



RFID Data Management Pro & RFID Label Design and Encoding Management Pro User's Guide Appendixes

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Preface

This document explains the usage methods common to the handheld reader, fixed reader versions of the “RFID Data Management Pro” and “RFID Label Design and Encoding Management Pro” for RFID printer. Be sure to read this manual in order to get familiarized with the tool.

■ 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”
Microsoft® Windows® 10 Professional	“Windows 10”
Microsoft® Windows® Mobile	Windows Mobile
Terminals where Windows 7 or Windows 8.1 has been installed Personal computer	PC
Reader/writer devices	Reader device, handheld device, HHT, handheld terminal
RFID tags	Tag
Fujitsu’s RFID Integrated Label - 8Kbyte (Large/Medium/Small)	"Large-capacity RFID tags", "large-capacity tags" or "high memory tags"
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 Impinj'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"

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

- This tool is designed to read and write data on tags that are compliant with the specification

for Radio Frequency Identification (RFID) on Parts in ATA Spec2000 Chapter 9-5.

■ ATA Common Data Support Dictionary (CSDD)

- ATA Common Data Support Dictionary provides standardized names, definitions and properties for data used within the air transport industry.

■ 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.

■ Manual organization

The user manuals for this product are organized as follows:

Component	Manual title	Description
RFID Data Management Pro for Fixed Readers	RFID Data Management Pro for Fixed Readers Installation Guide	• Explains how to install the fixed reader version of the RFID Data Management Pro
	RFID Data Management Pro for Fixed Readers User's Guide	• Explains how to use the fixed reader version of the RFID Data Management Pro
	RFID Data Management Pro & RFID Label Design and	• Explains the usage methods common to the handheld reader,

Component	Manual title	Description
	Encoding Management Pro User's Guide (Appendixes)	fixed reader versions of the "RFID Data Management Pro" and "RFID Label Design and Encoding Management Pro" for RFID printer
RFID Data Management Pro for Mobile Computers	RFID Data Management Pro for Mobile Computers Installation Guide	<ul style="list-style-type: none"> Explains how to install the handheld reader version of the RFID Data Management Pro
	RFID Data Management Pro for Mobile Computers User's Guide	<ul style="list-style-type: none"> Explains how to use the handheld reader version of the RFID Data Management Pro
	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 common to the handheld reader, fixed reader versions of the "RFID Data Management Pro" and "RFID Label Design and Encoding Management Pro" for RFID printer
RFID Label Design and Encoding Management Pro	RFID Label Design and Encoding Management Pro Installation Guide	<ul style="list-style-type: none"> Explains how to install RFID Label Design and Encoding Management Pro for RFID printer
	RFID Label Design and Encoding Management Pro User's Guide	<ul style="list-style-type: none"> Explains how to use 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 common to the handheld reader, fixed reader versions of the "RFID Data Management Pro" and "RFID Label Design and Encoding Management Pro" for RFID printer

■ Request

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■ Revision history

Edition	Date issued	Changes
Version 1.00	March 2013	Newly prepared
Version 1.10	July 2013	Support for ATA Spec2000 Rev.2013.1 and other changes
Version 1.11	September 2013	Added error messages and other changes
Version 2.00	March 2014	<ul style="list-style-type: none">• Support for MAINtag's 8 kilobyte large-capacity RFID tags.• Improvements for screen navigation and design.• Support for data Input from 2D Barcode.• CSV logging for multiple record commissioning.
Version 2.10	June 2014	<ul style="list-style-type: none">• Changed product name• Added description for RFID Label Design and Encoding Management Pro
Version 2.20	October 2014	Commercialization Version
Version 2.30	March 2015	Support for TEIs of DTT, DOW, and DOH
Version 2.31	October 2015	Delete FJ 64KB/8KB tag
Version 2.32	April 2016	Add The RFID leader writer's regional setting
Version 2.33	October 2016	Enhancement in 2016 1) For serial # of EPC 2) For Windows 10 Function addition to output data written in tag as XML file.

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Appendix A – AIT Task Files

A.1 Overview

In the context of this tool, a task file is an XML data file for recording maintenance plans and the information to be written to a tag (ATA record information). Preparing the data to be written to the tag in advance in a task file simplifies the process of entering data using the handheld device, as well as making it possible to use XML files to transfer data between the handheld device and a PC.

Task files are created using the RFID Data Encoder function of this tool.

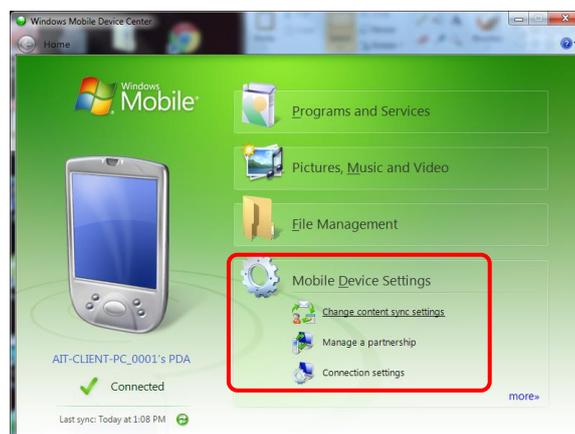
A.2 Data Linkage Using Task Files

This section explains how to use task files to link data between the handheld reader version of RFID Data Management Pro and the fixed reader version of RFID Data Management Pro.

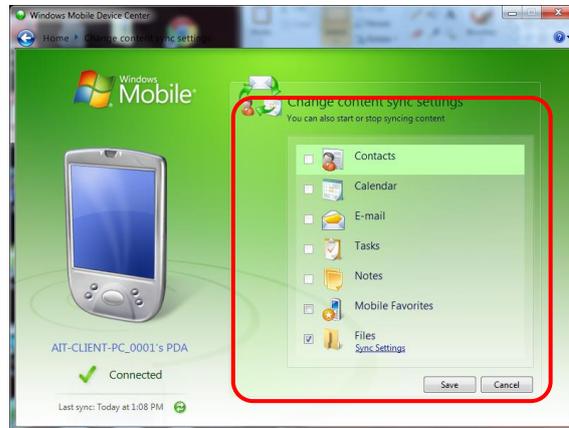
■ Operating procedure

- (1) Use the fixed reader version of RFID Data Management Pro to create a task file, and save it in any desired folder on the PC. Refer to the *RFID Data Management Pro for Fixed Readers User's Guide* for information on how to create task files with the fixed reader.
- (2) Connect the PC and the handheld reader. Use the cradle for the handheld reader to connect to the PC.
- (3) Check that the Windows Mobile Device Center will start on the PC and the connection is complete.
- (4) Select **Mobile Device Settings** and then **Change content sync settings**.

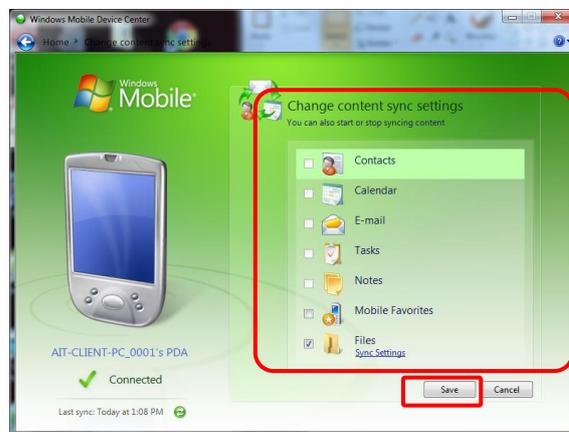
Note: If the device setup for the PC and the handheld device has not completed, follow the wizard to finish the device setup.



- (5) Under the **Change content sync settings** menu, select the checkbox next to **Files** and then select the **Sync Settings** link.



- (6) Clicking the **Add** button under the **Files** menu opens a file selection dialog box. Select the task file that was saved in Step (1) of this procedure.
- (7) After the synchronization settings are complete, click the **Done** button. The display will return to the **Change content sync settings** menu, so click the **Save** button.



- (8) The file will be synchronized between the PC and the handheld device, so that the file saved in Step (1) of this procedure will be displayed in the task file selection window for the handheld reader version of RFID Data Management Pro. Refer to the *RFID Data Management Pro for Mobile Computers User's Guide* for details on the task file selection window.

Appendix B – Environment Configuration Files

This appendix describes the environment configuration files that can be edited by users. Please copy the environment configuration files to the available folder temporarily to edit them and return them after editing.

