

User's Manual

ZAC



ZAC

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	March 1, 2013	Initial release
1.1	August 1, 2013	Added how to import file section
1.2	Nov. 20, 2013	Added download, upload, and import instructions
1.3	December 3, 2013	Added lookup table instructions

Important Notice

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Guidance for Printing

This manual is in A5 size. Please double check your printer setting before printing it.

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Introduction

ZAC is the powerful software for developing custom templates for your data collector. It enables users to create their own application templates without using any program code.

Features

- Simple to use
- Supports Windows XP, Vista, and 7
- Supports real-time device and barcode settings
- Supports direct-link transfer of data

System Requirement

WinTaskGen requires a PC with the following specifications:

- Windows 2000
- Windows XP
- Windows Vista
- Windows 7

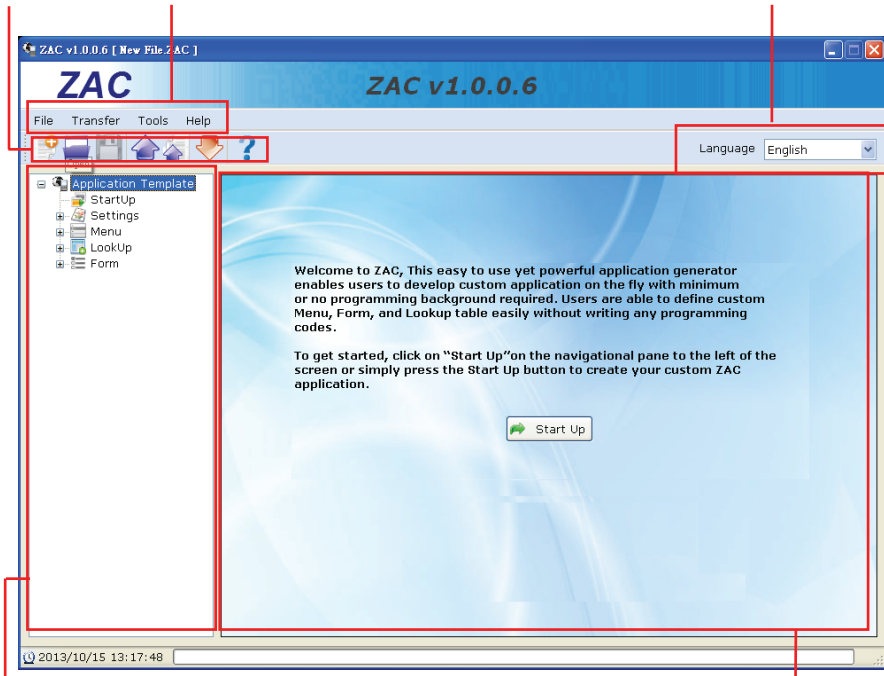
Overview

Refer to the following illustrations to familiarize yourself with the user interface.

Quick Tools

Main Menu

Language Settings



Navigational Pane

Working Area

Description	Function
Main Menu	To access all the functions in the program
Quick Tools	Frequently used functions are listed here
Navigational Pane	Select “+” to expand the menu tree and access the programming options
Language Settings	Choose the display language.
Working Area	The main settings area.




Main Menu





Main Menu can be used to initiate tasks on your system. Please refer to the following table to see what each menu item can do.

Menu	Item	Function
File	New	Create a new application template
	Open	Open an existing application template (ZAC and AGX format only)
	Save	Save the current working template file
	Save as	Save the current working template file with a new file name
	Exit	Quit the program
Transfer	Send Application	Download the current template file from the PC to the data collector
	Receive Application	Upload ZAC file from the data collector to the PC
	Send Lookup	Download the associated lookup file from the PC to the data collector
	Direct-Link Data Transfer	Upload data from the data collector to the PC
Tools	Simulator	Initiate the data collector simulator. You can test applications here before running them on the actual device
Help	About ZAC	Show information about ZAC

Quick Tools

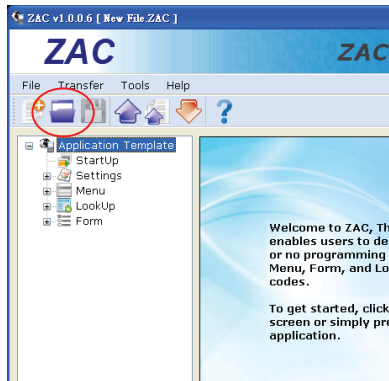
Quick Tools provide the most frequently used functions from the Main Menu for you convenience.

Icon	Name	Function
	New	Create a new application template
	Open	Open an existing application template (ZAC and AGX format only)
	Save	Save the current working template file

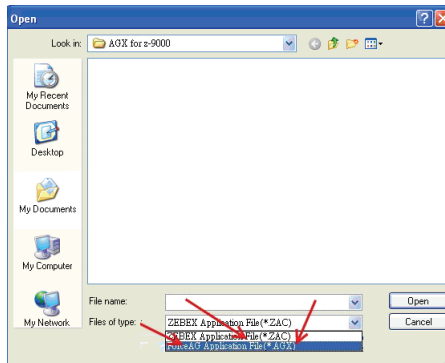
	Send Application	Download the current template file from the PC to the data collector
	Send Lookup	Download the associated lookup file from the PC to the data collector
	Direct-Link Data Transfer	Upload data from the data collector to the PC
	About	Show information about ZAC

Importing other types of application file (such as .agx) into ZAC

1. Click on “Open” from the shortcut bar (as shown below), or File >> Open.



2. At Open dialog box, Select the correct file type, such as AGX and click OK.



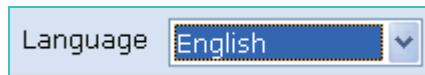
Language Setting

1. To change the language you must first create a language file. Locate the “default.lng” file in the “language” folder where ZAC program files are located and duplicate and rename the “default.lng” file to a new language file; for instance, Japanese.LNG. The file type must be “.LNG” for the change to take effect.
2. Next, you must edit the language file so the new language can be displayed properly. Open the newly created file and you will see a list of strings displayed in the user interface of ZAC.



Change string
to a different
language

3. Change the right side of the strings (the strings after the equal signs) from English to your desired language and save the file.
4. To display the new language, select the new language from the Language menu in ZAC.



Menu Tree

Menu	Sub-Menu	Function
StartUp	none	Allows you to configure the program sequences and customizes the user interface
Settings	Setting Up The Device	Allows the user to configure the data collector function key, password, output file and equipment operation mode
	Barcode Setting	Allows you to configure symbologies and barcode parameters
Menu	Menu1 ~ Menu10	Customizes the hierarchical arrangement of applications under the main menu of application
Lookup	1st Lookup ~ 3rd Lookup	Configure how the lookup files retrieve data for the application
Form	Form1 ~ Form10	Designed to accept user inputs. It may contain multiple input fields and can be arranged to follow up a menu

Getting Started

This section covers basic functions such as configuring device settings and symbologies. See later chapters for advanced functions.

Installation

A driver must be installed to establish connections between the PC and the data collector. Follow the instructions below to install the driver on your computer.

1. Connect the device to your computer via USB cradle.
2. A window appears in the bottom right-hand corner of Windows that says "Found new hardware". In a few seconds a "Found New Hardware Wizard" window opens up. Double click the found new hardware icon to pull up the window if it does not appear automatically. Select "No, not this time" to continue.
3. Click "Next" to continue installation.
4. Click "Install from a list or specific location (Advanced)" and click "Next".
5. Check the "Include this location" option and use "Browse" to locate the driver in your computer. Click "Next" to go to the next step.
6. Click "Next" and "Finish" when the installation is done.

