

# Enhanced Laser and Imager Scanner Application („ELISA“)



(Version 2.21)

March 15, 2012

# Contents

<b>CHAPTER 1</b>	<b>OPERATION ENVIRONMENT .....</b>	<b>- 6 -</b>
1.1	APPLICABLE HANDHELD TERMINALS .....	- 6 -
1.2	OS .....	- 6 -
1.3	SUPPLIED FILES .....	- 6 -
1.4	STEPS TO START UP .....	- 6 -
<b>CHAPTER 2</b>	<b>INSTALLATION .....</b>	<b>- 7 -</b>
2.1	MANUAL INSTALLATION (CAB FILE) .....	- 7 -
2.2	AUTOMATIC INSTALLATION (DESKTOP INSTALLER FILE) .....	- 8 -
<b>CHAPTER 3</b>	<b>APPLICATION OVERVIEW.....</b>	<b>- 9 -</b>
3.1	PURPOSE .....	- 9 -
3.2	CAPABILITIES .....	- 9 -
3.3	COMPATIBILITY .....	- 9 -
3.4	REQUIREMENTS .....	- 9 -
3.5	OPERATING SYSTEM INTEGRATION .....	- 10 -
3.5.1	Start Menu Integration.....	- 10 -
3.5.2	Control Panel Integration.....	- 11 -
3.5.3	Desktop Tray Icon Integration.....	- 12 -
3.5.4	Windows Phone Today Screen settings.....	- 13 -
<b>CHAPTER 4</b>	<b>OPERATION.....</b>	<b>- 14 -</b>
4.1	APPLICATION START .....	- 14 -
4.2	CONFIGURATION.....	- 14 -
4.3	RUN TIME BEHAVIOUR .....	- 14 -
<b>CHAPTER 5</b>	<b>SETTINGS.....</b>	<b>- 15 -</b>
5.1	FILTER SETTINGS.....	- 15 -
5.1.1	Strip first „n“ Characters .....	- 16 -
5.1.2	Strip last „n“ Characters.....	- 16 -
5.1.3	Character No. „m“ to „n“ only.....	- 17 -
5.1.4	Strip Leading Characters.....	- 17 -
5.1.5	Strip Trailing Characters.....	- 18 -
5.1.6	Validate Content .....	- 18 -
5.1.7	Modify Case .....	- 19 -
5.1.8	Preamble.....	- 19 -
5.1.9	Postamble.....	- 20 -
5.1.10	Escape Sequences .....	- 20 -
5.1.11	Code / Symbology Identifiers .....	- 21 -
5.1.12	GSI-128 Barcodes on 1D Laser Scanner devices.....	- 21 -
5.1.13	Replace EAN-128 / GSI-128 FNC1 Character.....	- 21 -
5.1.14	Set Default Values.....	- 21 -
5.2	BULK MODE SETTINGS .....	- 22 -
5.2.1	Enable Bulk Mode.....	- 23 -
5.2.2	Bulk Mode activation .....	- 23 -
5.2.3	Bulk Scanning Limit.....	- 23 -
5.2.4	Clear Scanned Barcodes List Timeout.....	- 23 -
5.2.5	Immediate List Clearance Barcode Limit .....	- 23 -
5.2.6	Bulk Trigger Mode.....	- 24 -
5.2.7	Barcode Type Comparison.....	- 24 -
5.2.8	Barcode Length Comparison .....	- 24 -
5.2.9	Set Default values.....	- 24 -
5.3	COMMON SETTINGS.....	- 25 -
5.3.1	Show Splash Screen on Startup.....	- 26 -
5.3.2	Start Scanner Wedge on reboot.....	- 26 -
5.3.3	Trigger Keys power on device.....	- 26 -
5.3.4	Power on Device in cradle.....	- 27 -

5.3.5	Enable Aimer Mode .....	- 27 -
5.3.6	Aimer Width .....	- 27 -
5.3.7	Other Laser / Imager Settings .....	- 27 -
5.3.8	Set Default Values .....	- 27 -
5.4	COUNTER WINDOW COMMON SETTINGS .....	- 28 -
5.4.1	Show Counter Window after „n“ scans .....	- 29 -
5.4.2	Counter Window Close Mode .....	- 29 -
5.4.3	Counter Window Type .....	- 29 -
5.4.4	Set Default values .....	- 29 -
5.5	SOLID COUNTER WINDOW SETTINGS .....	- 30 -
5.5.1	Window Size / Position .....	- 31 -
5.5.2	Foreground-/Background-Color .....	- 31 -
5.5.3	Set Default values .....	- 31 -
5.5.4	Preview Pane .....	- 31 -
5.6	TRANSPARENT COUNTER WINDOW SETTINGS .....	- 32 -
5.6.1	Window Position .....	- 33 -
5.6.2	Window Size .....	- 33 -
5.6.3	Counter Color .....	- 33 -
5.6.4	Set Default values .....	- 33 -
5.6.5	Preview Pane .....	- 33 -
<b>CHAPTER 6</b>	<b>APPENDIX .....</b>	<b>- 34 -</b>
6.1	SUPPORT .....	- 34 -
6.2	DISCLAIMER .....	- 35 -

No part of this document may be produced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of CASIO Europe GmbH. Information in this document is subject to change without advance notice. CASIO Europe GmbH makes no representations or warranties with respect to the contents or use of this manual and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose.

© 2012 CASIO Europe GmbH. All rights reserved.

## Editorial Record

Date	Version	Note
October 22, 2009	1.00	<ul style="list-style-type: none"> <li>Initial Release of Laser Scanner Version „ELISA“</li> <li>IT-600 and DT-X7 supported</li> </ul>
October 23, 2009	1.01	<ul style="list-style-type: none"> <li>DT-X11 support added</li> </ul>
October 26, 2009	1.02	<ul style="list-style-type: none"> <li>DT-X30 Windows Mobile support added</li> <li>Improved screen readability</li> </ul>
November 3, 2009	1.03	<ul style="list-style-type: none"> <li>DT-X30 Embedded CE support added</li> </ul>
December 17, 2009	1.04	<ul style="list-style-type: none"> <li>IT-800 support added</li> </ul>
January 15, 2010	2.00	<ul style="list-style-type: none"> <li>Name changed to „ELISA“</li> <li>CMOS Imager support added</li> </ul>
February 5, 2010	2.01	<ul style="list-style-type: none"> <li>Transparent Counter Window added</li> <li>Splash Screen added</li> </ul>
April 26, 2010	2.10	<ul style="list-style-type: none"> <li>Pre-/Postamble Escape Sequences supported</li> <li>Bogus CR+LF Clipboard Output eliminated</li> <li>Improved memory management</li> <li>Camera Wedge Cooperative Mode for DT-X30 and IT-800 approved</li> </ul>
May 04, 2010	2.11	<ul style="list-style-type: none"> <li>Windows Phone Today Screen limitations noted</li> </ul>
May 11, 2010	2.12	<ul style="list-style-type: none"> <li>Bogus trailing character in mixed 1D/2D scanning removed</li> </ul>
September 10, 2010	2.13	<ul style="list-style-type: none"> <li>Bugfix for CMOS Aimer Mode single (non-Bulk) mode scanning</li> </ul>
December 02, 2010	2.14	<ul style="list-style-type: none"> <li>Gun Grip support for IT-800</li> </ul>
May 19, 2011	2.16	<ul style="list-style-type: none"> <li>IT-300 support added</li> <li>DT-X8 support added</li> <li>DT-X30 All Range Imager support added</li> <li>EAN-128 / GS1-128 FNC1 conversion implemented</li> </ul>
November 11, 2011	2.17	<ul style="list-style-type: none"> <li>EAN-128 / GS1-128 FNC1 issue on Laser Scanner devices resolved</li> </ul>

