



Opticon SpeedGen application generator for OPL9728

PC Version EGF28703 OPL9728 Version LFB28703

Click to start

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Contents of the SpeedGen help file

This SpeedGen help file describes how to create, load and use SpeedGen application generator.

All data collector applications consist of a few steps, Data input(scanning and keyboard input), data processing (searching and storage) and data output (Transmit the processed data).

The speedGen application generator helps to make these steps without the need of any programming knowledge

Below a list of the main topics that are described in this help file is shown.
(Click on the name of the chapter to jump directly to that chapter)

1. Installation of the SpeedGen application generator

The installation of the SpeedGen application generator are described on this [Installation](#)-page.

2. OPL9728

This section describes the OPL9728 handheld terminal.

3. Properties

The property pages below control the application that is loaded into the OPL9728. Each property page has it's own description.

3.1. Startup

3.2. Barcode

3.2.1. Barcode options EAN / UPC, Code 39

3.2.2. Barcode options code 2 of 5, MSI, Telepen and Plessey

3.2.3. Barcode options Codabar, Code 128 and IATA

3.2.3. Barcode options Code 11, Korean post, RSS and PDF417

3.3 Lookup

3.4. Form

3.5. Menu

3.6. Data

3.7. Language

4. SpeedGen Interpreter

Description of the SpeedGen interpreter application.

5. NetO32

Explains howto setup NetO32 application to work with the OPL9728 SpeedGen Interpreter.

6. Examples

3 very simple step by step examples, that show howto use the SpeedGen application generator.

Installation of OPL9728 OS, SpeedGen interpreter, application



1. Requirements

To load something into the OPL9728 a PC with the SpeedGen PC application and a CRD-9723 communication cradle is needed.

Connect RS232 cradle to PC

- Set DIP switch. Turn switch 6 ON automatic baudrate.
- Connect the RS232 cable between PC and cradle
- Connect the power supply.
- Put the OPL9728 into the cradle.

Connect USB cradle to PC

- Download the USB driver from the www.opticon.com web site.
- Unpack the contents of the file.
- Connect the power supply to the cradle.
- Connect the USB cable between PC and cradle.
- Add new hardware message appears. Now install the downloaded software.
- Check at properties for the COMport: ('USB Serial Port (COMn)'). This serial port number is later needed.
- Put the OPL9728 into the cradle.

After connecting the cradle to the PC the serial port where the cradle is connected to needsw to be set. This is done by right clicking the OPL9728 on the display. Select the COM port menu item and select the serial port.

2. Start the installation of the OS or SpeedGen Interpreter for the OPL9728

Right click the SpeedGen application and select from the right click menu 'Transmit build application to OPL9728'.

Change the file filter from 'SpeedGen files (*.S3I)' to 'OS, Interpreter files (*.S32)'.

To load an OS select the LBDVxxxx.S32 file.

To load the interpreter select the LFBxxxxx.S32 file.

A popup message should appear on the PC showing the progress of the transfer.

3. Start the installation of the SpeedGen application

Right click the SpeedGen application and select from the right click menu 'Transmit build application to OPL9728'.

Change the file filter to 'SpeedGen files (*.S3I)'.

To load an build application select the S3I file.

A popup message should appear on the PC showing the progress of the transfer.

OPL9728 Terminal



UP key

The UP key or the UP key together with the shift key (LEFT key) is a navigation key. In a menu with the UP key the selected line goes 1 item up. When using the UP key in one of the created forms returns to the previous input line of the current form. This will clear the previous entered data.

TRIGGER key

The TRIGGER key is used for selecting and scanning a barcode.

DOWN key

The DOWN key or the DOWN key together with the shift key (RIGHT key) is a navigation key. In a menu the DOWN key will set the selected line one line down. When using the DOWN key in one of the created form will acknowledge the inputted data on that line and continue with the next line.

Shift key

When keeping the Shift key pressed the extended functionality of the keypad keys can be used.

BS key

The BS key is the backspace key. This key is for removing a character that was entered by the OPL9728 keypad.

CLR key

The CLR key is a clear or escape key. When this key is pressed a return from menus or input is possible. When this key is pressed from the Main menu the Version of the Interpreter application and the file version of the build application is shown.

1 key

The 1 key can be used in a menu as a shortcut to the matching menu number. In the input form the 1 key can also be used with the shift to get the extended characters from the 1 key.

2 key

The 2 key can be used in a menu as a shortcut to the matching menu number. In the input form the 2 key can also be used with the shift to get the extended characters from the 2 key.

3 key

The 3 key can be used in a menu as a shortcut to the matching menu number. In the input form the 3 key can also be used with the shift to get the extended characters from the 3 key.

4 key

The 4 key can be used in a menu as a shortcut to the matching menu number. In the input form the 4 key can also be used with the shift to get the extended characters from the 4 key.

5 key

The 5 key can be used in a menu as a shortcut to the matching menu number. In the input form the 5 key can also be used with the shift to get the extended characters from the 5 key.

6 key

The 6 key can be used in a menu as a shortcut to the matching menu number. In the input form the 6 key can also be used with the shift to get the extended characters from the 6 key.

7 key

The 7 key can be used in a menu as a shortcut to the matching menu number. In the input form

the 7 key can also be used with the shift to get the extended characters from the 7 key.

8 key

The 8 key can be used in a menu as a shortcut to the matching menu number. In the input form the 8 key can also be used with the shift to get the extended characters from the 8 key.

9 key

The 9 key can be used in a menu as a shortcut to the matching menu number. In the input form the 9 key can also be used with the shift to get the extended characters from the 9 key.

*** key**

When using the Shift key together with the * key a dot (.) or a space sign are used as input.

0 key

The 0 key can be used in a menu as a shortcut to the matching menu number. In the input form the 0 key can also be used with the shift to get the extended - or + sign.

ENT key

The ENT key is used as an acknowledge or a submit key.

Properties

Description

The SpeedGen application generator has several property pages. These pages together control the OPL9728.

Available
pages

Page	Description
Startup	Specify the where to start the application from (Form 1 or Menu 1). Change some default settings of the OPL9728. Enable or disable security options.
Barcode	Enable or disable barcode symbolgies and with the submenu's configure their parameters.
Barcode options EAN / UPC, Code 39	Set some of the parameters for EAN / UPC and Code 39 symbolgies.
Barcode options code 2 of 5, MSI, Telepen and Plessey	Set some of the parameters for Interleaved and Industrial 2 of 5, MSI Plessey, Telepen and UK Plessey symbolgies.
Barcode options Codabar, Code 128 and IATA	Set some of the parameters for Codabar / NW7, Code 128 and IATA symbolgies.
Barcode options Code 11, Korean post, RSS and PDF417	Set some of the parameters for Code 11, Korean post, RSS and PDF417 symbolgies.
Lookup	When the data of a form needs to refer to a lookup file, the data format of the lookup file needs to be specified in the Lookup property page.
Form	Forms are used to show information and allow the user to do data input.
Menu	The specified menus in the Menu property page are used as sub-menus under the main menu to provide multi-level options.
Data	The inputted data is stored in a data file. the formatting and settings of the records and fields are specified in the Data property page.
Language	The language property page allows the application builder to change the default strings and messages.

Startup properties field

The screenshot shows the 'Speed Application Generator' window with the 'Startup' tab selected. On the left is a tree view with 'Startup' expanded, showing sub-items: Barcode, Options for EAN/UPC a, Options for 2 of 5, MSI, Options for Codabar, Code 11, Korean post, Lookup, Form, Menu, Data, and Language. The main area contains the following settings:

- Program starts from: Form 1 (dropdown)
- Backlight: AUTO (dropdown)
- Flipscreen: AUTO (dropdown)
- Delete data: NO (dropdown)
- Terminal ID: 123456 (text field)
- Security section:
 - ☐ Lock OS system menu
 - Utilities menu:
 - ☐ Lock utilities menu by password
 - Password: (text field)

At the bottom right are 'OK', 'Cancel', and 'Help' buttons.

Select from where the program should start when selecting "1. Input" from the main menu.

Two values are defined for to start from:

Program starts from

- | | |
|-------|---|
| Form1 | The first input form (see form for more information). |
| Menu1 | The first selection menu (see form for more information). |

Backlight

Sets how the backlight should work in the OPL9728.

Three values are defined for the backlight:

- | | |
|------|---|
| OFF | The backlight is always off. |
| ON | The backlight is on when the OPL9728 is on. |
| AUTO | The backlight is on when a key is pressed. The backlight goes off when there is no user input for 10 seconds. |

Set how the information on the LCD display should be shown.
Two values are defined for the flipscreen property:

Flipscreen	NO	No flipping of the display.
	AUTO	Turns the information on the display upside down when the OPL9728 is placed in the cradle. The display is restored when the OPL9728 is taken out of the cradle.

This property can remove the data file from the ramdisk when selecting "1. Input" from the main menu. The data file to delete is defined in the [data](#) property screen. Three values are defined for the Delete data:

Delete data	NO	Data file is not deleted.
	MANUAL	A message screen asks the user if the data needs to be deleted.
	AUTO	The data is deleted directly without user confirmation.

Terminal ID	A six digit terminal ID that can be used for communicating with the PC with the NetO protocol. For more information see communication NetO .
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Lock OS system menu	Checking this option prevents the user to be able to get into the (3 keys, UP key, TRIGGER key and DOWN key) system menu.
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Lock utilities menu	Checking this options prevents the user to get direct access to the "3 Utilities" menu, before entering a password dialog is shown.
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Password	The password the user needs to enter to get into the "3 Utilities" menu. This field is only available when the Lock utilities menu is checked.
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Barcode properties field

The screenshot shows the 'Barcode' properties dialog box within the 'Speed Application Generator' application. The dialog has a blue title bar and a sidebar on the left with a tree view containing 'Startup', 'Barcode', 'Options for EAN/UPC a', 'Options for 2 of 5, MSI', 'Options for Codabar, C', 'Code 11, Korean post,', 'Lookup', 'Form', 'Menu', 'Data', and 'Language'. The 'Barcode' section is selected. The main area is titled 'Barcode' and contains three sections: 'Reader settings', 'Barcodes', and 'System settings'. The 'Reader settings' section has a 'Read mode' dropdown set to 'Single'. The 'Barcodes' section is divided into two columns, each with a 'Types' list and a 'Default' column. The first column lists EAN / UPC, Code 39, Codabar / NW7, Industrial 2 of 5, Interleaved 2 of 5, SCode, Matrix 2 of 5, IATA, Code 93, and Code 128 / EAN128, all with 'ON' defaults. The second column lists MSI/Plessey, Telepen, UK/Plessey, Tri-Optic, Chinese post, RSS, PDF417, Code 11, and Korean post, with 'ON' defaults for the first three and 'OFF' for the others. The 'System settings' section has an empty text field. At the bottom right are 'OK', 'Cancel', and 'Help' buttons.