Starting ZAC

To start ZAC:

1. Obtain the latest version of ZAC. Please contact your dealer for assistance.
2. Locate the ZAC folder and open the executable file.
3. The ZAC main screen appears on the desktop.

Connecting Data Collector

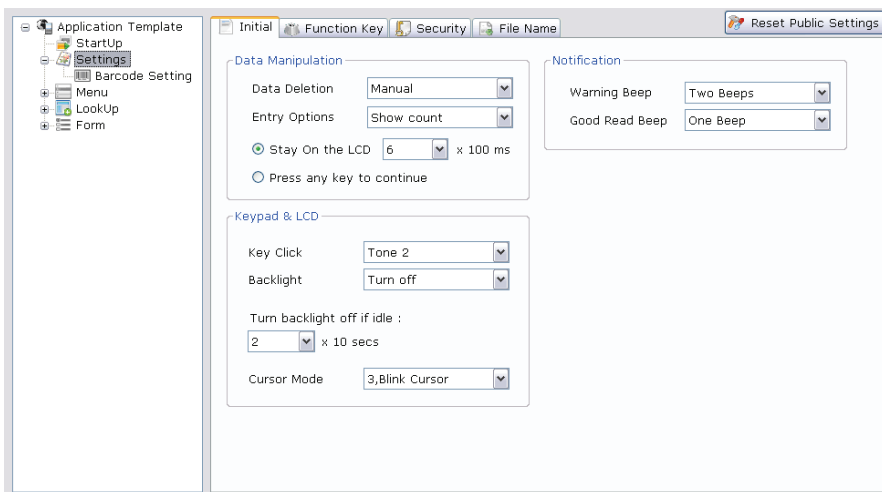
To connect the data collector to a PC via cradle:

1. Place the data collector on the cradle and connect the cradle to PC using the USB cable.
2. The PC should auto-detect the device as a COM device and ask for the driver when connecting the first time.
3. Please install the driver from the CD. The system should assign a COM port to the device after the driver installation.
 - Connect the power adapter to the cradle when necessary.
 - Make sure the unit is turned on after the cable is connected.
 - Check the COM and LPT section in the device manager for the assigned COM port. The data collector should appear as a virtual com device.

Setting up the Device

Initial Settings

Select “Settings” on the navigational pane and select the “Initial” tab on the right to enter the setup.



The Initial property page covers the following settings:

Data Manipulation:

Setting	Value	Function
Data Deletion <small>Configures if the data should be deleted from the data collector after it is uploaded to a host</small>	Manual	Prompt the user after upload is complete to decide to keep or delete the data on the data collector
	Automatic	Delete the data automatically from data collector after the upload is completed
	No	Keep the data on the data collector after upload is completed
Entry Option <small>Configures what information to display on data collector after data entry is completed</small>	No Prompt	Display nothing after data entry is completed
	Show count	Display the current record number being stored
	Show record	Display the data recorded after data entry is completed
Stay On the LCD	1 ~ 99 * 100ms	Select 1~99 ms to specify the time of the count/record review
Press any key to continue	n/a	Select this option to display the count/record review until a key is pressed

Keypad & LCD

Configure the tone of the key click and the LCD/keypad backlight.

Setting	Value	Function
Key Click	Mute	Select desired tone from Tone 1~Tone5 or Mute to mute it
	Tone 1 ~ Tone 5	
Backlight	Turn off, Turn on	Turn the backlight on or off
Turn backlight off if idle	1 ~ 9 * 10 secs	Select idle duration (1~9 *10 secs) for turning off backlight when the backlight is on
Cursor Mode	Disable Cursor	Prohibit the cursor display
	Fixed Cursor	Cursor does not blink
	Blink Cursor	Show the blinking cursor

Notification

Configure the device beep sound for status feedback.

Setting	Value	Function
Warning Beep	Mute	Select desired warning feedback options (one ~ three beeps) or Mute for no feedback
	One Beep ~	
	Three Beeps	
Good Read Beep	Mute	Select desired Good Read feedback options (one ~ three beeps) or Mute for no feedback
	One Beep ~	
	Three Beeps	

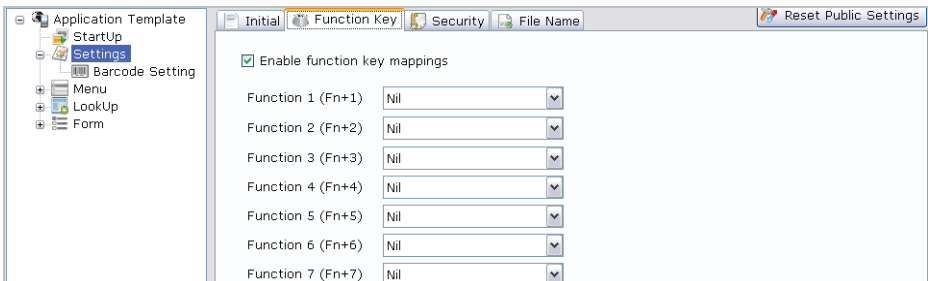
Reset Current Menu

Select this option to reset the current form back to default values.

Function Key Settings

Select “Settings” on the navigational pane and select the “Function Key” tab on the right to enter the setup. The data collector includes default shortcut keys (FN+1~FN+7) to quick-access applications or menus. The Function Key settings enable users to customize their own shortcut keys. To change the settings check the “Enable Function Key Mappings” checkbox and select options from the drop down menu for each key you want to configure.

Setting	Value	Function
	Nil	No function
Function 1 (Fn + 1) ~ Function 7 (Fn+7)	Collect Upload Utilities Settings Browse Data Delete Data Reader Test Set Date/Time Load Program Memory & Power Load Lookup Upload Port Download Port Baud Rate Backlight Data Deletion Entry Option View Settings Calculator	Assign function to the shortcut key



Security Settings

Select “Settings” on the navigational pane and select the “Security” tab on the right to enter the setup. The Security settings enable users to add access restrictions to specified resources.

The screenshot displays the Security Settings configuration window. On the left, a tree view shows the application structure with 'Settings' highlighted. The main window has a tabbed interface with 'Security' selected. Under the 'Security Checking' section, a password field contains '0123456789'. Below it, several checkboxes are listed: Settings, Edit Data, Delete Data, Set Date/Time, Load Application, Load Lookup File, and Backlight. The 'Upload ZAC' section features a checked 'Allow Upload ZAC' checkbox and a password field containing '12345'. A 'Reset Public Settings' button is located in the top right corner.

Security Checking

You may specify a password and check one or more items to lock the item. Locked items must be unlocked with the password before you can use them. Check the checkbox and enter the password to add the restriction. Up to 10 alphanumeric characters is permitted for the password.

