



RFID Label Design and Encoding Management Pro User's Guide Manual Input

October 2016
Version 1.23

Preface

This document explains how to use the RFID Label Design and Encoding Management Pro for RFID Printer (hereafter referred to as "this tool"). Be sure to read this manual before using this tool.

➔ Please read the **First Step Guide** first.

■ Abbreviations and generic terms used

This document uses the following abbreviations and generic terms.

Name	Abbreviation used in this document
Microsoft® Windows® 7 Professional	"Windows 7"
Microsoft® Windows® 8.1 Professional	"Windows 8.1"
Terminals where Windows 7 or Windows 8.1 has been installed Personal computer	PC
Reader/writer devices	"Reader device"
RFID tags	Tag
Fujitsu's RFID Integrated Label - 8Kbyte (Large/Medium/Small)	"Large capacity RFID tag" or "high memory tag"
Fujitsu's RFID Integrated Label - 1Kbyte (Large/Medium/Small) Fujitsu's 2-kilobit RFID tags	Tag
NXP's RFID tags with a 240-bit EPC area and a 512-bit user area, and Impinji's RFID tags with a 128-bit EPC area and a 512-bit user area	"Small-capacity RFID tags", "small-capacity tags", "low memory tags" or just "tags"

■ Trademarks

- Microsoft, Windows, .NET Framework, and .NET Compact Framework are registered trademarks of Microsoft Corporation in the United States and other countries.
- Other company names and product names in this manual are trademarks or registered trademarks of respective companies. Note that system names and product names in this manual are not always followed by trademark symbols such as ® or ™.

■ ATA (Air Transport Association of America) Spec 2000 Chapter 9-5

- This tool is designed to read and write data from and to tags in compliance with the specification for Radio Frequency Identification (RFID) on Parts in ATA Spec2000 Chapter 9-5.

■ High Risk Activity

- This product is designed and manufactured as contemplated for general use, including without limitation, general office use, personal use and household use, but is not designed and manufactured as contemplated for use accompanying fatal risks or dangers that, unless extremely high safety is secured, could lead directly to death, personal injury, severe physical damage or other loss (hereinafter called "High Safety Required Use"), including without limitation, nuclear reaction control, aircraft flight control, air traffic control, mass transport control, life support, and weapon launch control . The customer shall not use this product without securing the sufficient safety required for the High Safety Required Use.

■ Notes on export procedures

- When exporting or providing this product and this document, check the regulations under the Foreign Exchange and Foreign Trade Law and the laws and regulations relating to US export control, and complete the necessary procedures.

■ Screenshots and illustrations

- The screenshots and illustrations in this manual are only examples, and the actual screens may be slightly different depending on the environment that you are using.
- The screenshots used in the explanations in this manual are from a Windows 7 environment.
- These screenshots and sample task files are from a version of the tool that was still in development, and so may differ slightly from the actual version.

■ How to obtain third-party software (such as Zebra products)

- For information about how to obtain third-party software, make inquiries with Fujitsu Customer Support.

■ Request

- No part of this document may be reproduced or reused for other purposes without the express written permission of Fujitsu Limited.
- The content of this document may change without prior notice.

■ Revision history

Edition	Date issued	Changes
Version 1.00	October 2014	First version released.
Version 1.10	March 2015	Support for Windows 8.1
Version 1.20	September 2015	Add Commissioning from 2D and Batch Commissioning
Version 1.21	October 2015	Small changes.
Version 1.22	April 2016	Changed the screen transition on startup

Version 1.23	October 2016	For the first enhancement in 2016
--------------	--------------	-----------------------------------

CONTENTS

1 Function Overview of RFID Label Design and Encoding Management Pro	1
1.1 Overview	1
1.2 Function Configuration	1
1.3 Suite of User Manuals	2
1.4 Message Display	2

2 Operating Environment.....	3
2.1 PC.....	3
2.1.1 Hardware Requirements.....	3
2.1.2 Software Requirements	4
2.2 RFID Tags	4

3 RFID Label Design and Encoding Management Pro Manual Input	5
3.1 Overview	5
3.2 Function Configuration	5
3.3 Function Overview	6
3.4 Screen Transitions	7
3.5 Starting and Stopping the Tool	8
3.5.1 Starting the Tool	8
3.5.2 Stopping the Tool	10
3.6 Using RFID Label Design and Encoding Management Pro Manual Input	12
3.6.1 Selecting an Initialization Definition File	12
3.6.2 Entering EPC Information	16
3.6.3 Selecting a Record Input Method	17
3.6.4 Entering Birth Record.....	28
3.6.5 Confirmation and Execution.....	34

1 Function Overview of RFID Label Design and Encoding Management Pro

1.1 Overview

This tool can initialize RFID tags by RFID printer in the ATA formats specified in ATA Spec2000 Chapter 9-5, and print the label on RFID tags.

1.2 Function Configuration

This tool consists of following application.

Name	Overview
RFID Label Design and Encoding Management Pro	This application initializes RFID tags using an ATA format as specified in ATA Spec2000 Chapter 9-5 based on the data inputted by manual or CSV/XML files, and prints the label on RFID tags.

1.3 Suite of User Manuals

The user manuals for this product are organized as follows:

Manual title	Description
RFID Label Design and Encoding Management Pro User's Guide (Manual Input)	<ul style="list-style-type: none">• This is the present document• Explains how to use the Manual Input function of "RFID Label Design and Encoding Management Pro" for RFID printer.
RFID Label Design and Encoding Management Pro User's Guide (Commissioning from 2D)	<ul style="list-style-type: none">• Explains how to use the Commissioning from 2D function of "RFID Label Design and Encoding Management Pro" for RFID printer.
RFID Label Design and Encoding Management Pro User's Guide (Batch Commissioning)	<ul style="list-style-type: none">• Explains how to use the Batch Commissioning function of "RFID Label Design and Encoding Management Pro" for RFID printer.
RFID Data Management Pro & RFID Label Design and Encoding Management Pro User's Guide (Appendixes)	<ul style="list-style-type: none">• Explains the usage methods and provides additional information about the "RFID Data Management Pro" and "RFID Label Design and Encoding Management Pro"

1.4 Message Display

Messages may be displayed in popup dialog boxes, depending on conditions encountered during processing.

When an error is displayed, the normal processing is suspended.

Refer to the *RFID Data Management Pro & RFID Label Design and Encoding Management Pro User's Guide (Appendixes)* for information on the messages displayed in the pop-up dialog box, and for guidance on how to eliminate the cause of the error.

If the cause of the error cannot be identified, please make an inquiry to Fujitsu support service.

2 Operating Environment

2.1 PC

2.1.1 Hardware Requirements

The following hardware and settings are required to install this tool.

2.1.1.1 PC

Hardware	Description
CPU	A CPU with a 1.0 GHz processor or higher (manufactured by Intel or AMD)
Memory	1 GB or more
Hard disk capacity	400 MB or more
Text resolution	96 DPI
Display size	XGA (1024 x 768) or higher

- **Reference:**
- There may be display problems if a text resolution other than the one above is used.
 - The text resolution can be set using the Control Panel.
Select **Control Panel > Adjust screen resolution > Make text or other items larger or smaller > Smaller - 100% (default)**.

2.1.1.2 Reader/writer Devices

This product is only guaranteed to work with the following reader/writer devices.

Manufacturer	Type	Driver, SDK, etc.	Model
Zebra Technologies	Card Printers (UHF)	Firmware Ver. FZ7ME.02.04.00	ZXP Series 7 Card Printers (UHF)

2.1.2 Software Requirements

The following software is required to install this tool.

- Windows 7 Professional Service Pack 1 (64bit edition) or Windows 8.1 Professional (64bit edition)
- Internet Explorer 8 or higher
- .NET Framework 3.5 (Note: .NET Framework 3.5 is preinstalled on Windows 7)
- BarTender (SeaGull Co.)

2.2 RFID Tags

This tool supports the following RFID tags.

