing the buttons ◄ or ► in order to go to the desired field. By pressing button ENTER changing to edit mode will be performed.

Closing Entry and storing the Record

If the minimum required characters (with Standard Program 1 character, with a client specific application according to the input field specification) were entered and key ENTER is pressed in the last input field, data entry will be closed and the record will be stored into data memory.

Afterwards the next empty input mask will be shown.
6. System Functions

Charging the integrated Accumulator

With the mains adapters DC-plug connected to the socket of the 9 pin SUBD connector and connecting the communications cable to the MDE device the accumulator will be charged and the MDE devices left upper LED lights up green. A full discharged accumulator requires a charging time of about 2 hours.

<table>
<thead>
<tr>
<th>LED</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>green</td>
<td>Communication cable connected to MDE device and mains adapter</td>
<td>Accumulator being charged</td>
</tr>
<tr>
<td>red</td>
<td>Error, accumulator is not being charged</td>
<td>Voltage on Mains adapter too high, examine mains adapter</td>
</tr>
<tr>
<td>Aus</td>
<td>Communication cable connected to MDE device and mains adapter</td>
<td>Charging of accumulator has been completed</td>
</tr>
</tbody>
</table>

The MDE device has a built-in intelligent charging component which constantly monitors the integrated Li-Ion accumulator capacity.

The accumulators charge level is shown on the display by the battery symbol. The battery symbol changes as the level of current changes.

![Battery Symbol](image)

The accumulator lifetime depends upon the number of charging cycles carried out during accumulator life. Therefore the accumulator should only be charged when the capacity has fallen below a certain level. Charging the accumulator should only be carried out when the symbol shows less than half-full.

The menu function Admin/Accu Capacity allows a more specific method of showing the accumulator charge level. Here the accumulator capacity is displayed in percent. Below a capacity of 30% the user is called upon to recharge the accumulator. At the latest, when the MDE devices signals “Battery Low! Press Enter Key“ the accumulator must be recharged.
**Hardware Reset**

A hardware reset with the various device types will be performed as follows:

- **LogiScan-800**: pressing keys 2, 5 and 7 at the same time.
- **LogiScan-600**: pressing keys F1, F3 and 9 at the same time.
- **LogiScan-1100**: pressing keys F1, F4 and 9 (older types: pressing keys 2, 5 and 7) at the same time.

After hardware reset the software will be restarted. One after another data memory, laser scanner, RFID module and DECT module will be tested. Data memory contents are not altered due to hardware reset.
System Menu

System level call from application level may be performed by holding down button ↑ and pressing button ESC at the same time. Normally this function is locked and has to be unlocked by menu function Admin/Settings/Lock Shift ESC. Another quick and easy method to call system level is to scan the following function code.

System Level Call

```
System Level Call

Start Admin Test Info

Start of the application.

Admin

System

- Power Setting power off and power save times
- Contrast Setting display contrast
- Volume Setting loudspeaker volume
- Keypad
  - Click Switching on/off button click
  - Lock Switching on/off keyboard lock
- Time
- Password Setting password

Disk

- Directory Display the data which is stored into Flash ROM. After a data file was selected one of the following operations can be performed with this date file:
  - Info Shows the data file information
  - Copy Copy the data file
  - Rename Change name of data file
  - Del Delete data file
```
<table>
<thead>
<tr>
<th><strong>Format</strong></th>
<th>Format the Flash ROM. <strong>Attention</strong>: All data files will be deleted.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DECT</strong></td>
<td>Call up the DECT Module IPUI</td>
</tr>
<tr>
<td><strong>PP-ID</strong></td>
<td>Call up/Setting the assigned DECT module RFIDs</td>
</tr>
<tr>
<td><strong>FP-ID</strong></td>
<td>Performing the Subscription On Air procedure</td>
</tr>
<tr>
<td><strong>Subscript</strong></td>
<td>Displaying the signal strength (RSS - Radio Signal Strength) and link quality (RLQ - Radio Link Quality) of the actual DECT connection.</td>
</tr>
<tr>
<td><strong>Signal</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Test</strong></td>
<td>Calling the barcode test/transponder program. Switching from bar code to transponder is made with key <strong>SCAN</strong>.</td>
</tr>
<tr>
<td><strong>CODE/RF-ID</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Info</strong></td>
<td>Display the operating system information.</td>
</tr>
</tbody>
</table>

**System Error Message „Battery low!“**

- At the first notification the accumulator has left about 20% capacity.
- At the second notification the accumulator has left about 10% capacity.
- At the third notification the accumulator has left 0% capacity.
  The device switches off and cannot be switched back on again.

The present operation should be closed and the MDE device accumulator should be charged.
7. Battery and SIM Card Changing

LogiScan-1100

The LogiScan-1100 is equipped with a changeable accumulator. The SIM card (only devices with GPRS option) resides beneath the accumulator. To change the accumulator respectively to insert the SIM card the cover of the accumulator case respectively the hand grip has to be removed. Proceed as follows:

Loosen the battery cover screw with coin or screwdriver.