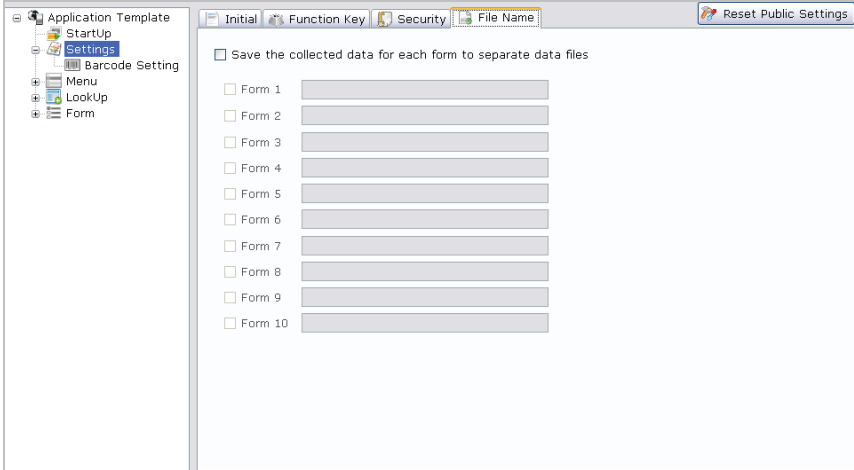
Upload ZAC

You may set a password to restrict ZAC upload. Check the checkbox and enter the password to add the restriction. Up to 5 alphanumeric characters is permitted for the password.

File Name

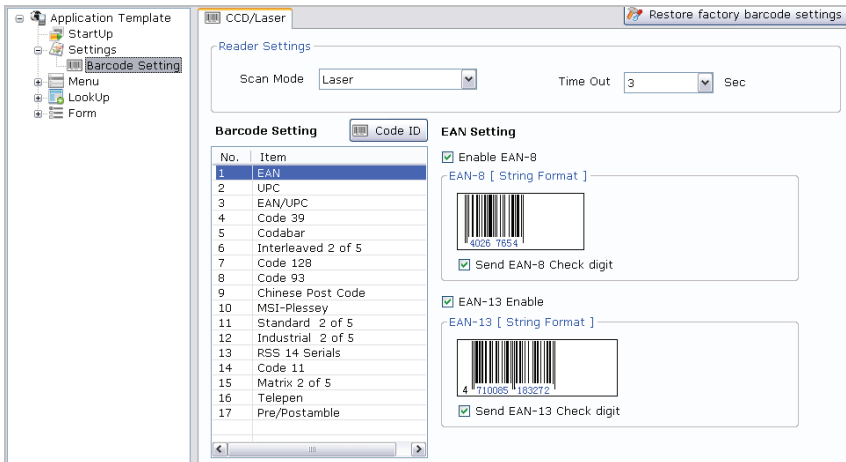
Select “Settings” on the navigational pane and select the “File Name” tab on the right to enter the setup.

You may save collected data from a specific form separately. Check the checkbox and enter the file names to save to activate this function.



Barcode Setting

Learn how to customize the barcode settings for your data collector unit in this section. Select “Settings/Barcode Setting” from the navigational pane to enter the setup.

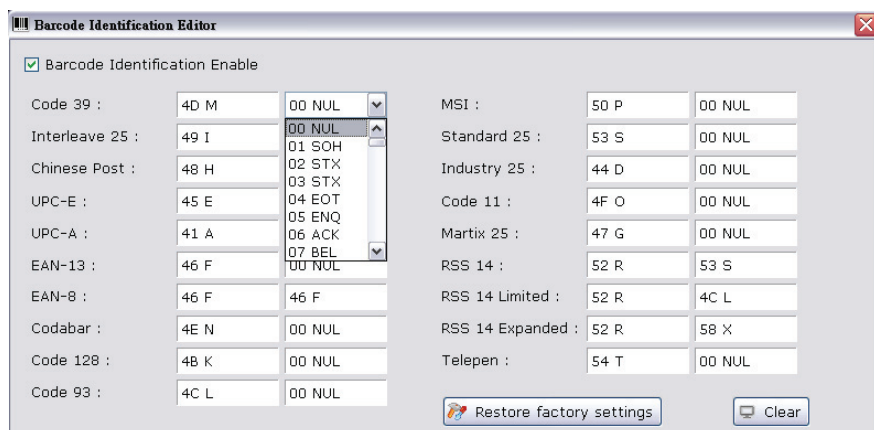


Reader Settings

The Reader Settings covers the following settings:

Setting	Value	Function
Scan Mode	Continuous	Set scan mode to non-stop scanning
	Laser	Hold the trigger to start scanning. The scanning will only stop when a barcode is read or the set timeout expires or the trigger is released
Time Out	0~99 Sec	Set the time out for the scan mode to 0~99 seconds

Code ID Setting



Setting	Value	Function
Code ID	Barcode Identification Enable	Enable custom barcode recognition
	Restore factory settings	Restoring the factory barcode recognition value
	Clear	Clear all barcode identification value

Barcode Setting

The Barcode Setting covers the following settings:

Symbology	Setting	Function
EAN8	Enable	Enable/Disable to read EAN-8
	Send Check Digit	Enable/Disable to transmission check digit
EAN13	Enable	Enable/Disable to read EAN-13
	Send Check Digit	Enable/Disable to transmission check digit
UPC-A	Enable	Enable/Disable to read UPC-A
	Send UPCA Leading 0	Enable/Disable to transmission leading "0"
	Send Check Digit	Enable/Disable to transmission check digit
UPC-E	Enable	Enable/Disable to read UPC-E
	Send UPCE Leading 0	Enable/Disable to transmission leading "0"
	Send Check Digit	Enable/Disable to transmission check digit

EAN/UPC	UPCE to UPCA Enable	The UPCE barcode will be converted into UPCA, and the next processing will follow the settings configured for UPCA
	UPC-A to EAN-13 Format	The UPC-A barcode will be converted into EAN-13 and the next processing will follow the settings configured for EAN-13
	ISBN/ ISSN Conversion	Barcodes starting with 977/978 will be converted to ISBN
	EAN8 to EAN-13 Enable	The EAN-8 barcode will be converted into EAN-13 and the next processing will follow the settings configured for EAN-13
	EAN13 first "0" can transmit Enable	Enable/Disable to EAN13 First 0 transmission
	EAN13 with first 0 ID code same as	Use this option to first 0 ID code same as options: <ul style="list-style-type: none"> ● EAN-13 ● UPC-A
	UPC/EAN Add-On	Use this option to set supplemental options: <ul style="list-style-type: none"> ● No Supplement ● 2 Digits ● 5 Digits ● 2 + 5 Digits
Code39	Enable	Enable/Disable to read Code39
	Send Start / Stop Character	Enable/Disable transmission Start and Stop asterisks
	Check Digit Verification Enable	Enable/Disable to check digit verification
	Send Check Digit	Enable/Disable to transmission check digit
	Enable Full Code39	Enable: Using full ASCII encoding reading Disable: Direct code reading (Please refer to the specification of code39)
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
	ITPR Conversion	Enable/Disable to read Code32 (Italian Pharmacy code)
	ITPR Transmit A Character	When reading code32, enable/disable to transmission an "A" character

Codabar	Enable	Enable/Disable to read Codabar
	Send Start/Stop Character	Enable/Disable transmission Start and Stop character
	Send Check Digit	Enable/Disable to transmission check digit
	Check Digit Verification Enable	Enable/Disable to check digit verification
	ST / SP	Set start / stop characters to <ul style="list-style-type: none"> ● ABCD ● DC1→DC4 ● a/t,b/n,c/* ,d/e ● abcd / abcd
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
Interleaved 2 of 5	Enable	Enable/Disable to read Interleaved 25
	Send Check Digit	Enable/Disable to transmission check digit
	Check Digit Verification Enable	Enable/Disable to check digit verification
	Fix Length 1 Default	Set the length qualification to fixed length
	Fix Length 2 Default	Set the length qualification to fixed length
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64