- Fujitsu's RFID Integrated Label – 1Kbyte (Large/Medium/Small)
- Fujitsu's RFID Integrated Label – 8Kbyte (Large/Medium/Small)

3 RFID Label Design and Encoding Management Pro

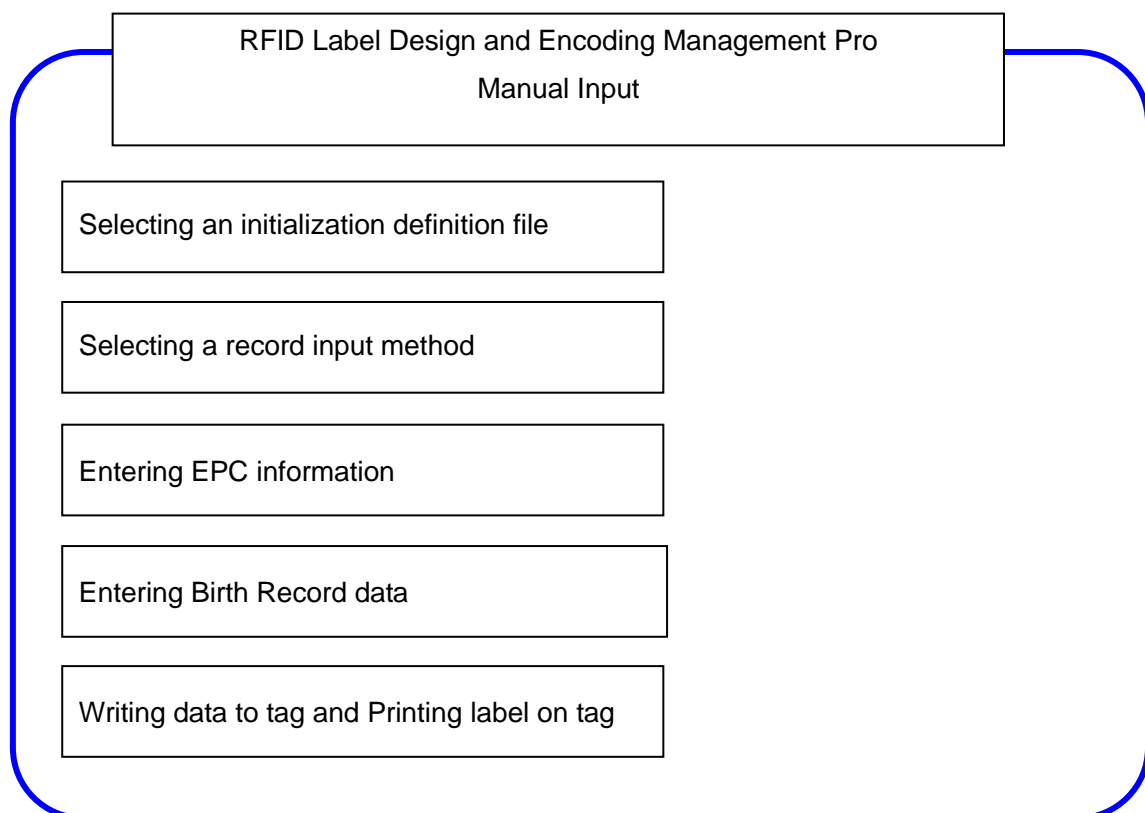
Manual Input

3.1 Overview

This tool makes it possible to initialize tags using an ATA format as defined in ATA Spec2000 Chapter 9-5, as well as to print a label on tags. There are three data entry forms. The hand input, csv file input, and SAP All (XML File) can be input.

3.2 Function Configuration

The function configuration for this tool is as follows:



3.3 Function Overview

This section provides an overview of the functions of this tool.

- Selecting an initialization definition file

This function is used to select an initialization definition file (XML) that defines such items as the size of the ATA area to be initialized.

- Automatic EPC generation

This function automatically generates an EPC based on the values entered in the EPC information setup window and the values specified for the Birth Record TEIs.

- Selecting an record input method

This function is used to select an input method for tag data. The user can select one of the following methods: import from csv file, import from SAP All (Auto-Id Infrastructure) Messages, import from template file, or manual input.

- Setting up Birth Record

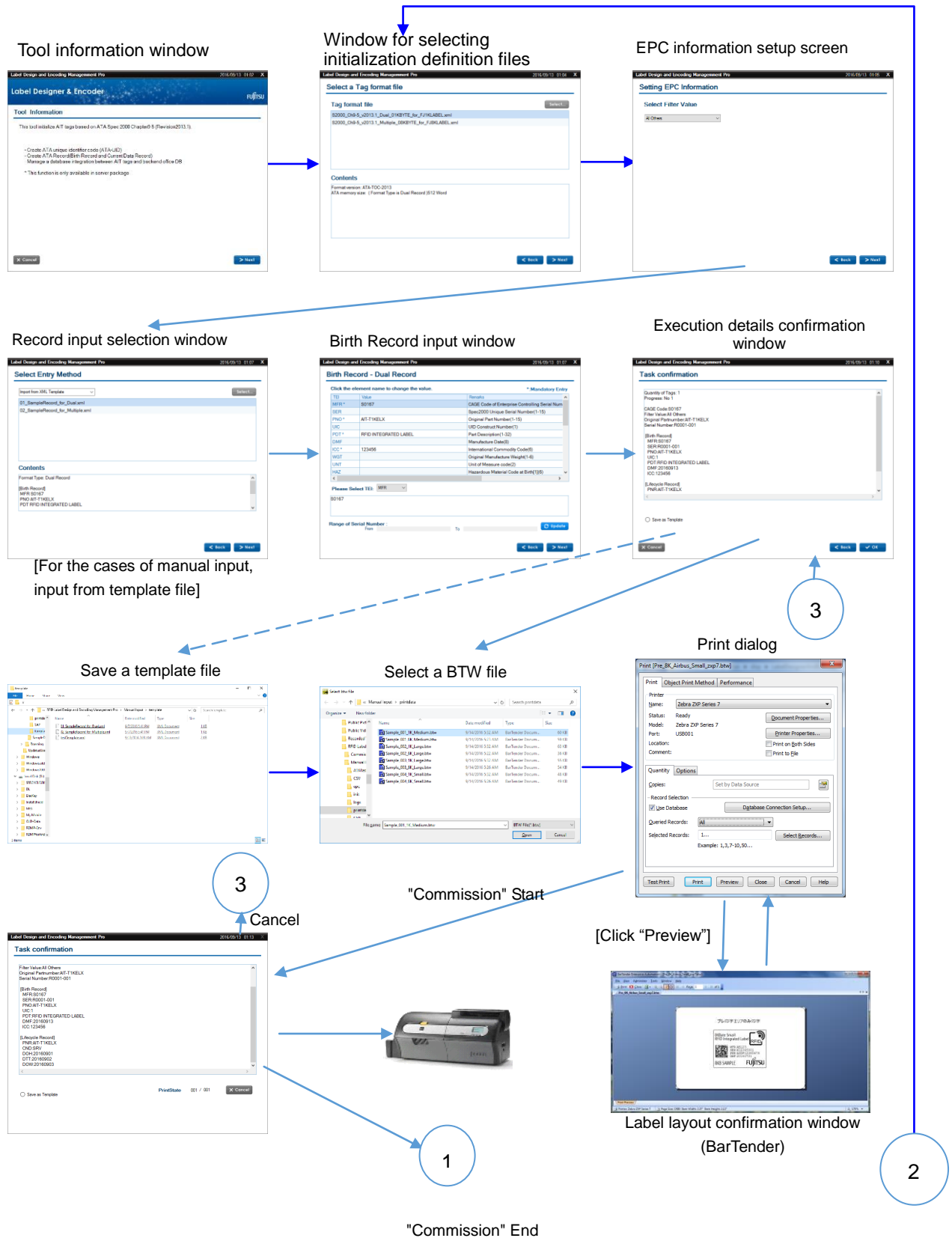
This function sets up the Birth Record. The user can select either of the following two methods: selecting a template file that defines the Birth Record, or entering the settings manually.

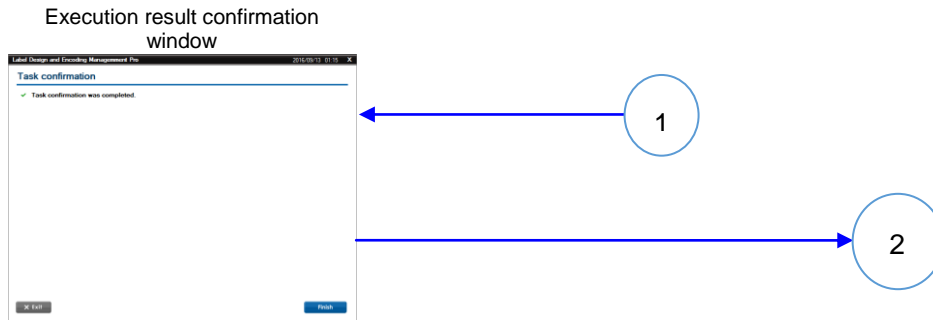
- Writing data to tag and Printing a label on tag

This function initializes the tag and prints a label on tag using the selected definition files, the data elements for each record and the printing layouts.

3.4 Screen Transitions

The following diagram illustrates the screen transitions of this tool.