B.1 AITUtilityCommon.config (RFID Data Management Pro for Mobile Computers)

This is the application environment definition file for the handheld reader version of RFID Data Management Pro.

Note: Normally, there is no need to edit this file.

Only the <LogPath> parameter (which indicates the log output directory) can be edited.

To change the log output directory, specify the full path to the desired log output directory for the parameter highlighted in bold in the example below.

This file is stored at "Program Files\Fujitsu\AIT\RFIDDataAccess".

- "AITUtilityCommon.config" file

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
... omitted ...
  <add key="LogPath" value="\Program Files\Fujitsu\AIT\RFIDDataAccess\log" />
... omitted ...
</configuration>
```

B.2 AITUtilityCommon.config (RFID Data Management Pro for Fixed Readers)

This is the application environment definition file for the fixed reader version of RFID Data Management Pro

Note: Normally, there is no need to edit this file.

Only the <LogPath> parameter (which indicates the log output directory) can be edited.

To change the log output directory, specify the path to the desired log output directory for the parameter highlighted in bold in the example below.

This file is stored in the following folder.

32bit OS: "Program Files\Fujitsu\AIT\RFIDDataManagement"

64bit OS: "Program Files (x86)\Fujitsu\AIT\RFIDDataManagement"

- "AITUtilityCommon.config" file

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
... omitted ...
  <add key="LogPath" value="log" />
... omitted ...
</configuration>
```

B.3 AITUtilityCommon.config (RFID Label Design and Encoding Management Pro)

This is the application environment definition file for the RFID Label Design and Encoding Management Pro.

Note: Normally, there is no need to edit this file.

Only the <LogPath> parameter (which indicates the log output directory) can be edited.

To change the log output directory, specify the path to the desired log output directory for the parameter highlighted in bold in the example below.

This file is stored in the following folder.

32bit OS: "Program Files\Fujitsu\AIT\ LabelDesignerEncoder"

64bit OS: "Program Files (x86)\Fujitsu\AIT\ LabelDesignerEncoder"

- "AITUtilityCommon.config" file

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
... omitted ...
  <add key="LogPath" value="log" />
... omitted ...
</configuration>
```

B.4 RFIDDataAccess.exe.config (RFID Data Management Pro for Mobile Computers)

This is the application environment definition file for the handheld reader version of the RFID Data Management Pro.

Note: Normally, there is no need to edit this file.

(1) XML file output directory for tag data

The <TagWriteResultXmlPath> parameter (which indicates the XML file output directory) can be edited. To change the XML file output directory, specify the full path to the desired XML file output directory for the parameter highlighted in bold in the example below.

This file is stored at "Program Files\Fujitsu\AIT\RFIDDataAccess".

- "RFIDDataAccess.exe.config" file

```

<?xml version="1.0" encoding="utf-8" ?>
<configuration>
... omitted ...
    <add key="TagWriteResultXmlPath" value="\Program
Files\Fujitsu\AIT\RFIDDataAccess\write" />
... omitted ...
</configuration>

```

(2) CSV file output directory for validation result of tag data and barcode data

The <TagValidationResultCsvPath> parameter (which indicates the csv file output directory) can be edited. To change the csv file output directory, specify the full path to the desired csv file output directory for the parameter highlighted in bold in the example below.

This file is stored at "Program Files\Fujitsu\AIT\RFIDDataAccess".

- "RFIDDataAccess.exe.config" file

```

<?xml version="1.0" encoding="utf-8" ?>
<configuration>
... omitted ...
    <add key="TagValidationResultCsvPath" value="\Program
Files\Fujitsu\AIT\RFIDDataAccess\validation" />
... omitted ...
</configuration>

```

(3) Automatic displaying ATA Record screens

The ATA Records screen can be automatically displayed once a tag is detected on Detecting Tags screen. To disable this automatic displaying, remove the parameter <add key="FindTags" value="AutoNext" />. The ATA Records screen will be automatically displayed with the information read from the first tag detected. If the tag is not commissioned in ATA format, an error message will be displayed.

- "RFIDDataAccess.exe.config" file

```

<?xml version="1.0" encoding="utf-8" ?>
<configuration>
... omitted ...
    <add key="FindTags" value="AutoNext" />
... omitted ...
</configuration>

```

(4) Default record type displayed on ATA Record screens

The default record type displayed on ATA Record screen can be configured. This configuration is only available for multiple record tags. The available value for the parameter is as follows.

"CDR": Current Data Record

-
- “BR”: Birth Record
“USR”: User Scratchpad Record
“PHR”: Latest Part History Record
“ALL”: List of Part History Records

- "RFIDDataAccess.exe.config" file

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
... omitted ...
  <add key="DefaultMultiRecord" value="BR" />
... omitted ...
</configuration>
```

B.5 About the log of RFID Data Management Pro and RFID Label Design and Encoding Management Pro

The logs of "RFID Data Management Pro for Fixed Readers", "RFID Data Management Pro for Mobile Computers", and "Labale Design & Encoding Management Pro" are stored in the Log folder that exists in each installation folder and used repeatably.

The log name is "program name + date + serial number (From 0000 to 0009)".log.

Appendix C – TEI Input

This appendix describes TEI input.

C.1 Standard Information TEIs

This section describes input validation for standard information TEIs prescribed in ATA Spec2000.

- ! Caution**
- In the "Format" columns of the tables below, the word "symbol" refers to non-alphabetic and non-numeric characters with ASCII codes between 0x20 and 0x7F.
 - In the "Mandatory" columns of the tables below, the letter "M" designates a mandatory field.
 - The commissioning data might not be correctly generated, and don't input the symbols of comma (,) and caret (^).

(1) Multi-Record

- Birth Record

No	TEI	Mandatory	Min	Max	Format	Validation
1	MFR/ SPL	M	5	5	Alphabetic (uppercase) Number	• An error will occur if both MFR and SPL are defined.
2	SER/ SEQ/ UCN		1	15	Alphabetic (uppercase) Number Symbol	<ul style="list-style-type: none"> • An error will occur if SER or SEQ is selected when SPL has been selected. • An error will occur if UCN is selected when MFR has been selected. • An error will occur if more than one of SER, SEQ and UCN elements are present. • For symbols, only hyphens ("-") can be entered. However, an error will occur if a hyphen ("-") appears as the last character.
3	PNO	M	1	15	Alphabetic (uppercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
4	UIC		1	1	Number	<ul style="list-style-type: none"> • Only "1" and "2" are allowed. • An error will occur if the value is "1" when SER or UCN has not been selected.

						• An error will occur when the value is "2" and SEQ is not present.
5	PDT	M	1	32	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
6	DMF		8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
7	ICC	M	6	6	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
8	WGT		1	6	Number	An error will occur if UNT has not been set.
9	UNT		2	2	Alphabetic (uppercase)	• An error will occur if WGT has not been set. • Only "KG" and "LB" are allowed.
10	HAZ		6	6	Alphabetic (uppercase) Number	• An error will occur if the first two letters are not "UN" or "NA". • An error will occur if the last four characters are not numbers.
11	ESD		1	1	Number	Only "1" is allowed.
12	EXP		8	8	Date	• The allowable input range is from 1900/1/1 to 9998/12/31. • An error will occur if the specified date is earlier than the DMF date when DMF has been set.
13	LLE		1	1	Number	Only "1" is allowed.
14	LOT/ LTN		1	15	Alphabetic (uppercase) Number	• An error will occur if both LOT and LTN are defined.
15	CNT		2	2	Alphabetic (uppercase)	Refer to "List of Country Codes" for the allowed values.
16	ECC		5	14	Alphabetic (uppercase/lowercase) Number	No validation
17	SWI		1	1	Number	Only "1" is allowed.
18	OPN		16	32	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.

19	TDN		1	32	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
20	PML		1	12	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
21	NSN		13	13	Number	No validation
22	FAB		5	5	Alphabetic (uppercase) Number	No validation

• Current Data Record

No	TEI	Min	Max	Format	Validation
1	PNR	1	15	Alphabetic (uppercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
2	PML	1	12	Alphabetic (uppercase) Number Symbol	Symbols other than "*" are allowed.
3	OPN	16	32	Alphabetic (uppercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
4	CND	3	3	Alphabetic (uppercase)	An error will occur if a string other than "SRV", "UNS" and "UNK" is entered.
5	EXP	8	8	Date	<ul style="list-style-type: none"> • The allowable input range is from 1900/1/1 to 9998/12/31. • An error will occur if the specified date is earlier than the DMF date when DMF has been set.
6	TDN	1	32	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.