## Editorial Record (continued)

Date	Version	Note
December 02, 2011	2.18	<ul style="list-style-type: none"> <li>• IT-9000 support added</li> <li>• Code / Symbology Identifiers added</li> <li>• Configuration File saving performance improved</li> <li>• Word Suggestion suppressed during keyboard barcode output on Windows Mobile devices</li> <li>• Keyboard sequences for ASCII control characters added</li> <li>• Auto Reset added to installation procedure</li> <li>• Text Editor Link added to Tray Icon Context Menu</li> </ul>
February 10, 2012	2.19	<ul style="list-style-type: none"> <li>• GS1 application identifier replacement for GS1-DataMatrix and GS1-DataBar Expanded implemented</li> </ul>
March 08, 2012	2.20	<ul style="list-style-type: none"> <li>• Improved handling of non-printable characters in clipboard operation mode</li> </ul>
March 15, 2012	2.21	<ul style="list-style-type: none"> <li>• Non-printable character handling in clipboard mode improved once more</li> <li>• Compatibility improvement with RDP sessions</li> </ul>

# **Chapter 1**

## **Operation Environment**

### **1.1 Applicable Handheld Terminals**

- DT-X7 series
- DT-X8 series
- DT-X11 series
- DT-X30 series
- IT-300 series
- IT-600 series
- IT-800 series
- IT-3100 series
- IT-9000 series

### **1.2 OS**

- Microsoft® Windows® CE 5.0
- Microsoft® Windows® Embedded CE 6.0 R2/R3
- Microsoft® Windows Mobile® 6.1
- Microsoft® Windows Mobile® 6.5
- Microsoft® Windows Mobile® 6.5.3
- Microsoft® Windows® Embedded Handheld 6.5

### **1.3 Supplied Files**

- Elisa.cab
- Elisa\_Desktop\_Installer.exe

### **1.4 Steps to Start Up**

Install the Application according to the Instructions given in Chapter 2. Start the application according to the Instructions given in 3.5. Apply settings according to the Instructions given in Chapter 5.

# Chapter 2

## Installation

ELISA ships as a .CAB Installer package for installation on your CASIO device and, alternatively, as a Desktop Installer Application which will automatically install the application through an existing ActiveSync or Windows Mobile Device Center connection to your CASIO device.

### 2.1 Manual Installation (CAB File)

Inside the ELISA Package there's a manual installation file named „Elisa.cab“ in a subfolder corresponding to the CASIO device's Operating System (*Windows® CE 5.0 / Windows® Embedded CE 6.0 / Windows® Mobile 6.x*). Please copy the file „Elisa.cab“ (might appear as „Elisa“ if file extensions are not shown on your PC) to your CASIO device into a folder of your choice and start it there.

The following steps describe the installation in detail, assuming that the „Elisa.cab“ file is located in the root folder of your C: drive and should be installed from the root folder of your CASIO device:

1. Connect your CASIO device to your PC via Microsoft ActiveSync (Windows 2000/XP) or Windows Mobile Device Center (Windows Vista / Windows 7). Please consult the Software Manual of your CASIO device regarding details of connection procedure.
2. In the Microsoft ActiveSync or Windows Mobile Device Center Window, click on the Explore button in the shortcut button list (if the button list is not shown or you cannot find the right button, click on the File → Explore menu entry).
3. On your PC's Desktop, click/double click on My Computer to open the explorer. Click/double click the entry for your local C: drive to open the file list of drive C:
4. Click and hold the file „Elisa.cab“ (might appear as „Elisa“ if file extensions are not shown on your PC).
5. Drag the file to the Microsoft ActiveSync or Windows Mobile Device Center „Explore“ Window and drop it in an empty area of the right window pane. The file will now be copied from your PC's C: drive to the root folder of your CASIO device.
6. *Embedded CE*: After file copy has finished, take your CASIO device and double tap on My Device on the Desktop of the device.  
*Windows® Mobile 6.1*: After file copy has finished, take your CASIO device and tap on Start → Programs → File Explorer.  
*Windows® Mobile 6.5(.3)*: After file copy has finished, take your CASIO device and tap on Start → File Explorer.
7. (Double) tap the file „Elisa.cab“ in the root folder (by default it appears as „Elisa“ since known file extensions are not shown on your CASIO device by default).
8. When being asked for a destination folder for the installation, simply press the RETURN key or tap „OK“.

Please note the following facts about the ELISA manual installation:

- By default the file „Elisa.CAB“ is write-protected. If you remove the write protection, the file will be automatically deleted from the device after installation. With write protection enabled, the installation file will remain on the device after installation.
- You can use the CAB Setup Tool to automate the installation process. Please consult the device's Software Manual Chapter „Auto Setup“ for further details.

## **2.2 Automatic Installation (Desktop Installer File)**

Inside the ELISA Package there's an automatic Desktop installation file named „Elisa\_Desktop\_Installer.exe“ in a subfolder corresponding to the CASIO device's Operating System (*Windows® CE 5.0 / Windows® Embedded CE 6.0 / Windows® Mobile 6.x*). The following steps describe the installation in detail, assuming that the „Elisa\_Desktop\_Installer.exe“ file is located in the root folder of your C: drive:

1. Connect your CASIO device to your PC via Microsoft ActiveSync (Windows 2000/XP) or Windows Mobile Device Center (Windows Vista / Windows 7). Please consult the Software Manual of your CASIO device regarding details of connection procedure.
2. On your PC's Desktop, click/double click on „Computer“ (can be found inside the Start Menu, if not located on the Desktop) to open the explorer. Click/double click the entry for your local C: drive to open the file list of drive C:
3. Click or (double-click, depending on your PCs settings) the file „Elisa\_Desktop\_Installer.exe“ (might appear as „Elisa\_Desktop\_Installer“ if file extensions are not shown on your PC) to start the automatic Desktop Installer.
4. Follow the instructions on your screen to finish the installation.
5. After installation has finished, it is recommended to reset your device.



# Chapter 3

## Application Overview

### 3.1 Purpose

The ENHANCED LASER AND IMAGER SCANNER APPLICATION („ELISA“) is meant to extend the capabilities of the integrated Laser or Imager Scanner Wedge Application shipped with CASIO devices.

### 3.2 Capabilities

The extended capabilities include but are not limited to:

- Filter settings which can be applied to the barcodes
- Preamble/Postamble
- Bulk Mode scanning
- Aimer Mode
- Scan Counter Window
- Automatic Launch of the Wedge Application on device start up
- Enable/Disable use of scanning keys and/or cradle detection for device power on
- Programmatically enable/disable the Scanning Wedge from within third party applications (e.g. Interoperability with the builtin camera on DT-X30/IT-800)

### 3.3 Compatibility

ELISA is fully compatible with the integrated Scanner Wedge Application. You can decide whether to use one or another, but not both at the same time.

### 3.4 Requirements

ELISA Requirements:

- CASIO device equipped with a 1D Laser or 2D CMOS Scanner
- Latest patches and service packs installed on your CASIO device
- Latest CASIO Software Development Libraries installed on your CASIO device
- Operating System Windows® CE 5.0 or later

## 3.5 Operating System Integration

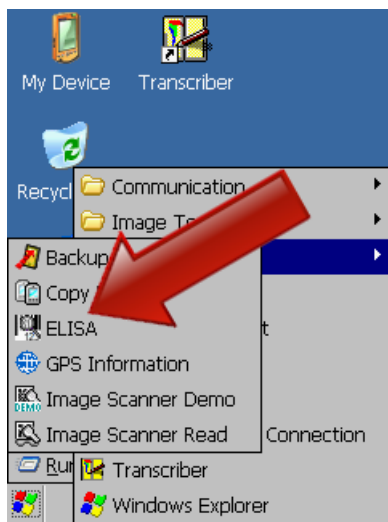
ELISA integrates seamlessly into the device's operating system environment. After installation, you will find the application within the Start Menu, the Control Panel and, if actually running, within the System Tray area of your device.