Code 128	Enable	Enable/Disable to read Code 128
	Send Check Digit	Enable/Disable to transmission check digit
	Check Digit Verification Enable	Enable/Disable to check digit verification
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
Code 93	Enable	Enable/Disable to read Code 93
	Check Digit Verification Enable	Enable/Disable to check digit verification
	Send Check Digit	Enable/Disable to transmission check digit
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
Chinese Post Code	Enable	Enable/Disable to read Chinese Post Code
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
MSI/ Plessey	Enable	Enable/Disable to read MSI-Plessey
	Check Digit Enable	Enable/Disable to transmission check digit
	Check Digit Calculation	Set check digit to <ul style="list-style-type: none"> ● Do not sent check digit ● Single check digit Enable ● Double check digit Enable
	Send single check digit	Enable/Disable to transmission single check digit
	Send double check digit	Enable/Disable to transmission double check digit
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64

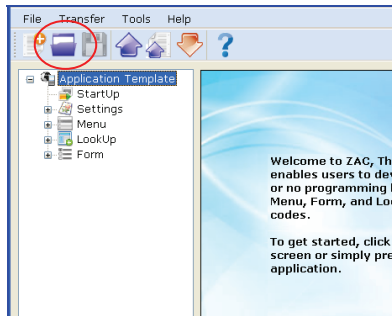
Standard 2 of 5	Enable	Enable/Disable to read Standard 25
	Send Check Digit	Enable/Disable to transmission check digit
	Check Digit Verification Enable	Enable/Disable to check digit verification
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
Industrial 2 of 5	Enable	Enable/Disable to read Industrial 25
	Enable IATA	Enable/Disable to read IATA Code
	Send Check Digit	Enable/Disable to transmission check digit
	Check Digit Verification Enable	Enable/Disable to check digit verification
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
RSS 14 Serials	RSS14 Enable	Enable/Disable to read RSS14
	RSS14 Limited Enable	Enable/Disable to read RSS14 Limited
	RSS14 Expanded Enable	Enable/Disable to read RSS14 Expanded
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
Code 11	Enable	Enable/Disable to read Code 11
	Send Check Digit	Enable/Disable to transmission check digit
	The number of check digit	Set the number of check digit: <ul style="list-style-type: none"> ● One Check Digit ● Two Check Digits
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64

Matrix 2 of 5	Enable	Enable/Disable to read Matrix 25
	Send Check Digit	Enable/Disable to transmission check digit
	Check Digit Verification Enable	Enable/Disable to check digit verification
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
Telepen	Enable	Enable/Disable to read Telepen
	Telepen Mode	Set Telepen to: <ul style="list-style-type: none"> ● Telepen Numeric mode Enable ● AIM Telepen mode Enable
	Min Length & Max Length	Set the length qualification to fixed length or min/max length from 0 ~ 64
Pre/ Postamble	Preamble	Prefix string setting. (up to 10 characters)
	Postamble	Suffix string setting. (up to 10 characters)

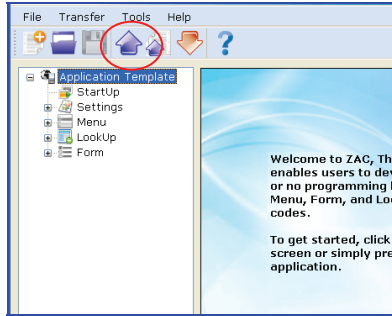
Upload Custom Application

To upload custom application from PC to the data collector:

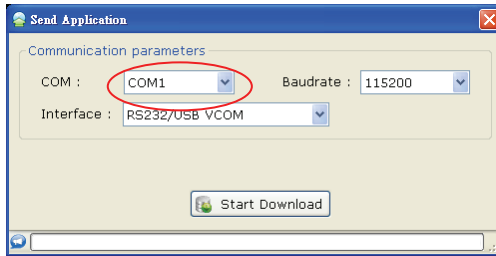
1. Power on the data collector and select “3.Utilities” and “6.Load Application” on the data collector main menu.
2. Connect the cradle to the PC and place the data collector on the cradle.
3. Open ZAC and click the “Open” icon to select the application file on your PC.



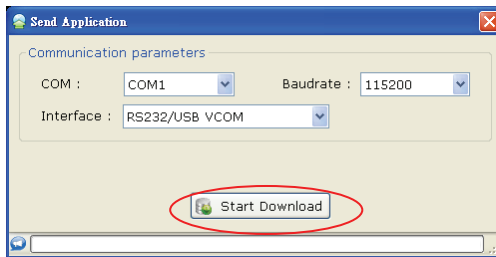
- Click the “Send Application” icon.



- Check the Device Manager on your PC for the COM port your data collector is using and select the same COM port in the Communication parameters.



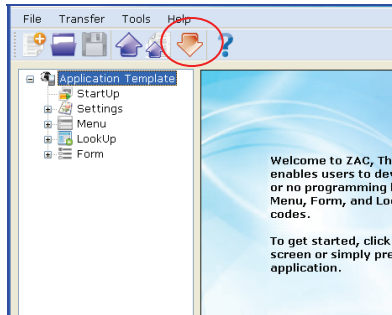
- Click “Start Download” to send the application to the data collector.



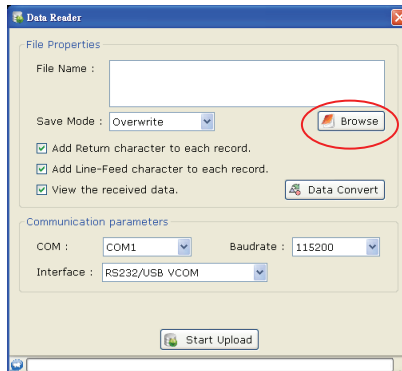
Upload Scanned Data to PC

To upload scanned data from the data collector to PC:

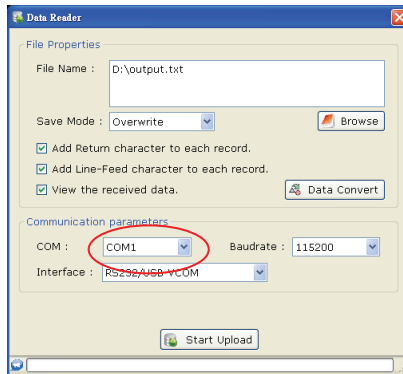
1. Power on the data collector and select “2.Upload” on the data collector main menu.
2. Connect the cradle to the PC and place the data collector on the cradle.
3. Open ZAC and click the “Direct-Link Data Transfer” icon.



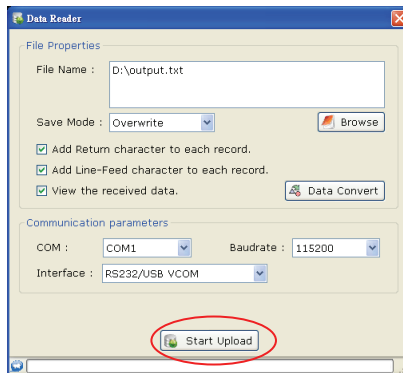
4. Select “Browse” to open the Save as window. Specify the name for your data file and click “Save” to save the file.



5. Check the Device Manager on your PC for the COM port your data collector is using and select the same COM port in the Communication parameters.