Types	Default
<input checked="" type="checkbox"/> EAN / UPC	ON
<input checked="" type="checkbox"/> Code 39	ON
<input checked="" type="checkbox"/> Codabar / NW7	ON
<input checked="" type="checkbox"/> Industrial 2 of 5	ON
<input checked="" type="checkbox"/> Interleaved 2 of 5	ON
<input checked="" type="checkbox"/> SCode	ON
<input checked="" type="checkbox"/> Matrix 2 of 5	ON
<input checked="" type="checkbox"/> IATA	ON
<input checked="" type="checkbox"/> Code 93	ON
<input checked="" type="checkbox"/> Code 128 / EAN128	ON

Types	Default
<input checked="" type="checkbox"/> MSI/Plessey	ON
<input checked="" type="checkbox"/> Telepen	ON
<input checked="" type="checkbox"/> UK/Plessey	ON
<input type="checkbox"/> Tri-Optic	OFF
<input type="checkbox"/> Chinese post	OFF
<input type="checkbox"/> RSS	OFF
<input type="checkbox"/> PDF417	OFF
<input type="checkbox"/> Code 11	OFF
<input type="checkbox"/> Korean post	OFF

Description

The barcode property page lists all the barcode types that are supported by the OPL9728. The need to scan only some or all of the barcode symbologies are application dependent. Enabling or disabling a barcode type has effect in all the input [Forms](#). It is not possible to set a specific barcode symbology for only one input [Form](#). Very specific items can be set by using the system settings.

Read mode Change the way how the laser module inside the OPL9728 should react.
Three values are defined for the Read mode

- Single The laser module is switched on when the user presses a trigger key. The laser module stays powered regardless of the state of the trigger key, and is only switched off when 6 seconds has elapsed, or when a successful read has been made by OPL9728.
- Multiple Almost the same as SINGLE, however the laser module is not switched off after a successful read has been made by the OPL9728, allowing the user to read another barcode. The same barcode can only be read though when the laser beam has been moved away from the label first. The scan time of 6 seconds is reset after a successful read.
- Trigger The laser beam is only on when the trigger key is pressed. The laser beam is switched off after a succesful read has been made by the OPI9728 or when the trigger key has been released.

Enable or disable the barcode symbologies the OPL9728 should be able to read. Some specific barcode symbology settings settings can be done from the sub menus. These are the available barcode symbologies.

Barcodes

- EAN / UPC
- Code 39
- Codabar / NW7
- Industrial 2 of 5
- Interleaved 2 of 5
- SCode
- Matrix 2 of 5
- IATA
- Code 93
- Code 128 / EAN128
- MSI / Plessey
- Telepen
- Tri-Optic
- Chinese post
- RSS
- PDF417
- Code 11
- Korean post

With a systemsetting some specific properties of the OPL9728 can be set. The maximum amount of 2 digit systemsetting that can be set are 20. The maximum amount of 3 digit systemsetting are 10 this is because a 3 digit systemsetting needs a prefix [chracter. 2 and 3 digit systemsettings can be mixed.

Systemsetting

Systemsettings properties can be found in the Universal Menu Book (UMB) or by using [opticonfigure](#).

For specific questions about systemsettings please contact the Opticon support department support@opticon.com.

EAN / UPC, Code 39 Barcode properties field

Speed Application Generator

Options for EAN/UPC and Code 39

EAN / UPC options

Option	Default
<input type="checkbox"/> Enable EAN / UPC addon 2	OFF
<input type="checkbox"/> Enable EAN / UPC addon 5	OFF
<input type="checkbox"/> UPC-A include leading zero in string	OFF
<input checked="" type="checkbox"/> UPC-A include check digit in string	ON
<input type="checkbox"/> UPC-E include leading zero in string	OFF
<input checked="" type="checkbox"/> UPC-E include check digit in string	ON
<input type="checkbox"/> Convert UPC-E to UPC-A format	OFF
<input checked="" type="checkbox"/> EAN-13 include check digit in string	ON
<input checked="" type="checkbox"/> EAN-8 include check digit in string	ON
<input type="checkbox"/> Convert EAN-13 to ISBN format	OFF
<input type="checkbox"/> Convert EAN-13 to ISSN format	OFF

Code 39 options

Option	Default
<input type="checkbox"/> Code 39 enable Full ASCII conversion	OFF
<input type="checkbox"/> Code 39 Italian Pharmaceutical only	OFF
<input type="checkbox"/> Code 39 Italian Pharmaceutical if possible	OFF
<input type="checkbox"/> Code 39 calculate check digit	OFF
<input checked="" type="checkbox"/> Code 39 include check digit in string	ON
<input type="checkbox"/> Code 39 include start/stop character in string	OFF
<input type="checkbox"/> Code 39 include leading A Italian Pharmaceutical	OFF

OK Cancel Help

Description

The common properties for EAN / UPC and Code 39 can be set from this page. Some of the properties do not match with other properties displayed on the form. When this is the case the other items are grayed out.

EAN / UPC Options	Enable EAN / UPC addon 2	When this options is enabled the OPL9728 within the 0.5 sec. for a valid 2 digit addon code. If a valid 2 digit addon code is found, the OPL9728 transmits the data immediately. If nothing is found behind the code, the OPL9728 will transmit the data without addon. If something is found behind the code, the OPL9728 ignored the code in case it is not a valid 2 digit addon.
	Enable EAN / UPC addon 5	When this options is enabled the OPL9728 within the 0.5 sec. for a valid 5 digit addon code. If a valid 5 digit addon code is found, the OPL9728 transmits the data immediately. If nothing is found behind the code, the OPL9728 will transmit the data without addon. If something is found behind the code, the OPL9728 ignored the code in case it is not a valid 5 digit addon.
	UPC-A include leading zero in string	Enabled a scanned UPC-A label is shown with a leading zero.
	UPC-A include check digit in string	This options enables the transmission of the check digit together with the data characters.
	UPC-E include leading zero in string	Enabled a scanned UPC-E label is shown with a leading zero.
	UPC-E include check digit in string	This options enables the transmission of the check digit together with the data characters.
	Convert UPC-E to UPC-A format	If this optin is enabled, a UPC-E label is transmitted in the UPC-A format.
	EAN-13 include check digit in string	This options enables the transmission of the check digit together with the data characters.
	EAN-8 include check digit in string	This options enables the transmission of the check digit together with the data characters.
	Convert EAN-13 to ISBN format	If this option is enabled, an EAN-13 label is verified for the correct format and transmitted as a 10 digit ISBN number.
	Convert EAN-13 to ISSN format	If this option is enabled, an EAN-13 label is verified for the correct format and transmitted as a 8 digit ISSN number.

Code 39 Options	Code 39 Enable Full ASCII conversion	In this mode the decoded data characters are translated to full ASCII Code 39.
	Code 39 Italian Pharmaceutical only.	In this mode the decoded data characters are translated to the Italian Pharmaceutical format. If the data does not comply with the Italian Pharmaceutical format, the label is rejected.
	Code 39 Italian Pharmaceutical if possible.	In this mode the decoded data characters are translated to the Italian Pharmaceutical format. If the data does not comply with the Italian Pharmaceutical format, then the data is transmitted as Normal or full ASCII Code 39.
	Code 39 calculate check digit.	This option enables the check digit calculation. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.
	Code 39 include check digit in string	This options enables the transmission of the check digit together with the data characters.
	Code 39 include start/stop character in string	This options enables the transmission of the check digit together witht the data characters.
	Code 39 include leading A Italian Pharmaceutical	Enabled a scanned Italian Pharmaceutical label is shown with a leading A character.

Code 2 Of 5, MSI, Telepen, Plessey Barcode properties field

Speed Application Generator

Startup
Barcode
Options for EAN/UPC a
Options for 2 of 5, MSI
Options for Codabar, C
Code 11, Korean post,
Lookup
Form
Menu
Data
Language

Options for 2 of 5, MSI, Telepen and Plessey

Code 2 of 5 options (Interleaved and Industrial)

	Default
<input type="checkbox"/> Code 2 of 5 calculate check digit	OFF
<input checked="" type="checkbox"/> Code 2 of 5 include check digit in string	ON

MSI Plessey options

<input checked="" type="checkbox"/> MSI calculate 1 check digit MOD10	ON
<input type="checkbox"/> MSI calculate 2 check digit MOD10 / MOD10	OFF
<input type="checkbox"/> MSI calculate 2 check digit MOD10 / MOD11	OFF
<input type="checkbox"/> MSI calculate 2 check digit MOD11 / MOD10	OFF
<input checked="" type="checkbox"/> MSI include first check digit in string	ON
<input type="checkbox"/> MSI include both check digits in string	OFF

Telepen options

<input checked="" type="checkbox"/> Enable Full ASCII mode	ON
--	----

UK Plessey options

<input checked="" type="checkbox"/> UK Plessey include check digit in string	ON
--	----

OK Cancel Help

Description

The common properties for Code 2 Of 5, MSI, Telepen and Plessey can be set from this page. Some of the properties do not match with other properties displayed on the form. When this is the case the other items are grayed out.

Code 2 of 5
options
(Interleaved and
Industrial)

Code 2 of 5 calculate check digit.

This option enables the check digit calculation. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

Code 2 of 5 include check digit in string

This options enables the transmission of the check digit together with the data characters.

MSI calculate 1 check digit MOD10. This option enables the check digit calculation. The checksum is calculated as the sum modulo 10 of the data characters. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

MSI calculate 2 check digits MOD10/MOD10. This option enables the check digit calculation. The first checksum is calculated as the sum modulo 10 of the data characters, the second checksum is calculated as the sum modulo 10 of the data characters and the first check digit. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

MSI calculate 2 check digits MOD10/MOD11. This option enables the check digit calculation. The first checksum is calculated as the sum modulo 10 of the data characters, the second checksum is calculated as the sum modulo 11 of the data characters and the first check digit. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

MSI calculate 2 check digits MOD11/MOD10. This option enables the check digit calculation. The first checksum is calculated as the sum modulo 11 of the data characters, the second checksum is calculated as the sum modulo 10 of the data characters and the first check digit. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

MSI include first check digit in string. This options enables the transmission of the first check digit together with the data characters.

MSI include both check digits in string. This options enables the transmission of both check digits together with the data characters.

Enable Full ASCII mode. In this mode the decoded data characters are translated to full ASCII.

UK Plessey include check digit in string. This options enables the transmission of the check digit together with the data characters.

MSI Plessey
Options

Telepen option

UK Plessey option

Codabar / NW7, Code128 / EAN128, IATA Barcode properties field

Speed Application Generator

Options for Codabar, Code 128 and IATA

Options for Codabar, Code 128 and IATA	Default
Codabar / NW7 options	
<input type="checkbox"/> Only Codabar ABC code	OFF
<input type="checkbox"/> Only Codabar CX code	OFF
<input type="checkbox"/> Codabar ABC and CX code	OFF
<input type="checkbox"/> Codabar calculate check digit	OFF
<input checked="" type="checkbox"/> Codabar include check digit in string	ON
<input type="checkbox"/> Codabar include start/stop char as ABCD/ABCD	OFF
<input type="checkbox"/> Codabar include start/stop char as abcd/abcd	OFF
<input type="checkbox"/> Codabar include start/stop char as ABCD/TN*E	OFF
<input type="checkbox"/> Codabar include start/stop char as abcd/tn*e	OFF
<input checked="" type="checkbox"/> Enable intercharacter gap check	ON
Code 128 / EAN128 options	
<input type="checkbox"/> EAN128 conversion only	OFF
<input type="checkbox"/> EAN128 conversion if possible	OFF
IATA options	
<input type="checkbox"/> IATA check serial number only	OFF
<input type="checkbox"/> IATA check coupon and serial numbers	OFF
<input type="checkbox"/> IATA check coupon, airline and serial numbers	OFF
<input checked="" type="checkbox"/> IATA include check digit in string	ON

OK Cancel Help

Description

The common properties for Codabar / NW7, Code128 / EAN128 and IATA can be set from this page. Some of the properties do not match with other properties displayed on the form. When this is the case the other items are grayed out.