3.5 Starting and Stopping the Tool

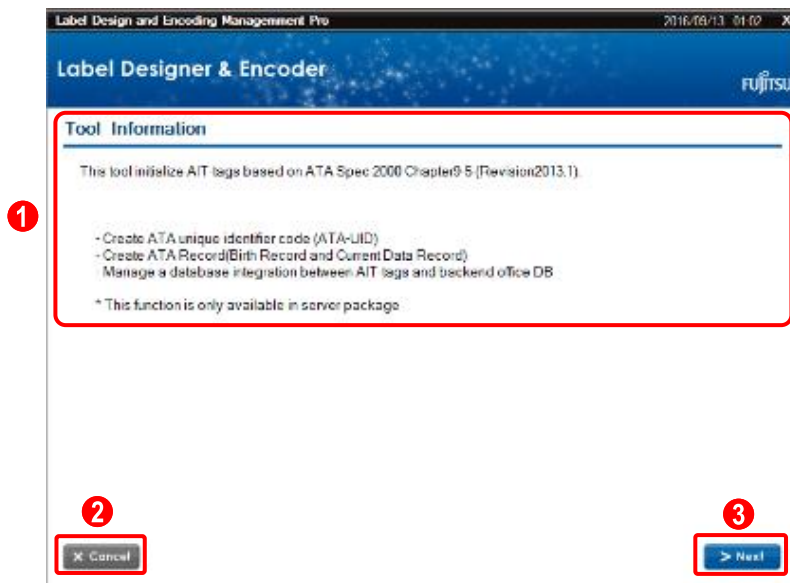
3.5.1 Starting the Tool

To start this tool, the icon of “RFID Label Design And Encoding Management Pro” that has been placed on the computer desktop is click.



Manual Input is clicked.





1 Tool Information

This area displays the version of the ATA Spec and the tool's processing outline.

2 Cancel button

This button is used to close this tool.

3 Next button

This button is used to display the next screen.

■ Operating procedure

(1) Confirm the **Tool Information** window.

(2) Click the **Next** button.

- The **Select a Tag format file** window (the window for selecting an initialization definition file) will be displayed.

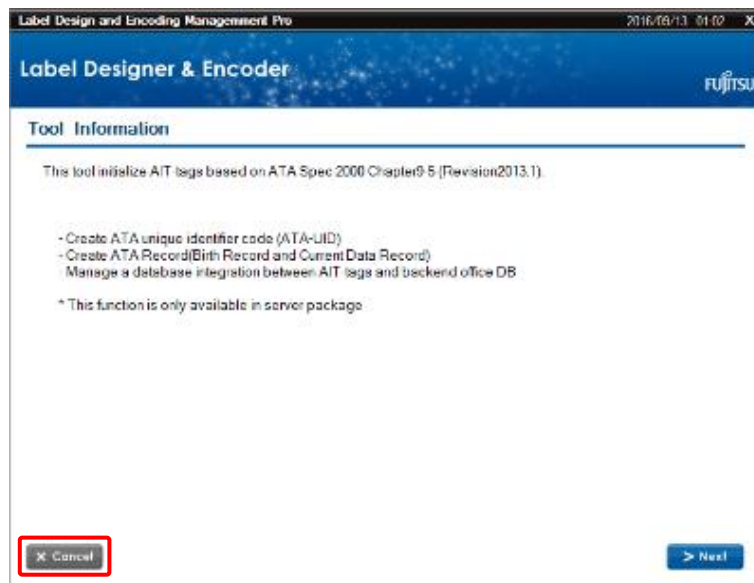
3.5.2 Stopping the Tool

To close the tool, click the **[x]** button at the top right of the window.

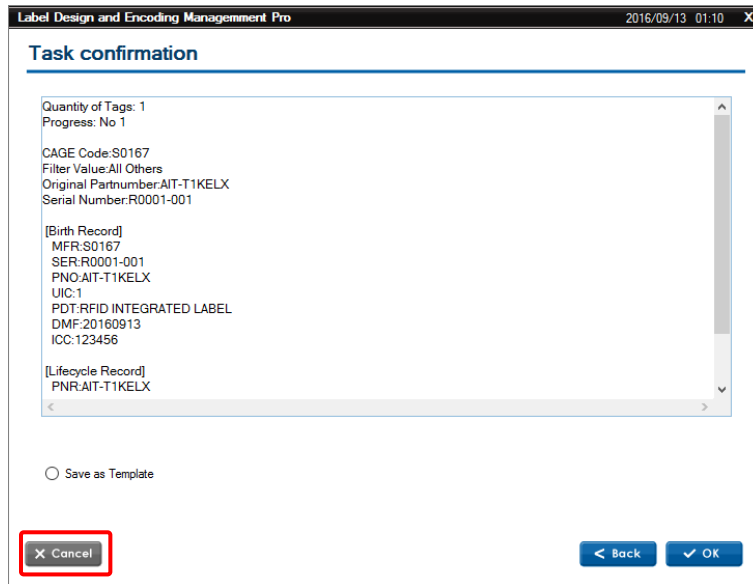


Alternatively, the tool can also be closed by clicking the **Cancel** buttons on the tool information window or the execution details confirmation window, or the **Exit** button on the execution result confirmation window.

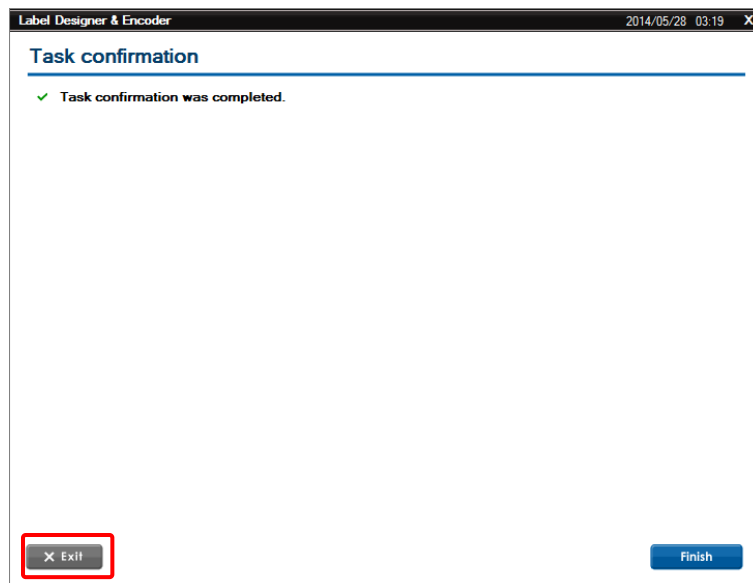
- Tool information window



- Execution details confirmation window



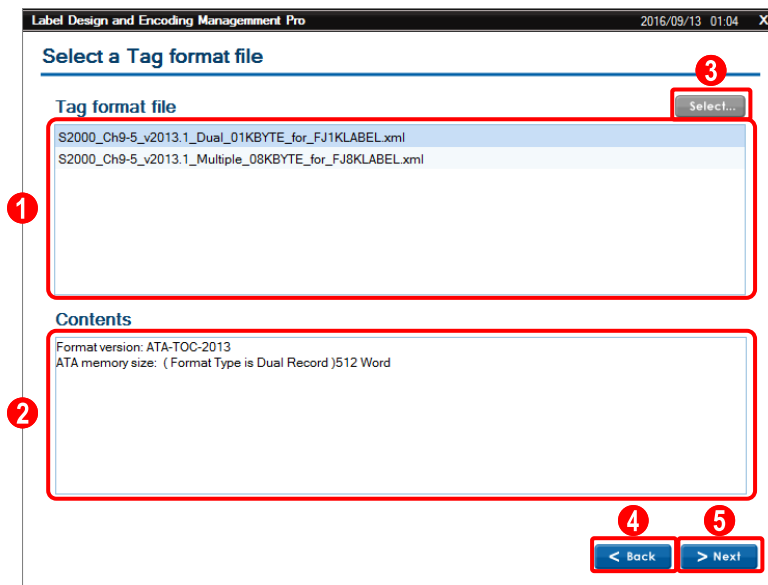
- Execution results confirmation window



3.6 Using RFID Label Design and Encoding Management Pro Manual Input

3.6.1 Selecting an Initialization Definition File

Select the initialization definition file to be used to initialize the tag.



1 Tag format file (list of initialization definition files)

This area displays a list of initialization definition files.

Clicking the **Select** button and selecting a folder displays a list of the XML files in the selected folder.

The file list that is first displayed is based on the folder that was selected last time.