Push the battery cover until it stops in the direction of arrow and lift off.

Lift and remove the battery on the transparent flap.

Slide the SIM card lock down and open it.
Inserting the SIM card, open the SIM card lock and push upwards.

When inserting the battery its contact surfaces must point to the contact pins in the battery compartment.

Attach as shown battery cover and slide in direction of the arrow until it stops.

Tighten battery cover screw with a coin or screwdriver. Make sure that the screw is not twisted.

**HINT:** After removing and inserting the accumulator the LCD’s charging control symbol shows about half the accumulator capacity independently from the charging state of the inserted accumulator. Only after completing the next charging cycle or when reaching the „Battery Low Level“ the charging control symbol shows the correct charging state of the inserted accumulator.
LogiScan-600/12

Loosen the battery cover screw with coin or screwdriver.

Push the battery cover until it stops in the direction of arrow and lift off.

Lift and remove the battery on the transparent plate.

Rotate the SIM card lock to the left and open the SIM card slot.

Insert SIM card, close the SIM card slot and close SIM card lock.

When inserting the battery its contact surfaces must point to the contact pins in the battery compartment.
Battery and SIM Card Changing

**HINT**: After removing and inserting the accumulator the LCD’s charging control symbol shows about half the accumulator capacity independently from the charging state of the inserted accumulator. Only after completing the next charging cycle or when reaching the „Battery Low Level“ the charging control symbol shows the correct charging state of the inserted accumulator.

Attach as shown battery cover and slide in direction of the arrow until it stops.

Tighten battery cover screw with a coin or screwdriver. Make sure that the screw is not twisted.
8. Software Update

Devices, which are connected via RS-232 resp. RS-232/USB-Adapter

► For a software update it is necessary that the program M16START.EXE is installed and the file extension „MOT“ is linked to this program.
► The black 9-pin Sub-D plug on the communication cable must be connected to COM1 of the PC.
► The flat connector of the communication cable has to be connected to the MDE device, respectively the MDE device has to be put into the docking station.
► After double clicking the system software data file 01005vvv.MOT (contains system and application software) or the application data file 03000vvv.MOT (contains only application software) the program M16START.EXE will be started.
► If the download don’t start automatically: Release a software reset by pressing button SHIFT ESC 2 times or release a hardware reset (refer to chapter System Functions/Hardware Reset). After that M16Start will start the software update.
► If M16Start shows the error message „Bad Security Key!“ menu function Security/Key Input must be selected and the key 8602 must be entered to force M16Start to start the software update. After that a hardware reset must be released.
► Confirm the data transfer notified end from M16START by pressing ENTER. M16START is then closed automatically.

Devices, which are connected directly via USB (i.e. LogiScan-1100)

► For a software update it is required that the programs MTWIN4.EXE and M16Start.EXE are installed and MTWIN-4 was started.
► The device has to be connected to the PC with the appropriate USB cable.
► After execution of MTWIN-4 menu function „Software Update“ and selection of the desired MOT file M16Start will be called and the download starts usually automatically.
► If the download don’t start automatically: Release a software reset by pressing button SHIFT ESC 2 times or release a hardware reset (refer to chapter System Functions/Hardware Reset). After that M16Start will start the software update.
► If M16Start shows the error message „Bad Security Key!“ menu function Security/Key Input must be selected and the key 8602 must be entered to force M16Start to start the software update. After that a hardware reset must be released.
► After the download is terminated M16START closes automatically.
9. Error Correction – What to do if ...

... an application can’t be loaded
► Note the original content of SKY file.
► Store 8602 in SKY file and repeat software update.
► After software update a hardware reset has to be performed.
► Store original content into SKY file.

... the scanner doesn’t function or negative record numbers are shown in the status line
► Perform hardware reset
► When „Database: init.“ is shown, press key SHIFT
► After „Protected Mode!“ is shown format data flash by means of menu function Admin/Disk/Format.

... Bar codes were read badly
► The screen in front of the MDE device is dirty or scratched,
► Bar code has been printed badly, is damaged or dirty.
► Too many bar codes have been activated. Activate only the Bar codes which are required.

... Serial Communication is erroneous
► The serial Interface parameters (baud rate, parity bit) are set up incorrectly either on the MDE device, on the PC or on both. The standard settings are: 19.200 Bd, 8 Bit, no Parity, 1 Stop Bit.

... Serial Communication does not function
• Mains plug of the communication adaptor isn’t plugged to 220V mains
► Mains plug of the communication adaptor isn’t plugged to the device
► Communication adaptor not correctly connected to PC
► Serial Interface of the MDE device or the PC defect.