Only Codabar ABC code. From the Codabar options only allow Codabar ABC code.

Only Codabar CX code. From the Codabar options only allow Codabar CX code.

Codabar ABC and CX code. From the Codabar options Codabar ABC and CX code are allowed.

Codabar calculate check digit This option enables the check digit calculation. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

Codabar include check digit in string. This options enables the transmission of the check digit together with the data characters.

Codabar include start/stop characters as ABCD/ABCD.

This options enables the translation and transmission of the start and stop characters in the string. The start character is converted to A,B,C or D and the stop character is converted to A,B,C or D.

Codabar include start/stop characters as abcd/abcd.

This options enables the translation and transmission of the start and stop characters in the string. The start character is converted to a,b,c or d and the stop character is converted to a,b,c or d.

Codabar include start/stop characters as ABCD/TN*E

This options enables the translation and transmission of the start and stop characters in the string. The start character is converted to A,B,C or D and the stop character is converted to T,N,* or E.

Codabar include start/stop characters as abcd/tn*e

This options enables the translation and transmission of the start and stop characters in the string. The start character is converted to a,b,c or d and the stop character is converted to t,n,* or e.

Enable intercharacter gap check.

This option enables the reading of Codabar labels with a large or irregular gap between characters.

EAN128 conversion only.

In this mode the decoded data characters are translated to the EAN 128 format. If the data does not comply with the EAN 128 format, then the label is rejected.

EAN128 conversion if possible.

In this mode the decoded data characters are translated to the EAN 128 format. If the data does not comply with the EAN 128 format, then the label is transmitted as Code 128.

Codabar
options

Code 128 /
EAN128
options

**IATA check serial
number only.**

This option enables the check digit calculation. The checksum is calculated as the modulo of the form code and the serial number. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

**IATA check
coupon and serial
number.**

This option enables the check digit calculation. The checksum is calculated as the modulo of the coupon, form code and the serial number. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

IATA option

**IATA check
coupon airline and
serial number.**

This option enables the check digit calculation. The checksum is calculated as the modulo of the coupon, airline, form code and the serial number. If the calculated check digit does not correspond to the check digit in the barcode, the barcode is ignored. The use of a check digit greatly improves the security of a barcode.

**IATA include
check digit in
string.**

This options enables the transmission of the check digit together with the data characters.

Code 11, Korean post, RSS and PDF417 Barcode properties field

Speed Application Generator

Code 11, Korean post, RSS and PDF417

Option	Default
Code 11 options	
<input checked="" type="checkbox"/> Check auto 1 or 2	ON
<input type="checkbox"/> Check 2 check digits	OFF
<input type="checkbox"/> Check 1 check digit	OFF
<input type="checkbox"/> Include check digit in string	OFF
Korean post	
<input type="checkbox"/> Include check digit in string	OFF
<input checked="" type="checkbox"/> Include dash in string	ON
RSS	
<input checked="" type="checkbox"/> Include check digit in string	ON
<input checked="" type="checkbox"/> Include application identifier	ON
PDF417	
<input type="checkbox"/> MicroPDF include number of data columns in string	OFF
<input type="checkbox"/> RSS include link flag in string	OFF
<input type="checkbox"/> EAN128 include link flag in string	OFF

OK Cancel Help

Description

The common properties for Code 11, Korean post, RSS and PDF417 can be set from this page. Some of the properties do not match with other properties displayed on the form. When this is the case the other items are grayed out.

Check auto 1 or 2. Enables the automatic checking for 1 or 2 check digits depending of the number of data characaters.

Check 2 check digits. Enables the checking for 2 check digits.

Code 11
options

Check 1 check digit. Enables the checking for 1 check digits.

Include check digit in string. This options enables the transmission of the check digit together with the data characters.

Korean post options	Include check digit in string.	This options enables the transmission of the check digit together with the data characters.
	Include dash in string.	This options enables the inclusion of the dash character (-) between the 3rd and 4th digit.
RSS options	Include check digit in string.	This options enables the transmission of the check digit together with the data characters.
	Include application identifier.	This option includes the application identifier in the string.
PDF417 options	MicroPDF include number of data columns in string.	Enables the MicroPDF line numbering of the datacolumns in the string.
	RSS include link flag in string.	This option includes the RSS link flag in the string.
	EAN128 include link flag in string.	This option includes the EAN128 link flag in the string.

Lookup properties field

Speed Application Generator

Lookup

Lookup file:

☒ Use lookup file

Filename:

Record options

Record size including <CR><LF>:

Number of fields:

Specific actions when

Format of record is wrong:

Input data has no match:

Lookup file not available:

Record fields

Field	Offset	Length	Key field
#1	0	13	<input checked="" type="radio"/>
#2	13	6	<input type="radio"/>
#3	0	1	<input type="radio"/>
#4	0	1	<input type="radio"/>
#5	0	1	<input type="radio"/>
#6	0	1	<input type="radio"/>
#7	0	1	<input type="radio"/>
#8	0	1	<input type="radio"/>
#9	0	1	<input type="radio"/>
#10	0	1	<input type="radio"/>

OK Cancel Help

Description

A lookup file is a flat fixed length database file that is created for information reference. The lookup file needs to be sorted to find the wanted record.

Lookup file Describes the current Lookup file. The number of available lookup files are from Lookup 1..Lookup 3.

Use lookup file Enabling this option makes the application check if a lookup file is present want input is started from the main menu.

Lookup filename The name of the lookup file that is loaded into the OPL9728 or is placed in the RAM_DISK folder of the SpeedGen application. The lookup file format needs to be in the 8.3 DOS format.

Record
Options

**Record size including
<CR><LF>.**

The total size of one record in the database. The application checks the lookup file matches this record size. The end of the record should always have a <CR><LF> (carriage return and Linefeed) character. The maximum size of one record is 350 characters including the <CR><LF>.

Number of fields.

The number of fields that are needed in the application. The maximum amount of field are 8.

Record
fields

Field. The field number in the lookup file.

Offset. The position of where the field should start in the record of the lookup file. The first position in a record is position 0.

Length. The length of the field. The length must between the 1 and 40 characters.

Key field. The key field marks the field on what the database is sorted.

Example 1:

```
Lookup1.txt
0000000000001 10.95<CR><LF>
```

Lookup1.txt

Field	Offset	Length	Key field	Description	Item
#1	0	13	Yes	Barcode	0000000000001
#2	13	6		Price	10.95

Example 2:

```
Lookup2.txt
0000000000001, 10.95<CR><LF>
```

Lookup2.txt

Field	Offset	Length	Key field	Description	Item
#1	0	13	Yes	Barcode	0000000000001
#2	14	6		Price	10.95

Specific
action
when

- Format of record is wrong

Continue

Ignore the lookup file
format error, just
continue.

Show error & delete lookup

Show an error message
and remove the lookup file
from the ramdisk.

Show error & Goto main menu

Show an error message
and return to the main
menu.

- Input data has not match

Continue

Empty lookup variables from look1 to lookx. Lookx is the
selected number of fields.

Show
warning

Show a warning message that the item to search for does not
match the item in the key field. The lookup variables are
emptied from look1 to lookx. Lookx is the selected number of
fields.

Goto

Jump to a specific Form, Menu or main page when the lookup
search item is not found.

Goto &
Warning

Show a warning message that the item to search for does not
match the item in the key field. After this warning message the
interpreter jumps to the selected Form, Menu or Main page.

- Lookup file not available

Goto main	Directly return to the main menu, no error message is displayed on the OPI9728.
Show error & continue	Shows an error message that the lookup file is not available on the ramdisk. The application can continue with the wanted input.
Show error & goto main	Shows an error message that the lookup file is not available on the ramdisk. The application returns back to the main menu.

Form properties field

Speed Application Generator

Form

Name: CLR:

Font: Next:

Display & Input

Line	Data type	Prompt	Input	Min	Max	Variable	Lookup	Properties
#1	<input type="text" value="Text"/>	<input type="text" value="Barcode:"/>	<input type="text" value="Both"/>	<input type="text" value="1"/>	<input type="text" value="13"/>	<input type="text" value="Var 1"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 567 1477 598" type="text" value="More..."/>
#2	<input type="text" value="Integer"/>	<input type="text" value="Quantity:"/>	<input type="text" value="Keypad"/>	<input type="text" value="1"/>	<input type="text" value="6"/>	<input type="text" value="Var 2"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 619 1477 651" type="text" value="More..."/>
#3	<input type="text" value="Real"/>	<input type="text" value="Price:"/>	<input type="text" value="Keypad"/>	<input type="text" value="1"/>	<input type="text" value="8"/>	<input type="text" value="Var 3"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 672 1477 703" type="text" value="More..."/>
#4	<input type="text" value="Counter"/>	<input type="text" value="Records"/>	<input type="text" value="Both"/>	<input type="text" value="0"/>	<input type="text" value="40"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 724 1477 756" type="text" value="More..."/>
#5	<input type="text" value="Nil"/>	<input type="text" value=""/>	<input type="text" value="Both"/>	<input type="text" value="0"/>	<input type="text" value="40"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 777 1477 808" type="text" value="More..."/>
#6	<input type="text" value="Nil"/>	<input type="text" value=""/>	<input type="text" value="Both"/>	<input type="text" value="0"/>	<input type="text" value="40"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 829 1477 861" type="text" value="More..."/>
#7	<input type="text" value="Nil"/>	<input type="text" value=""/>	<input type="text" value="Both"/>	<input type="text" value="0"/>	<input type="text" value="40"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 882 1477 913" type="text" value="More..."/>
#8	<input type="text" value="Nil"/>	<input type="text" value=""/>	<input type="text" value="Both"/>	<input type="text" value="0"/>	<input type="text" value="40"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 934 1477 966" type="text" value="More..."/>
#9	<input type="text" value="Nil"/>	<input type="text" value=""/>	<input type="text" value="Both"/>	<input type="text" value="0"/>	<input type="text" value="40"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 987 1477 1018" type="text" value="More..."/>
#10	<input type="text" value="Nil"/>	<input type="text" value=""/>	<input type="text" value="Both"/>	<input type="text" value="0"/>	<input type="text" value="40"/>	<input type="text" value="Nil"/>	<input type="text" value="Nil"/>	<input data-bbox="1396 1039 1477 1071" type="text" value="More..."/>

Storage

☒ Save on Next

OK Cancel Help

Description

The form properties control the input from the user, show data from the lookup and the data file. Some of the input options that are found on the form properties page have [more](#) properties that can be displayed in this form. For these properties click the [more](#) button.