### 3.5.1 Start Menu Integration

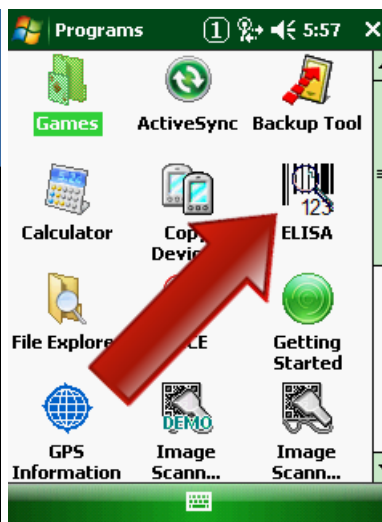
You can find a Link to ELISA in the Start Menu at

- Start → Programs → Utility → ELISA (*Windows® Embedded CE*)
- Start → Programs → ELISA (*Windows Mobile® 6.1*)
- Start → ELISA (*Windows Mobile® 6.5*)

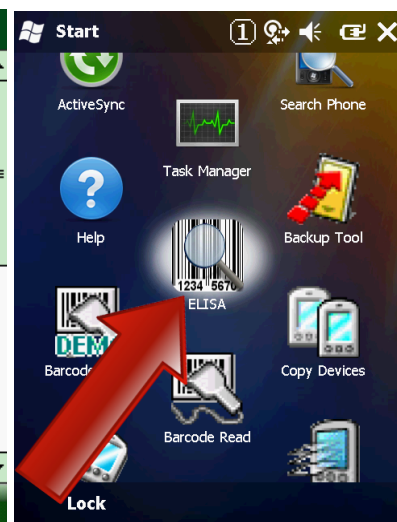
See Figure 3-1, Figure 3-2 and Figure 3-3 below:



**Figure 3-1**  
Start Menu  
Windows® Embedded CE



**Figure 3-2**  
Start Menu  
Windows Mobile® 6.1



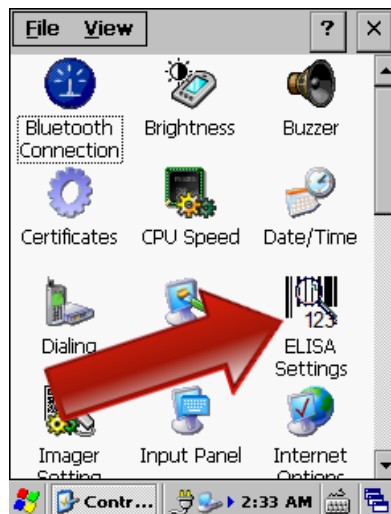
**Figure 3-3**  
Start Menu  
Windows Mobile® 6.5

### 3.5.2 Control Panel Integration

You can find a Link to ELISA Settings in the Control Panel inside the Start Menu at:

- Start → Settings → Control Panel → ELISA Settings (*Windows® Embedded CE*)
- Start → Settings → System → ELISA (*Windows Mobile® 6.x*)

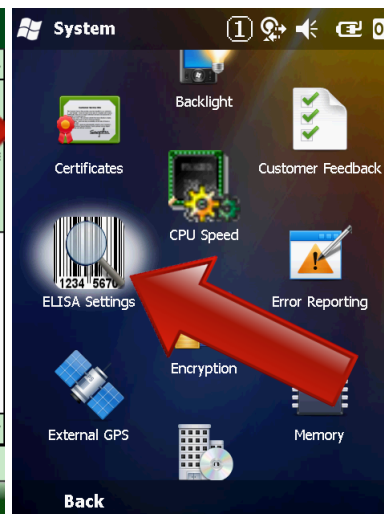
See Figure 3-4, Figure 3-5 and Figure 3-6 below:



**Figure 3-4**  
Control Panel  
Windows® Embedded CE



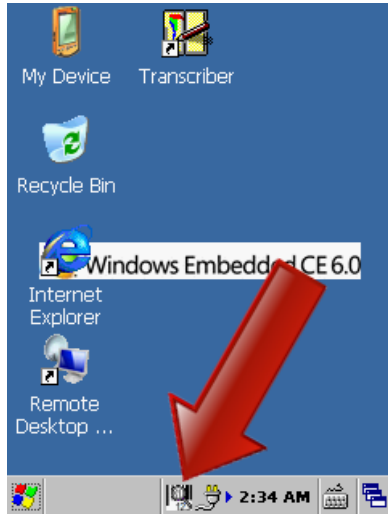
**Figure 3-5**  
Control Panel  
Windows Mobile® 6.1



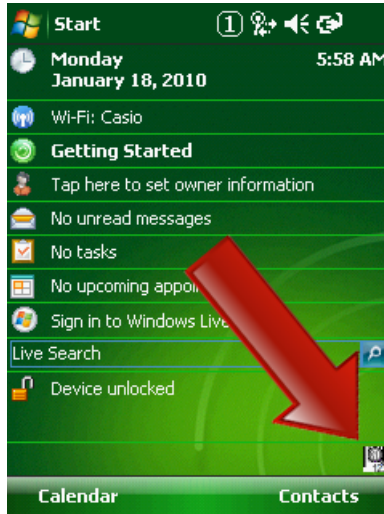
**Figure 3-6**  
Control Panel  
Windows Mobile® 6.5

### 3.5.3 Desktop Tray Icon Integration

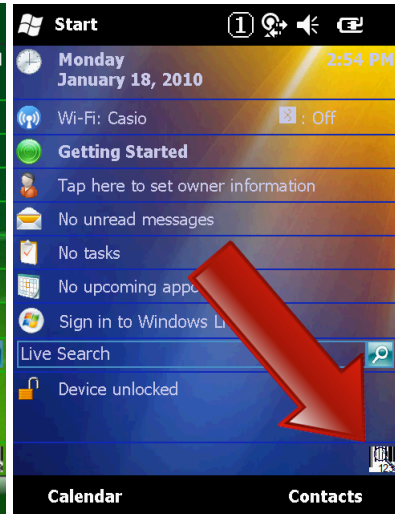
When ELISA is running, you can find an Icon in the System Tray Area (see Figure 3-7, Figure 3-8 and Figure 3-9 below). Tapping on the Tray Icon opens a pop up menu (see Figure 3-10, Figure 3-11 and Figure 3-12 below).



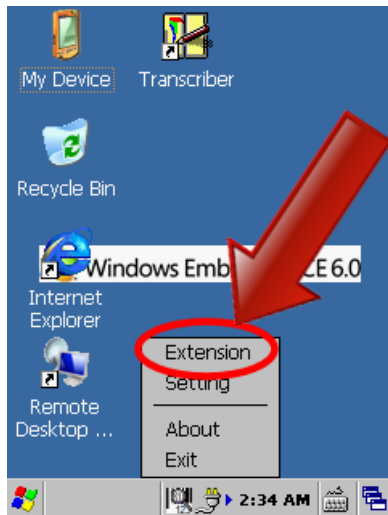
**Figure 3-7**  
System Tray Icon  
Windows® Embedded CE



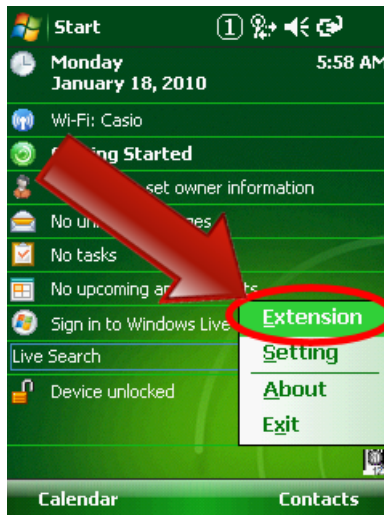
**Figure 3-8**  
System Tray Icon  
Windows Mobile® 6.1



**Figure 3-9**  
System Tray Icon  
Windows Mobile® 6.5



**Figure 3-10**  
Popup Menu  
Windows® Embedded CE



**Figure 3-11**  
Popup Menu  
Windows Mobile® 6.1



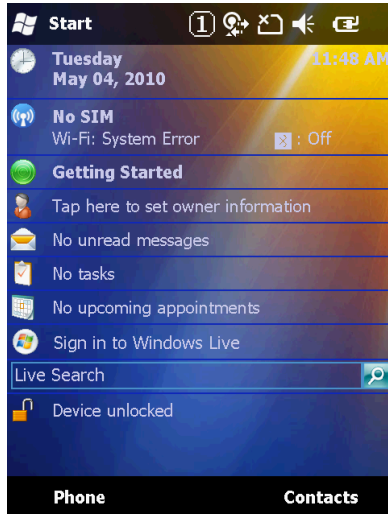
**Figure 3-12**  
Popup Menu  
Windows Mobile® 6.5

### 3.5.4 Windows Phone Today Screen settings

Note: On CASIO IT-800RG<...> devices (IT-800 devices with mobile phone integrated), you might want to switch the Today Screen settings to „Classic“ style, since „Windows Phone“ style does not support displaying tray icons (see Figure 3-13 and Figure 3-14).