... a DECT Scanner doesn’t show a lock symbol in the status line
► WinDECT has to be started. The parameters in file WinDECT.ini have to be set correctly for the concerning Accesspoint (serial port or IP address).
► The LED „DTR“ of the concerning Accesspoint must flash.
► If these demands are met the concerning MDE device has to be registered to the Accesspoint by means of utility DECTOR II.
10. Accessories

Cradle for LogiScan-600/800

Deals for data communication and charging device at the same time.
Interfaces: RS-232, USB or LAN
Charging time: about 2 hours

Cradle for LogiScan-1100

Deals for data communication and charging device at the same time.
Interfaces: RS-232, USB or LAN/WLAN
Ladezeit: about 3 hours
Truck Charging Station for LogiScan-600/800

The MDE device will be locked to the charging station.
Charging Time: about 2 hours

Charging Station for LogiScan-600/800

Wall or table assembly
Charging Time: about 2 hours

Belt Holder for LogiScan-600/800

Adjoining the belt holder for the LogiScan-600 is shown,
Accesspoint for DECT RF Network

RF Module: MD-32 Module
Interfaces: RS-232, LAN

Connection of up to 16 MDE devices per Accesspoint possible
11. Recycling Orders

Disposal of Batteries

Duty to inform in accordance with battery legislation (BattG)

Batteries and rechargeable batteries do not belong in household waste. The consumer is obliged to dispose of no longer used batteries properly. Let please dispose of them only through retailers or battery collection points. Hereby you make an actual contribution to environmental protection. Since 2009, the German battery legislation obligates all citizens to dispose of used batteries exclusively via the trade or specially equipped collection points (statutory obligation to return). Retailers and manufacturers are obliged to take back these batteries free of charge and properly and batteries to be recycled or disposed of as hazardous waste (legal obligation). Batteries may only be disposed in the discharged state at the return points, and / or (e.g. by isolating the poles with adhesive strips), precaution against short-circuits has to be taken.

The built-in Li-Polymer battery of this device is marked with the adjacent Disposal characters (consisting of a crossed out dustbin and the type of batteries used). The symbols shown on the batteries have the following meaning:

- Battery must not be placed in household waste
- Battery contains more than 0.004 percent lead
- Battery contains more than 0.002 percent cadmium
- Battery contains more than 0.0005 percent of mercury

Legal notice for waste disposal

In accordance with the European legislation, it is forbidden to dispose of electrical and electronic equipment in the domestic waste. The aitronic GmbH takes back all of it placed on the market or sold electronic devices and accessories. So environmentally sound disposal is ensured.
12. Standard Application 03000

If there was no client order for a specific application the MDE device will contain this standard application.

Initializations following Cold Start

After a device cold start date and time must be checked and altered if necessary:

After entering date and time mask 10 for barcode capturing or mask 20 for transponder reading will be shown on the display.

Calling System Level

With function Shift ESC the application will be terminated and system level will be called.

This function can be locked with menu function Admin/Settings/Lock Shift ESC.

In case of a password was set this must be entered when releasing function Shift ESC. At this the setting Admin/Settings/Lock Shift ESC wouldn’t be regarded.
Menu: Options

By pressing button **MENU** the menu bar appears. Now the menu item **Options** can be chosen by pressing button ⬅ or ➤. By pressing button **ENTER** the options list can now be opened.

![Options Menu]

**Quantity Field**
The quantity field in the input mask can be selected and deselected.

When this option is selected, records which have been collected without entering the quantity, “1” will be added to the record when transmitting the data memory.

When this option is deselected, records containing a quantity will be cut off when data transfer is performed.

**Field Separator**
The field separator has to be entered in hex code and deals as separator between the data fields when transmitting the data. Default setting is the semicolon (hex 3B).

**Time Stamp**
By selected this option a time stamp (record store time) will be added to each record when transferring the data file.

**Double Input**
When this option deselected, it isn’t possible to scan or to enter manually two identical article numbers directly one after another.
Add up Quantity
When this option selected the quantity (only in case of selected quantity field) will be incremented if the same barcode is scanned one after another without entering with key ENTER.

Transponder Options
Calling sub menu Transponder Options

Bluetooth Commun.
If this option is selected all captured data are sent immediately to an Bluetooth device to which a connection exists. How the Bluetooth connection can be setup or changed is described in chapter Bluetooth Communication on page 12-30.

MTWin via Bluetooth
If this option is selected Bluetooth deals as cable replacement and the communication with the MDE device will be done by means of MTWin.

Bluetooth/Master
If this option is selected the MDE device operates as a Bluetooth master, otherwise as a slave.
Sub Menu: Transponder Options

Read Transponder lesen
If this option isn’t selected mask 10 will be shown for scanning barcodes after leaving the options menu.

If this option is selected mask 20 will be shown for reading transponders after leaving the options menu.

Write Transponder
If this option isn’t selected all transponder tags were treated as read only transponder, that means that only the transponder id. will be read and stored.

If this option is selected with writeable transponders the data will be read and shown in Mask 21.
**Menu: Admin**

After pressing key **MENU** the menu bar is shown. Now menu item **Admin** may be selected by means of keys ‹ and ›. When there was a password set with menu function **Admin/Password**, this must be entered after pressing key **ENTER**. If no password was set menu **Admin** will be opened directly.