Name Describes the current form. The number of available forms are from Form 1..Form 8.

Font The OPL9728 has 4 fonts available inside.

Large	14 characters wide	4 lines high
Medium	18 characters wide	5 lines high
Small	14 characters wide	8 lines high
Tiny	18 characters wide	10 lines high

The jump position when the CLR key is pressed on the OPL9728.

CLR

- Main menu
- Form 1..Form 8
- Menu 1..Menu 8

Specify which Form or Menu to be shown after last line has been completed on the current form.

Next

- Main menu
- Form 1..Form 8
- Menu 1..Menu 8

Line. The line number of the display.

Data type. Controls what kind of [Data type](#) is used for this line. For more information click [Data type](#).

Display &
Input

Prompt Specify the prompt string for each input data type field, if necessary.

The input source from where the data is collected.

Input.

- Reader
- Keypad
- Both

Save on
Next

Save the data when the last line of Display & Input has been handled. The number of data files to select from are from Data 1..Data 3. For more information on [data](#) look at the [data](#) property field.

Display & Input lines



Description

Each line represents one line on the OPL9728. Changing these properties will change the way the application input works. Input is done by reading a barcode or by entering data by the keypad. When using the keypad data is submitted by pressing the ENT or DOWN key. To get back to the previous input line press the UP key. More information on keys of the OPL9728 is available [here](#)

Line. Describes the current line number. The amount of available lines are set by changing the **Font** property.

Data type Data type describes what the current line should do.

Data type	Prompt on display	Expect input	Data length	Store in Var	Lookup field
Nil	No	No	No	No	No
Text	Yes	Yes	Yes	Yes	Yes
Integer	Yes	Yes	Yes	Yes	Yes
Real	Yes	Yes	Yes	Yes	Yes
Alpha	Yes	Yes	Yes	Yes	Yes
AlphaNum	Yes	Yes	Yes	Yes	Yes
Boolean	Yes	Yes	No	Yes	Yes
Lookup	Yes	No	No	No	Yes
Counter	Yes	No	No	No	No
Fixed	Yes	No	No	No	No
Pause	Yes	Yes	No	No	No
Extension	No	No	No	No	No

	Data type	Description
--	-----------	-------------

	Nil	This is the do nothing data type. When Nil is selected the whole line is empty. The application will directly proceed with the next line number.
--	------------	--

	Text	Accept input of any character Example: !AaZz # \$=-
--	-------------	---

	Integer	Numeric input is accepted. Negative input is possible by the More... properties dialog. Example: 123
--	----------------	--

	Real	Accept input of Real value with one or two decimals. The number of Decimals and possitive and negative input is set by the More... properties dialog. Example: 123.12
--	-------------	---

	Alpha	Accept uppercase and lowercase letters Example: AaZz
--	--------------	--

	AlphaNum	Accept uppercase and lowercase letters and Numeric input Example: Aa123Zz
--	-----------------	---

	Boolean	Accepts just a 1 and a 0
--	----------------	--------------------------

	Lookup	Search the Data file or lookup file with as searchkey the variable described in the Var field. The field from the data file or lookup file that needs to be shown on the display is set from the More... properties dialog.
--	---------------	---

	Counter	Shows the amount of records that are available in the data file.
--	----------------	--

	Fixed	Shows a text entered in the prompt field or show the contents of one of the selectable variables.
--	--------------	---

	Pause	Shows the prompt and wait for the user to press a key to proceed to the next line.
--	--------------	--

	Extension	This line is used as an "Extension" of the previous line. This way displaying data that exceeds one line, is continued to display it content one the Extension line.
--	------------------	--

Prompt		Display some text information, user input is directly placed behind the prompt.
--------	--	---

	Reader	Input is done by reading a barcode. The laser is emitted by pressing the trigger key. See OPL9728 to find the trigger key.
--	---------------	--

Input	Keypad	Data input is entered by pressing the the keys on the keypad of the OPL9728. The input data is submitted by pressing the ENT key or by the DOWN key.
-------	---------------	--

	Both	Data input is done by either Reader or Keypad.
--	-------------	--

Min	Specify the minimum length of data input that is considered acceptable. When the data entered is too short an error message appears on the display.
Max	Set the maximum amount of characters that is considered acceptable the maximum length can be 40 characters at most.
Variable	<p>When the Show input mark is selected from the More.. properties dialog the set character for as input marker has the same length as the set maximum length.</p> <p>All the fields that need an input source can store the inputted data in one of the variable fields. The lookup and data fields can also be used for data storage, the disadvantage is only that during a lookup these fields will be overwritten.</p> <p>If the Data type is Lookup the variable field holds the search key.</p>
Lookup	Find a record in the data file or lookup file. The field that needs to be displayed is selected from the More... properties dialog.
Properties	By clicking the More... properties dialog button additional options can be set for the input line.

More properties dialog

More properties

Field & line

Form #1 Line #1

Field data

Alignment & padding

Left aligned padded with spac

Initial value or text

Variable

Value or text

1

Variable

Var 1

☐ Add prefix

☐ Add suffix

☐ Show input mark

Decimal places: 1

Lookup

On match display field:

Nil

Numeric or Real

☐ Allow negative

Counter

Show: Data 1

OK Cancel

Description

The more properties dialog can set some specific properties for Data type **form** properties.

Field & Line Shows the current Form and line number the user is editing some of the properties.

Field data

Alignment & Padding

The data input that is stored in a variable is set to a fixed length set by the Max length property. To set the data into the wanted format alignment and padding is used.

Alignment examples

	Max	Settings	Data input	Formatted data
13		Left aligned padded with space	1234567890	1234567890
13		Right aligned filled with space	1234567890	1234567890
13		Left aligned padded with 0	1234567890	1234567890000
13		Right aligned filled with 0	1234567890	0001234567890

Initial value or text

Show a default value or text for the data input.

None	No initial value or text as default value
Value or text	Use an default value for input
Variable	Use an default value from one of the selectable variable fields. When the variable field is empty the value or text from the edit box is used.

Add prefix

When this option is checked the value or text entered in the edit box is placed before the input data.

Add prefix

When this option is checked the value or text entered in the edit box is placed after the input data.

Show input mark

Check box to show the input marks, such as underline (_) or asterix (*), which is to be replaced by the data input.

The number of input marks shown on the display is based on the maximum length set from the [Form](#) properties dialog.

Decimal places:

The number of decimals that can be enetered for the Real data type.

Lookup ***On match display field:***

Display one of the lookup or data fields when the searchkey matched the key field.

Numeric or
Real ***Allow negative***

When this checkbox is marked negative value input is allowed for Integer and Real.

Counter ***Show:***

Displays the number of records of this particular data file, When no data file is available then the result 0 will be displayed.

Menu properties field

The screenshot shows the 'Menu' properties dialog box in the 'Speed Application Generator'. The left sidebar contains a tree view with 'Menu' selected. The main area is divided into several sections: 'Name' (Menu 1), 'Font' (Large), 'CLR' (Main), 'Menu Header' (Use Menu header checked, Main), 'Data' (Store Header unchecked, Store Menu item checked, Var 1), and 'Storage' (Save on Next unchecked, Data 1). On the right, the 'Menu Items' section displays a table with 10 rows. The first row is pre-filled with 'menu item 1', while the others are empty. All 'Next' dropdowns are set to 'Main'. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

Item No.	Item Name	Next:
#1	menu item 1	Main
#2	menu item 2	Main
#3	menu item 3	Main
#4	menu item 4	Main
#5		Main
#6		Main
#7		Main
#8		Main
#9		Main
#10		Main

Description

The menu properties field display a menu on the OPL9728. The items are displayed until the first empty Item name. The menu is controlled by the UP and DOWN key and an item is selected by using the TRIGGER or ENT key. Click [here](#) more information on the OPL9728 keypad keys.

Name. Describes the current Menu. The number of available menus are from Menu 1..Menu 8 .

Font The OPL9728 has 4 fonts available inside.

Large	14 characters wide	4 lines high
Medium	18 characters wide	5 lines high
Small	14 characters wide	8 lines high
Tiny	18 characters wide	10 lines high

The jump position when the CLR key is pressed on the OPL9728.

- CLR
- Main menu
 - Form 1..Form 8
 - Menu 1..Menu 8

Menu Header

Use menu header

When the use menu header is checked On top of the menu a header text is displayed.

Store Header

Data

Store the header text in a [variable](#) when a menu item is selected.

Store Menu item

Store the menu item text in a [variable](#) when a menu item is selected.

Item No.

The menu item number.

Menu Item

Item name

The text that is shown for the menu item.

Next

The jump position when the item name is selected.

Save on Next

Save the data when the a menu item is selected. The number of data files to select from are from Data 1..Data 3. For more information on [data](#) look at the [data](#) property field.

Data properties field

The screenshot shows the 'Speed Application Generator' window with the 'Data' tab selected. The left sidebar contains a tree view with 'Startup', 'Barcode', 'Options for EAN/UPC a', 'Options for 2 of 5, MSI', 'Options for Codabar, C', 'Code 11, Korean post,', 'Lookup', 'Form', 'Menu', 'Data' (highlighted), and 'Language'. The main area is titled 'Data' and contains several sections: 'Data file' with a dropdown set to 'Data 1'; 'Filename' with a text box containing 'Example1.txt'; 'Record options' with 'Record size: 43', a checked 'Use field separator' checkbox, and 'Number of Fields: 2'; 'Date format: YYYY/MM/DD' with checked boxes for 'Year', 'Month', and 'Day', and a 'Format' dropdown set to 'Year/Month/Day'; 'Time format: HH:MM:SS' with checked boxes for 'Hour', 'Minute', and 'Second'; and 'Data storage' with a dropdown set to 'Append new data'. The 'Data record' section is a table with 10 rows. The first two rows are configured with 'Var 1' and 'Var 2' as variables, field sizes of 13 and 7, and 'Right al. filled with 0' and 'Right al. filled with spa' respectively. The remaining eight rows are configured with 'Nil' for both variables, field sizes of 0, and 'Left al. padded with sp'. At the bottom of the 'Data record' section are checkboxes for 'Add date' and 'Add time', and a text box containing '<CR><LF>'. The bottom of the window has 'OK', 'Cancel', and 'Help' buttons.

Fields	Variable 1	Variable 2	String	Field size	Key	Alignment & padding
#1	Var 1	Nil	<input checked="" type="checkbox"/>	13	<input checked="" type="radio"/>	Right al. filled with 0
#2	Var 2	Nil	<input type="checkbox"/>	7	<input type="radio"/>	Right al. filled with spa
#3	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp
#4	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp
#5	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp
#6	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp
#7	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp
#8	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp
#9	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp
#10	Nil	Nil	<input checked="" type="checkbox"/>	0	<input type="radio"/>	Left al. padded with sp

Description

This Data properties form describes the way a data file needs to be formatted. The data file is of a type flat fixed length database. To be able to search through this data file the data needs to be sorted on the key field.

Data file Describes the current Data file. The number of available Data files are from Data 1..Data 3.

Filename The name of the data file that is received from the OPL9728 or is fetched from the RAM_DISK folder of the SpeedGen application. The data file format needs to be in the 8.3 DOS format. A data file can also be loaded in the OPL9728 or copied into the RAM_DISK folder of the SpeedGen application.