There are the following types of initialization definition files:

- For the dual-record type Fujitsu's RFID Integrated Label – 1Kbyte (Large/Medium/Small)
S2000_Ch9-5_v2013.1_Dual_01KBYTE_for_FJ1KLABEL.xml
- Fujitsu's the multi-record type of RFID Integrated Label – 8Kbyte (Large/Medium/Small)
S2000_Ch9-5_v2013.1_Multi_08KBYTE_for_FJ8KLABEL.xml

2 Contents

This area displays the content of the file selected in the initialization definition file list.

If the selected file cannot be recognized as an initialization definition file, an error message will be displayed and the **Contents** area will be blank.

If this area is blank, the **Next** button will be grayed out.

3 Select button

This button displays the folder selection dialog box.

The XML files in the selected folder will be displayed in the initialization definition file list.

4 Back button

This button is used to display the previous window.

5 Next button

This button is used to display the next window.

If the **Contents** area is blank, this button will be grayed out.

! Caution

- If SizeofCurData is not set, the tag initialization will fail.
-

3.6.1.1 Initialization Definition File

Refer to the sample initialization definition file below.

Sample initialization definition file (example)

```
<?xml version='1.0' encoding='UTF-8'?>
<AITTag>
  <InitInfo>
    <VersionDesc>ATA-TOC-2013</VersionDesc>
    <FlagTimeStamp>1</FlagTimeStamp>
    <ATAFormatType>1</ATAFormatType>
    <SizeofUserMem>2048</SizeofUserMem>
    <SizeofCurData>255</SizeofCurData>
    <SizeofMechanic>255</SizeofMechanic>
    <SizeofBirth>200</SizeofBirth>
  </InitInfo>
```

-
- ◆ **Reference** • Do not change any of the items in the sample file, except for the "SizeofUserMem" item.

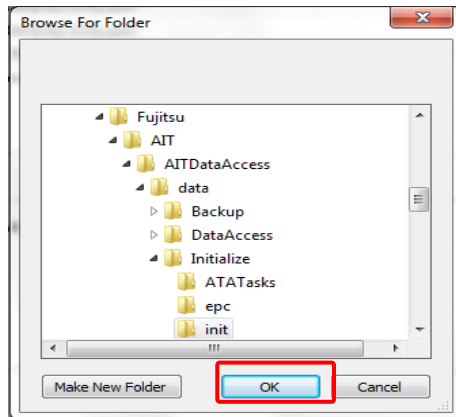
For the "SizeofUserMem" item, specify the size (in words) of the area for writing ATA records.

- Consider the type and capacity of the tag when selecting an initialization definition file and setting a size for "SizeofUserMem".
 - With multi-record tags, only values that are multiples of 1024 between 1024 and 30720 can be specified as valid values. Specify a value between 1024 and 4096 as the size when using Fujitsu's the multi-record type of RFID Integrated Label – 8Kbyte.
 - With dual-record tags, only 96 and values that are multiples of 256 between 512 and 2048 can be specified as valid values. Specify 512 or more as the size when using Fujitsu's the multi-record type of RFID Integrated Label –
-

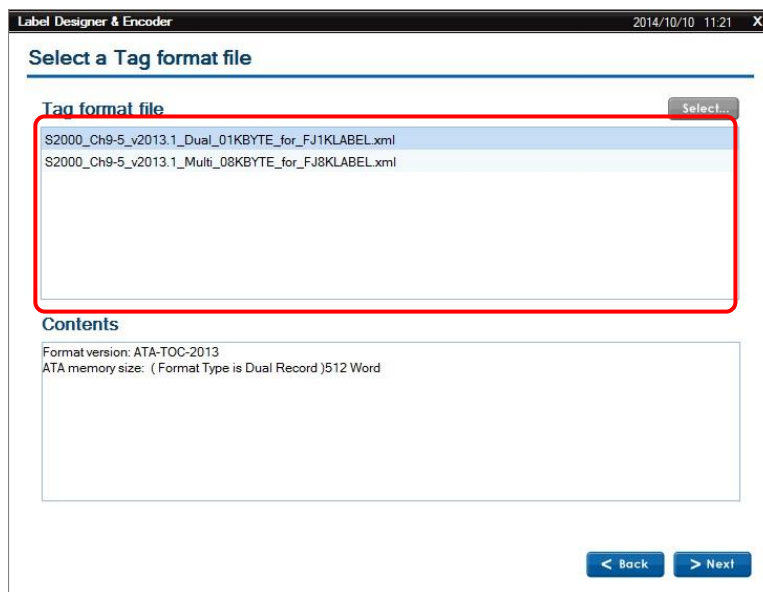
1Kbyte.

■ Operating procedure

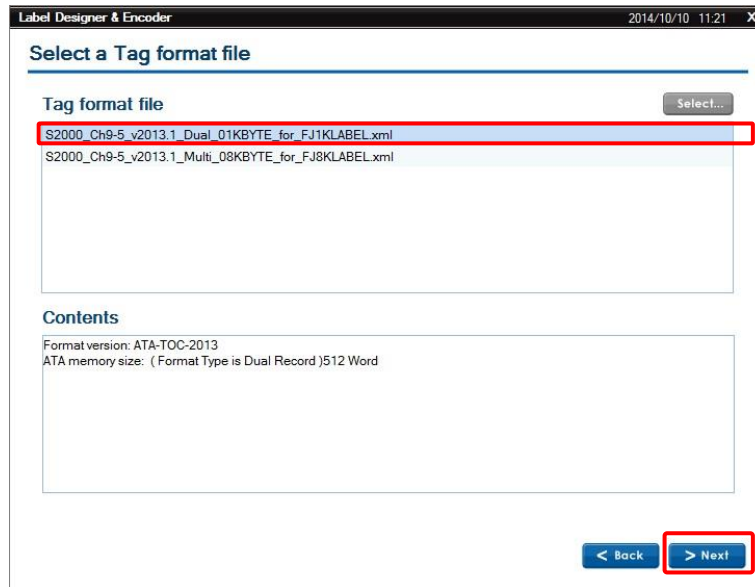
- (1) Click the **Select** button.
- (2) In the displayed dialog box, navigate to the folder containing the Tag Format files, and then click the **OK** button.



- (3) A list of the XML files in the selected folder will be displayed.

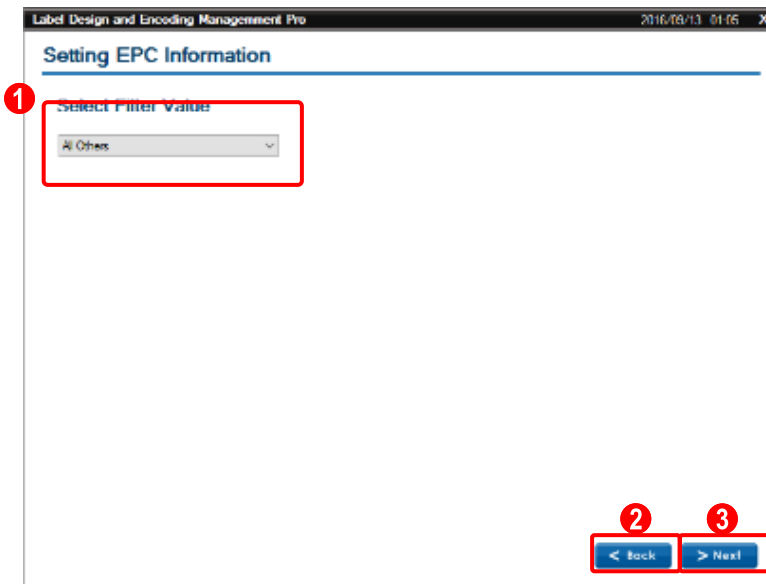


- (4) Select the target file and then click the **Next** button.



3.6.2 Entering EPC Information

Enter the EPC information.



- 1** Filter Value list
This list displays the Filter Values that can be selected.
Select the Filter Value to be set to the EPC.

- 2** **Back** button
This button is used to display the previous window.

- 3** **Next** button
This button is used to display the next window.