7	HAZ	6	6	Alphabetic (uppercase) Number	<ul style="list-style-type: none"> • An error will occur if the first two letters are not "UN" or "NA". • An error will occur if the last four characters are not numbers.
8	ONR	2	5	Alphabetic (uppercase/lowercase) Number	No validation
9	LAC	1	13	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
10	ASN	1	11	Alphabetic (uppercase/lowercase) Number	No validation
11	DOW	8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
12	DTT	8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
13	DOH	8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.

• Part History Record [Traceability Data]

No	TEI	Min	Max	Format	Validation
1	ACT	3	3	Alphabetic (uppercase)	An error will occur if the value is other than the ACT values listed in "1 Table of correspondence between ACT values and Standard Information" below.
2	ACO	3	5	Alphabetic (uppercase) Number	No validation
3	ACD	8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
4	CND	3	3	Alphabetic (uppercase)	An error will occur if a string other than "SRV", "UNS" and "UNK" is entered.

• Part History Record [Standard Information]

No	TEI	Action Code	Min	Max	Format	Validation
1	NHA	INS	1	15	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
2	AIN	INS	1	6	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
3	FHL	INS	4	9	Number	No validation
4	FCL	INS	3	5	Number	No validation
5	LAC	INS	3	13	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
6	NHA	RMV	1	15	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
7	AIN	RMV	1	6	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
8	FHL	RMV	4	9	Number	No validation
9	FCL	RMV	3	5	Number	No validation
10	LAC	RMV	3	13	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
11	RMT	RMV	1	30	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.

12	RTI	RMV	1	50	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
13	RMD	RPR	1	50	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
14	RAP	RPR	1	20	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
15	EXP	OVH	8	8	Date	<ul style="list-style-type: none"> • The allowable input range is from 1900/1/1 to 9998/12/31. • An error will occur if the specified date is earlier than the DMF date when DMF has been set.
16	OHM	OVH	6	20	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
17	PNR	MOD	1	15	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
18	STN	MOD	1	25	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
19	PML	MOD	1	12	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
20	SFT	MOD	1	32	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
21	MFR	EXC	5	5	Alphabetic (uppercase) Number	No validation

22	SER	EXC	1	15	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only hyphens ("-") can be entered. However, an error will occur if a hyphen ("-") appears as the last character.
23	PNR	EXC	1	15	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
24	MNC	SRV	3	5	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
25	SHT	SHP	1	5	Alphabetic (uppercase/lowercase) Number	No validation
26	MFR/ SPL	RCD	5	5	Alphabetic (uppercase) Number	No validation
27	IFC	INP	1	3	Alphabetic (uppercase/lowercase) Number	No validation
28	IMD	INP	1	25	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
29	ACR	OTH	1	25	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
30	REM	OTH	1	50	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.

*1 Table of correspondence between ACT values and Standard Information

The following table shows the ACT values that can be used, and the combinations of Standard Information items corresponding to each ACT value.

ACT	Standard Information
INS	NHA, AIN, FHL, FCL, LAC
RMV	NHA, AIN, FHL, FCL, LAC, RMT, RTI

RPR	RMD, RAP
OVH	EXP, OHM
MOD	PNR[New Part Number], STN, PML, SFT
DMP	
EXC	MFR, SER, PNR[Exchanged Part Number]
TST	
SRV	MNC
WHR	
SHP	SHT
RCD	MFR/SPL
INP	IFC, IMD
OTH	ACR, REM

- User Scratchpad Record

No	TEI	Min	Max	Format	Validation
1	ACO	5	5	Alphabetic (uppercase) Number	No validation
2	ACD	8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
3	REM	1	344	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.

(2) Dual-Record

- Birth Record

No	TEI	Mandatory	Min	Max	Format	Validation
1	MFR/ SPL	M	5	5	Alphabetic (uppercase) Number	• An error will occur if both MFR and SPL are defined.
2	SER/ SEQ/ UCN		1	15	Alphabetic (uppercase) Number Symbol	• An error will occur if SER or SEQ is selected when SPL has been selected. • An error will occur if UCN is selected when MFR has been selected.

						<ul style="list-style-type: none"> • An error will occur if more than one of SER, SEQ and UCN are defined. • For symbols, only hyphens ("-") can be entered. However, an error will occur if a hyphen ("-") appears as the last character.
3	PNO	M	1	15	Alphabetic (uppercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
4	UIC		1	1	Number	<ul style="list-style-type: none"> • Only "1" and "2" are allowed. • An error will occur if the value is "1" when SER or UCN has not been selected. • An error will occur if the value is "2" when SEQ has not been selected.
5	PDT	M	1	32	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
6	DMF		8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
7	ICC	M	6	6	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed.
8	WGT		1	6	Number	An error will occur if UNT has not been set.
9	UNT		2	2	Alphabetic (uppercase)	<ul style="list-style-type: none"> • An error will occur if WGT has not been set. • Only "KG" and "LB" are allowed.
10	HAZ		6	6	Alphabetic (uppercase) Number	<ul style="list-style-type: none"> • An error will occur if the first two letters are not "UN" or "NA". • An error will occur if the last four characters are not numbers.
11	ESD		1	1	Number	Only "1" is allowed.
12	EXP		8	8	Date	<ul style="list-style-type: none"> • The allowable input range is from 1900/1/1 to 9998/12/31. • An error will occur if the specified date is earlier than the DMF date when DMF has been set.
13	LLE		1	1	Number	Only "1" is allowed.
14	LOT/		1	15	Alphabetic	• An error will occur if both LOT and LTN are

	LTN				(uppercase) Number	defined.
15	CNT		2	2	Alphabetic (uppercase)	Refer to "List of Country Codes" for the allowed values.
16	ECC		5	14	Alphabetic (uppercase/lowercase) Number	No validation
17	SWI		1	1	Number	Only "1" is allowed.
18	OPN		16	32	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
19	TDN		1	32	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed. However, the characters must be characters than can be converted to 6-bit ASCII.
20	NSN		13	13	Number	No validation
21	FAB		5	5	Alphabetic (uppercase) Number	No validation

- Lifecycle Record

No	TEI	Min	Max	Format	Validation
1	PNR	1	15	Alphabetic (uppercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
2	PML	1	12	Alphabetic (uppercase) Number Symbol	Symbols other than "*" are allowed. However, the characters must be characters than can be converted to 6-bit ASCII.
3	OPN	16	32	Alphabetic (uppercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
4	CND	3	3	Alphabetic (uppercase)	An error will occur if a string other than "SRV", "UNS" and "UNK" is entered.

5	EXP	8	8	Date	<ul style="list-style-type: none"> The allowable input range is from 1900/1/1 to 9998/12/31. An error will occur if the specified date is earlier than the DMF date when DMF has been set.
6	DOH	8	8	Date	<ul style="list-style-type: none"> The allowable input range is from 1900/1/1 to 9998/12/31.
7	TDN	1	32	Alphabetic (uppercase/lowercase) Number Symbol	Symbols other than "*" are allowed. However, the characters must be characters that can be converted to 6-bit ASCII.
8	HAZ	6	6	Alphabetic (uppercase) Number	<ul style="list-style-type: none"> An error will occur if the first two letters are not "UN" or "NA". An error will occur if the last four characters are not numbers.
9	DOW	8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
10	DTT	8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.

(3) Single-Record

• Birth Record

No	TEI	Mandatory	Min	Max	Format	Validation
1	MFR/ SPL	M	5	5	Alphabetic (uppercase) Number	<ul style="list-style-type: none"> An error will occur if both MFR and SPL are defined.
2	SER/ SEQ/ UCN	M	1	15	Alphabetic (uppercase) Number Symbol	<ul style="list-style-type: none"> An error will occur if SER or SEQ is selected when SPL has been selected. An error will occur if UCN is selected when MFR has been selected. An error will occur if more than one of SER, SEQ and UCN are defined. For symbols, only hyphens ("-") can be entered. However, an error will occur if a hyphen ("-") appears as the last character.
3	PNO	M	1	15	Alphabetic (uppercase) Number Symbol	<ul style="list-style-type: none"> For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or hyphen ("-") appears as the last character.