Record Options **Record size**
Shows the calculated record size including the <CR><LF>.

Use field separator

When checked the record fields are separated by a (,).

Number of fields

The total number of fields in a record without the date and time.

Data
Record
fields

- | | |
|--------------------------------|--|
| Field. | The field number in the data file. |
| Variable 1. | The first item to be placed into the variable field of the data file. This item can be added with Variable 2 . |
| Variable 2. | The second item to be placed into the variable field of the data file. This item can be added to with Variable 1 . |
| String | When this string checkbox is marked the Variable 1 and Variable 2 are appended after each other. When the string checkbox is not marked the OPL9728 tries to add Variable 1 to Variable 2 if possible. |
| Field size. | The length of the current data field. The length must be between 1 and 40 characters. |
| Key | The key field is only used when the Data storage is set to <i>Update record (sorted)</i> . The field number that has the key field marked is the sorting key. |
| Alignment & padding | The Variable 1 and Variable 2 that are added together are finally stored into a fixed length data field. To set the data into the wanted format alignment and padding is used. |
| Add date | Add a date field to the record, the format of the date field is set by the Date format field. |
| Add time | Add a time field to the record, the format of the date field is set by the Time format field. |

Adding and Alignment examples

Variable 1	Variable 2	String	Size	padding & alignment	Formatted data
ABCDEF	XYZ	Yes	13	Left aligned padded with space	ABCDEFXYZ
ABCDEF	XYZ	Yes	13	Right aligned filled with space	ABCDEFXYZ
ABCDEF	XYZ	Yes	13	Left aligned padded with 0	ABCDEFXYZ0000
ABCDEF	XYZ	Yes	13	Right aligned filled with 0	0000ABCDEFXYZ
123456	222	Yes	13	Right aligned filled with 0	0000123456222
123456	222	No	7	Left aligned padded with space	123678
123456	222	No	7	Right aligned filled with space	123678
123456	222	No	7	Right aligned padded with 0	0123678
123456	ABCDEF	No	7	Left aligned padded with space	123456A

Formats the date field.

Year Use year in the date formatting.

Year digits Use year as a 2 digit value or as a 4 digit value.

Month Use month in date formatiing.

Day Use day in day formatiing.

Select the way the Year, month and day need to be placed into the date field.

Format

- Year/Month/Day
- Month/Day/Year
- Day/Month/Year

Date
format.

Formats the time field.

Time format.	Hour	Use hour in the time formatting.
	Minute	Use minute in time formatiing.
	Second	Use seconds int time formatiing.



Language properties field

The screenshot shows the 'Speed Application Generator' window with the 'Language' tab selected. On the left is a tree view with categories: Startup, Barcode, Options for EAN/UPC a, Options for 2 of 5, MSI, Options for Codabar, C, Code 11, Korean post, Lookup, Form, Menu, Data, and Language. The 'Language' category is highlighted. The main area is titled 'Language' and contains two sections: 'Convert strings' and 'Convert messages'. Each section has a table with 'Original' and 'Translated' columns. In the 'Convert strings' table, 'Sunday' is selected in the 'Translated strings' column. The 'Convert messages' table lists various error messages. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

Original strings	Translated strings
Sunday	
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	

Original messages	Translated messages
Data file already open!	
Cannot open data file!	
Cannot create data file!	
Data file does not exist!	
Data file not open!	
Data file is empty!	
Data file has wrong format!	
Failed reading data file!	
Failed writing data file!	
Data file memory problem!	
Data file database error!	

Description

The language properties page is an optional page. If all strings are left empty then no translation item will be used and the default language settings will be kept. When an empty is left empty then also the default value will be used for the string or message.

Converted string Small strings up to 18 characters are possible. It is possible to enter longer strings, but those will not be stored in a build application.

Converted messages Errors, warning and information messages can be translated here. The maximum size that can be use is 54 characters. Converted messages that exceed the 54 characters are not stored in the build application.

Interpreter



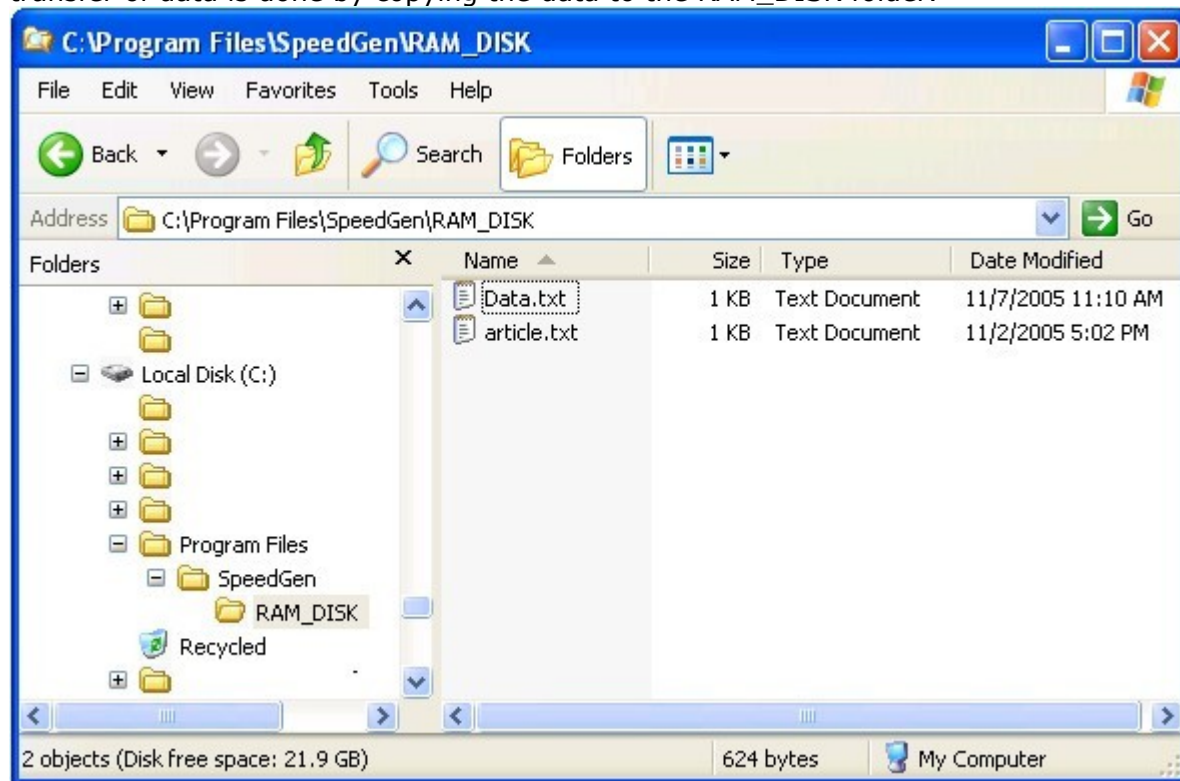
Main Menu

To navigate through the menu the UP, DOWN, LEFT, RIGHT keys can be used for scrolling. A highlighted option is submitted by using the TRIGGER or ENT key. The numbers on the keypad can also be used as shortcut key to start the wanted menu number item.

From the main menu the build application can be started by selecting "1 Input". Menu option "2 Send data" starts the transfer of the data file. With menu option "3 Utilities" special file and terminal options for the OPL9728 can be set.

- Input
- Send data
- Utilities

The PC SpeedGen application and the Interpreter on the OPL9728 work almost the same. The biggest difference is that the PC application does not support communicating with the NetO protocol. The transfer of data is done by copying the data to the RAM_DISK folder.

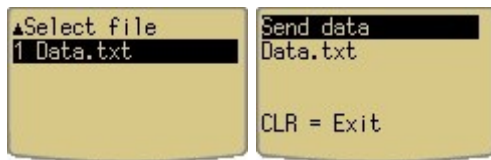


With notepad or any other text editor the contents of the files in the RAM_DISK folder can be checked if it matches the wanted format. The format of the files that are created on the PC have the same format as the files created on the OPL9728.

Input

The start of the application.

Send Data



Send data starts the file selection to transfer one or more data files. The protocol for transmitting the data file to the PC is the standard Opticon Neto protocol. To receive the file on the PC an application is needed. The NetO protocol application can be downloaded from the www.opticon.com web site.

To setup the NetO Protocol on the PC click [here](#).

The Send data option does not work on the PC interpreter, to look at the data input file goto the RAM_DISK folder.

Utilities

The Utilities menu show some additional options for the OPL9728. This menu can be locked by changing security property in the [Startup](#) properties page.

The Utilities menu consists of these options:

- 1 Rcv lookup
- 2 Browse data
- 3 Delete data
- 4 Delete lookup
- 5 Set time/date
- 6 Power & memory
- 7 Browse disk
- 8 Format disk
- 9 Erase language

1 Rcv lookup

Put the OPL9728 in receive file(s) mode. The protocol used for receiving the file(s) is the NetO protocol. The baudrate used for the transfer 115200, the other parameters are No Parity, 1 stopbit and 8 databits. For the cradle the NetO32 application also needs to set an IrDA adapter. The IrDA adapter needed for the CRD-9723 RS232 cradle is the Litelink compatible adapter.

2 Browse data



With browse data option it is possible to look through the records and fields of the data file. First the data file to browse needs to be selected. Only one of the data fields is shown on the display at the time. The two number on the top left of the display show the amount of fields that are in the data file. The two number on the top right show the amount of records in the data file. By pressing the CLR key the user return to the Utilities menu.

To navigate between the data fields of a record it is possible to use the LEFT and RIGHT keys or a direct record field can be selected by pressing one of the numeric keys on the keypad.

Navigating between the different records is done by pressing the UP and DOWN keys on the keypad.

By pressing the TRIGGER key a whole record can be removed from the data file.

3 Delete data

The delete data option can delete the data file if that is available on the RAM disk. A warning message is shown before the user can delete the data file.

4 Delete lookup

The delete lookup option can delete the lookup file if that is available on the RAM disk. A warning message is shown before the user can delete the lookup file.

5 Set time/date



Change the time and date. The changed time and date is stored when the CLR key is pressed. This options only works on the OPL9728 and not on the PC.

Navigating is done by the LEFT, RIGHT, UP and DOWN keys. Changing the values can be done by pressing the TRIGGER key or by the numeric keys on the keypad.

The PC date and time is transferred to the OPL9728 when loading an OS, Interpreter or a SpeedGen build application.

6 Power & memory

The Power & memory options shows the current battery voltage in the OPL9728 and the available memory on the RAM disk. The PC interpreter has a fixed voltage and a fixed amount for the available memory.

7 Browse disk



Browses the contents of the RAM disk. With the CLR key the interpreter returns to the Utilities menu. with the 1 key the file can be deleted. With the 2 key the OPL9728 continues to the next file, after the last file the OPL9728 returns to the Utilities menu.