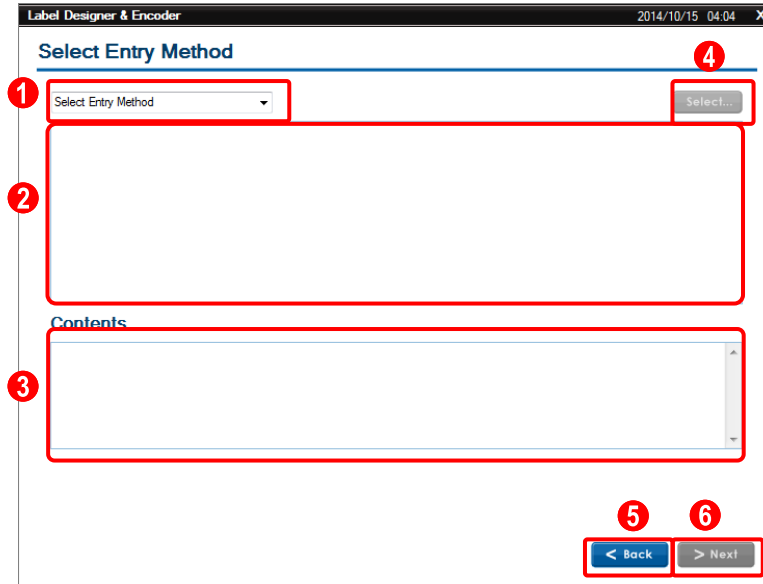
■ Operating procedure

- (1) Use the Filter Value list to select the Filter Value to be set to the EPC.
- (2) Click the **Next** button.

3.6.3 Selecting a Record Input Method

Select a record input method.

If **Enter Birth Record from templates** has been selected, select a template file..



1 Select Entry Method

Select one of the following input methods for tag data:

- Import from CSV File: import data from CSV file
- Import from SAP All (Auto-Id Infrastructure) Messages: import data from SAP-All message
- Import from XML Template: import data from template file
- Manual Input: input data manually

When any option other than “Manual Input” is specified, the **Select** button is enabled.

2 File list

This area displays a list of files for importing data if the option other than “Manual Input” is specified in the **Select Entry Method** dropdown.

Clicking the **Select** button and selecting a folder displays a list of the files in the selected folder.

3 Contents

This area displays the content of the file selected in the file list if the option other than “Manual Input” is specified in the **Select Entry Method** dropdown.

If the selected file cannot be recognized as a tag data file, an error message will be displayed and the **Contents** area will be blank.

If this area is blank, the **Next** button will be grayed out.

4 Select button

This button displays the folder selection dialog box.

The XML files in the selected folder will be displayed in the template file list.

5 Back button

This button is used to display the previous window.

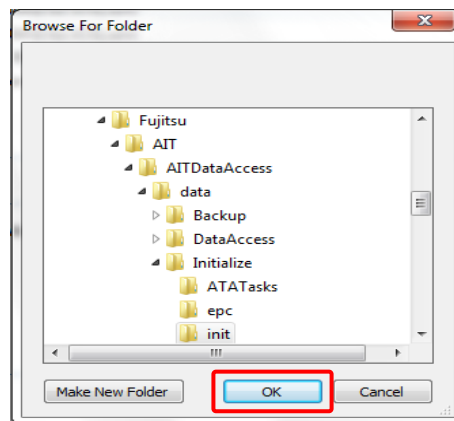
6 Next button

This button is used to display the next window.

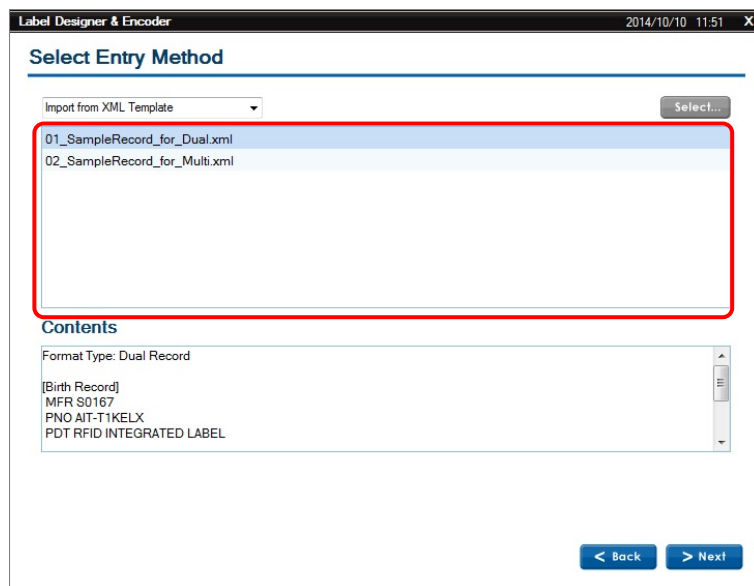
This button will be disabled if the **Enter Birth Record from templates** radio button has been selected but the **Contents** area is blank.

■ **Procedure (when non-“Manual Input” has been selected)**

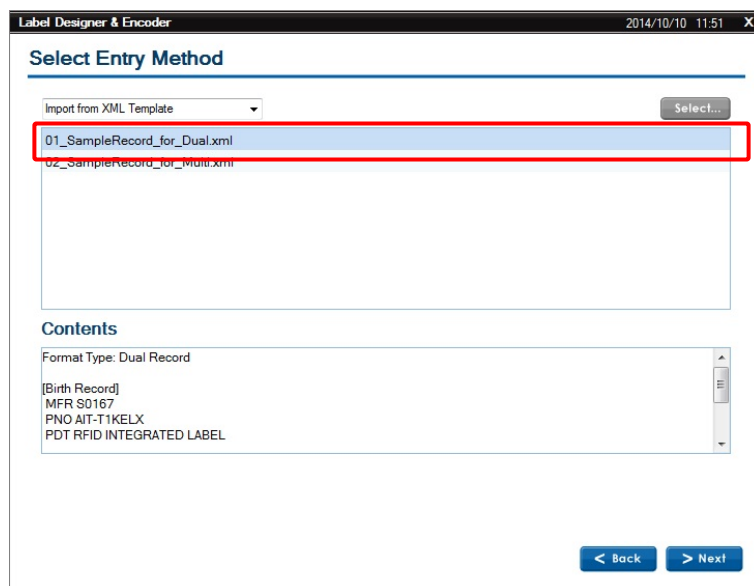
- (1) Select one option other than **Manual Input** in the **Select Entry Method** dropdown and then click the **Select** button.
- (2) In the displayed dialog box, navigate to the folder containing the template files, and then click the **OK** button.



(3) A list of the files in the selected folder will be displayed.



(4) Select the target file and then click the **Next** button.



(5) The content of the file will be displayed.

In case of **Import from XML Template**

Label Designer & Encoder 2014/10/15 04:06

Birth Record - Dual Record

Click the element name to change the value. * Mandatory Entry

TEI	Value	Remarks
MFR *	S0167	CAGE Code of Enterprise Controlling Serial Num
SER *		Spec2000 Unique Serial Number(1-15)
PNO *	AIT-T1KELX	Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *	RFID INTEGRATED LABEL	Part Description(1-32)
DMF		Manufacture Date(8)
ICC *	123456	International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth(1)(6)

Please Select TEI: MFR

S0167

Range of Serial Number : From To Update

< Back > Next

In case of **Import from CSV File** or **Import from SAP All Messages**

Label Design and Encoding Management Pro 2016/09/13 01:13

Task confirmation

Filter Value: All Others
Original Partnumber: AIT-T1KELX
Serial Number: R0001-001

[Birth Record]
MFR: S0167
SER: R0001-001
PNO: AIT-T1KELX
UIC: 1
PDT: RFID INTEGRATED LABEL
DMF: 20160913
ICC: 123456

[Lifecycle Record]
PNR: AIT-T1KELX
CND: SRV
DOH: 20160901
DTT: 20160902
DOW: 20160903

☐ Save as Template

PrintState 001 / 001 Cancel

■ Procedure (when Manual Input has been selected)

- (5) Select the **Manual Input** in the **Select Entry Method** dropdown and then click the **Next** button.

- (6) The Birth Record input window will be displayed.

TEI	Value	Remarks
MFR *		CAGE Code of Enterprise Controlling Serial Num
SER *		Spec2000 Unique Serial Number(1-15)
PNO *		Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *		Part Description(1-32)
DMF		Manufacture Date(8)
ICC *		International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth[1](6)

3.6.3.1 CSV File

This tool is able to import CSV file with tag data. Each record on CSV file corresponds to the data for a tag. The format of the CSV file is described as follows. TEIs (aka Item Name) are used as column headers in the file.