4	UIC		1	1	Number	<ul style="list-style-type: none"> • Only "1" and "2" are allowed. • An error will occur if the value is "1" when SER or UCN has not been selected. • An error will occur if the value is "2" when SEQ has not been selected.
5	DMF		8	8	Date	The allowable input range is from 1900/1/1 to 9998/12/31.
6	HAZ		6	6	Alphabetic (uppercase) Number	<ul style="list-style-type: none"> • An error will occur if the first two letters are not "UN" or "NA". • An error will occur if the last four characters are not numbers.
7	EXP		8	8	Date	<ul style="list-style-type: none"> • The allowable input range is from 1900/1/1 to 9998/12/31. • An error will occur if the specified date is earlier than the DMF date when DMF has been set.
8	LLE		1	1	Number	Only "1" is allowed.
9	OPN		16	32	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
10	PNR		1	15	Alphabetic (uppercase/lowercase) Number Symbol	For symbols, only spaces and hyphens ("-") can be entered. However, an error will occur if a space or a hyphen ("-") appears as the last character.
11	PML		1	12	Alphabetic (uppercase) Number Symbol	Symbols other than "*" are allowed. However, the characters must be characters that can be converted to 6-bit ASCII.

C.2 Additional TEIs (CSDD)

This section describes input specifications for the TEIs listed in the *ATA Common Data Support Dictionary (CSDD)*.

The input specifications for TEIs and their values are defined below.

Refer to the *ATA Common Data Support Dictionary (CSDD)* for information on the input specifications for any additional TEI element (CSDD).

TEI	An element defined as either "xs:element" or "xs:attribute" in "CSDD_MM.xsd"
Value	(1) If a value has been defined as "xs:complexType", all characters except asterisks ("*") can be used.

	<p>For dual-record and single-record tags, however, only characters that can be converted to 6-bit ASCII can be used.</p> <p>(2) In cases other than (1) above, values in accordance with the schema file ("CSDD_MM.xsd") are allowed.</p> <p>Input validation is conducted using the XML parser that comes as a standard feature of the .NET Framework.</p>
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C.3 Additional TEIs (Custom Information)

This section describes information input using TEIs that can be freely defined by the user.

The input specifications for TEIs and TEI values are as below.

TEI	<p>Uppercase letters or numbers can be used.</p> <p>When information is written to the tag, an underscore ("_") is prepended to the TEI designation.</p>
Value	<p>All characters except asterisks ("*") can be used. For dual-record and single-record tags, however, only characters that can be converted to 6-bit ASCII can be used.</p>

C.4 List of Country Codes

This section lists the country codes that can be used with this tool.

Code	Country
AF	AFGHANISTAN
AX	ÅLAND ISLANDS
AL	ALBANIA
DZ	ALGERIA
AS	AMERICAN SAMOA
AD	ANDORRA
AO	ANGOLA
AI	ANGUILLA
AQ	ANTARCTICA
AG	ANTIGUA AND BARBUDA
AR	ARGENTINA
AM	ARMENIA
AW	ARUBA
AU	AUSTRALIA
AT	AUSTRIA

AZ	AZERBAIJAN
BS	BAHAMAS
BH	BAHRAIN
BD	BANGLADESH
BB	BARBADOS
BY	BELARUS
BE	BELGIUM
BZ	BELIZE
BJ	BENIN
BM	BERMUDA
BT	BHUTAN
BO	BOLIVIA, PLURINATIONAL STATE OF
BQ	BONAIRE, SINT EUSTATIUS AND SABA
BA	BOSNIA AND HERZEGOVINA
BW	BOTSWANA
BV	BOUVET ISLAND
BR	BRAZIL
IO	BRITISH INDIAN OCEAN TERRITORY
BN	BRUNEI DARUSSALAM
BG	BULGARIA
BF	BURKINA FASO
BI	BURUNDI
KH	CAMBODIA
CM	CAMEROON
CA	CANADA
CV	CAPE VERDE
KY	CAYMAN ISLANDS
CF	CENTRAL AFRICAN REPUBLIC
TD	CHAD
CL	CHILE
CN	CHINA
CX	CHRISTMAS ISLAND
CC	COCOS (KEELING) ISLANDS
CO	COLOMBIA
KM	COMOROS
CG	CONGO
CD	CONGO, THE DEMOCRATIC REPUBLIC OF THE
CK	COOK ISLANDS
CR	COSTA RICA

CI	CÔTE D'IVOIRE
HR	CROATIA
CU	CUBA
CW	CURAÇAO
CY	CYPRUS
CZ	CZECH REPUBLIC
DK	DENMARK
DJ	DJIBOUTI
DM	DOMINICA
DO	DOMINICAN REPUBLIC
EC	ECUADOR
EG	EGYPT
SV	EL SALVADOR
GQ	EQUATORIAL GUINEA
ER	ERITREA
EE	ESTONIA
ET	ETHIOPIA
FK	FALKLAND ISLANDS (MALVINAS)
FO	FAROE ISLANDS
FJ	FIJI
FI	FINLAND
FR	FRANCE
GF	FRENCH GUIANA
PF	FRENCH POLYNESIA
TF	FRENCH SOUTHERN TERRITORIES
GA	GABON
GM	GAMBIA
GE	GEORGIA
DE	GERMANY
GH	GHANA
GI	GIBRALTAR
GR	GREECE
GL	GREENLAND
GD	GRENADA
GP	GUADELOUPE
GU	GUAM
GT	GUATEMALA
GG	GUERNSEY
GN	GUINEA

GW	GUINEA-BISSAU
GY	GUYANA
HT	HAITI
HM	HEARD ISLAND AND MCDONALD ISLANDS
VA	HOLY SEE (VATICAN CITY STATE)
HN	HONDURAS
HK	HONG KONG
HU	HUNGARY
IS	ICELAND
IN	INDIA
ID	INDONESIA
IR	IRAN, ISLAMIC REPUBLIC OF
IQ	IRAQ
IE	IRELAND
IM	ISLE OF MAN
IL	ISRAEL
IT	ITALY
JM	JAMAICA
JP	JAPAN
JE	JERSEY
JO	JORDAN
KZ	KAZAKHSTAN
KE	KENYA
KI	KIRIBATI
KP	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF
KR	KOREA, REPUBLIC OF
KW	KUWAIT
KG	KYRGYZSTAN
LA	LAO PEOPLE'S DEMOCRATIC REPUBLIC
LV	LATVIA
LB	LEBANON
LS	LESOTHO
LR	LIBERIA
LY	LIBYA
LI	LIECHTENSTEIN
LT	LITHUANIA
LU	LUXEMBOURG
MO	MACAO
MK	MACEDONIA, THE FORMER YUGOSLAV REPUBLIC OF

MG	MADAGASCAR
MW	MALAWI
MY	MALAYSIA
MV	MALDIVES
ML	MALI
MT	MALTA
MH	MARSHALL ISLANDS
MQ	MARTINIQUE
MR	MAURITANIA
MU	MAURITIUS
YT	MAYOTTE
MX	MEXICO
FM	MICRONESIA, FEDERATED STATES OF
MD	MOLDOVA, REPUBLIC OF
MC	MONACO
MN	MONGOLIA
ME	MONTENEGRO
MS	MONTserrat
MA	MOROCCO
MZ	MOZAMBIQUE
MM	MYANMAR
NA	NAMIBIA
NR	NAURU
NP	NEPAL
NL	NETHERLANDS
NC	NEW CALEDONIA
NZ	NEW ZEALAND
NI	NICARAGUA
NE	NIGER
NG	NIGERIA
NU	NIUE
NF	NORFOLK ISLAND
MP	NORTHERN MARIANA ISLANDS
NO	NORWAY
OM	OMAN
PK	PAKISTAN
PW	PALAU
PS	PALESTINIAN TERRITORY, OCCUPIED
PA	PANAMA

PG	PAPUA NEW GUINEA
PY	PARAGUAY
PE	PERU
PH	PHILIPPINES
PN	PITCAIRN
PL	POLAND
PT	PORTUGAL
PR	PUERTO RICO
QA	QATAR
RE	RÉUNION
RO	ROMANIA
RU	RUSSIAN FEDERATION
RW	RWANDA
BL	SAINT BARTHÉLEMY
SH	SAINT HELENA, ASCENSION AND TRISTAN DA CUNHA
KN	SAINT KITTS AND NEVIS
LC	SAINT LUCIA
MF	SAINT MARTIN (FRENCH PART)
PM	SAINT PIERRE AND MIQUELON
VC	SAINT VINCENT AND THE GRENADINES
WS	SAMOA
SM	SAN MARINO
ST	SAO TOME AND PRINCIPE
SA	SAUDI ARABIA
SN	SENEGAL
RS	SERBIA
SC	SEYCHELLES
SL	SIERRA LEONE
SG	SINGAPORE
SX	SINT MAARTEN (DUTCH PART)
SK	SLOVAKIA
SI	SLOVENIA
SB	SOLOMON ISLANDS
SO	SOMALIA
ZA	SOUTH AFRICA
GS	SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
SS	SOUTH SUDAN
ES	SPAIN
LK	SRI LANKA