8 Format disk

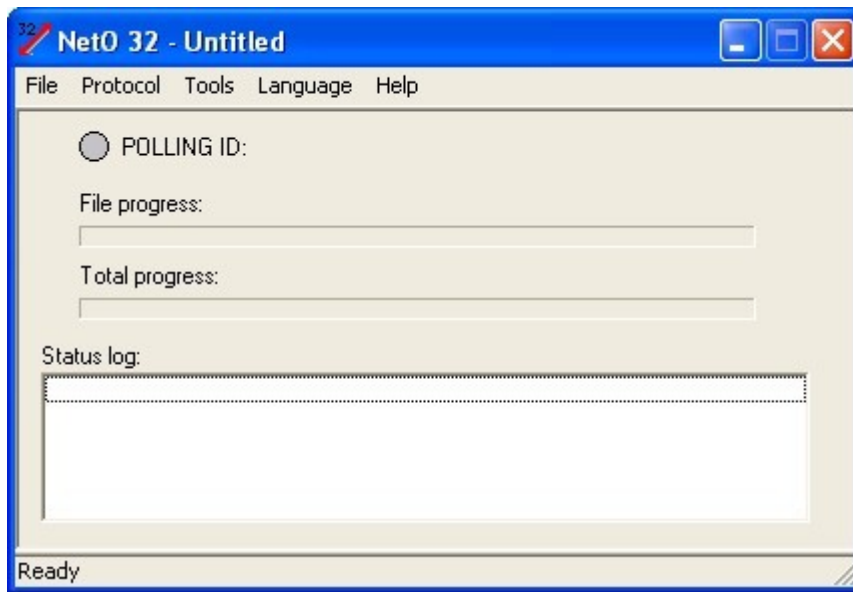
Formats the whole RAM disk, all the contents of the RAM disk is lost. Before doing the format a warning message appear to ask if the user is really sure to clear the whole RAM disk.

The PC interpreter shows the warning message but does not format the RAM_DISK folder.

9 Erase language

With the erase language the build application returns to the default language settings.

NetO32 communication application



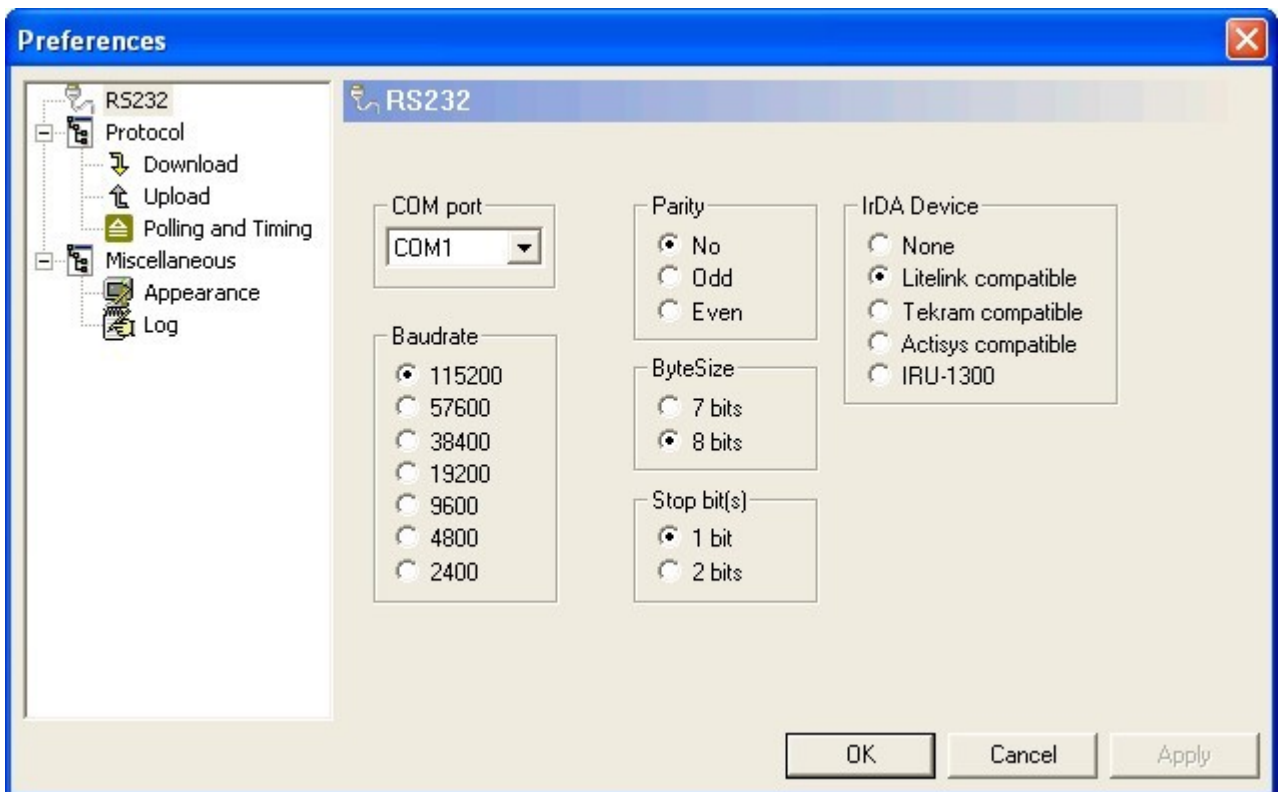
Description

The NetO32 application handles the transfer of the data and the lookup file from and to the OPL9728. To make the NetO32 application work with the OPL9728 some settings need to be done. This section describes what settings are needed to start the communication. The NetO32 application can be downloaded from the www.opticon.com web site.

Remarks:

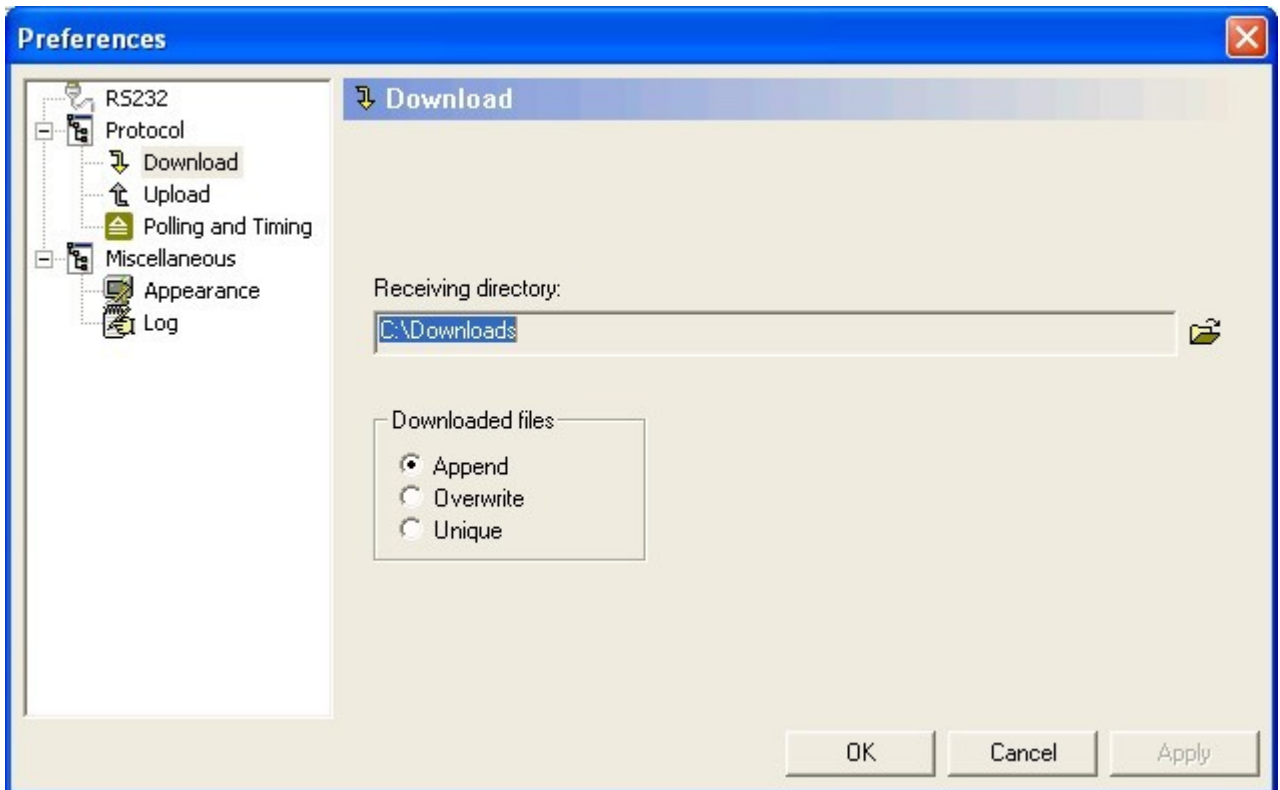
- When creating an application by the SpeedGen application generator, sending a build file to the OPL9728 cannot be done at the same time as sending or receiving a data or lookup file.
- More information can be found in the help file that is distributed by the NetO32 application installation.

Step 1.



To get the RS232 property dialog click **Tools** from the menu and then click **Options**. Here the user can set the needed RS232 parameters. Select the serial port (COM port) to where the CRD-9723 is connected to. The other settings need to match the settings in the image.

Step 2.

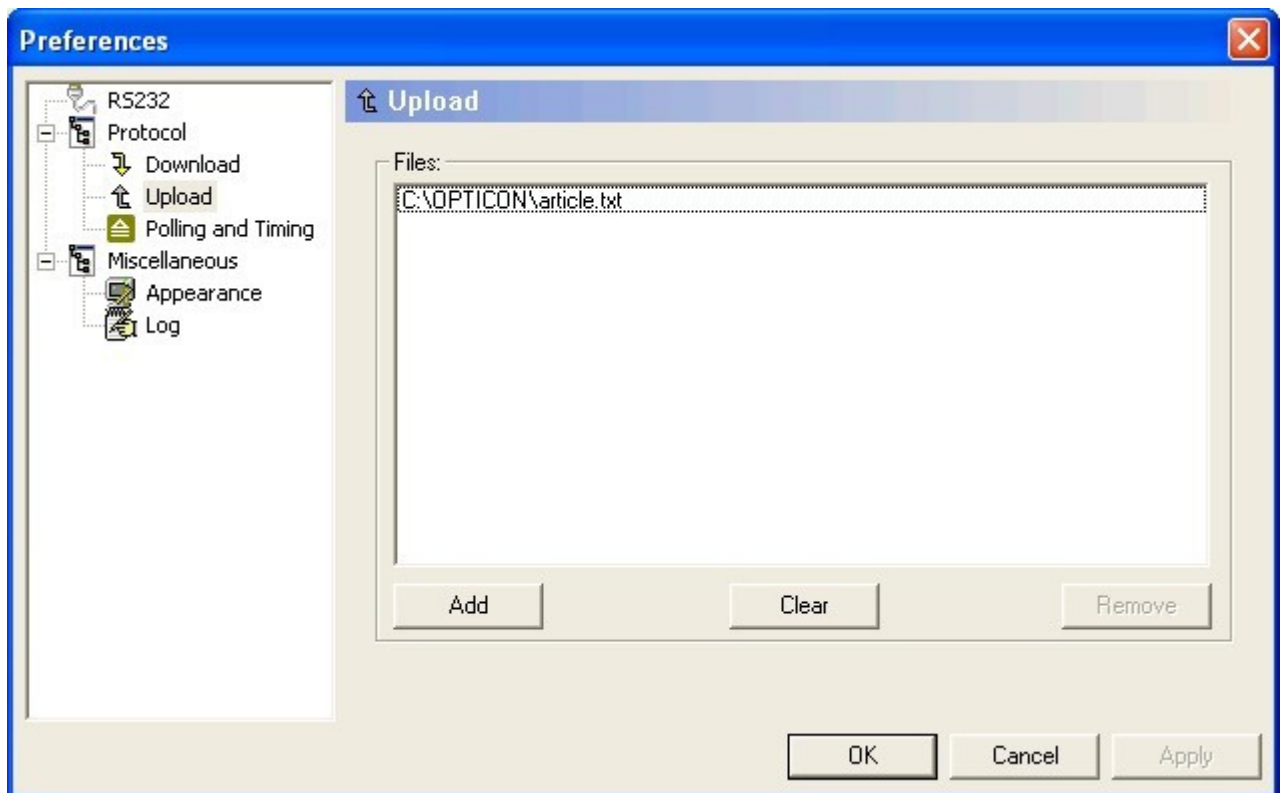


From the download property page the place where the received data file from the OPL9728 is stored. By clicking the small folder icon, a folder popup dialog appears. from this dialog select the folder where the received data files need to be stored.