Please consider: In case of selecting a non implemented function (i.e. because the appropriate hardware is not available)

```
Please confirm
Not implemented!
```

will be shown.

**Accu Capacity**
Checking the integrated accumulator capacity.

**Date/Time**
Checking and correcting date and time.

**Password**
Entering a password. This deals for protection against unauthorized access to the **Options** and **Admin** menu.
Erase Data
Manually erasing of the captured data.

Language
Selecting the language for the displayed texts.

Keyboard Settings
Calling sub menu Keyboard Settings

DECT Setup
Calling sub menu DECT Setup

GPRS Setup
Calling the GPRS Setup.

WLAN Setup
Calling the WLAN Setup.

Rx Quality
Showing the GPRS resp. WLAN signal level and link quality in percent. Function can be terminated by pressing key ESC.

GPS Settings
Calling sub menu GPS Settings.

GPS Test
Calling the GPS Test (Mask 5).

Bluetooth Setup
Displays the available Bluetooth devices (see chapter Bluetooth Communication on page 12-30).

If the Bluetooth communication with menu Options is disabled, will be displayed and the function can’t be executed.
Sub Menu: Keyboard Settings

Keyboard Lock
Locking the keyboard. Only key ON/OFF, MENU, SCAN and ENTER are left unlocked.

Lock Shift ESC
Locking function Shift ESC (returning to system level).
Sub Menu: DECT Setup

**DECT Communication**
When this option is selected the captured data will be sent via DECT RF. Received answers will be either displayed as info (window will close automatically itself after 2 seconds) or as message (must be confirmed manually). In case of no RF connection the captured data will be stored in data memory. When RF connection is established again data memory will be sent in background via RF.

**HDLC Protocol**
When this option is selected DECT communication is performed with HDLC Protocol.

**VT100 Emulation**
The MDE device will operate in VT100 Mode. When activating VT100 Mode both options Host Polling and Tx Serial No. will be activated too because this is required for VT100 emulation.

**Host Polling**
This option is required for VT100 emulation. By sending „empty records“ the PC application will be able to send data without having received a record before.

**Tx Serial No.**
This option is required for VT100 Mode and for communication with 16 virtual COMs and WinDECT.

**Wait for Response**
When this option is selected the MDE device will wait for a response after having sent a record. During this waiting time „Waiting for Response...“ will be displayed and further article numbers may be not entered.
GPRS Setup

PIN/SIM Card
4 digit PIN for SIM card installed in the MDE device.

APN
1...40 digit GPRS Accesspoint Name.

User
1...40 digit user name, entry is optional.

Password
1...11 digit password. Entry is optional. After having confirmed the entry with ENTER mask 2 will be displayed.

The fields APN, User and Password for the specified providers can be taken from the following list by pressing F1 (possibly some times):

<table>
<thead>
<tr>
<th>Netz-betreiber</th>
<th>APN</th>
<th>User</th>
<th>Password</th>
<th>SMS-Service-Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Plus</td>
<td>internet.eplus.de</td>
<td>eplus</td>
<td></td>
<td>+491770610000</td>
</tr>
<tr>
<td>T-Mobile</td>
<td>internet.t-dl.de</td>
<td>t-mobile</td>
<td>tm</td>
<td>+491710760000</td>
</tr>
<tr>
<td>Vodafone</td>
<td>event.vodafone.de</td>
<td></td>
<td></td>
<td>+491722270000</td>
</tr>
</tbody>
</table>
GPRS Setup
Mail Server ___________
Port ______
SMSC ___________
SMSR ___________

---statuszeile-----

Mask 2

Mail Server
1...40 digit Mail Server Name.

Port 1...5 digit Port No. After having confirmed the entry with ENTER mask 3 will be displayed.

SMSC (Short Message Service Center)
1...20 digit telephone no. of the Short Message Service Center.

SMSR (SMS Receiver)
1...20 digit telephone no. of SMS receiver.

GPRS Setup
Sender ___________
Password ___________
Subject ___________
Receiver ___________

---statuszeile-----

Mask 3

Sender
1...40 digit mail address of sender

Password
1...11 digit password fir Sender Mail Account.

Subject
1...40 digit Subject of mail to send.

Receiver
1...40 digit mail address of receiver. After having confirmed the entry with ENTER mask 1 will be displayed again.
**FTP Server**
1...40 digit FTP Server Address

**User**
1...20 digit user name

**Password**
1...11 digit password

**Transm. per**
Selecting the file transmission mode. „FTP“ (default), „Mail“ and „SMS“ can be selected.

The GPRS setup masks 1 to 4 can be left at each time by pressing ESC. After pressing ESC the following mask is shown

<table>
<thead>
<tr>
<th>Key</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTER</td>
<td>The settings are <strong>stored</strong> permanently in the User Parameter Area and are preserved also in the case of cold start or formatting the Flash ROM. A return to the previous mask is performed.</td>
</tr>
<tr>
<td>ESC</td>
<td>The settings are <strong>not</strong> stored and a return to the previous mask is performed.</td>
</tr>
</tbody>
</table>
WLAN Setup

**APN** 1...40 digit WLAN Accesspoint Name.

**Password**
1...11 digit password, entry is optional. After having confirmed the entry with **ENTER** mask 2 will be displayed.