The Today Screen Settings can be found at:

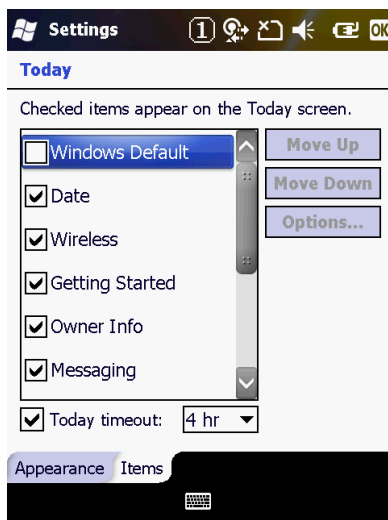
Start → Settings → Today → Items (see Figure 3-15 and Figure 3-16)



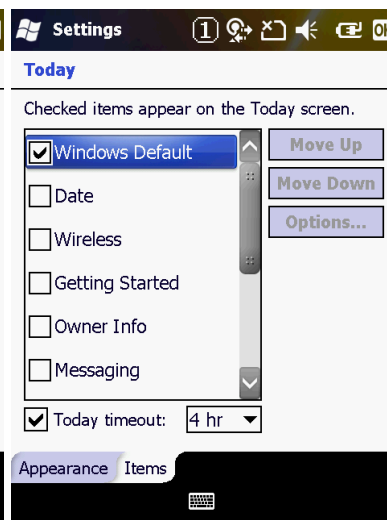
**Figure 3-13**  
Today Screen „Classic“



**Figure 3-14**  
Today Screen „Phone“



**Figure 3-15**  
Today Screen Settings „Classic“



**Figure 3-16**  
Today Screen Settings „Phone“

# Chapter 4

## Operation

### 4.1 Application start

ELISA can be started either through enabling the Auto Start feature from the Settings Menu (see below) or through tapping the link in the Start Menu (see Start Menu Integration).

### 4.2 Configuration

ELISA can be configured either by double-tapping the „ELISA Settings“ Icon in the Control Panel (see Control Panel Integration) or by tapping the „Extension“ entry in the pop up Menu of the System Tray Icon (see Desktop Tray Icon Integration)

### 4.3 Run time behaviour

ELISA operates transparent to all running applications on the device. While running ELISA, all scanned barcodes will be entered at the current cursor position, configurable either like they would have been entered manually through key input, or but Clipboard Copy and Paste operation.

**Note:** Copy and Paste operation should generally be the preferred operation since it operates faster and more reliable than key input operation. However, if you're running applications which don't properly implement clipboard support (e.g. specific .Net Compact Framework Versions don't support Clipboard Monitoring at all, neither do Remote Desktop Connections), you might want to use key input mechanism as a fallback instead.

# Chapter 5

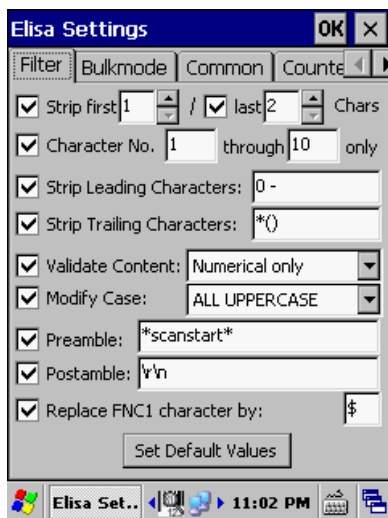
## Settings

ELISA Settings are divided into 4 property sheets, reflecting each section of enhanced settings possibilities. The Settings property sheet page can be closed either by tapping „OK“ or by tapping the „X“ (only *Windows® Embedded CE*) in the upper right corner of the window. Tapping „OK“ or „Save“ (only *Windows Mobile®*) saves and applies the settings, „X“ (only *Windows® Embedded CE*) or „Cancel“ (only *Windows Mobile®*) discards them.

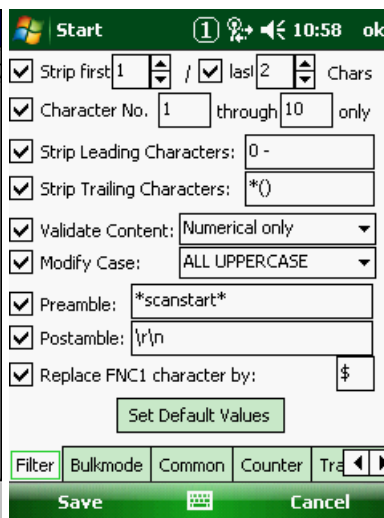
### 5.1 Filter Settings

Several Filter Settings are available to modify contents of scanned barcodes. The Filter settings can be combined. If more than one filter is enabled, the filters apply in top-down order like shown on the property sheet. For an overview of possible filter settings, please see Figure 5-1, Figure 5-2 and Figure 5-3 below. For details of the filter settings, please refer to the subsections

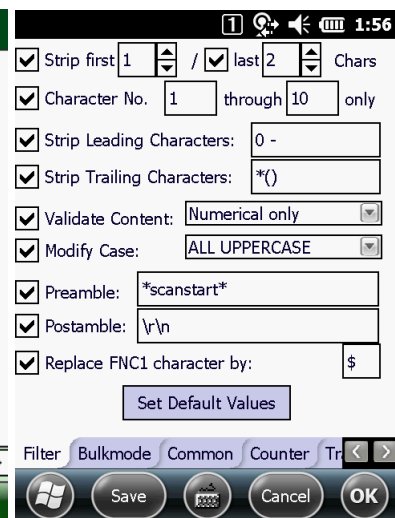
- Strip first „n“ Characters
- Strip last „n“ Characters
- Character No. „m“ to „n“ only
- Strip Leading Characters
- Strip Trailing Characters
- Validate Content
- Modify Case
- Preamble
- Postamble
- Escape Sequences
- Code / Symbology Identifiers
- GS1-128 Barcodes on 1D Laser Scanner devices
- Replace EAN-128 / GS1-128 FNC1 Character
- Set Default Values



**Figure 5-1**  
Filter Settings  
Windows® Embedded CE



**Figure 5-2**  
Filter Settings  
Windows Mobile® 6.1



**Figure 5-3**  
Filter Settings  
Windows Mobile® 6.5.3



### 5.1.1 Strip first „n“ Characters

This setting strips the configured number of characters from the beginning of the barcode, if applicable. You can find examples in Table 5-1 below.




Barcode	„Strip first“ setting	result
 1234567890	5	67890
 1234567890	disabled / 0	1234567890
 1234567890	11 (out of range)	1234567890

Table 5-1: Strip first „n“ Characters

### 5.1.2 Strip last „n“ Characters

This setting strips the configured number of characters from the end of the barcode, if applicable. You can find examples in Table 5-2 below.




Barcode	„Strip last“ setting	result
 1234567890	5	12345
 1234567890	disabled / 0	1234567890
 1234567890	11 (out of range)	1234567890

Table 5-2: Strip last „n“ Characters



### 5.1.3 Character No. „m“ to „n“ only

This setting strips all characters from the barcode except for the range specified, if applicable. You can find examples in Table 5-3 below.




Barcode	„Character No „m“ to „n““ setting	result
 1234567890	3-7	34567
 1234567890	disabled / 0	1234567890
 1234567890	9-11 (out of range)	1234567890

Table 5-3: Character No. „m“ to „n“ only

### 5.1.4 Strip Leading Characters

This setting strips all characters up to the first non-matching character from the beginning of the barcode, if applicable. You can find examples in Table 5-4: Strip Leading Characters below.




Barcode	„Strip Leading“ setting	result
 aa112233bb	a1	2233bb
 aa112233bb	disabled / empty	aa112233bb
 aa112233bb	123 (no match)	aa112233bb

Table 5-4: Strip Leading Characters

### 5.1.5 Strip Trailing Characters

This setting strips all characters up to the first non-matching character from the end of the barcode, if applicable. You can find examples in Table 5-5: Strip Trailing Characters below.