Under Download files the way the data file(s) are stored can be set, use append to append the

new data file to the end of an existing data file. The Overwrite option will overwrite the existing data file with the newly downloaded data. The Unique option downloads the data file and looks if the same file already exist in the download folder. If this is the case the extension is changed to 001 until 999.

Step
3.



This step is only needed when a lookup file is used by the build application. From the upload property page select the the file that is going to be used as lookup file. Make sure that the name of the lookup file that is transmitted into the OPL9728 matches the filename that is set in the [Lookup](#) properties page.

Step 4. Select the OK button of the Preferences page. Click from the menu **Protocol** and then **Start** to start the NetO protocol. The transfer of the data and the lookup file is done automatically when the wanted menu item for Send data or Rcv Lookup is selected and the OPL9278 is placed into the cradle.

Example applications

3 simple example applications are described step by step to see the power of the SpeedGen application generator. Select one of the examples below to get a full description on howto create the application.

The samples that are explained are also available in the Example sub folder of the SpeedGen installation folder.

1. Scan, quantity, append example.

Scan or type a barcode.
Add a quantity.
Append the input into the data file.

2. Scan, quantity, update example.

Scan or type a barcode.
Check data file if barcode has been scanned previously.
Add a quantity.
Add previous quantity with new quantity.
Update the user input into the data file.

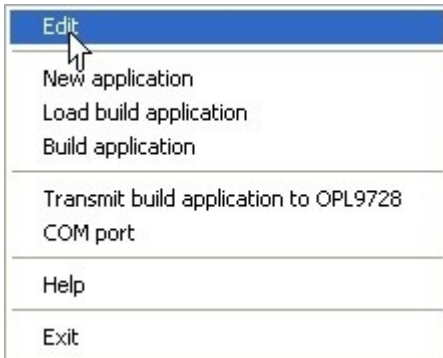
3. Scan, lookup, quantity, update example.

Scan or type a barcode.
Check if barcode description exists.
Check data file if barcode has been scanned previously.
Add a quantity.
Add previous quantity with new quantity.
Update the user input into the data file.

Example 1.

- Scan or type a barcode.
- Add a quantity.
- Append the input to the data file.

Step 1.



Right click the OPL9728 on the PC and select Edit.

Step 2.

Select the Form property page and make sure that Name is "Form 1". The font is set to "LARGE", CLR is "Main menu" and Next is "Form 1".



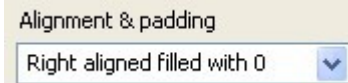
Change Line 1 to the above settings.



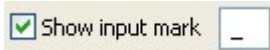
Change Line 2 to the above settings. and click the "More..." button for some additional options.

Step 3.

Change the alignment to Right aligned filled with 0.



Now check the use of an input mark and set as sign (_).

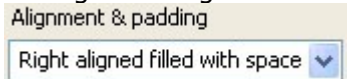


Step 4.

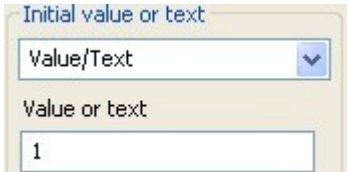


Change Line 4 to the above settings. and click the "More..." button for some additional options.

Change the alignment to Right aligned filled with space.



Set a default value for the quantity



Now check the use of an input mark and set as sign (_).

☒ Show input mark

Step 5. Check the "Save on Next" checkbox and make sure that "Data 1" is selected. Now when returning to the Barcode input the data is saved in the Data 1 file.

☒ Save on Next

Goto the Data property page. And change the filename of Data 1 to "Example1.txt".

Step 6.

Data file:
Filename:

Step 7. Store the barcode that was stored into Variable 1 in Field1 of the data file. Change the settings in the SpeedGen application.

#1 + ☒ 13

Step 8. Store the entered quantity that was stored into Variable 2 in Field2 of the data file. Change the settings in the SpeedGen application.

#2 + ☐ 6

The record options should look like this.

Step 9.

Record options
Record size: 42
☒ Use field separator
Number of Fields:

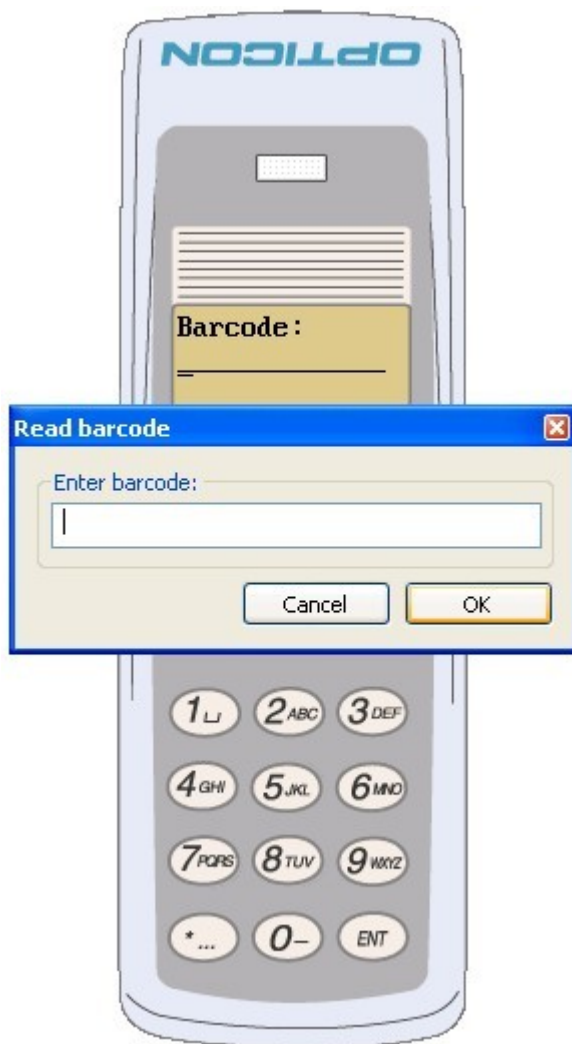
Make sure that the data storage is set to "Append new data".

Step 10.

Data storage

Now click the "OK" button to return to the OPL9728 on the PC.

Step 11. To test the application on the PC click key 1 on the keypad or highlight "1 Input" and press the ENT key.
The display should look like this.



Enter scanned barcode data in the Read barcode dialog. Or Click cancel and use the keypad. Enter 2 for barcode.

Barcode :
2_____

Quant : 1_____

Step
12.

Click the ENT key to keep the default value.

Enter for the new barcode now 1 and for quantity 21.

Click the "Cancel" button in the Read barcode dialog and click the CLR key to return to the Main menu.

The Example1.txt data file looks like this.

Step

13.

```
00000000000002,      1,2005/11/10,14:33:55
00000000000001,      21,2005/11/10,14:34:03
```

Build the application by right clicking the OPL9728 on the PC display and select "Build application". Name the application Example1.S3I.

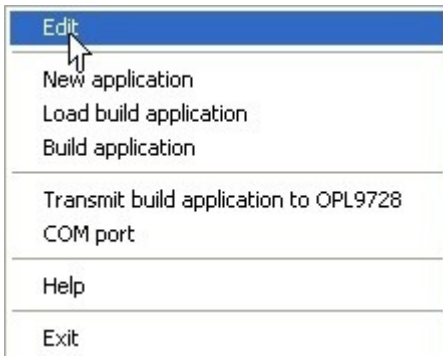
Step
14.

Place the OPL9728 with the interpreter loaded into the cradle. Right click the OPL9728 on the PC display and select "Transmit build application to OPL9728". Select the Example1.S3I file, the file is transferred automatically. The OPL9728 is now ready to be used with the Example1 application.

Example 2.

- Scan or type a barcode.
- Check data file if barcode has been scanned previously.
- Add a quantity.
- Add previous quantity with new quantity.
- Update the user input into the data file.

Step 1.



Right click the OPL9728 on the PC and select Edit.

Step 2.

Select the Form property page and make sure that Name is "Form 1". The font is set to "LARGE", CLR is "Main menu" and Next is "Form 1".



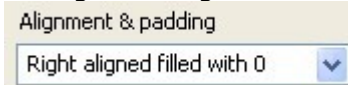
Change Line 1 to the above settings.



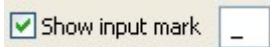
Change Line 2 to the above settings. and click the "More..." button for some additional options.

Step 3.

Change the alignment to Right aligned filled with 0.



Now check the use of an input mark and set as sign (_).



Step 4.



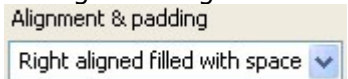
Change Line 3 to the above settings. The "Data file 1 data field 2" should show a quantity if the scanned or typed barcode was found in the data file.



Change Line 4 to the above settings. and click the "More..." button for some additional options.

Step 5.

Change the alignment to Right aligned filled with space.



Set a default value for the quantity

Initial value or text

Value/Text ▼

Value or text

1

Now check the use of an input mark and set as sign (_).

☒ Show input mark _

Step 6. Check the "Save on Next" checkbox. Now when returning to the Barcode input the data is saved in the data file.

☒ Save on Next Data 1 ▼

Goto the Data property page. And change the filename of Data 1 to "Example2.txt".

Step 7.

Data file: Data 1 ▼

Filename: Example2.txt

Step 8. Store the barcode that was stored into Variable 1 in Field1 of the data file 1. Change the settings in the SpeedGen application.

#1 Var 1 ✓ + Nil ✓ ☒ 13 ▲▼ ☒ Right al. filled with 0 ▼

Step 9. Store the entered quantity that was stored into Variable 2 in Field2 of the data file 1. If a matching barcode found in the data file the quantity was stored into "data 2". Check if the settings in the data field 2 matches the settings below.

#2 Var 2 ✓ + Data 1-2 ✓ ☐ 6 ▲▼ ☐ Right al. filled with spa ▼

The record options should look like this.