**Mail Server**
1...40 digit Mail Server Name.

**Sender**
1...40 digit mail address of sender

**Password**
1...11 digit password for sender mail account.

**Subject**
1...40 digit subject of mail to be sent.

**Receiver**
1...40 digit mail address of receiver. After having confirmed the entry with **ENTER** mask 4 will be displayed.
WLAN Setup

FTP Server
User
Password
Senden per

----statuszeile-----

Mask 4

FTP-Server
1...40 digit FTP server address

User
1...20 digit user name

Password
1...11 digit password

Senden per
Selecting the file transmission mode. „FTP“ (default) and „Mail“ can be selected.

The WLAN setup masks 1 to 4 can be left at each time by pressing ESC. After pressing ESC the following mask is shown

Key Function

ENTER
The settings are stored permanently in the User Parameter Area and are preserved also in the case of cold start or formatting the Flash ROM. A return to the previous mask is performed.

ESC
The settings are not stored and a return to the previous mask is performed.
Submenü: GPS Settings

Store Coord.
If this option is selected each record which is stored together with the actual GPS coordinates as described in the following manner.

If the actual GPS coordinates are available when the record is stored they are stored directly together with the record. If the actual GPS coordinates are not available but are received from the GPS module within the next 2 seconds they are stored together with the record. Otherwise the record will be stored without GPS coordinates and data capturing may be continued.

The application communicates permanently with the integrated GPS module. This communication will only be interrupted by scanning a barcode or a transponder tag. If the GPS module returns actual coordinates, the records in data memory beginning with the last record are checked for GPS coordinates. Records which were stored without GPS coordinates are added with the actual GPS coordinates and the time stamp. This procedure will be continued until a time difference of greater than 3 minutes or a record which was stored with GPS coordinates will be found.
GPS Test

| Fix:     | nn             | Number of identified GPS satellites
| bb-cc   |                | No. of first identified satellite
| dd-ee   |                | Signal strength of first identified satellite in db
| Lat:    | gggg.mmmm      | Latitude with dimension ggg.mm.mmm
|         | ggg            | Degree
|         | mm.mmm         | arc minutes with decimals
| Lng:    | ggggg.mmmm     | Longitude with dimension ggg.mm.mmm
|         | gg             | Degree
|         | mm.mmm         | arc minutes with decimals
| UTC:    | hhmss.nnn      | Universal Time Coordinated with dimension hhmss.nnn

Key Function

| F1 | Activating the GPS module |
| F2 | Deactivating the GPS module |
| F3 | Resetting the GPS module |
| ESC | Leaving the GPS Test and showing the mask of the standard program which actually is parameterized. |
Menü: Info

By pressing key **MENU** the menu bar will be displayed. Now menu item **Info** may be selected by means of keys  and . After pressing the key **ENTER** the Info window will be shown.

![Info window](image)

<table>
<thead>
<tr>
<th>S/N</th>
<th>6-digit device number</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS</td>
<td>Name and version of system software</td>
</tr>
<tr>
<td>AP</td>
<td>Name and version of application</td>
</tr>
<tr>
<td>n..n</td>
<td>Options marking. This can be put together with following alpha characters:</td>
</tr>
<tr>
<td>d</td>
<td>The application contains the required software module for <strong>DECT</strong> radio communication</td>
</tr>
<tr>
<td>f</td>
<td>The application contains the required software module for <strong>WLAN</strong> data transmission (WiFi)</td>
</tr>
<tr>
<td>g</td>
<td>The application contains the required software module for <strong>GPRS</strong> data transmission</td>
</tr>
<tr>
<td>l</td>
<td>The application contains the required software module for the <strong>Logging</strong> function</td>
</tr>
<tr>
<td>m</td>
<td>The application contains the required software module for <strong>MTWIN</strong> data transmission</td>
</tr>
<tr>
<td>p</td>
<td>The application contains the required software module for <strong>GPS</strong></td>
</tr>
<tr>
<td>s</td>
<td>The application contains the required software module for the <strong>GPRS resp. WLAN Setup</strong></td>
</tr>
<tr>
<td>w</td>
<td>The application contains the required software module for Transponder R/W functionality. Without this module (in case of an integrated transponder module) only the reading of the transponder id. is supported.</td>
</tr>
</tbody>
</table>
Loading the GPRS/WLAN Parameter Table

After starting MTWin on the connected PC and executing function **Load table**

![Table Load Interface](image)

will be shown. After having loaded the table, mask 8 is shown again. After pressing the key **ENTER** mask 10 resp. mask 20 (depending on the selected option) will be shown.