SD	SUDAN
SR	SURINAME
SJ	SVALBARD AND JAN MAYEN
SZ	SWAZILAND
SE	SWEDEN
CH	SWITZERLAND
SY	SYRIAN ARAB REPUBLIC
TW	TAIWAN, PROVINCE OF CHINA
TJ	TAJIKISTAN
TZ	TANZANIA, UNITED REPUBLIC OF
TH	THAILAND
TL	TIMOR-LESTE
TG	TOGO
TK	TOKELAU
TO	TONGA
TT	TRINIDAD AND TOBAGO
TN	TUNISIA
TR	TURKEY
TM	TURKMENISTAN
TC	TURKS AND CAICOS ISLANDS
TV	TUVALU
UG	UGANDA
UA	UKRAINE
AE	UNITED ARAB EMIRATES
GB	UNITED KINGDOM
US	UNITED STATES
UM	UNITED STATES MINOR OUTLYING ISLANDS
UY	URUGUAY
UZ	UZBEKISTAN
VU	VANUATU
VE	VENEZUELA, BOLIVARIAN REPUBLIC OF
VN	VIET NAM
VG	VIRGIN ISLANDS, BRITISH
VI	VIRGIN ISLANDS, U.S.
WF	WALLIS AND FUTUNA
EH	WESTERN SAHARA
YE	YEMEN
ZM	ZAMBIA
ZW	ZIMBABWE

Appendix D – Message List

This section lists the messages that are displayed when this tool is used.

There are three types of messages:

- E (Error): Check the tag or file that was the cause of the error.
- I (Information): If necessary, check the items in the content of the message.
- C (Confirmation): Click the **OK** button to continue processing or the **Cancel** button to cancel processing.

Note: If the message is displayed, operate after releasing it.

Type	Message in the dialog box	Code	Details of the message
E	Failed to open a task file.	EA001	The task file could not be opened.
E	Failed to save a task file.	EA002	The task file could not be saved.
E	Failed to delete a task file.	EA003	The task file could not be deleted.
E	Cannot find task file in the folder.	EA004	The task file did not exist in the specified folder.
E	The task ID in the task file is incorrect.	EA005	The task ID for the task file did not contain "INIT".
E	This file does not contain a primary id	EA006	The primary ID has not been specified in the task file.
E	Failed to write Current Data Record.	EA007	The Current Data Record could not be written to the task file.
E	Failed to write User Scratchpad Record.	EA008	The User Scratchpad Record could not be written to the task file.
E	Failed to write Part History Record.	EA009	The Part History Record could not be written to the task file.
E	Failed to write free space information.	EA010	Information about available memory space could not be written to the task file.
E	Failed to write Part History Record number.	EA011	The record number of the Part History Record could not be written to the task file.
E	Failed to write Birth Record timestamp.	EA012	The timestamp of the Birth History Record could not be written to the task file.
E	Failed to write Current Data Record timestamp.	EA013	The timestamp of the Current Data Record could not be written to the task file.
E	Failed to write User Scratchpad Record timestamp.	EA014	The timestamp of the User Scratchpad Record could not be written to the task file.
E	Failed to write Part History Record timestamp.	EA015	The timestamp of the Part History Record could not be written to the task file.
E	Failed to read task information	EA016	The task information in the task file could not be read.
E	Failed to read work order information	EA017	The work order information in the task file could not be read.
E	Failed to write task status	EA018	The status of the task could not be written to the task file.
E	Failed to delete Current Data Record.	EA019	The Current Data Record could not be deleted from the task file.
E	Failed to read file	EA021	The file could not be read.
E	Failed to write Birth Record.	EA023	The Birth Record could not be written to the

Type	Message in the dialog box	Code	Details of the message
			task file.
E	Failed to read the initialization definition file.	EA026	The initialization definition file could not be read.
E	Failed to read the template file.	EA028	The template file could not be read.
E	Log level is wrong	EA029	There is a problem with the log level specified in the environment settings file.
E	Failed to open an application log file.	EA030	The log file output by the application could not be opened.
E	Failed to open trigger device and sound device.	EA031	The tool failed to open the device that generates a beep sound when the trigger is pulled or when a tag is detected.
E	Failed to open trigger device	EA032	An attempt to access the trigger device has failed.
E	Failed to write Birth Record size.	EA036	The size of the Birth Record could not be written to the task file.
E	Failed to write Current Data Record size.	EA037	The size of the Current Data Record could not be written to the task file.
E	Failed to write User Scratchpad Record size.	EA038	The size of the User Scratchpad Record could not be written to the task file.
E	Failed to write Part History Record size.	EA039	The size of the Part History Record could not be written to the task file.
E	Failed to write ATAFormat	EA040	ATAFormat attribute information could not be written to the task file.
E	Failed to read ATAFormat	EA041	ATAFormat attribute information could not be read from the task file.
E	Failed to read Current Data Record size.	EA043	The size of the Current Data Record could not be read from the task file.
E	Failed to read User Scratchpad Record size.	EA044	The size of the User Scratchpad Record could not be read from the task file.
E	Unable to identify the product.	EA047	The product cannot be identified.
E	Failed to add additional TEI.	EA048	An attempt to add an additional TEI has failed.
E	Failed to delete additional TEI.	EA049	An attempt to delete an additional TEI has failed.
E	Failed to read Lifecycle Record size.	EA050	The size of the Lifecycle Record could not be read from the task file.
E	Failed to write Lifecycle Record.	EA051	The Lifecycle Record could not be written to the task file.
E	Failed to write Lifecycle Record size.	EA052	The size of the Lifecycle Record could not be written to the task file.
E	Failed to open barcode.	EA101	There is a problem with the barcode setting specified in the environment settings file. Correct the environment settings file.
E	Failed to open file.	EA201	The file could not be opened.
E	The application has terminated due to an internal error.	EA999	The application closed due to an internal error.
I	Failed to read barcode.	IA101	Barcode scanning failed. Scan the barcode again.
I	Information missing in order to generate EPC.	IA301	Information needed to generate the EPC does not exist.
I	The length of the values passed to generate EPC is too large for the item.	IA302	The length of the information passed to generate EPC is too large for the item.
I	Failed to convert to 6-bit encoding.	IA303	An attempt to convert to 6-bit encoding has failed.

Type	Message in the dialog box	Code	Details of the message
I	The length of the values passed to generate EPC is too small for the item.	IA304	The length of the information passed to generate EPC is too small for the item.
E	Failed to read the configuration file.	EC001	The environment settings file could not be read.
E	Failed to read the user information file.	EC002	The user settings file could not be read.
E	Failed to read the TEI attributes file	EC003	The TEI attribute definition file could not be read.
E	Same program is already running	EC007	An attempt was made to open an application that is already running.
E	Failed to read the TEI setting file	EC013	The TEI settings file could not be read.
E	Failed to save the TEI setting file	EC014	The TEI settings file could not be written.
E	Failed to read the additional setting file	EC015	The additional information definition file could not be read.
E	Failed to read the EPC structure file.	EC016	The EPC structure definition file could not be read.
E	Failed to read the EPC filter file.	EC017	The Filter Value definition file could not be read.
E	Failed to read the country code file.	EC018	The Country Code definition file could not be read.
E	Failed to read the message list file.	EC999	The message definition file could not be read.
E	Failed to write file	EF001	The file could not be written to the custom user area.
E	Unable to read files from PC correctly.	EF004	The file on the PC could not be read correctly.
E	File name length error.	EF005	The file name is either zero characters long or more than 15 characters long.
E	File extension length error.	EF006	The file extension is longer than 5 characters.
E	Failed to read from the custom user area.	EF007	The application failed to read the user custom area.
E	Failed to read TOC from the custom user area.	EF008	TOC failed to be read from the custom user area.
E	A file I/O error has occurred.	EF009	Inputting or outputting a file has failed.
E	Failed to write to the custom user area.	EF010	Data failed to be written to the custom user area.
E	Failed to read files from the custom user area.	EF012	Files failed to be read from the custom user area.
E	Failed to write TOC to the custom user area.	EF013	TOC failed to be written to the custom user area.
E	Not authorized to delete file	EF014	The user does not have the privileges required to delete the file.
E	Cannot delete locked file	EF015	Locked files cannot be deleted.
E	The specified file does not exist.	EF016	The specified file does not exist.
E	File size is too large	EF017	The file is too large.
E	File size is zero bytes.	EF018	The file size is 0 bytes.
E	The specified output folder does not exist.	EF019	The folder specified for the output destination does not exist.
E	You cannot add a file with the same name as an existing file.	EF020	It is not possible to select a file with the same name as an existing file.
E	Failed to add a file	EF021	Adding a file has failed.
E	Failed to delete a file	EF022	Deleting a file has failed.
E	Failed to open device	ER001	The device could not be opened.
E	An error occurred during tag detection.	ER002	An error occurred while tags were being detected.