Barcode	„Strip Trailing “ setting	result
 aa112233bb	3b	aa1122
 aa112233bb	disabled / empty	aa112233bb
 aa112233bb	123 (no match)	aa112233bb

Table 5-5: Strip Trailing Characters

### 5.1.6 Validate Content

This setting strips all characters from the barcode, which do not match the validation criteria. You can find examples in Table 5-6 below.





Barcode	„Validate Content “ setting	result
 -aA123Bb+	disabled	-aA123Bb+
 -aA123Bb+	Alphanumeric only	aA123Bb
 -aA123Bb+	Numerical only	123
 -aABb+	Numerical only	No output.

Table 5-6: Validate Content

### 5.1.7 Modify Case

This setting modifies the case of alpha characters within the barcode to the given setting. You can find examples in Table 5-7 below.

Barcode	„Strip last“ setting	result
 -aA123Bb+	disabled	-aA123Bb+
 -aA123Bb+	all lowercase	-aa123bb++
 -aA123Bb+	ALL UPPERCASE	-AA123BB+

Table 5-7: Modify Case

### 5.1.8 Preamble

This setting adds the specified string in front of the barcode. You can find examples in Table 5-8 below. The Preamble setting accepts Escape Sequences:

The preamble will be part of the clipboard content if clipboard output has been selected.




Barcode	„ Preamble“ setting	result
 1234567890	disabled	1234567890
 1234567890	+++	+++1234567890
 1234567890	\x40\o100HexOct*	@@HexOct*1234567890

Table 5-8: Preamble

### 5.1.9 Postamble

This setting adds the specified string at the end of the barcode. You can find examples in Table 5-9 below.

The Postamble setting accepts Escape Sequences according to the definitions given in Chapter 5.1.8 (Preamble) above.

The preamble will be part of the clipboard content if clipboard output has been selected, whereas a suffix configured in „Add Suffix“ inside the device’s builtin Scanner/Imager configuration will always be entered through keyboard input in order to comply to specific requirements, such as remote desktop environments.




Barcode	„Postamble“ setting	result
	disabled	1234567890
	###	1234567890###
	*scanning ends here*	1234567890*scanning ends here*

Table 5-9: Postamble

### 5.1.10 Escape Sequences

The Preamble and Postamble settings accept the following Escape Sequences:

Escape Sequence	Output
\r	Carriage Return
\n	New Line
\t	Tabulator
\x<hh>	Hex Digit
\o<ooo>	Octal Digit
\v	Vertical Tab
\f	Form Feed
\g	Group Separator
\0	Null Character

Escape Sequence	Output
\a	Alert (Beep)
\b	Backspace
\'	Single Quote
\"	Double Quote
\?	Question Mark
\\	Backslash
\c	Custom Code ID
\i	ISO Symbology Identifier (AIM)

Please note that a new line in Windows may contain both carriage return and line feed, hence it might be defined as „\r\n“.

The Hex Digit Escape Sequence „\x“ is followed by a two digit hexadecimal character value, the Octal Digit Escape Sequence „\o“ is followed by a three digit octal character value.

### **5.1.11 Code / Symbology Identifiers**

The Preamble and Postamble settings may contain Escape Sequences for Code / Symbology Identifiers.

The Custom Code Identifier „\c“ will be replaced automatically by strings defined in the ELISA configuration file „ELISA.INI“, which is located in the System Settings folder of your CASIO device. For the location of the System Settings folder please refer to the Software Manual of your device accordingly. If you wish to alter Custom Code Identifiers, please edit the ELISA configuration file „ELISA.INI“ manually.

The Symbology Identifier „\i“ will be replaced automatically by the standard AIM ISO Symbology Identifier, which consists of three characters: An ID Start character „]“, a barcode type specific symbology identification letter and a hex number specifying a so called „modifier“ for the barcode symbology. For GS1-128 barcodes on CASIO devices equipped with a 1D Laser Scanner, please refer to Chapter 5.1.12 below.

For details about AIM ISO Symbology Identifiers please refer to the AIM barcode technology website <http://www.aimglobal.org/technologies/barcode>.

### **5.1.12 GS1-128 Barcodes on 1D Laser Scanner devices**

Please note that for CASIO devices equipped with a 1D Laser Scanner, in order to distinguish between Code 128 and GS1-128 barcodes and in order to use group separators in GS1-128 barcodes, the default driver mode setting for Code 128 barcodes needs to be adjusted. To do so please open the standard laser scanner settings, switch to the „Driver Mode“ tab, select „Code128“ in the barcode type dropdown box and select „C128 ASCII + E128 With GS“ in the „Output format“ dropdown box.

### **5.1.13 Replace EAN-128 / GS1-128 FNC1 Character**

This settings is used to replace the FNC1 group separator character of EAN-128, GS1-128, GS1-DataMatrix and GS1-DataBar Expanded barcodes by some human readable character.

For CASIO devices equipped with a 1D Laser Scanner, please refer to Chapter 5.1.12 above.

### **5.1.14 Set Default Values**

This button restores all filter settings to their factory defaults.

A warning message appears if you push this button.

After confirming the warning message, factory defaults will be set.

## 5.2 Bulk Mode Settings

ELISA incorporates a special scanning mode called „bulk mode“.

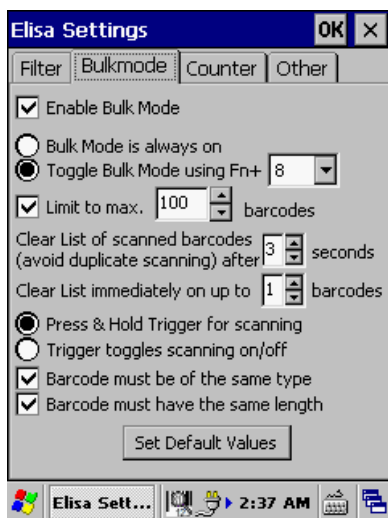
Using this scanning mode, multiple barcodes can be scanned in one pass. During bulk scanning, the terminal holds a list of barcodes which already have been scanned in order to avoid duplicate scanning of those barcodes. With this mechanism it's easy to scan large lists of barcodes, e.g. serial numbers of a bunch of goods inside an outer package.

Some of the bulk mode settings correspond to specific settings on other pages. Therefore some bulk mode settings might be disabled (grayed out) if on other property sheets specific options are set, and on the other hand some of the bulk mode settings might result in disabled options on other property sheets.

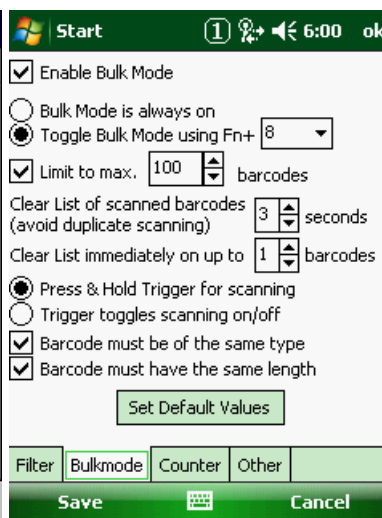
For an overview of possible bulk mode settings, please see Figure 5-4, Figure 5-5 and Figure 5-6 below.

For details of the bulk mode settings, please refer to the subsections

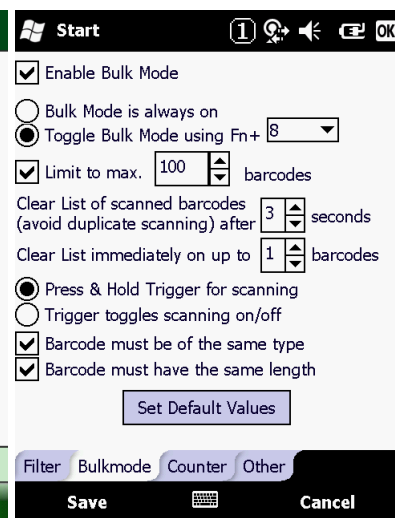
- Enable Bulk Mode
- Bulk Mode activation
- Bulk Scanning Limit
- Clear Scanned Barcodes List Timeout
- Immediate List Clearance Barcode Limit
- Bulk Trigger Mode
- Barcode Type Comparison
- Barcode Length Comparison
- Set Default values



**Figure 5-4**  
Bulk Mode Settings  
Windows® Embedded CE



**Figure 5-5**  
Bulk Mode Settings  
Windows Mobile® 6.1



**Figure 5-6**  
Bulk Mode Settings  
Windows Mobile® 6.5

### **5.2.1 Enable Bulk Mode**

This setting enables or disables Bulk Mode scanning in general. „Bulk Mode“ scanning is used to scan multiple barcodes in one instance while avoiding duplicate scans.