The following page shows an example for the GPRS/WLAN parameter table. Please notice:

- All unknown parameter names resp. all lines beginning with „//“ are interpreted as comment
- Spaces are only permitted within parameter strings (on the right side of character „=“
- Parameter names are not case sensitive
- Parameters which are not referred by provided parameter names are not changed.
03000 Parameter<CR>
GPRS_PIN_SIM=pin<CR>
GPRS_APN=Accesspoint-name<CR>
GPRS_APN_User=Accesspoint-user<CR>
GPRS_APN_PW=<CR>
GPRS_MailServerAdr=mail-server-adresse<CR>
GPRS_MailServerPort=mail-server-port<CR>
GPRS_SMSC=sms-service-center<CR>
GPRS_SMSR=sms-receiver<CR>
GPRS_MailSender=mail-sender<CR>
GPRS_MailSenderPW=password<CR>
GPRS_MailSubject=mail-subject<CR>
GPRS_MailReceiver=mail-receiver<CR>
GPRS_FTPServerName=ftp-server-name<CR>
GPRS_FTPUserName=ftp-user-password<CR>
GPRS_FTPPassword=ftp-password<CR>
// GPRS_DUE_Mode: 0 - FTP, 1 - Mail, 2 - SMS
GPRS_DUE_Mode=n<CR>
WLAN_APN=aoa2wlan<CR>
WLAN_APN_PW=wlan-password<CR>
WLAN_MailServerAdr=mail-server-adresse<CR>
WLAN_MailSender=mail-sender<CR>
WLAN_MailSenderPW=mail-sender-password<CR>
WLAN_MailSubject=mail-subject<CR>
WLAN_MailReceiver=mail-receiver<CR>
WLAN_FTPServerName=ftp-server-adresse<CR>
WLAN_FTPUserName=ftp-user-name<CR>
WLAN_FTPPassword=ftp-password<CR>
// WLAN_DUE_Mode: 0 - FTP, 1 - Mail, 2 - SMS<CR>
WLAN_DUE_Mode=n<CR>
Barcode Capturing

Following cold start and initialization the standard program mask will be shown:

<table>
<thead>
<tr>
<th>Data Capturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article No.</td>
</tr>
<tr>
<td>Quantity</td>
</tr>
<tr>
<td>----status line-----</td>
</tr>
</tbody>
</table>

Mask 10

In field **Article No.** a 1...40 digit article number can be scanned or entered manually. In the input field **Quantity** a 1...10 digit input can be entered manually.

**Article No.**

The **Article No.** can be scanned as a 1...40 digit barcode or manually be entered. In case of option **Options/Double Input** selected, several identical article numbers can be captured. Otherwise the error message „Already captured!“ will be shown.

When more than 20 characters are entered scrolling will be made, the last entered 20 characters are displayed. When leaving the article number field the left part of the article number will be shown.

**Quantity**

The quantity field will only be shown when option **Options/Quantity Field** is selected.

After entering the article number the quantity field is preset with „1“. When the next article number is scanned the record will be stored with quantity „1“. If the same article number was scanned again and option **Options/Add up Quantity** is selected the quantity will be incremented by 1.

Otherwise the preset quantity can be overwritten by making a 1...10 digit manually entry.

After leaving the quantity field with key **ENTER** or scanning the next barcode the record is stored with a time stamp. The time stamp will only be transmitted if option **Time Stamp** is selected.
Reading/Writing Transponder

When selecting option Transponder

![Read Transponder](image1)

will be shown. By positioning the scanner screen (behind it there is the transponder modules antenna) near to a transponder tag and pressing key **SCAN** the transponder id. and the first 24 data bytes will be read. In case of an error

![Transponder lesen](image2)

will be shown. This message must be confirmed with key **ENTER** and reading must be repeated. The data bytes are interpreted as follows:

<table>
<thead>
<tr>
<th>Byte</th>
<th>Field Name</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>0...9</td>
<td>Date</td>
<td>tt.mm.jjjj</td>
</tr>
<tr>
<td>10...11</td>
<td>Programming Counter</td>
<td>zz</td>
</tr>
<tr>
<td>12...23</td>
<td>Text</td>
<td>tt...tt</td>
</tr>
</tbody>
</table>

The transponder id. and transponder data will be shown:
If the field **Date** doesn't contain a valid date "--.--.--" will be shown, the programming counter is set to "0" and an empty text field is displayed. Otherwise the transponder data are displayed. Now the field **Text** can be altered as desired.

After pressing **ENTER**

will be shown. By positioning the scanner near to a transponder tag read before and pressing key **SCAN** the transponder tag will be programmed with the displayed data. If an error occurs

will be shown. After confirming with key **ENTER** programming must be repeated. The programmed data will also be stored into the scanners data memory. Successful programming of the transponder will be shown for about 2 seconds with
After that the empty mask 20 will be shown.