No	Item Name	Detail
1 ~ N	[TEI Name]	<p>Set the TEI for Birth Record according to the format type defined in ATA SPEC2000.</p> <p>Mandatory TEI and the TEI corresponding to Spec 2000 Unique Serial Number (SER/SEQ/UCN) should be set. In case of Dual Record, CND for Lifecycle Record should also be set.</p> <p>If a specific TEI appears multiple times, the Item name should be defined in the format as [TEI Name]_([Number]). For example: HAZ (1), HAZ (2), HAZ (3). If a specific value of a specific TEI need to be encoded to the tag, the value should be set in corresponding row for that TEI.</p> <p>Refer to the <i>RFID Data Management Pro & RFID Label Design and Encoding Management Pro User's Guide (Appendixes) – Appendix C – TEI Input</i> for information about mandatory TEIs.</p>

Sample CSV file (example)

MFR	SER	PNO	PDT	ICC
CAGEM	B00001	PARTS64	A1234567890123456789012345678901	C12345
CAGEM	B00002	PARTS64	A1234567890123456789012345678901	C12346
CAGEM	B00003	PARTS64	A1234567890123456789012345678901	C12347

! Caution

- The delimiter character of the CSV file can be changed by editing the following configuration files.
C:\Users\Public\RFID Label Design and Encoding Management Pro\Manual Input\CSV\CSVSetting.xml
- The default value is a comma.
- If the value of "Output_Delimiter" is changed, it is necessary to execute **Refresh Field Names** from **Database Connection Setup** menu in the BTW file.

• CSVSetting.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<CSVSetting>
  <Input_Delimiter>,</Input_Delimiter>
  <Input_DoubleQuoteEnable>>false</Input_DoubleQuoteEnable>
  <Output_Delimiter>,</Output_Delimiter>
  <Output_DoubleQuoteEnable>>false</Output_DoubleQuoteEnable>
</CSVSetting>
```

<Input_Delimiter> sets the delimiter of the CSV file for the input (the delimiter needs to be defined as single character).

When < Input_DoubleQuoteEnable > is set to true, each of values need to be enclosed with double quotes.

<Output_Delimiter> sets the delimiter of the CSV file for the output (the delimiter needs to be defined as single character).

When <Output_DoubleQuoteEnable> is set to true, each of values are enclosed with double quotes.

3.6.3.2 SAP-All (Auto-Id Infrastructure) Message

This tool is able to import the Command message generated from SAP-All in the form of a xml file with tag data. Refer to *SAP All-DC 1.0* for the detail information of schema of Command message (Command.xsd).

The elements and attributes in Command.xsd used by this tool are described as follows.

Table. Elements, Attributes and Rules in Command.xsd

N o	Element Name	Rule	Detail
1	/Command/WriteTag Data/Item	Minimum Occurrence: 1	The element contains the data to be written to the tag. Each "Item" element corresponds to one tag. To contain multiple tags' data, "Item" should be defined in multiple times.
2	/Command/WriteTag Data/Item/FieldList/Field	Minimum Occurrence: 1 Unbounded Mandatory Attribute: name	The element contains EPC value, TEI of Birth Record corresponding to the format type defined in ATA SPEC2000 and the item name, item value to be printed on the label of a tag. Each "Field" element corresponds to one of above items. The relation between the categories and the values of these items, detail of rules are described in the table below.
3	/Command/WriteTag Data/Item/FieldList	Minimum Occurrence: 1 Unbounded Optional Attribute: format	This element is the parent element of "Field" element. "format" attribute can be used to defined the name of a label layout which is used by RFID printer.

Table. Relation between Tag Data, Label Data and Field Elements in Command Message

No	Memory Bank in Tag	Item Name in ATA SPEC	Definition of Name Attribute for Field Element	Value of Field Element	Mandatory / Optional	Detail										
1	EPC	-	EPC	Hexadecimal value of EPC	Optional	<p>This item contains hexadecimal value of EPC data to be written to the tag. (Business data only, not including PC bit)</p> <p>Creation of EPC Data:</p> <p>If this item is defined, the value contained in this item will be written to EPC memory on the tag.</p> <p>If this item is not defined, data be written to EPC memory on the tag will be generated from “Filed” elements defined in the table below.</p> <p>If “EPC_FilterValue” is not defined, however, the filter value selected in “EPC information setup screen”.</p> <table><tr><th>Value of Name Attribute</th><th>Item in EPC</th></tr><tr><td>EPC_FilterValue</td><td>Filter Value</td></tr><tr><td>TEI_MFR or TEI_SPL</td><td>Manager number CAGE/DoDAAC</td></tr><tr><td>TEI_PNO</td><td>Original Part Number(PNO)</td></tr><tr><td>TEI_SER or TEI_SEQ or TEI_UCN</td><td>Spec 2000 Unique Serial Number (SER or SEQ or UCN)</td></tr></table>	Value of Name Attribute	Item in EPC	EPC_FilterValue	Filter Value	TEI_MFR or TEI_SPL	Manager number CAGE/DoDAAC	TEI_PNO	Original Part Number(PNO)	TEI_SER or TEI_SEQ or TEI_UCN	Spec 2000 Unique Serial Number (SER or SEQ or UCN)
Value of Name Attribute	Item in EPC															
EPC_FilterValue	Filter Value															
TEI_MFR or TEI_SPL	Manager number CAGE/DoDAAC															
TEI_PNO	Original Part Number(PNO)															
TEI_SER or TEI_SEQ or TEI_UCN	Spec 2000 Unique Serial Number (SER or SEQ or UCN)															
2	EPC	EPC Filter Value	EPC_Filter Value	Value of Filter Value	Optional	<p>This item contains the value of Filter Value to be written to the EPC memory on the tag.</p>										

No	Memory Bank in Tag	Item Name in ATA SPEC	Definition of Name Attribute for Field Element	Value of Field Element	Mandatory / Optional	Detail
N 3 }	Birth Record	[TEIName]	TEI_[TEI Name]	Value of TEI. Compliant with the definition in ATA SPEC2000	Compliant with the definition in ATA SPEC2000. Spec 2000 Unique Serial Number is mandatory. CND in Lifecycle Record is mandatory in case of Dual Record.	This item contains TEI of Birth Record corresponding to the format type defined in ATA SPEC2000. If a specific TEI appears multiple times, the Item name should be defined in the format as TEI_[TEI Name]_[Number]. For example: TEI_HAZ_1, TEI_HAZ_2, TEI_HAZ_3.

Sample SAP-All Message 1 (Containing Value of EPC)

```
<?xml version="1.0" encoding="UTF-8" ?>
<Command xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="Command.xsd">
<WriteTagData readerID="Writer_Device">
<Item>
<FieldList format="FJ Label Large.BTW" jobName="ZXP7_Job" quantity="1">
  <Field name="EPC">3B4604F0C76DD03B00420F1CB3D35DB7E390131520420F1CB3D35DB7E3900000</Field>
  <Field name="TEI_MFR">S0167</Field>
  <Field name="TEI_SER">SERABC123456789</Field>
  <Field name="TEI_PNO">PN0ABC123456789</Field>
  <Field name="TEI_PDT">PDTABCDEFGHIJKLMN1234567890_+?</Field>
  <Field name="TEI_DMF">20001122</Field>
  <Field name="TEI_ICC">123456</Field>
  <Field name="TEI_HAZ_1">UN1122</Field>
  <Field name="TEI_HAZ_2">UN3344</Field>
  <Field name="TEI_HAZ_3">UN5566</Field>
</FieldList>
</Item>
</WriteTagData>
</Command>
```

Sample SAP-All Message 2 (Not Containing Value of EPC)