### **5.2.2 Bulk Mode activation**

Bulk Mode can be generally enabled or toggled by a specific key combination. In toggle mode, bulk mode can be toggled between enabled and disabled state by pressing the specified key combination. In enabled state, the scanning LED will be quickly flashing amber.

Possible key combinations for toggle mode are:

- Fn + 7
- Fn + 8
- Fn + 9

### **5.2.3 Bulk Scanning Limit**

Bulk Mode scanning can be limited to a specific number of barcodes. If the specified number of barcodes has been scanned in one bulk, scanning will stop automatically.

If Bulk Scanning Limit is disabled, the number of barcodes which can be scanned in one bulk is only limited by the available physical memory of the device.

### **5.2.4 Clear Scanned Barcodes List Timeout**

In Bulk Mode, all scanned barcodes are kept in a list to avoid duplicate scanning. When scanning ends (e.g. by releasing the trigger key), the list can be cleared either immediately (if this setting equals to „0“) or after a given timeout. This timeout prevents the list from being cleared too quickly if the user accidentally interrupts the scanning process during bulk scanning.

For instance, if the user accidentally releases the trigger key, he can continue to scan the same bulk without losing the comparative list if he pushes the trigger again within the given timeout.

When the timeout elapses after scanning got stopped, the list will be cleared.

### **5.2.5 Immediate List Clearance Barcode Limit**

In Bulk Mode, a timeout applies to clearing the scanned barcode list after scanning stops. This timeout can be overridden, thus the list can be cleared immediately if the number of barcodes scanned in a bulk does not exceed a specific limit.

For instance, if this value is set to „1“, a single barcode can be scanned repeatedly as if the device were not in bulk mode at all, while from the second barcode (scanned in one bulk) on, the bulk scanning starts and the timeouts apply.

### **5.2.6 Bulk Trigger Mode**

In Bulk Mode, the scanner can either be activated as long as a trigger key has been held pressed, or it can be toggled between „scan start“ and „scan end“ status by pressing a trigger key.

Please note that in Trigger Toggle Mode the user should pay close attention not to dazzle anybody, since the scanner might be emitting light continuously without further notice.

Press&Hold Mode is not available if Aimer Mode (see 5.3.5: Enable Aimer Mode) has been enabled.

### **5.2.7 Barcode Type Comparison**

If enabled, in bulk mode only barcodes of the same type like the first scanned barcode will be accounted for.

### **5.2.8 Barcode Length Comparison**

If enabled, in bulk mode only barcodes of the same length like the first scanned barcode will be accounted for.

### **5.2.9 Set Default values**

This button restores all bulk mode settings to their factory defaults.

A warning message appears if you push this button.

After confirming the warning message, factory defaults will be set.



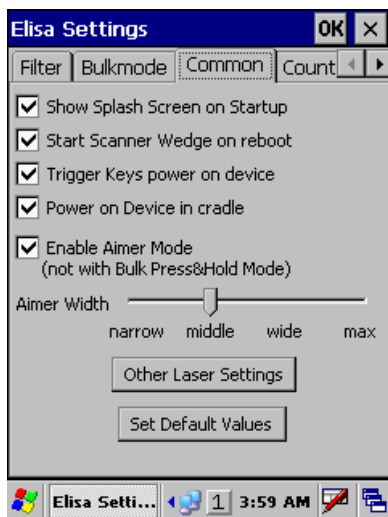
## 5.3 Common Settings

There are several other settings which apply to ELISA, e.g. the Aimer Mode. These settings can be made on this property sheet.

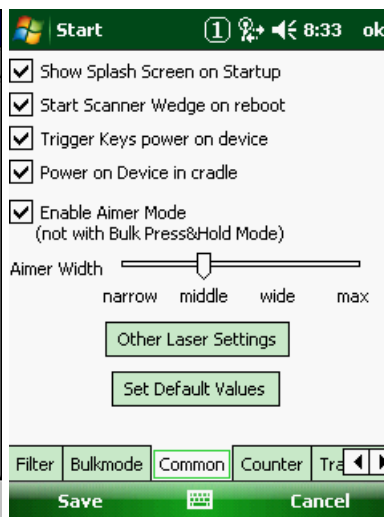
For an overview of possible other settings, please see Figure 5-7, Figure 5-8 and Figure 5-9 below.

For details of these settings, please refer to the subsections

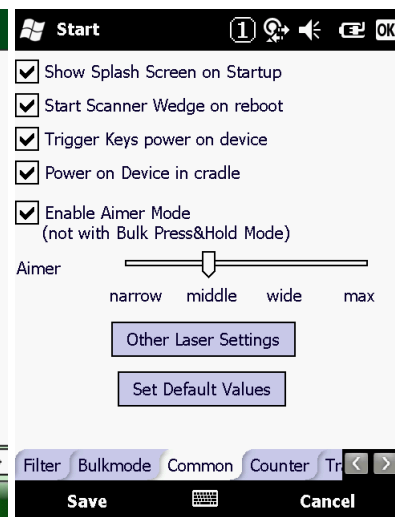
- Show Splash Screen on Startup
- Start Scanner Wedge on reboot
- Trigger Keys power on device
- Power on Device in cradle
- Enable Aimer Mode
- Aimer Width
- Other Laser / Imager Settings
- Set Default Values



**Figure 5-7**  
Common Settings  
Windows® Embedded CE



**Figure 5-8**  
Common Settings  
Windows Mobile® 6.1



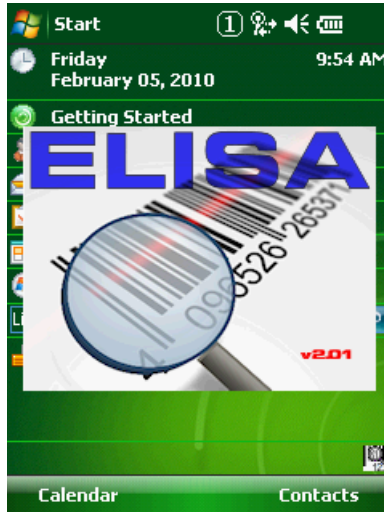
**Figure 5-9**  
Common Settings  
Windows Mobile® 6.5

### 5.3.1 Show Splash Screen on Startup

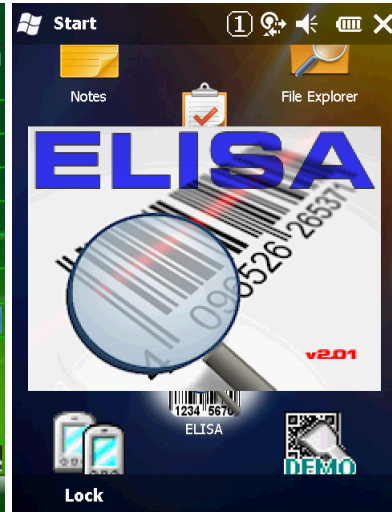
Using this setting, ELISA will show a Splash Screen when the application starts, please see Figure 5-10, Figure 5-11 and Figure 5-12 below.



**Figure 5-10**  
Splash Screen  
Windows® Embedded CE



**Figure 5-11**  
Splash Screen  
Windows Mobile® 6.1



**Figure 5-12**  
Splash Screen  
Windows Mobile® 6.5

### 5.3.2 Start Scanner Wedge on reboot

Using this setting, ELISA can be launched automatically when the device reboots (i.e. gets resetted). Note that a power off/power on (suspend/resume) cycle isn't a reboot. Suspending a Windows CE device doesn't stop the running applications.