Type	Message in the dialog box	Code	Details of the message
E	Failed to read TOC from the tag.	ER003	The TOC for the tag could not be read.
E	Failed to read TOC header from the tag.	ER004	The TOC Header could not be read from the tag.
E	Failed to read Record Descriptor from the tag.	ER005	The Record Descriptor could not be read from the tag.
E	Failed to read Trailer from the tag.	ER006	The Trailer could not be read from the tag.
E	Failed to read Birth Record from the tag.	ER007	The Birth Record could not be read from the tag.
E	Failed to read Current Data Record from the tag.	ER008	The Current Data Record could not be read from the tag.
E	Failed to read User Scratchpad Record from the tag.	ER009	The User Scratchpad Record could not be read from the tag.
E	Failed to read the first Part History Record from the tag.	ER010	The first Part History Record could not be read from the tag.
E	Failed to read the last Part History Record from the tag.	ER011	The last Part History Record could not be read from the tag.
E	Failed to read the specified Part History Record from the tag.	ER012	The specified Part History Record could not be read from the tag.
E	Failed to read all Part History Records from the tag.	ER013	An attempt to read all the Part History Records from the tag has failed.
E	Failed to write EPC to the tag.	ER014	The EPC could not be written to the tag.
E	Failed to write Birth Record to the tag.	ER015	The Birth Record could not be written to the tag.
E	Failed to replace Current Data Record on the tag.	ER016	The Current Data Record on the tag could not be replaced.
E	Failed to replace User Scratchpad Record on the tag.	ER017	The User Scratchpad Record on the tag could not be replaced.
E	Failed to append Part History Record to the tag.	ER018	A Part History Record could not be appended to the tag.
E	Failed to get information required for calculating free space on the tag.	ER019	The information required to calculate the free space on the tag could not be acquired.
E	Failed to get the number of Part History Records on the tag.	ER020	The number of Part History Records could not be read from the tag.
E	Failed to read the timestamp of Birth Record on the tag.	ER021	The timestamp of the Birth Record could not be read from the tag.
E	Failed to read the timestamp of Current Data Record on the tag.	ER022	The timestamp of the Current Data Record could not be read from the tag.
E	Failed to read the timestamp of User Scratchpad Record on the tag.	ER023	The timestamp of the User Scratchpad Record could not be read from the tag.
E	Failed to read the timestamp of the last Part History Record on the tag.	ER024	The timestamp of the last Part History Record could not be read from the tag.
E	TEI format is incorrect	ER025	The TEI for a record read from the tag is not in the following format: three TEI characters + space + TEI content.
E	Current Data Record has not been set.	ER026	A value has not been specified for the Current Data Record on the tag. To automatically update the Current Data Record based on the Part History Record, a value must be specified for the Current Data Record.
E	An error occurred during tag initialization.	ER030	An error occurred while tags were being initialized.

Type	Message in the dialog box	Code	Details of the message
E	Tag initialization parameter error: The user memory size is less than 1024	ER031	Parameter error for tag initialization processing The value for the user memory size is less than 1024.
E	Tag initialization parameter error: The user memory size is not a multiple of 1024.	ER032	Parameter error for tag initialization processing The user memory size is not a multiple of 1024.
E	Tag initialization parameter error: The Current Data Record size is not an even number.	ER033	Parameter error for tag initialization processing The size of the Current Data Record is not an even number.
E	Tag initialization parameter error: The User Scratchpad Record size is not an even number.	ER034	Parameter error for tag initialization processing The size of the User Scratchpad Record is not an even number.
E	Tag initialization parameter error: The total size of Current Data Record and User Scratchpad Record is not 1022.	ER036	Parameter error for tag initialization processing The sum of the size of the Current Data Record and the size of the User Scratchpad Record is not 1022.
E	A TOC write error occurred during tag initialization.	ER037	An error occurred while the TOC was being written during the tag initialization processing.
E	An error writing Current Data Record occurred during tag initialization.	ER038	An error occurred while the Current Data Record was being written during the tag initialization processing.
E	An error writing User Scratchpad Record occurred during tag initialization.	ER039	An error occurred while the User Scratchpad Record was being written during the tag initialization processing.
E	A trailer write error occurred during tag initialization.	ER040	An error occurred while the trailer was being written during the tag initialization processing.
E	A descriptor write error occurred during tag initialization.	ER041	An error occurred while the descriptor was being written during the tag initialization processing.
E	Failed to read all records.	ER042	An error occurred while all of the records for the tag were being read.
E	Failed to lock a tag.	ER044	An error occurred while the tag was being locked.
E	Tag initialization parameter error: The user memory size is not an even number.	ER047	Parameter error for tag initialization processing The size of user memory is not an even number.
E	Failed to allocate free space.	ER049	Allocating free space has failed.
E	Failed to initialize a tag. A value larger than the user memory bank size was specified.	ER050	An attempt was made to initialize a tag using a size that was larger than the size of the user memory on the tag.
E	TEI is too long.	ER051	An attempt was made to write data that was larger than the size of the Current Data Record area.
E	TEI is too long.	ER052	An attempt was made to write data that was larger than the size of the User Scratchpad Record area.
E	TEI is too long.	ER053	The Birth Record could not be written because there is not enough free space.
E	TEI is too long.	ER054	The Part History Record could not be written because there is not enough free space.
E	TEI is too long.	ER055	An attempt was made to write data that was larger than the size of the Single Record area.

Type	Message in the dialog box	Code	Details of the message
E	This tag has not been initialized.	ER056	The tag has not been initialized.
E	Failed to load DeviceProviders.config.	ER059	Loading DeviceProviders.config has failed.
E	Failed to read Lifecycle Record from the tag.	ER060	The Lifecycle Record could not be read from the tag.
E	TEI is too long.	ER061	An attempt was made to write data that was larger than the size of the Lifecycle Record area.
E	Failed to replace Lifecycle Record on the tag.	ER062	The Lifecycle Record on the tag could not be replaced.
I	Writing data has completed successfully.	IF001	A record has been successfully written to the ATA area.
I	Writing a file has completed successfully.	IF002	A file has been successfully written to the custom user area.
I	Deleting a record or file has completed successfully.	IF003	A record in the ATA area or a file in the custom user area has been successfully deleted.
I	Saving a file has completed successfully.	IF005	A file has been successfully saved.
I	Birth Record already exists on the tag.	IX001	The tag already contains a Birth Record.
I	This is the first record, so there is no record before this record.	IX002	An attempt was made to search for the previous Part History Record while the first record was displayed.
I	This is the last record, so there is no record after this record.	IX003	An attempt was made to search for the next Part History Record while the last record was displayed.
I	Nothing is selected in "Enter data manually".	IX004	No check box has been selected even though Enter data manually was selected.
I	TEI length error. TEI=XXX(N1-N2)	IX006	There is an error with the number of characters in the TEI value. (XXX indicates the TEI, while N1 and N2 are the minimum and maximum values respectively.)
I	This TEI is mandatory TEI=XXX	IX007	A value has not been specified for a mandatory TEI. (XXX indicates the TEI.)
I	The specified login ID or password (or both) is incorrect.	IX008	There is an error with the input for either the login ID or password (or both).
I	Multiple tags have been detected during initialization.	IX009	Multiple tags were detected during initialization.
I	Birth Record does not exist on the tag.	IX011	The tag does not contain a Birth Record.
I	Please select a file	IX014	The file to be operated on has not been specified.
I	Please select a tag	IX015	The tag to be operated on has not been selected.
I	Please select target user	IX016	The user to be changed has not been selected.
I	No user code has been entered.	IX017	The user code has not been entered.
I	User code must be no more than six characters long.	IX018	A user code must be no more than six characters.
I	The specified user code already exists.	IX019	The specified user code already exists.
I	This user code cannot be changed.	IX020	This user code cannot be changed.
I	Password must be no more than eight characters long.	IX021	A password must be no more than eight characters.