```
<?xml version="1.0" encoding="UTF-8" ?>
<Command xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="Command.xsd">
<WriteTagData readerID="Writer_Device">
<Item>
<FieldList format="FJ Label Large.BTW" jobName="ZXP7_Job" quantity="1">
  <Field name="EPC_FilterValue">17</Field>
  <Field name="TEI_MFR">S0167</Field>
  <Field name="TEI_SER">SERABC123456789</Field>
  <Field name="TEI_PNO">PN0ABC123456789</Field>
  <Field name="TEI_PDT">PDTABCDEFGHIJKLMN1234567890_+?</Field>
  <Field name="TEI_DMF">20001122</Field>
  <Field name="TEI_ICC">123456</Field>
  <Field name="TEI_HAZ_1">UN1122</Field>
  <Field name="TEI_HAZ_2">UN3344</Field>
  <Field name="TEI_HAZ_3">UN5566</Field>
</FieldList>
</Item>
</WriteTagData>
</Command>
```

3.6.4 Entering Birth Record

Enter a Birth Record.

- If **Import from XML Template** has been selected

The content of the template will be displayed as the initial values.

- If **Manual Input** has been selected

No initial values will be displayed.

1 TEI list

This list displays the TEI values and remarks explaining the TEI values.

- **TEI**

This column displays TEIs.

- **Value**

This column displays the value that has been specified for the TEI.

- **Remarks**

This column displays a description of the TEI and the number of characters that can be entered.

2 TEI description

This area displays the remark for the TEI selected in the TEI list, as well as whether the TEI is mandatory.

Also select the TEI to be defined if necessary.

3 Input area

This area displays the value of the TEI selected in the TEI list. The value can be changed if necessary.

4 Update button

This button replaces the value in the **Value** column of the TEI that has been selected in the **TEI** list with the content of the input area.

5 Back button

This button is used to display the previous window.

6 Next button

This button is used to display the next window.

7 From area

This area displays the Spec 2000 Unique Serial Number for the first tag if continuously commissioning multiple tags. A blank will be displayed until a value of Spec 2000 Unique Serial Number is input.

8 To area

This area displays the Spec 2000 Unique Serial Number for the last tag if continuously commissioning multiple tags. Spec 2000 Unique Serial Number will be blank until a value is input. A blank will be displayed until a value of Spec 2000 Unique Serial Number is input.

☐ **Reference:** • The asterisk ("*") to the right of the TEI code for some data input fields indicates that the item is a mandatory input item.

• To the right of each item an explanation of the TEI is displayed, along with the maximum number of characters that can be entered.

For example, "1-5" means that 1 to 5 characters can be entered.

• This tool uses the information entered in the EPC information setup window and the Birth Record input window to create an EPC to be written to the tag. The following table shows the correspondence between the input information and the EPC items.

Input item in this tool	EPC item
EPC information setup window [Select Filter Value]	Filter Value
Birth Record input window [MFR/SPL]	Manager number CAGE/DoDAAC

Birth Record input window [PNO]	Original Part Number(PNO)
Birth Record input window [SER/SEQ/UCN]	Spec 2000 Unique Serial Number (SER or SEQ or UCN)

! Caution

- If a template file that comes with this tool is selected, sample values will be displayed in the **Value** column of the TEI list. These sample values cannot be used as they are, so change them to the appropriate values.
- If the **Next** button is clicked without clicking the **Update** button, a message will be displayed indicating that the **Update** button has not been clicked.
- For single-record and dual-record tags, the characters that can be entered are the 6-bit characters defined in table A13-2, "ASCII Conversion Chart" in Appendix 13, "6 Bit ASCII Encoding" of *ATA Spec2000 Rev.2013.1*. If characters other than valid characters are entered, an error message will be displayed and processing will be canceled. The following error message will be displayed: "[ER015] Failed to write Birth Record to the tag. (Invalid parameter)"
- It is possible to input **CND** in Lifecycle Record on the Birth Record input screen.

When Value of Birth Record is not renewed and NEXT is pressed, the alert message is displayed, and please press OK, and, next, advance when it is not necessary to input it.

■ Operating procedure (Items other than Spec 2000 Unique Serial Number)

- (1) Select the TEI to be updated in the TEI list.

Label Designer & Encoder 2014/10/15 04:12 X

Birth Record - Dual Record

Click the element name to change the value. *:Mandatory Entry

TEI	Value	Remarks
MFR *		CAGE Code of Enterprise Controlling Serial Num
SER *		Spec2000 Unique Serial Number(1-15)
PNO *		Original Part Number(1-15)
UCN *		UCN Construct Number(1)
PDT *	12345678901234567890	Part Description(1-32)
DMF		Manufacture Date(s)
ICC *		International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth(1)(6)

PDT _ Part Description (Mandatory Entry)

12345678901234567890

Range of Serial Number : From To Update

< Back > Next

- (7) Change the content displayed in the input area, and then click the **Update** button. An error message will be displayed if there is an error with the value entered.

Label Designer & Encoder 2014/10/15 04:15

Birth Record - Dual Record

Click the element name to change the value. *:Mandatory Entry

TEI	Value	Remarks
MFR *		CAGE Code of Enterprise Controlling Serial Num
SER *		Spec2000 Unique Serial Number(1-15)
PNO *		Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *	12345678901234567890	Part Description(1-32)
DMF		Manufacture Date(8)
ICC *		International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth[1](6)

PDT _ Part Description (Mandatory Entry)

PDT1234567890

Range of Serial Number : From To Update

< Back > Next

- (8) The value in the TEI list will be updated with the modified content.

Label Designer & Encoder 2014/10/15 04:16

Birth Record - Dual Record

Click the element name to change the value. *:Mandatory Entry

TEI	Value	Remarks
MFR *		CAGE Code of Enterprise Controlling Serial Num
SER *		Spec2000 Unique Serial Number(1-15)
PNO *		Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *	PDT1234567890	Part Description(1-32)
DMF		Manufacture Date(8)
ICC *		International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth[1](6)

PDT _ Part Description (Mandatory Entry)

PDT1234567890

Range of Serial Number : From To Update

< Back > Next