6. Select the desired save mode (Overwrite or Append).
7. Click “Start Upload” to upload data.

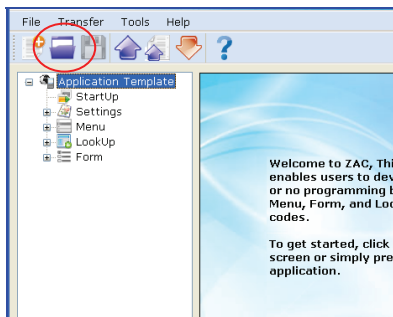


8. A message appears in ZAC when upload is completed. To view received data, select “Yes”, otherwise select “No”.
9. To delete the data you just sent on your data collector, select “Yes” when prompted on the data collector screen. Otherwise select “No”.

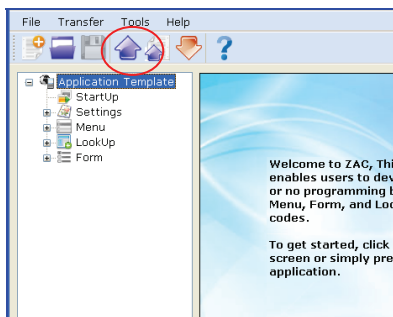
Upload Lookup File

To upload lookup file from PC to the data collector:

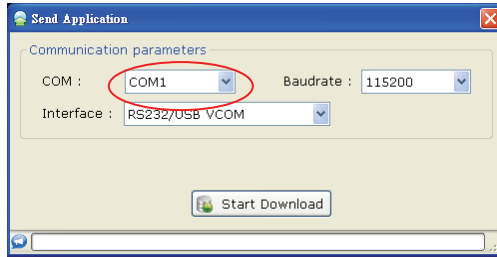
1. Power on the data collector and select “3.Utilities” and “6.Load Application” on the data collector main menu.
2. Connect the cradle to the PC and place the data collector on the cradle.
3. Open ZAC and click the “Open” icon to select the application file on your PC.



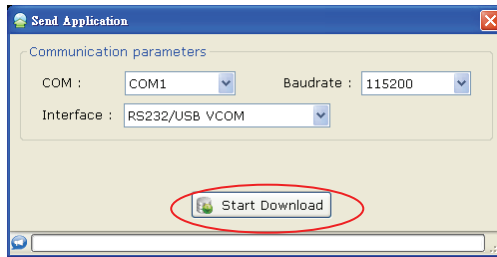
4. Click the “Send Application” icon.



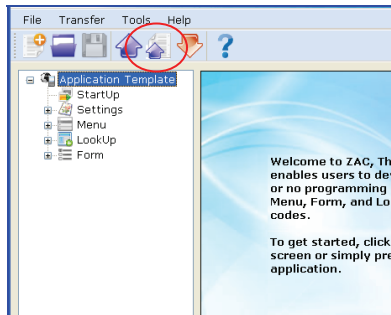
5. Check the Device Manager on your PC for the COM port your data collector is using and select the same COM port in the Communication parameters.



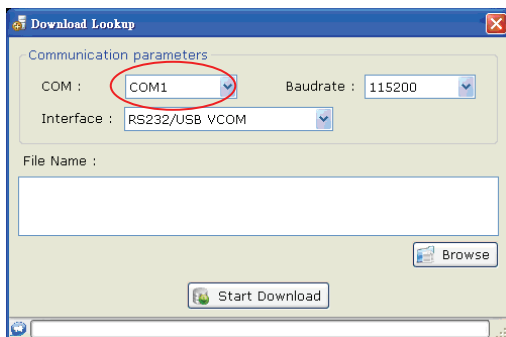
6. Click "Start Download" to send the application to the data collector.



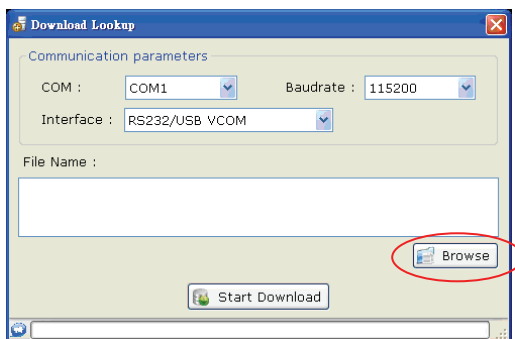
7. Select "8. Load Lookup" on your data collector and place it back on the cradle.
8. Click the "Send Lookup" icon.



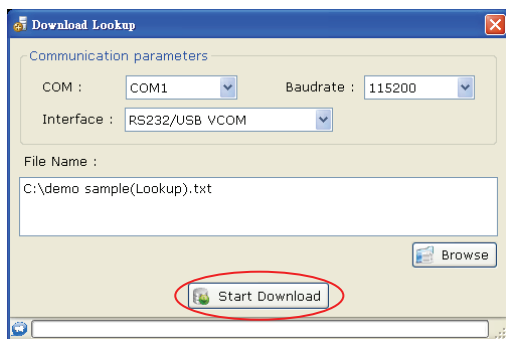
- Check the Device Manager on your PC for the COM port your data collector is using and select the same COM port in the Communication parameters.



- Select "Browse" and select the lookup file.



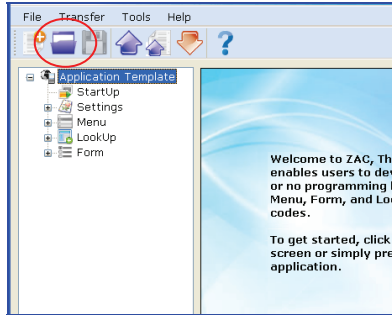
- Select "Start Download" to send the lookup file.



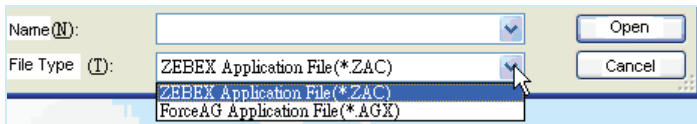
Convert AGX to ZAC

To import .AGX files into ZAC:

1. Open ZAC and click the “Open” icon.



2. Click the arrow in “File Type” in the Open menu. 2 options appear as illustrated below.



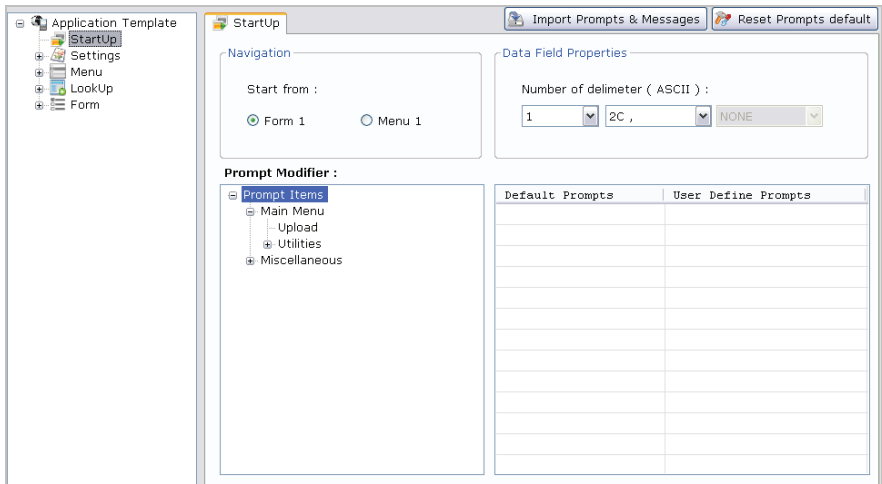
3. Select the “ForceAG Application File (*.AGX)” option. The .AGX type files will appear.
4. Select the desired .AGX file and click Open.