Type	Message in the dialog box	Code	Details of the message
I	Please select an item from the "Select menu" drop-down list.	IX022	A menu item has not been selected.
I	Please select an item from the tree.	IX023	No item has been selected from the tree.
I	The user code or password is incorrect.	IX024	Either the user code or the password does not match.
I	The number of users registered on the tag has already reached the maximum limit.	IX029	The number of users registered on the tag has exceeded the maximum limit.
I	Please enter mandatory TEIs.	IX030	The TEI for a mandatory item has not been entered.
I	The format type does not match between the file used for initialization and the template file.	IX033	The file used for initialization uses a different format type from the template file.
I	Memory size must be no less than 1024.	IX034	The user memory size specified for initialization is a value smaller than 1024.
I	Memory size must be no more than 30720.	IX035	The user memory size specified for initialization is a value greater than 30720.
I	Memory size must be a multiple of 1024.	IX036	The user memory size specified for initialization is not a multiple of 1024.
I	Memory size has not been specified.	IX037	The user memory size to be used to initialize the tag has not been specified.
I	The specified memory size is not numeric.	IX038	The user memory size specified for initialization cannot be recognized as a numeric value.
I	EPC has not been entered.	IX039	The EPC has not been entered.
I	The entered EPC is not hexadecimal.	IX040	The specified input has to be a string of hexadecimal characters.
I	The entered string cannot be recognized as EPC.	IX041	The specified input has to be a string of hexadecimal characters.
I	This TEI is an invalid date string. (format: yyyyymmdd) TEI=XXX	IX042	The specified input has to be a date formatted as yyyyymmdd.
I	This TEI is an invalid character type. TEI=XXX	IX043	Characters that have been entered for the TEI are invalid.
I	Primary Id is missing.	IX044	The primary ID has not been specified in the task file.
I	The specified primary Id is not hexadecimal.	IX045	The primary ID has to be specified by a string of hexadecimal characters.
I	The specified primary Id cannot be recognized as EPC.	IX046	A string that cannot be recognized as an EPC has been entered for the primary ID in the task file.
I	The specified file name contains double-byte character code.	IX047	A double-byte character code has been used in the file name.
I	The entered user code contains double-byte character code.	IX048	A double-byte character code has been entered for the user code.
I	The entered password contains double-byte character code.	IX049	A double-byte character code has been entered for the password.
I	Memory size must be no less than 16.	IX051	The user memory size specified for initializing a low memory tag is a value smaller than 16.
I	Memory size must be no more than 128.	IX052	The user memory size specified for initializing a low memory tag is a value larger than 128.

Type	Message in the dialog box	Code	Details of the message
I	The specified TEI is not a mandatory item for Birth Record. TEI=XXX	IX054	The TEI that has been specified is not a mandatory item for the Birth Record.
I	The specified TEI is not a mandatory item for Current Data Record. TEI=XXX	IX055	The TEI that has been set is not a mandatory item for the Current Data Record.
I	The specified TEI is not a mandatory item for User Scratchpad Record. TEI=XXX	IX056	The TEI that has been set is not a mandatory item for the User Scratchpad Record.
I	The specified TEI is not a mandatory item for Part History Record. TEI=XXX	IX057	The TEI that has been set is not a mandatory item for the Part History Record.
I	The specified TEI is not a conditional item for Birth Record. TEI=XXX	IX058	The TEI that has been set is not a conditional item for the Birth Record.
I	The specified TEI is not a conditional item for Current Data Record. TEI=XXX	IX059	The TEI that has been set is not a conditional item for the Current Data Record.
I	The specified TEI is not a conditional item for User Scratchpad Record. TEI=XXX	IX060	The TEI that has been set is not a conditional item for the User Scratchpad Record.
I	The specified TEI is not a conditional item for Part History Record. TEI=XXX	IX061	The TEI that has been set is not a conditional item for the Part History Record.
I	A mandatory item for Birth Record has not been specified. TEI=XXX	IX062	A mandatory item has not been specified for the Birth Record. (XXX indicates the TEI.)
I	A mandatory item for Current Data Record has not been specified. TEI=XXX	IX063	A mandatory item has not been specified for the Current Data Record. (XXX indicates the TEI.)
I	A mandatory item for User Scratchpad Record has not been specified. TEI=XXX	IX064	A mandatory item has not been specified for the User Scratchpad Record. (XXX indicates the TEI.)
I	A mandatory item for Part History	IX065	A mandatory item has not been specified for the Part History Record.

Type	Message in the dialog box	Code	Details of the message
	Record has not been specified. TEI=XXX		(XXX indicates the TEI.)
	An invalid value has been specified for the TEI. TEI=XXX	IX066	An invalid value has been set for a TEI. (XXX indicates the TEI.)
	This TEI has been specified more than once. TEI=XXX	IX067	The TEI has been set more than once. (XXX indicates the TEI.)
	This file does not contain Birth Record or Current Data Record.	IX068	The task file does not contain either the Birth Record or the Current Data Record.
	Close the viewer.	IX069	The viewer is still open.
	This TEI contains an invalid date string. (format: X2) TEI=X1	IX075	Either a string that cannot be recognized as a date or a string with the wrong format has been entered for a TEI where a date should be entered. (The TEI is displayed for X1, and the date format is displayed for X2).
	The specified user memory size is not an even number.	IX079	The user memory size specified for initialization is not an even number.
	The specified Current Data Record size is not an even number.	IX080	The Current Data Record size specified for initialization is not an even number.
	The specified User Scratchpad Record size is not an even number.	IX081	The User Scratchpad Record size specified for initialization is not an even number.
	You cannot add a file with the same name as an existing file.	IX084	It is not possible to create/add a file with the same name as an existing file.
	The product number does not match between EPC and the template file.	IX087	The product number in the EPC used for initialization does not match the product number in the template file.
	The product number of EPC does not match the TID of the device.	IX088	The product number in the EPC used for initialization does not match the TID number for the device.
	This file does not contain Birth Record.	IX090	The task file does not contain the Birth Record.
	To hide the TEI, set a value in the "PresetValue" column.	IX092	To hide the TEI, set a value in the "PresetValue" column.
	TEI setting has been saved	IX093	The TEI settings have been saved.
	This TEI already exists.	IX094	The TEI that has been entered already exists.
	Please enter additional TEI.	IX096	User is prompted to enter any custom TEI at this point.
	The specified user memory size is not a multiple of 256.	IX097	The user memory size specified for initialization is not a multiple of 256.
	The specified Lifecycle Record size is not an even number.	IX098	The Lifecycle Record size specified for initialization is not an even number.
	Enter a serial number.	IX099	The serial number has not been entered.
	For a serial number, you can enter only alphanumeric characters and hyphens.	IX100	Only alphanumeric characters and hyphens can be entered for the serial number.
	Please select a filter value.	IX101	Select a filter value.
	Memory size must be no less than 512.	IX102	The memory size specified for initialization is a