Step 10.

Record options

Record size: 42

☒ Use field separator

Number of Fields: 2 ▼

Make sure that the data storage is set to "Update record (sorted)".

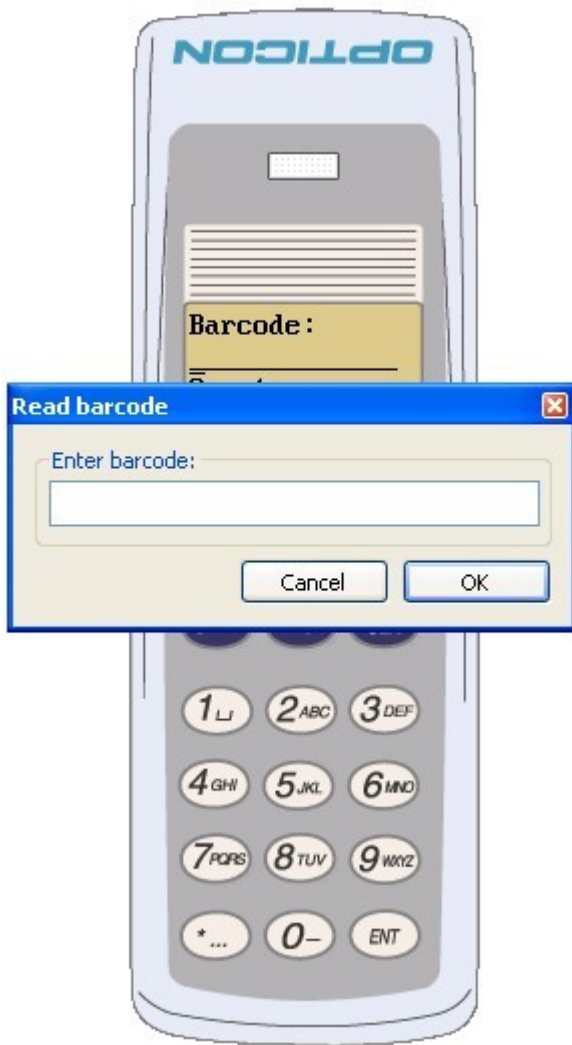
Step 11.

Data storage

Update record (sorted) ▼

Now click the "OK" button to return to the OPL9728 on the PC.

Step 12. To test the application on the PC click key 1 on the keypad or highlight "1 Input" and press the ENT key.
The display should look like this.



Enter scanned barcode data in the Read barcode dialog. Or Click cancel and use the keypad.
Enter 2 for barcode.

Barcode :	2
Quant :	
Add : 1	

Click the ENT key to keep the default value.
Enter for the new barcode now 1 and for quantity 21.
Enter for the new barcode now 2

Step
13.

Barcode :	2
Quant :	1
Add : 1	

and for quantity 21.
Click the "Cancel" button in the Read barcode dialog and click the CLR key to return to the Main menu.

The Example2.txt data file looks like this.

Step
14.

```
00000000000001, 21,2005/11/10,15:26:05
00000000000002, 22,2005/11/10,15:28:47
```

Step Build the application by right clicking the OPL9728 on the PC display and select "Build

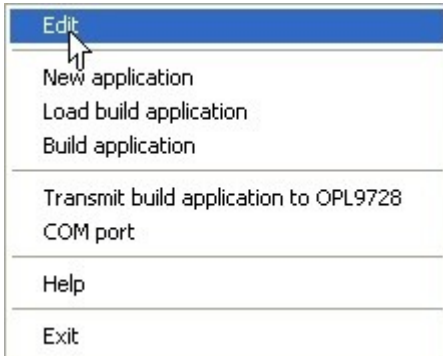
application". Name the application Example2.S3I.

15. Place the OPL9728 with the interpreter loaded into the cradle. Right click the OPL9728 on the PC display and select "Transmit build application to OPL9728". Select the Example2.S3I file, the file is transferred automatically. The OPL9728 is now ready to be used with the Example2 application.

Example 3.

- Scan or type a barcode.
- Check if barcode description exists.
- Check data file if barcode has been scanned previously.
- Add a quantity.
- Add previous quantity with new quantity.
- Update the user input into the data file.

Step 1.



Right click the OPL9728 on the PC and select Edit.

Step 2.

Select the Form property page and make sure that Name is "Form 1". The font is set to "MEDIUM", CLR is "Main menu" and Next is "Form 1".

Change Line 1 to the above settings.

Change Line 2 to the above settings. and click the "More..." button for some additional options.

Change the alignment to Right aligned filled with 0.

Step 3.

Now check the use of an input mark and set as sign (_).

Step 4.

Change Line 3 to the above settings.

Step 5.

Change Line 4 to the above settings. and click the "More..." button to set the display field of the data file. Now a quantity is shown when the scanned or typed barcode was found in the data file.

Set the display field to "Data 1 field 3".

Lookup

On match display field:

Data 1-3

#5 Integer Add: Keypad 1 6 Var 2 Nil More...

Change Line 5 to the above settings. and click the "More..." button for some additional options.

Change the alignment to Right aligned filled with space.

Alignment & padding

Right aligned filled with space

Step 6. Set a default value for the quantity

Initial value or text

Value/Text

Value or text

1

Now check the use of an input mark and set as sign (_).

☒ Show input mark

Step 7. Check the "Save on Next" checkbox. Now when returning to the Barcode input the data is saved in the data file.

☒ Save on Next Data 1

Step 8. Goto the lookup property page for setting up the lookup file properties. Select lookup 1. Check the "Use lookup file" checkbox.

☒ Use lookup file

Step 9. Set the lookup filename to "Lookup1.txt". The lookup filename can be found in the Examples sub folder of the Speedgen folder.

Filename: Lookup1.txt

Set the lookup file record options, match the settings below.

Step 10.

Record options

Record size including <CR><LF>

33

Number of fields:

2

Set the lookup fields for the lookup file.

The barcode field is field number 1 and is the key field.

Step 11.

#1 0 13

The Description field is field number 2 and should look like this.

#2 13 18

Step Set the lookup file check and security options

12.

Specific actions when

Format of record is wrong
 Show error & goto main

Input data has no match
 Continue Main

Lookup file not available
 Show error & goto main

Goto the Data property page. Change the filename of Data 1 to "Example3.txt".

Step 13.

Data file: Data 1

Filename: Example3.txt

Set the number of fields to 3 and set the field separator check.

Step 14.

☒ Use field separator

Number of Fields: 3

Step 15.

Store the barcode that was stored into Var1 in Field1 of the data file. Change the settings in the SpeedGen application.

#1 Var 1 + Nil ☒ 13 ☒ Right al. filled with 0

Step 16.

Store the description from the lookup file 1 in Field2 of the data file. Change the settings in the SpeedGen application.

#2 Look 1-2 + Nil ☒ 18 ☐ Left al. padded with sp

Step 17.

Store the entered quantity that was stored into Variable 2 in Field 3 of the data file 1. If a matching barcode found in the data file the quantity was stored into "Data file 1 Field 3". Check if the settings in the data file 1 field 3 matches the settings below.

#3 Var 2 + Data 1-3 ☐ 6 ☐ Right al. filled with spa

Step 18.

Add a date and stamp by setting the Add date and Add time check boxes.

The record options should look like this.

Step 19.

Record options

Record size: 61

☒ Use field separator

Number of Fields: 3

Step 20.

Make sure that the data storage is set to "Update record (sorted)".

Data storage

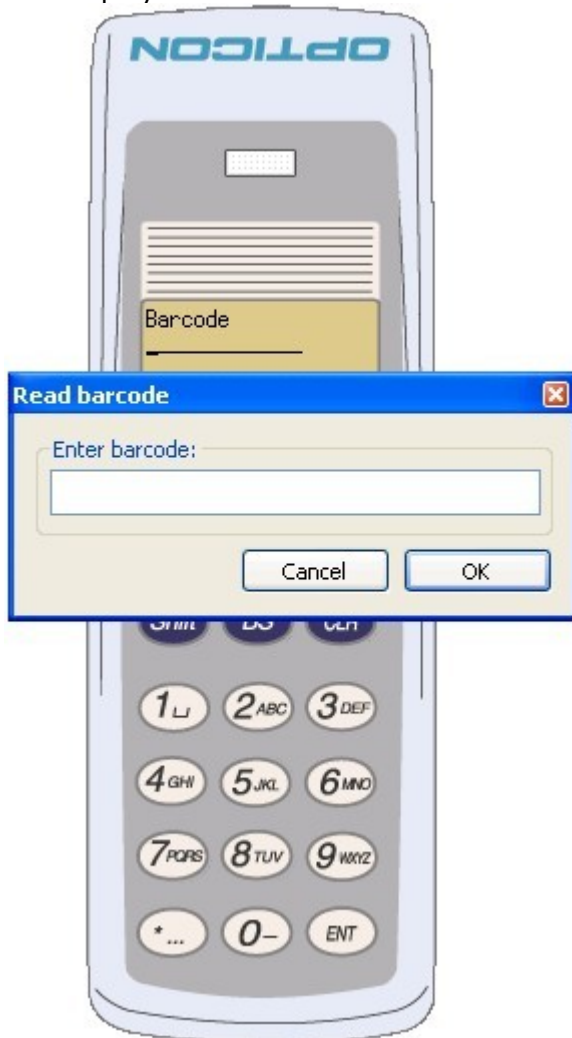
Update record (sorted)

Now click the "OK" button to return to the OPL9728 on the PC.

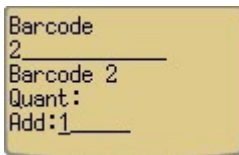
To test the application on the PC copy the "Lookup1.txt" file from the Examples folder to the RAM_DISK folder, see [Interpreter](#). Click key 1 on the keypad or highlight "1 Input" and press the ENT key.

The display should look like this.

Step
21.



Enter scanned barcode data in the Read barcode dialog. Or Click cancel and use the keypad. Enter 2 for barcode.



Step

22. Click the ENT key to keep the default value.
 Enter for the new barcode now 1 and for quantity 21.
 Enter for the new barcode now 6 and for quantity 3.
 Click the "Cancel" button in the Read barcode dialog and click the CLR key to return to the Main menu.

The Example3.txt data file looks like this.

Step
23.

```
00000000000001,Barcode 1      ,    21,2005/11/10,16:57:47
00000000000002,Barcode 2      ,    1,2005/11/10,16:57:16
00000000000006,Barcode 6      ,    3,2005/11/10,16:57:32
```

- Step 24. Build the application by right clicking the OPL9728 on the PC display and select "Build application". Name the application Example3.S3I.

Place the OPL9728 with the interpreter loaded into the cradle. Right click the OPL9728 on the PC display and select "Transmit build application to OPL9728". Select the Example2.S3I file, the file is transferred automatically.

On the OPL9723 select "3 Utilities" from the main menu and then select "1 Rcv lookup". Place the OPL9728 in the cradle and start the [NetO32](#) application protocol with as upload file the lookup1.txt file. After the transfer of the lookup1.txt file, the OPL9728 is ready to be used with the example3 application.