Start Up

Start Up settings allow you to customize the preset settings.

Customization

1. Run ZAC on your PC.
2. From the navigational pane, select “StartUp” to expand the menu and select one of the menus or simply select “Start Up” from the working area. Check the following section for the options you can configure.



Navigation

Select an option to start the application from:

- Form 1
- Menu 1

Import Prompts & Message

Click this button to import existing template file for the prompts and messages.

Reset Prompts Default

Click this button to load the pre-defined default prompts.

Data Field Properties

Data Field Properties are used to provide the information about the data structure.

Setting	Value	Function
Number of delimiter (ASCII)	Nil ~ 2	Delimiter is used to separate the data fields. Set the number of delimiter you are using and set the delimiter using included ASCII characters

Prompt Modifier

Select + to expand the menu tree on the left and select an item to display its default prompts on the right. You may change the default prompts by editing them in the “User Define Prompts” fields.

The screenshot shows a software interface for editing prompts. On the left is a tree view titled 'Prompt Items' with the following structure:

- Prompt Items
 - Main Menu
 - Upload
 - Utilities
 - Program Settings
 - Upload Port** (highlighted)
 - Modem
 - Download Port
 - Modem
 - Baud Rate
 - Backlight
 - Data Deletion
 - Entry Option
 - View Settings
 - Cursor Mode
 - Delete Data
 - Memory & Power
 - Load Lookup File

On the right is a table comparing 'Default Prompts' and 'User Define Prompts' for the selected 'Upload Port' item:

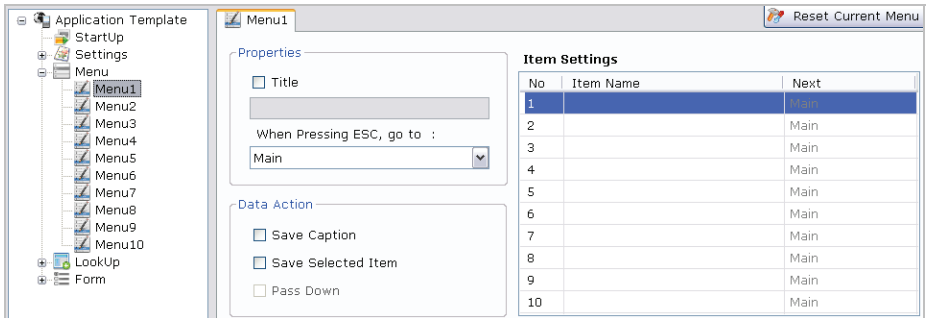
Default Prompts	User Define Prompts
Upload data or	Upload data or
lookup file via:	lookup file via:
1. Cradle-USB	1. Cradle-USB
2. IrDA	2. IrDA
3. Modem	3. Modem
4. Ethernet	4. Ethernet

Managing Menus

A menu is used to display commands that allow users to access various data collecting forms. Users can add one or more forms to a menu, and use multiple menus to create an application template.

Customizing a Menu

1. Run ZAC on your PC.
2. From the navigational pane, select “Menu” to expand the menu and select one of the menus or simply select Menu from the navigational pane and click “Menu” from the working area. Check the following section for the options you can configure.



Properties

Properties cover the following settings:

Setting	Value	Function
Title	n/a	Configure the menu title display
ESC	Main, Form1 ~ Form10, Menu1 ~ Menu10	Select the function to perform when ESC is pressed

Data Action

Data Action covers the following settings:

Setting	Function
Save Caption	Check this option to save the menu caption to the transaction record with the data
Save Selected Item	Check this option to save the name of the selected item to the transaction record
Pass Down	When "Save Selected Item" is checked, this option becomes available. Check this option to pass down the enabled information to the next form

Item Settings

Use this option to manage items in a menu. Item Settings cover the following settings:

Setting	Value	Function
Item Name	n/a	Enter the item names to be displayed in the menu
Next	Main, Form1 ~ Form10, Menu1 ~ Menu10	Assign a form or menu to the selected item name

Reset Current Menu

Select this option to reset the device back to default settings.

Managing Lookup Files

A lookup file is used for information reference in a database. It makes it possible for users to check what are stored on the database and retrieve information when necessary. Up to three lookup files are supported by ZAC.

Customizing a Lookup file

1. Run ZAC on your PC.
2. From the navigational pane, select “Lookup” to expand the menu and select one of the Lookup Files or simply select Lookup from the navigational pane and click “Lookup” from the working area. Check the following section for the options you can configure.

The screenshot shows the ZAC application interface for configuring a lookup file. The left pane shows a tree view with 'Lookup' selected. The main area is titled '1st Lookup File' and contains several configuration sections:

- Lookup table properties:** Number of fields: 1. Radio buttons for 'Fix Length' (selected) and 'Delimiter'. Delimiter: 2C.
- Lookup Data:**
 - Only read data once
 - Show message when the data is matched
 - lookup data can be uploaded
 - Trim space when lookup data be uploaded
- When record doesn't match:**
 - Continue
 - Show warning message
 - Insert to lookup file
 - Show warning message & insert
 - Clear the screen
 - Show warning & clear screen
- When record format is wrong:**
 - Stop the download process
 - Truncate/Reformat the record
 - Skip the record

The **Data Structure** table is as follows:

No.	Offset	Length	Key Field
1	1	1	<input checked="" type="radio"/>

Lookup Table Properties

Lookup Table Properties are used to provide the information about the data structure.

Setting	Value	Function
Number of Fields	0 ~ 8	Set the number of fields in the lookup file you are using. You must set a number that is no smaller than the lookup file's actual field amount
Fixed Length	n/a	Select this option to set fixed length for the data in lookup files
Delimiter	ASCII characters	Delimiter is used to separate the data fields. Use this option to set the delimiter using included ASCII characters

Lookup Data

Lookup Data configures how the data in the lookup file should be handled.

Setting	Function
Only read data once	Check this option to restrict a key field data to only one reading
Show message when the data is matched	Check this option to show message when the data is matched
lookup data can be uploaded	Check this option to allow lookup data to be uploaded from data collector to host
Trim space when lookup data be uploaded	This option becomes available when the Delimiter option is checked. Select this option to remove the spaces in a lookup file that has delimiters when it is uploaded to your PC

When record doesn't match

This setting configures the actions for the data collecting form to take when the incoming data finds no match in the lookup files.

Setting	Function
Continue	Select this option to allow the incoming data input into its field even if no match in the lookup files is found If the "Record" mode of the data collecting form is set to "Save", "Save & update", "Save & output record", "Save & output screen" or "Save & remove" on the Form property page, data can only be saved in a data file
Show warning message	Select this option to display a warning message when no match is found in the lookup files
Insert to lookup file	Select this option to allow the incoming data input into its field even if no match in the lookup files is found. The data will be saved as a key lookup file. The incoming data will be written into the target lookup file if the Record mode of the data collecting form is set to "Update lookup", "Save & update", "Remove from lookup", or "Save & remove"
Show warning message & insert	Select this option to display a warning message before accepting the incoming data into the lookup file even if no match is found in the lookup file
Clear the screen	Select this option to clear the screen when no match is found in the lookup files
Show warning & clear screen	Select this option to display a warning message before clearing the screen when no match is found in the lookup files

Data Structure

Data Structure covers the following settings:

Setting	Function
Offset	This option becomes available when "Fixed Length" is selected. It is used to specify the start position for each referred data field
Length	Specify the fixed length/maximum length for each referred data field in Fixed Length/Delimiter. The maximum value is 255
Key Field	Select a key field so that an index file can be created for the lookup file

When record format is wrong

This setting configures the actions for the data collecting form to take when the incoming data format is wrong.