Type	Message in the dialog box	Code	Details of the message
			value smaller than 512. ⇒Specify a value of 512 or more.
	Memory size must be no more than 2048.	IX103	The memory size specified for initialization is a value greater than 2048. ⇒Specify a value of 2048 or less.
	"Start from" is missing.	IX201	A value has not been entered in "Start from".
	The entered string cannot be recognized as Serial Number.	IX202	The value entered cannot be recognized as Serial Number.
	No value has been set for a mandatory TEI. TEI=XXX	IV001	A value has not been specified for a mandatory TEI. (XXX indicates the TEI.)
	Invalid date format. (X1) TEI=XXX	IV002	The value cannot be recognized as a date in the expected format. (XXX indicates the TEI.) (X1 indicates the date format.)
	Values must be between X1 and X2. TEI=XXX	IV003	A value outside of the range (X1) to (X2) has been specified. (XXX indicates the TEI).
	This TEI contains invalid characters. TEI=XXX	IV004	The value contains invalid characters. (XXX indicates the TEI.)
	The length of the value is incorrect. (Range: X1-X2) TEI=XXX	IV005	The length of the value is incorrect. (XXX indicates the TEI.) (X1 and X2 indicate the input length range.)
	Invalid value TEI=XXX	IV006	An invalid value has been entered. (XXX indicates the TEI.)
	A hyphen cannot be used as the last character. TEI=XXX	IV100	A hyphen ("-") cannot be used for the last character. (XXX indicates the TEI.)
	Specify a date later than X1. TEI=XXX	IV101	Specify a date later than X1.
	Invalid number. TEI=XXX	IV102	An invalid value has been entered. (XXX indicates the TEI.)
	You can specify any number with up to one decimal place.	IV103	No more than one decimal place can be used when specifying values.
	The first two characters must be either "UN" or "NA".	IV104	Only "UN" and "NA" can be specified for the first two characters.
	This TEI cannot be used. TEI=XXX	IV105	An invalid TEI has been specified. (XXX indicates the TEI.)
	These TEIs cannot be used at the same time. TEI=XXX	IV106	These TEIs cannot be used at the same time. (XXX indicates the TEI.)
	"X1" cannot be set. TEI=XXX	IV107	The value (X1) cannot be set. (XXX indicates the TEI.)
	Unable to add a User Scratchpad Record because of insufficient free	IV108	The User Scratchpad Record cannot be added because there is not enough space.

Type	Message in the dialog box	Code	Details of the message
	space.		
I	A hyphen cannot be used as the first character. TEI=XXX	IV109	A hyphen ("-") cannot be used as the first character. (XXX indicates the TEI.)
I	Enter a value. TEI=XXX	IV110	No value has been entered. (XXX indicates the TEI.)
I	This country code cannot be identified. TEI=XXX	IV111	An invalid country code has been entered. (XXX indicates the TEI.)
I	The maximum number of TEIs that can be defined is (X1). TEI=XXX	IV112	The specified TEI cannot appear more than (X1) times.. (XXX indicates the TEI.)
I	The last four characters must be numbers. TEI=XXX	IV113	Set the last four characters to numbers.
I	A space or hyphen cannot be used as the last character. TEI=XXX	IV114	A space or a hyphen ("-") cannot be used for the last character. (XXX indicates the TEI)
I	Enter a TEI.	IV200	A TEI has not been entered.
I	Not defined in CSDD.	IV201	The specified TEI does not appear in the CSDD.
I	You can enter only numbers or uppercase letters.	IV202	Only uppercase letters and numbers can be entered.
I	The first character must be an underscore.	IV203	The first character must be an underscore.
I	The specified TEI is already a standard TEI.	IV204	A TEI that has been defined in the standard TEIs has been entered.
C	To change the TEI values, click the Update button.	CA001	This confirmation message appears if input data has not been updated when the tag is to be initialized.
C	EPC data has not been changed. Continue?	CA002	This confirmation message appears if EPC configuration data has not been changed when the tag is to be initialized.
C	EPC will be rewritten. Do you want to continue the process?	CX001	This is a confirmation message for the processing to rewrite the EPC on the tag.
C	The text to be written is blank. Do you want to continue the process?	CX002	This message checks whether to continue writing blank text.
C	Are you sure you want to delete?	CX003	Deletion confirmation message
C	Are you sure you want to reset?	CX004	Reset confirmation message

Appendix E – Change Device ID of Handheld Device

To change the device ID of handheld device, carry out the following procedure.

E.1 MC9190Z

(1) Click "Setting"



(2) Click "System"



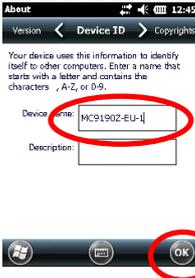
(3) Click "About"



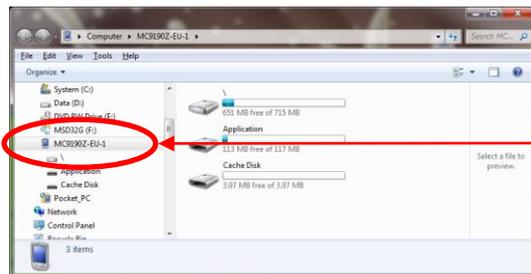
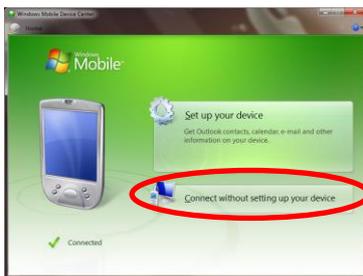
(4) Click "Device ID"



(5) Input Device ID and Click "OK"



(6) Connect the PC and the handheld reader, and confirm the setting.



Updated Device ID is displayed.

Appendix F – The RFID leader writer's regional setting

It is necessary to set it to the RFID leader writer so that the frequency of each region used may change.

F.1 MC9190Z

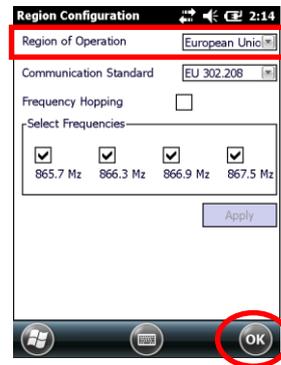
(1) RFID is selected, and the settings button is clicked.



(2) Configure Region is clicked.

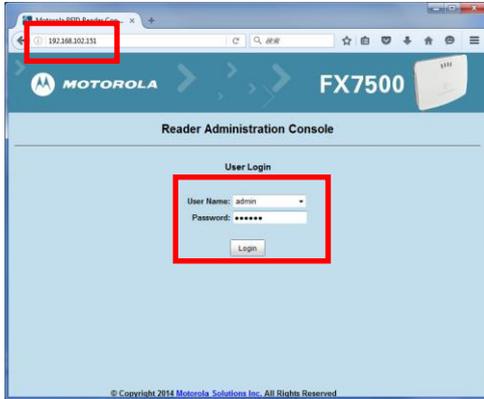


(3) The region is selected with Region of Operation, OK button is clicked, and the click is clicked.

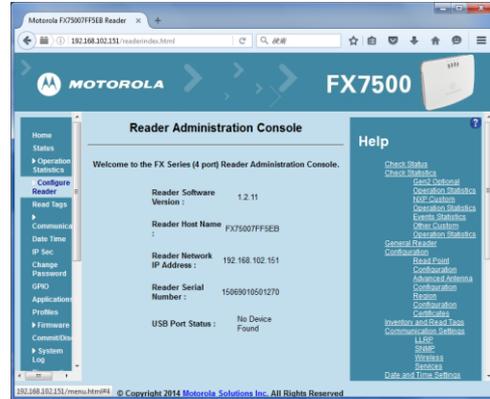


F.2 FX7500

(1) The browser specifies Internet Protocol address of FX7500, and a set screen is opened.



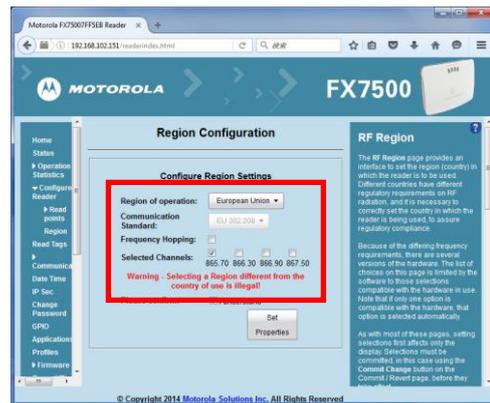
(2) The FX7500 setting screen opens.



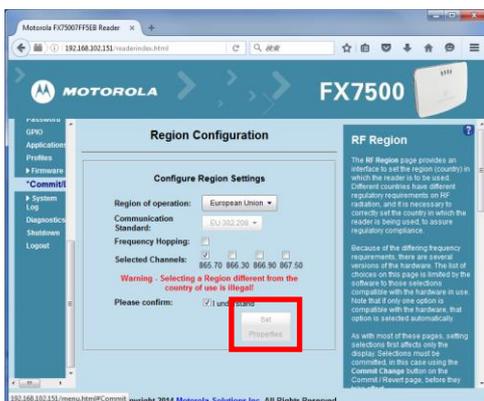
(3) Configure Reader of the side menu is clicked, and Region is clicked.



(4) The region is selected by "Region of operation", the channel is selected by "Selected Channels", and the check is put in "Please conform".



(5) Set Properties button is clicked.



(6) Commit of the side menu is clicked, and the Commit button is clicked.