When this setting is enabled, a link to ELISA will be saved in the devices auto-start folder, e.g. „\Windows\Startup“. The link will be removed if this setting is disabled.

### 5.3.3 Trigger Keys power on device

Using this setting, the Trigger Keys (those which have been configured in the Other Laser / Imager Settings) can be used to resume the device from suspend. This is useful especially for devices where the power button is hard to reach/press.

Note that this setting might cause unattended operation of the device if it is placed e.g. in a bag where the scanner keys are being pressed without further notice.

### **5.3.4 Power on Device in cradle**

Using this setting, the device can be set to power up (resume) automatically when it is being put into a charging/communication cradle. This is useful especially if the device is operating in batch mode and the application should automatically transfer scanned data when the device is in the cradle.

Note that this might result in extended charging time, especially if the power settings are set not to suspend the device automatically after a given time if it is running on external power.

### **5.3.5 Enable Aimer Mode**

This setting enables the Aimer Mode incorporated in ELISA.

In Aimer Mode, the laser will emit to a specified angle without actually scanning any barcode unless the trigger key is being released. On releasing the trigger key, the laser will emit to its normal angle and barcodes can be read.

This is useful when the user wants to scan barcodes which are listed close to each other and scanning should start mid-list. In this case the user can align the scanner to the right barcode in aimer mode and scan it on trigger release.

This setting is not available if Bulk Mode has been enabled (see 5.2.1: Enable Bulk Mode) and the Bulk Trigger Mode is set to „Press&Hold“ (see 5.2.6: Bulk Trigger Mode).

### **5.3.6 Aimer Width**

This setting selects the laser beam width during aimer mode.

Note that this setting should differ from the default laser beam width so the user can optically distinguish between aimer and normal mode.

This setting is only available for devices equipped with a 1D Laser Scanner.

This setting is not supported on DT-X11 devices (setting will have no effect).

### **5.3.7 Other Laser / Imager Settings**

This buttons opens the Laser / Imager Scanner Settings property sheet page which is built-in to the device already. These settings include all standard scanner settings which are not part of the ELISA settings.

### **5.3.8 Set Default Values**

This button restores all other settings to their factory defaults.

A warning message appears if you push this button.

After confirming the warning message, factory defaults will be set.

## 5.4 Counter Window Common Settings

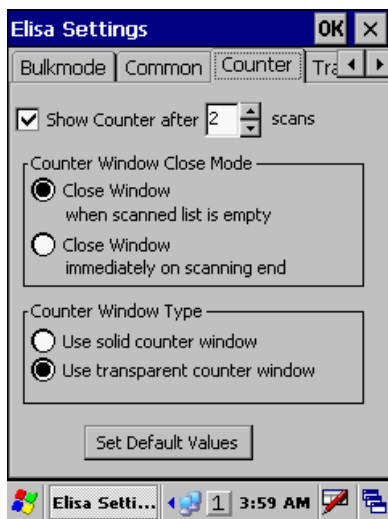
Using ELISA'S bulk mode scanning, there's a counter window available which provides graphical response to the user, letting him/her know how many barcodes already have been scanned in this bulk.

The Counter Window is available only if Bulk Mode Scanning has been enabled, see 5.2.1: Enable Bulk Mode.

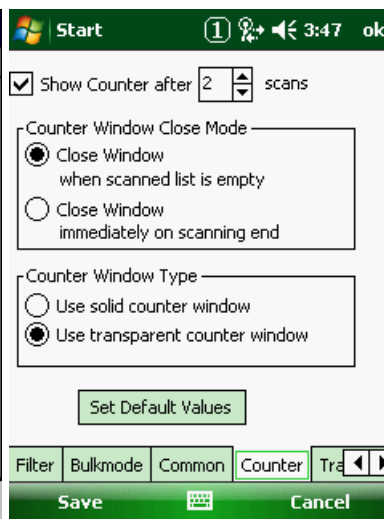
For an overview of possible counter window common settings, please see Figure 5-13, Figure 5-14 and Figure 5-15 below.

For details of the counter window settings, please refer to the subsections

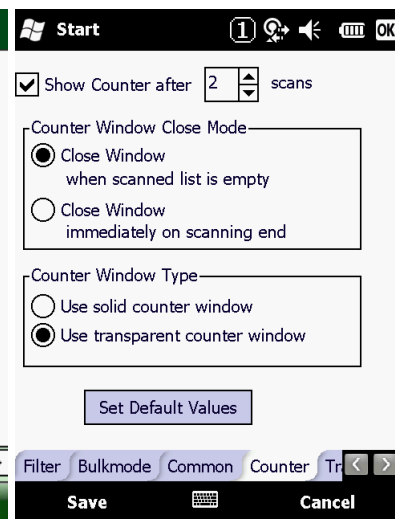
- Show Counter Window after „n“ scans
- Counter Window Close Mode
- Counter Window Type
- Set Default values



**Figure 5-13**  
Counter Window  
Common Settings  
Windows® Embedded CE



**Figure 5-14**  
Counter Window  
Common Settings  
Windows Mobile® 6.1



**Figure 5-15**  
Counter Window  
Common Settings  
Windows Mobile® 6.5

### **5.4.1 Show Counter Window after „n“ scans**

This setting enables/disables the counter window in bulk scanning mode.

When enabled, a threshold value for the number of scanned barcodes until the counter window appears must be set.

For instance, if the counter window is enabled and the threshold is set to „2“, a single barcode can still be scanned without showing the counter window, just like if the barcode wouldn't be scanned in bulk mode but in normal mode instead. From the second barcode being scanned in bulk mode on, the counter window would appear to show the user the number of already scanned barcodes.

### **5.4.2 Counter Window Close Mode**

During bulk scanning, the terminal keeps a list of barcodes which already have been scanned in order to avoid duplicate scanning of those barcodes.

With this setting, the counter window can be closed either immediately when bulk scanning ends (e.g. by toggling bulk scanning or by releasing the trigger key), or when the list of barcodes mentioned above gets emptied.

Setting this value to „Close Window when scanned list is empty“ results in a graphical response to the user about whether the list still applies or the timeout (see 5.2.4: Clear Scanned Barcodes List Timeout) has elapsed. During timeout period, a bar at the bottom of the counter window will continuously shrink until the window gets closed and the list is being cleared.

### **5.4.3 Counter Window Type**

This setting specifies the type of the Counter Window (solid / transparent).

The available settings for the Counter Window are automatically adjusted according to this selection.

### **5.4.4 Set Default values**

This button restores all counter window settings to their factory defaults.

A warning message appears if you push this button.

After confirming the warning message, factory defaults will be set.

## 5.5 Solid Counter Window Settings

Using ELISA'S counter window, the application provides a distinctive visual feedback showing the current status of bulk scanning processes.

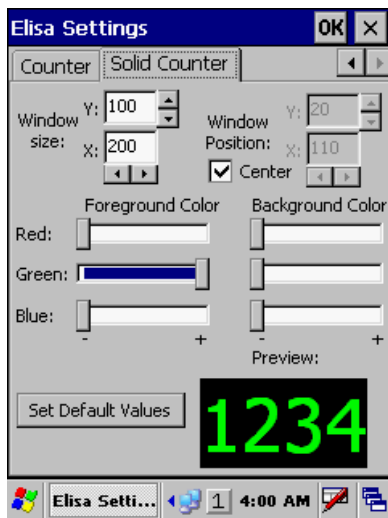
The solid counter window utilizes smooth anti-aliased font drawing with the possibility to select well readable, high contrast schemes.

The Solid Counter Window Settings are available only if Bulk Mode Scanning has been enabled and the solid counter window type has been selected, see 5.2.1: Enable Bulk Mode and 5.4.3: Counter Window Type.

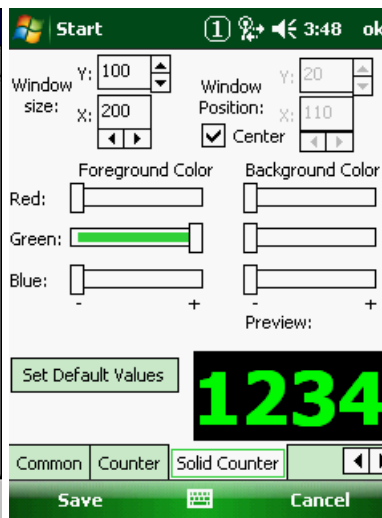
For an overview of possible solid counter window common settings, please see Figure 5-16, Figure 5-17 and Figure 5-18 below.