Setting	Function
Stop the download process	Select this option to stop the downloading process if the record format is wrong
Truncate/Reformat the record	Select this option to truncate/reformat the data during downloading if the record format is wrong
Skip the record	Select this option to continue downloading but discard the mismatched data

Reset Current Lookup File

Select this option to reset the current form back to default values.

How to use Lookup with ZAC/Data Collector

Lookup table serves as a reference database. Scanned data is first compare with corresponding data fields on the lookup table with pre-define rules and conditions. If they are met, comparison result will appear on the screen; if not met, warning messages will alert the user, or prompting user to take necessary actions.

Setting up lookup table is straight-forward and simple. The process usually involves the following steps:

- 1) Locate / produce lookup table (usually in TXT format).
- 2) Launch ZAC to setup relationship between application and lookup table.
- 3) Setup rules and conditions when comparing data with lookup table.
- 4) Send both the custom application + lookup table to data collector.
- 5) Test your application.

Locate / Produce Lookup Table

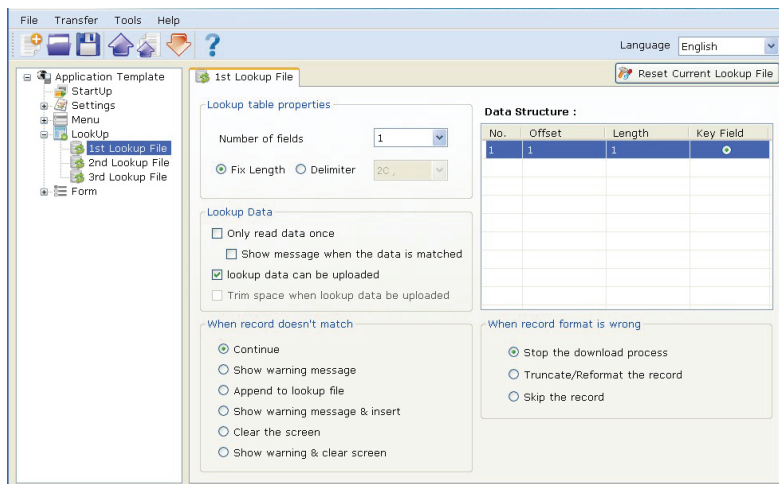
Lookup table usually contains rows and columns of data field. Each filed will be pre-define and contains different pieces of information such as name, barcode, or quantity, etc. You can create the table, or you can export all the data out from existing database. Below you will find a example of lookup table in TXT format.

```
00001, Juice, 10, Market
00002, Cookie, 11, Candy Shop
00003, Wine, 22, Market
00004, Chocolate, 33, Candy Shop
00005, Water, 44, Market
00006, Coke, 55, Market
00007, Sandwich, 66, Grocery Store
00008, Hamburger, 77, Grocery Store
00009, Milk, 88, Market
00010, Black Tea, 99, Markets
```

Notice a typical lookup table will contains all your records separated by “,”. Each record is uniquely identified by at least one column (in this case, the unique identifiable column would be the first column, item number which starts with 0001, 0002...). A column heading may or may not be necessary for the lookup table to work properly.

Setting up Relationship

Once the lookup table has been gathered, we now need to design custom application which will “link” to specific lookup table. Keep in mind in any ZAC application; you can have up to three lookup tables. Each form can only be link to one lookup table at anytime. Before you can import/upload the lookup table to data terminal, you will need to setup rules and conditions during import and compare.



Here you can setup the properties, rules when record doesn't match, rules when record format is wrong, and preview the data structure of the lookup table. Keep in mind the data structure has to match the data structures on the TXT file. If they don't match, error message may appear according to the rules specified in the “When record format is wrong” section.

For more information on the description of each rules and condition, please refer to ZAC user's manual [Managing Lookup Files](#).

Sending Lookup to Data Terminal

Once the data structure and rules have been setup, it is time to upload the lookup table to data terminal. In order for lookup table to function properly, you will need to upload custom application first, follow by lookup table. If you receive error message during lookup table uploading process, you need to go back to ZAC and adjust the data structure to match the data structure of your lookup table.

For instruction on how to upload application and lookup up table, please refer to ZAC user's manual [Upload Custom Application](#) and [Upload Lookup File](#).

Test and verified

Once both application and lookup table have been uploaded, execute (by going back to Main Menu and press 1. Collect). If all goes well, when you input one of the data listed in the uniquely identifiable column, data terminal will display the corresponding search result on the screen. If you are getting "record not found..." error message, you need to go back to ZAC and check application settings under Form and Lookup.

Managing Forms

A form consists of a sequence of inputs that can take on various values for data collecting purpose. You can add one or more forms to a menu, and use multiple menus to create an application template. You can also connect forms and menus to each other to fit your data collecting needs.

A form is designed to ask for inputs on the screen when it is run on the data collector. Once all the input fields are completed, the inputted data will be stored as a transaction record and saved into a “data file” on the data collector. You can add the transaction record to the lookup database that the form refers to, or directly output it to a printer.

Customizing a Form

1. Run ZAC on your PC.
2. From the navigational pane, select “Form” to expand the menu and select one of the Forms or simply select “Form” from the navigational pane and click “Form” from the working area. Check the following section for the options you can configure.

No	Type	Prompt	Input	Min	Max	Variables	
1	Nil		Both	0	80	Nil	More
2	Nil		Both	0	80	Nil	More
3	Nil		Both	0	80	Nil	More
4	Nil		Both	0	80	Nil	More
5	Nil		Both	0	80	Nil	More
6	Nil		Both	0	80	Nil	More
7	Nil		Both	0	80	Nil	More
8	Nil		Both	0	80	Nil	More

Navigation

Navigation covers the following settings:

Setting	Value	Function
ESC	Main, Form1 ~ Form10, Menu1 ~ Menu10	Select the function to perform when ESC is pressed
Next	Main, Form1 ~ Form10, Menu1 ~ Menu10	Select the next function to execute when the current form of work is completed
Record Action The Record function tells the system what to do when all the input fields of a form is completed	Save	Saves the record in order
	Update Lookup	Update the lookup file associated with the form
	Save & Update	Save the record in order and updates the lookup file
	Pass down	Pass down the data to the next form or menu without saving
	Output record	Outputs the record directly to a printer instead of saving it to a file
	Output screen	Outputs what is displayed on the screen such as the prompts and data collected
	Save & output record	Save the record in order and output it directly to a printer
	Save & output screen	Save the record in order and output what is displayed on the screen
	Remove form look up	Remove the record from the lookup file
Save & remove	Save the record in order and removes it from the lookup file	

Time Stamp

Use this feature to set the date and time stamp written format.