**Displaying Records**

When an input mask is clear, it is possible to scroll through the memory bank backwards and forwards by pressing the button ⬇ or ⬆.

By pressing the button ↑ and ⬇ or ⬆ at the same time, it is possible to jump to the first or last record.

Should the input mask already contain data, the ESC button must first be pressed twice in the Non-Focus-Mode

**Modifying a Record**

In order to alter a record it first must be displayed on the screen.

After pressing key ENTER the first edit field is focused. Now select which field is to be edited by pressing the buttons ⬇ or ⬆. By pressing the button ENTER, the cursor appears and the data can now be altered.

**Deleting Records**

In order to delete a record it first must be brought forward to the display screen. Once the record is displayed it can be deleted by pressing the button DEL.

If the displayed record wasn’t deleted the function "Delete Record? ENTER=yes" is displayed. By pressing button ENTER the record is deleted. Each other key cancels the function.
Message „Data Memory full!“

The data flash is full. The data has to be transmitted and the data memory has to be erased.

**Cable bound Data Transmission**

The **black** 9-pole Sub-D-connector of the communication cable has to be connected to the appropriate interface of the PC (default MTWin setting: COM1). The mains adapter has to be connected to the **black** 9 pin Sub-D-connector and to 220 V mains.

The data transfer is carried out by MTWin. For data transfer to be carried out the mask of the standard program must be displayed.

After connecting the communication cable (if the communication cable is already connected, it first must be disconnected) the data transfer follows either automatically called up by means of MTWin or the data will be marked as “transmitted” (depending on appropriate MTWIN setting). During the data transfer a progress bar shows the data transfer progression.

![Data Transmission](image)

After a successful data transfer the data memory is deleted by MTWin and the input mask from the standard program will be displayed.

The transferred records have the following data format:
%STX-ssssss/rrrrr/tt.mm.jjjj/hh:mm:ss<CR><LF>
<timestamp>; aa..aa; mm..mm; x..x; y..y><CR><LF>
<timestamp>; aa..aa; mm..mm; x..x; y..y><CR><LF>
<timestamp>; aa..aa; mm..mm; x..x; y..y><CR><LF>
<timestamp>; aa..aa; mm..mm; x..x; y..y><CR><LF>
<timestamp>; aa..aa; mm..mm; x..x; y..y><CR><LF>
<timestamp>; aa..aa; mm..mm; x..x; y..y><CR><LF>
<timestamp>; ii..ii; tt.mm.jjjj; zz; tt..tt; x..x; y..y><CR><LF>
<timestamp>; ii..ii; tt.mm.jjjj; zz; tt..tt; x..x; y..y><CR><LF>
<timestamp>; ii..ii; tt.mm.jjjj; zz; tt..tt; x..x; y..y><CR><LF>
<timestamp>; ii..ii; tt.mm.jjjj; zz; tt..tt; x..x; y..y><CR><LF>
%ETX-cccc<CR><LF>

rrrrr  Number of following records,
ssssss  Serial number of device (see type label),
tt.mm.jjjj  Date of data transfer,
     hh:mm:ss  Time of data transfer,
     cccc  16-Bit-Checksum in hex format. The checksum is calculated in the following way: All printable ASCII characters (from hex code $20 to $7E inclusive) from "%STX" to "%%ETX-" inclusively are added up.

timestamp  Time stamp of data collected in format tt.mm.jjj hh:mm:ss, can be selected/deselected via option parameter Options/Timestamp.
aa..aa  1...20 digit article number
mm..mm  1...7 digit quantity, can be selected/deselected via option parameter Options/Quant. Field.
ii..ii  Transponder IdentifiCation
tt.mm.jjjj  Date stored within the transponder
zz  Programming counter stored within the transponder, 1...2 digit
tt..tt  Text stored within the transponder, 1...12 digit
     x..x  GPS x coordinate (Longitude) with format gggm.mmmm
            ggg  Degrees
            mm.mmmm  Minutes with decimal digits
     y..y  GPS y coordinate (Latitude) with format ggm.mmmm
            gg  Degrees
            mm.mmmm  Minutes with decimal digits
Storing of GPS coordinates may be switched on/of by means of menu function Admin/GPS Settings/Store Coord.
**DECT Data Transmission**

If the option „Background Transm.“ (menu: DECT Settings) is not selected, the captured data are collected in data memory and may be sent as complete file via DECT radio.

After starting the DECT data transmission with key F1 the query

![Data Capturing]

is shown. After confirming with ENTER the connection will be established. During the data transmission a progress bar will be shown.

![Data Transmission]

If there is break of the data transmission

![Data Capturing]

will be shown. After confirming the error message with key ENTER the data transmission has to be repeated.
After a successful data transmission the data memory will be erased and for about 2 seconds

will be shown. After that the entry mask of the selected standard program will be shown.
GPRS or WLAN Data Transmission

Depending on the setting „Transmit per“ in the „GPRS Setup“ resp. „WLAN Setup“ the data transmission is done either per FTP or per Mail with the captured data appended or in case of a single record per SMS (only with GPRS).