- (9) Repeat Steps (1) to (3) and then click the **Next** button when the data input is complete.

Label Designer & Encoder 2014/10/15 04:18 X

Birth Record - Dual Record

Click the element name to change the value. *:Mandatory Entry

TEI	Value	Remarks
MFR *	S1067	CAGE Code of Enterprise Controlling Serial Num
SER *	A001	Spec2000 Unique Serial Number(1-15)
PNO *	PNO1111	Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *	PDT1234567890	Part Description(1-32)
DMF		Manufacture Date(8)
ICC *	123456	International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth(1)(6)

PNO _ Original Part Number (Mandatory Entry)

PNO1111

Range of Serial Number : From A001 To A001 Update

< Back > Next

■ Operating procedure (Items related to Spec 2000 Unique Serial Number)

- (1) Select the **SER** in the TEI list.

Label Designer & Encoder 2014/10/15 04:20 X

Birth Record - Dual Record

Click the element name to change the value. *:Mandatory Entry

TEI	Value	Remarks
MFR *	S1067	CAGE Code of Enterprise Controlling Serial Num
SER *	A001	Spec2000 Unique Serial Number(1-15)
PNO *	PNO1111	Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *	PDT1234567890	Part Description(1-32)
DMF		Manufacture Date(8)
ICC *	123456	International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth(1)(6)

Please Select TEI: SER

Start from Suffix Quantity

Range of Serial Number : From To Update

< Back > Next

- (2) Change the content displayed in the input area, and then click the **Update** button. An error message will be displayed if there is an error with the value entered.

Please Select TEI: Select a TEI.

Start from: Input the Serial Number for the first tag. However, the common suffix existing in the data all tags should not be input.

Suffix: Input the common fixed value at the end of Serial Numbers for all tags.

Quantity: Input the quantity of tags to be commissioned. The default value is 1 if no value is input.

Label Designer & Encoder 2014/10/15 04:21

Birth Record - Dual Record

Click the element name to change the value. *Mandatory Entry

TEI	Value	Remarks
MFR *	S1067	CAGE Code of Enterprise Controlling Serial Num
SER *		Spec2000 Unique Serial Number(1-15)
PNO *	PNO1111	Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *	PDT1234567890	Part Description(1-32)
DMF		Manufacture Date(8)
ICC *	123456	International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth[1](6)

Please Select TEI: SER

Start from: SER00001 Suffix: -S Quantity: 100

Range of Serial Number : From To Update

< Back > Next

- (3) The **From** area and **To** area displaying the range of Serial Number for all tags are updated when clicking the **Update** button. The TEI and value of Serial Number in the TEI list will be updated with the entered content for the first tag. An error message will be displayed if there is an error with the value entered.

Label Designer & Encoder 2014/10/15 04:23

Birth Record - Dual Record

Click the element name to change the value. *Mandatory Entry

TEI	Value	Remarks
MFR *	S1067	CAGE Code of Enterprise Controlling Serial Num
SER *	SER00001-S	Spec2000 Unique Serial Number(1-15)
PNO *	PNO1111	Original Part Number(1-15)
UIC		UID Construct Number(1)
PDT *	PDT1234567890	Part Description(1-32)
DMF		Manufacture Date(8)
ICC *	123456	International Commodity Code(6)
WGT		Original Manufacture Weight(1-6)
UNT		Unit of Measure code(2)
HAZ		Hazardous Material Code at Birth[1](6)

Please Select TEI: SER

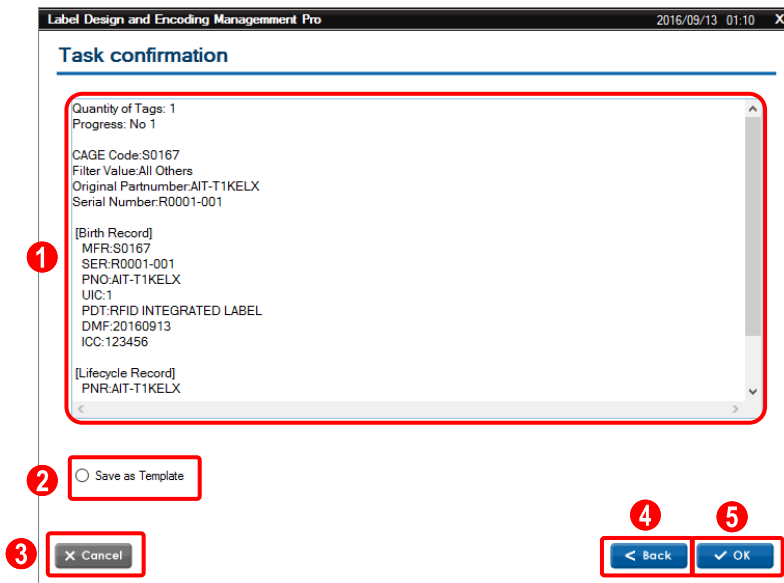
Start from: SER00001 Suffix: -S Quantity: 100

Range of Serial Number : From SER00001-S To SER00100-S Update

< Back > Next

3.6.5 Confirmation and Execution

Check the content of the data that was entered in the record input windows, and execute the processing.



1 Input content display area

This area displays the content of the data that was entered in the record input windows.

2 **Save as Template** check button

This button is used to save the input data as a template file to use same data next time (to use the template file, select "Import from XML Template" in "3.6.3 Selecting a Record Input Method").

3 **Cancel** button

This button is used to close this tool.

4 **Back** button

This button is used to display the previous window.

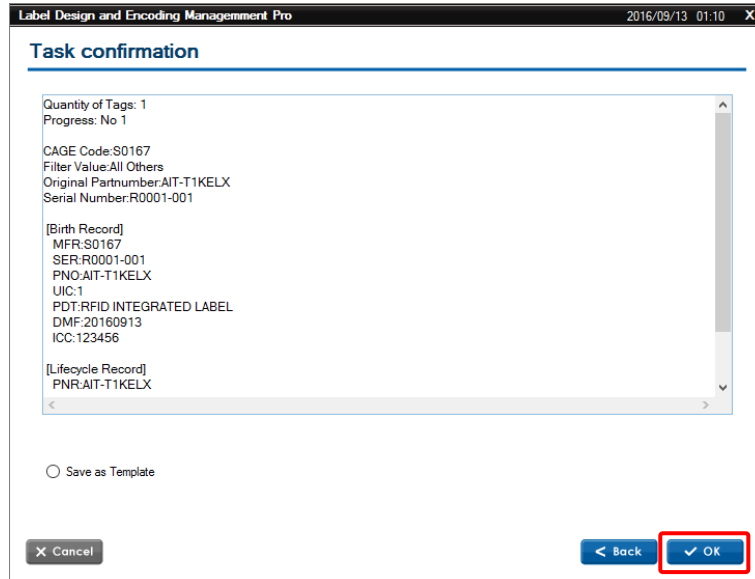
5 **OK** button

This button executes the processing that has been selected.

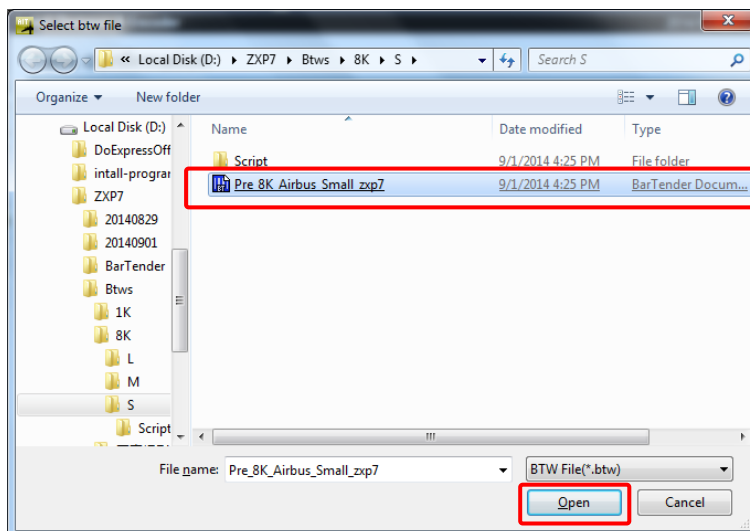
■ Operating procedure

- (1) Click the **OK** button to display **Label Layout Selection** window. (If the “Save as Template” check button is checked, enter a file name in the save dialog and save it.)

An error message will be displayed on the **Execution Result Confirmation** window if it fails to start BarTender or a validation error occurs on the input data.

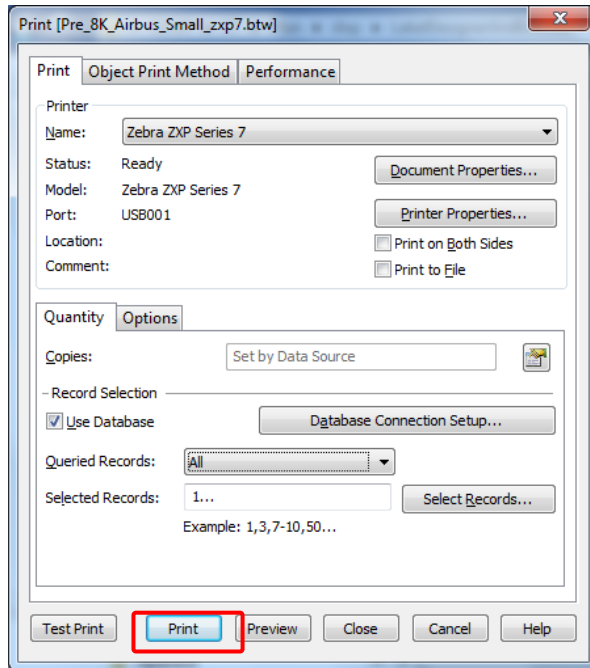


- (2) When the **OK** button is clicked on the Task confirmation screen, the screen shows the folder where you selected the BTW file last time. Select the BTW File and then click the **Open** button.



(3) The Print screen of BarTender is displayed.

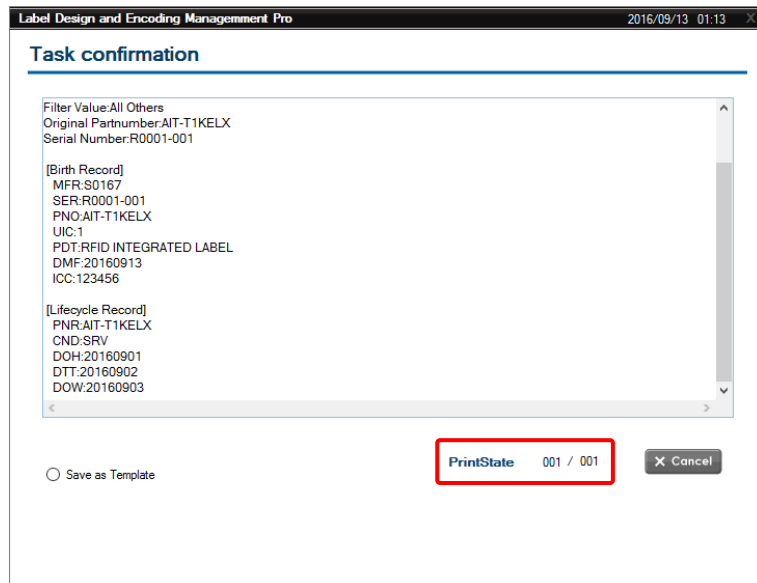
When the **Print** button is clicked, encoding and printing will be started.



! Caution

- Please commission tags one by one since a lot of resources are used during commissioning and printing. Before starting next commissioning, please click the **Print** button.
 - Even if a tag jams in RFID printer, the printing job is automatically resumed after removing the tag. If the print job is not resumed, please cancel the print job once by clicking **Control Panel, Devices and Printers**, and **ZXP-7** from **Start** menu. Then, please resume printing by entering the remaining records into the **Selected Records** field and re-click the **Print** button.
 - **Queried Records** and **Record Selection** are not used. All the record is printed even if any other option is selected in this dialogue.
 - Please make sure to commission the label tags within three minutes after clicking the **Print** button. When three minutes are passed, the printing queue is automatically deleted.
 - Please suspend commissioning tags when an error message is displayed after clicking the **Print** button.
-

- (4) The number of already commissioned tags and total number of tags in the operation are displayed in "PrinterState". The print of the subsequent page is stopped when **Cancel** button is clicked with there no print job queue, and it returns on the previous page.



- (5) Click the **Finish** button to return to the window for selecting an initialization definition file. When the **Exit** button is clicked, the tool will be closed.