Options available are:

Setting	Function
No Stamp	Write data without using date and time stamp
Before the record	Date and time stamp added to the front
After the record	Date and time stamp added at the end

Date & Time Stamp Settings

Setting	Value	Function
Separate DATA stamp and Time stamp to two fields	User defined	The date + time format delimiter
Year	4 Digits (YYYY) 2 Digits (YY)	Enable/Disable years format, used to write data reference.
Month	n/a	Enable/Disable month format
Day	n/a	Enable/Disable day format
Separator	User defined	The date format delimiter
Date Style	Year.Month.Day1 Month.Day.Year1 Day.Month.Year1	Select the date format combinations.
Hour	n/a	Enable/Disable hour format
Minute	n/a	Enable/Disable minute format
Second	n/a	Enable/Disable seconds format
Separator	User defined	The time format delimiter

Lookup Table

Lookup files are used to provide the information about the data structure. You must first configure the lookup file settings before this option becomes available. The lookup table covers the following settings:

Setting	Value	Function
Lookup Table	No Lookup 1st Lookup 2nd Lookup 3rd Lookup	Select a lookup file as the reference file when fetching data. Select no lookup to use the pre-defined initial value

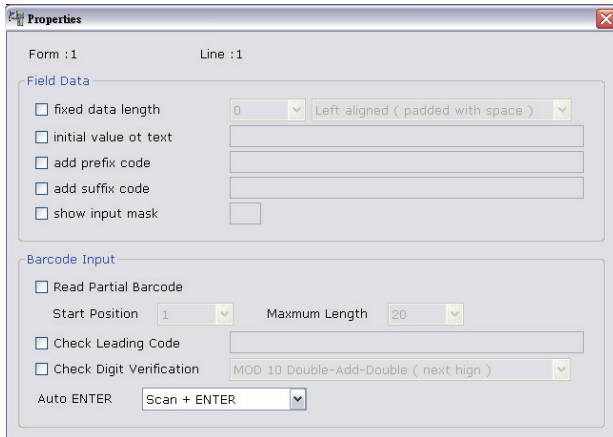
Branch

Branch configures the keypad shortcut for the data collector to switch between the forms and menus. Up to four shortcuts can be configured.

Setting	Value	Function
Fn + 1 Fn + 2 Fn + 3 Fn + 4	Disable, Form1 ~ Form 10	Configuring additional Fn + 1~ Fn + 4 shortcuts operations

More

Press the “More” button for advanced settings:



Field Data

Setting	Value	Function
fixed data length	0 ~ 255, Left aligned (padded with space), Right aligned (filled with space), Left aligned (padded with 0), Right aligned (filled with 0)	Check this option and select a value and alignment to set the data length within the specified value
initial value or text	User defined (up to 9 characters)	Check this option and enter a value or text to display the initial value or text on the data collector screen. The value or text will be replaced by data input
add prefix code	User defined(up to 10 characters)	Check this option and enter a value or text to add a prefix code such as a \$ sign in front of the inputted data
add suffix code	User defined(up to 10 characters)	Check this option and enter a value or text to add a suffix code after the inputted data
show input mask	User defined(only 1 character)	Check this option and enter a mark or symbol such as an asterisk (*) to highlight the input field

Barcode Input

Setting	Value	Function
Read Partial Barcode Start Position	Start Position: 1 ~ 80 Maximum Length: 1 ~80	To collect only a part of the barcode scanned, check this option and set the start and maximum length of the data
Check Leading Code	User defined(up to 6 characters)	Check this option and enter a value or text to enable leading code check. When the leading characters do not match the entered code, the barcode will be rejected
Check Digit Verification	MOD 10 Double-Add-Double (next high), MOD 10 Add-Double-Add (next high), MOD 10 Triple-Add-Triple (next high), MOD 11 Repeat Arithmetic (next high), MOD 10 Double-Add-Double (next low), MOD 10 Add-Double-Add (next low), MOD 10 Triple-Add-Triple (next low), MOD 11 Repeat Arithmetic (next low)	Check this option and select a formula for the checksum examination to enable the check against the barcode's check digit
Auto Enter	No Scan + Enter Enter + Scan	Configure the use of the Enter key for input

Data Collecting

The bottom half of the Form settings are used to configure the elements of the input fields in a data collecting form.

No	Type	Prompt	Input	Min	Max	Variables	
1	Nil		Both	0	80	Nil	More
2	Nil		Both	0	80	Nil	More
3	Nil		Both	0	80	Nil	More
4	Nil		Both	0	80	Nil	More
5	Nil		Both	0	80	Nil	More
6	Nil		Both	0	80	Nil	More
7	Nil		Both	0	80	Nil	More
8	Nil		Both	0	80	Nil	More

Data Type

Setting	Value	Function
Nil	None	Select this option to reject any data regardless of the format
Text	\$1a2b3c=-*/...	Select this option to accept any ASCII character
Integer	...-1,0,1,2...	Select this option to accept whole numbers
Real	8.88	Select this option to accept any number with a decimal
Letter	Aa ~ Zz	Select this option to accept any letter
Auto [+/-]	8, 8.88	Select this option to accept Real and Integer numbers and perform arithmetic + or – depending on the field setting
Boolean	0 or 1, Y or N, T or F...	Select this option to accept a true or false type input
Lookup	Matching data	No data accepted. Select this option to fetch associated lookup value for reference
Fixed Data	Pre-defined	No data accepted. Select this option to show data pre-defined in the Prompt field. Fixed Data will be saved as part of the transaction record
Prompt	Pre-defined	No data accepted. Select this option to show data pre-defined in the Prompt field. Prompt will not be saved as part of the transaction record
Counter	Counter	No data accepted. Select this option to record the count of user's data collecting process
Passdown	Data from previous form	Select this option to imports the data collected by the previous form that is set to Pass down for the Record mode
Extension	Space	No data accepted. Select this option to reserve field space for an input field above it when it is too long to completely display on the screen
Pause	User defined	No data accepted. Select this option to show an alert defined in the Prompt field
Alphameric	ABC123xyz	Select this option to accepts any alphabetic, numeric, or alphanumeric characters

Prompt

Setting	Value	Function
Prompt	User defined	Used for the label or name of an input field. Enter a string for an input field if necessary

Input Type

Setting	Value	Function
Input Type	Reader, Keypad, Both	Select the option to set where the data is collected from. "Auto Enter" in the barcode settings must be enabled for the Reader option to function

Minimum Length

Setting	Value	Function
Min	0 ~ 80	Set the minimum length of the input data

Maximum Length

Setting	Value	Function
Max	0 ~ 80	Set the maximum length of the input data

Fields

Fields are only available when the data collecting form is set to refer to a lookup file.

Setting	Value	Function
Fields	Nil	Accept no data
	Field 1, Field 2...	Select to set an input field to either admit the data read or fetch lookup value

Variables

Variables are only used when the data collecting form is not referring to any lookup file.

Setting	Value	Function
Variables	Nil	Accept no data
	get v1 ~ get v8, set v1 ~ set v8	Input field set to "set v1" can be fetched by the input field set to "get v1" in the succeeding form; input field set to "get v1" can fetch the data from input field set to "set v1"
	get & setv1~ get & setv8	Input field set to get & setv1 will fetch the value from an input field set to set v1 in the preceding form and sets the fetched value to the new variable that is to be fetched by the succeeding form. This selection is applicable when a data needs to pass down to an over next form

Reset Current Form

Select this option to reset the current form back to default values.