For details of the counter window settings, please refer to the subsections

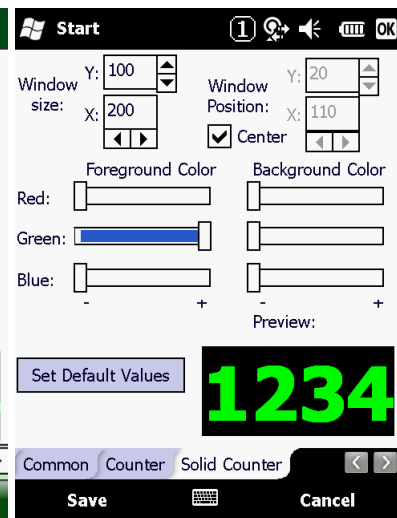
- Window Size / Position
- Foreground-/Background-Color
- Set Default values
- Preview Pane



**Figure 5-16**  
Solid Counter Window Settings  
Windows® Embedded CE



**Figure 5-17**  
Solid Counter Window Settings  
Windows Mobile® 6.1



**Figure 5-18**  
Solid Counter Window Settings  
Windows Mobile® 6.5

### **5.5.1 Window Size / Position**

This setting specifies the size and position of the counter window.

Selecting „Center“ position overrides the values set for x and y position coordinates.

The size and position are given in screen coordinates, minimum and maximum values apply regarding to the counter readability and physical limitations of the device display.

### **5.5.2 Foreground-/Background-Color**

These sliders are used to set the red, green and blue values for the foreground (i.e. text) and background color of the counter window.

A preview of the result of the current settings is shown in the Preview pane (see 5.5.4: Preview Pane).

If the text would become hard to read with the settings chosen, a warning message appears when the user tries to save the settings.

### **5.5.3 Set Default values**

This button restores all solid counter window settings to their factory defaults.

A warning message appears if you push this button.

After confirming the warning message, factory defaults will be set.

### **5.5.4 Preview Pane**

This pane shows a preview of the color settings chosen for the foreground and background color (see 5.5.2: Foreground-/Background-Color).

## 5.6 Transparent Counter Window Settings

Using ELISA'S counter window, the application provides a distinctive visual feedback showing the current status of bulk scanning processes.

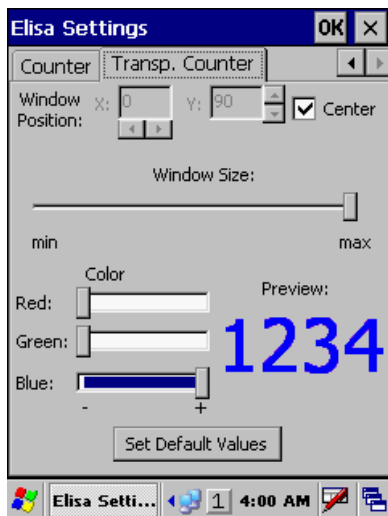
The transparent counter window enables the user to see through the current bulk scanning status display, thus keeping the information and status updates of the underlying window available all the time.

The Transparent Counter Window Settings are available only if Bulk Mode Scanning has been enabled and the transparent counter window type has been selected, see 5.2.1: Enable Bulk Mode and 5.4.3: Counter Window Type.

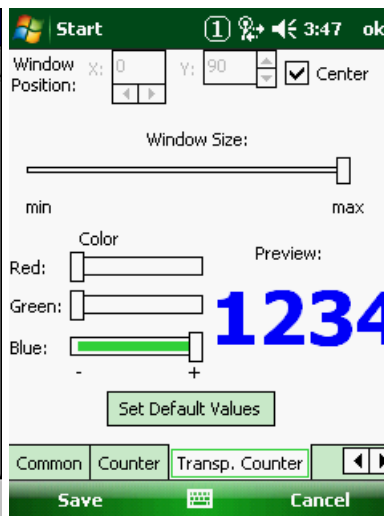
For an overview of possible solid counter window common settings, please see Figure 5-19, Figure 5-20 and Figure 5-21 below.

For details of the counter window settings, please refer to the subsections

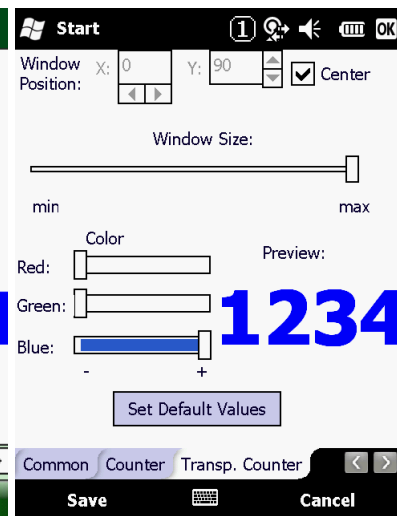
- Window Position
- Window Size
- Counter Color
- Set Default values
- Preview Pane



**Figure 5-19**  
Transparent Counter  
Window Settings  
Windows® Embedded CE



**Figure 5-20**  
Transparent Counter  
Window Settings  
Windows Mobile® 6.1



**Figure 5-21**  
Transparent Counter  
Window Settings  
Windows Mobile® 6.5



### **5.6.1 Window Position**

This setting specifies the position of the counter window.

Selecting „Center“ position overrides the values set for x and y position coordinates.

The position is given in screen coordinates, minimum and maximum values apply regarding to the counter readability and physical limitations of the device display.

### **5.6.2 Window Size**

This setting specifies the size of the counter window.

Due to the nature of drawing transparent windows on handheld devices, the size is selectable in 10 steps from min to max only.

### **5.6.3 Counter Color**

These sliders are used to set the red, green and blue values for transparent counter color.

A preview of the result of the current settings is shown in the Preview pane (see 5.6.5: Preview Pane).

### **5.6.4 Set Default values**

This button restores all transparent counter window settings to their factory defaults.

A warning message appears if you push this button.

After confirming the warning message, factory defaults will be set.

### **5.6.5 Preview Pane**

This pane shows a preview of the color settings chosen for the transparent counter (see 5.6.3: Counter Color).

Please note that results may differ from the preview according to the colors of the underlying window during later use.

# Chapter 6

## Appendix

### 6.1 Support

We have conscientiously tried to make this manual complete, accurate, and easy to understand. We therefore ask that you spend a few minutes with the manual before asking assistance. A little reading and a bit of experimenting should answer your question. If you are still stuck, call Casio Europe technical support on the web at <http://www.casio-b2b.com>. Please note that Microsoft software product support is not offered through that address.

Include the following information when you write, or have it ready when you call.

- Your hardware and software configuration including version info.
- The exact wording of any messages that appeared on your screen.
- What you were doing when the problem occurred.
- How you tried to solve the problem.

The authors of this manual really care about its accuracy, completeness, and usability. If you have suggestions about improving the documentation, please tell us. We do listen.

## 6.2 Disclaimer

The ENHANCED LASER AND IMAGER SCANNER APPLICATION („ELISA“) is provided on an „as-is“ basis. Please carry out sufficient tests before using it in a critical environment. Information in this document is subject to change without notice and does not represent a commitment on the part of Casio Europe GmbH. The software described in this document is furnished under a license agreement. The software may be used or copied only in accordance with the terms of the agreement. It is against the law to copy the software on any medium except as specifically allowed in the license agreement. No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including (but not limited to) photocopying, recording, or information storage and retrieval systems, for any purpose other than personal use, without the express written permission of Casio Europe GmbH. Microsoft, Windows, and Windows Mobile are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. This product does not come from nor is endorsed by Microsoft. All other product names are trademarks of their respective owners and are used solely for identification.

Casio Europe GmbH  
Mobile Industrial Solutions  
Casio-Platz 1  
22848 Norderstedt  
Germany  
Copyright 2012  
All rights reserved.