The name of the transmitted file with the data captured by the MDE device is built of the MDE devices serial number and the data transmission time in following format:

ssssss_jjjjjmmmttt_hhmmss.TXT

- **ssssss**: MDE devices serial number
- **jjjjmmmttt**: Year/Month/Day
- **hhmmss**: Hour/Minute/Second

After pressing function key F1

![Data Capturing](image)

will be shown. After confirming with key **ENTER** mask 20 will be shown. The function may be cancelled by pressing **ESC**.

![mode Transmission](image)

The transmission mode will be displayed in the title line (mode= “FTP“, “Mail“ or “SMS“). The status line shows the signal quality **SQ** in percent.
The data transmission may be cancelled at each time by holding down key ↑ and pressing key DEL.

If there is an error during data transmission the connection

![mode Transmission](image)

will be shown. The description of the displayed errors can be found in

- for GPRS in document „AT Command Set for SAGEM HiLo Module.PDF“

After confirming the error message with key ENTER the entry mask of the selected standard program will be shown.

If the data transmission was performed successfully

![mode Transmission](image)

will be shown and the data memory will be erased. After pressing ESC or ENTER the entry mask of the selected standard program will be shown.
Activating the SIM Card after PIN Error

If a PIN error occurs during data transmission mask 30 will be shown.

![Mask 30]

Entering of a valid PIN is required. An invalid entry will be replied with the error message „Please confirm – Invalid PIN!“.

If an invalid PIN was used 3 times overall (either for data transmission or when entering it in mask 30), mask 31 will be shown.

![Mask 31]

Entering PUK1 resp. PUK2 is required. An invalid entry will be replied with error message „Please confirm – Invalid PINn!“. After entering the PUK the entering of an new PIN is required. After that mask 12 will be shown and the data transmission has to be started again.
Bluetooth Communication

If option „Bluetooth Comm.“ (menu Options) is selected, „Bluetooth — Connecting ...“ will be shown, when the device is powered on.

If a Bluetooth device was already assigned to the MDE device before this device will be connected to and the data capturing mask (according to settings in menu Options) will be shown.

If no Bluetooth device was already assigned to the MDE device before, the available Bluetooth devices will be displayed.

<table>
<thead>
<tr>
<th>Key</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC</td>
<td>Leaves the function. This is only possible if a Bluetooth device was already assigned to before and the MDE device is connected to that.</td>
</tr>
<tr>
<td>DEL</td>
<td>Deletes list of Bluetooth devices, searches Bluetooth devices again and displays them.</td>
</tr>
<tr>
<td>▼</td>
<td>Displays previous Bluetooth devices</td>
</tr>
<tr>
<td>▶</td>
<td>Displays next Bluetooth devices</td>
</tr>
<tr>
<td>ENTER</td>
<td>Makes a connection to displayed Bluetooth device.</td>
</tr>
</tbody>
</table>
Deleting the Data Memory manually

When MTWin parameter Options/Transmission/After Data/Reception/Delete Data Memory is chosen data memory will be deleted after data transfer by the aid of MTWin.

If MTWin parameter Option/Transmission/After Data Reception/Set Data Transmission Lock) is chosen deletion of data memory must be carried out by the use of the Admin menu. If a password was set it must be entered when selecting the Admin menu.

By entering the correct password the Admin menu is shown:
After performing function Erase Data with button ENTER the following request is asked:

By confirming with button ENTER the data memory is deleted. Each other button cancels this function.
Logging

Assumed the application contains the concerning software module (refer to menu: Info), following events are logged with time stamp in the data file and may be inspected together with the captured data:

<table>
<thead>
<tr>
<th>Log Text</th>
<th>Explication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power on</td>
<td>Device switched off</td>
</tr>
<tr>
<td>Power off</td>
<td>Device switched on</td>
</tr>
<tr>
<td>GPS Fix</td>
<td>GPS coordinates are available</td>
</tr>
<tr>
<td>GPS Fix lost</td>
<td>GPS coordinates no longer available</td>
</tr>
<tr>
<td>Store GPS Coordinates</td>
<td>Record which were stored without GPS coordinates were added afterwards with GPS coordinates and time stamp</td>
</tr>
</tbody>
</table>

By means of the following function code

\[\text{Tx Log on/off}\]

it can be switched between „Tx Log on“ and „Tx Log off“. The new state will be shown at the display, i.e.:

![Data Capturing](image)

Tx Log on Output of log information together with the data
Tx Log off No output of log information (default).

After data transmission it will be switched to „Tx Log off“. 
Test Barcodes

Code 39

CODE-39

01234

UPC

123456789012

506789123450

EAN

23456785

23456789012345

Code 2/5 int.

4567890

0122344556677
Code 2/5 std.

Code 128

abc-ABC-123