TAGSYS RFID™
e-connecting goods

Fast Tagging Station

User's Guide

Revision 2.1

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www.tagsysrfid.com

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Document Reference: 11982B1

Read This First

Welcome to the TAGSYS range of products operating at the 13.56 MHz frequency. This range of products is used to implement high-quality RFID systems for demanding applications.

This document provides information about how to install and use the TAGSYS Fast Tagging Station.

Audience

This document does not require familiarity with RFID technology. It is intended for people in charge of library tagging operations.

Conventions

Symbol	Meaning
	**CAUTION**: A note that advises users that a specific action could result in the loss of data or damage the hardware. **WARNING**: A note that advises users that a specific action may result in physical harm.
	A note that provides additional information that helps the user perform a task or obtain the best performance from the product.

If you need assistance

Please contact your nearest TAGSYS sales representative or the TAGSYS welcome desk at:

Telephone: +33 (0)4 91 27 57 00
Fax: +33 (0)4 91 27 57 01
E-Mail: info@tagsysrfid.com
Website: http://www.tagsysrfid.com

Contact for Comments

We welcome your feedback to help us provide high quality documentation.

For technical comments, please contact our welcome desk:

Telephone: +33 (0)4 91 27 57 00
Fax: +33 (0)4 91 27 57 01
E-Mail: info@tagsysrfid.com

Please remember to quote the Document Reference Number 11982B1, your job title and your company.

Quality Issues

TAGSYS implements stringent quality controls at all stages of its manufacturing process. However, should you find a defect with this product, please notify your TAGSYS Quality Service representative using the dedicated Product Return Form.

Telephone: +33 (0)4 91 27 57 36
Fax: +33 (0)4 91 27 57 02

Table of Contents

1. For your Safety

1.1 General Use

The Fast tagging station is designed to be reliable and to provide years of trouble-free service. Please observe the following general tips:

- Take care not to scratch the device. Keep the device clean. When working with the device, use only TAGSYS-approved accessories.
- This device is not waterproof and should not be exposed to rain or moisture. Under extreme conditions, water may enter the circuitry.
- Protect the device from extreme temperatures. For example, do not place the device in a windowed area where the sun may cause extreme temperatures, and keep it away from heaters and other heat sources.
- Do not store or use the device in any location that is extremely dusty, damp, or wet.
- Use a soft, damp cloth to clean the device. If the surface of the device becomes soiled, clean it with a soft cloth moistened with a diluted window-cleaning solution.

1.2 Care and Maintenance

This device is a product of superior design and should be handled with care. The suggestions below will further increase the lifetime of this device.

- Keep the device and all parts and accessories out of the reach of small children.
- Keep the device dry. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits.
- Do not use or store the device in dusty, dirty areas. Its moving parts can be damaged.
- Do not store in hot areas. High temperatures can shorten the life of electronic devices, damage batteries and warp or melt certain plastics.
- Do not store in cold areas. When the device warms up (to its normal temperature), moisture can form inside the device, which may damage electronic circuit boards.
- Do not attempt to open the device. Non-professional handling of the device may damage it.
- Handle the device with care. Shocks may break internal circuit boards.
- Do not clean the device with harsh chemicals, cleaning solvents or strong detergents. Gently wipe the device with a soft cloth slightly dampened in a mild soap-and-water solution.
- Do not paint the device. Paint may clog the device’s moving parts and prevent proper operation. Paint with metallic contents may limit device performances.
- If the device or any accessory are not working properly, take it to your nearest qualified TAGSYS representative.

1.3 Important Safety Information

1.3.1 Operating Environment

When connecting the device or any accessory to another device, read its user's guide for detailed safety instructions. Do not connect incompatible products.
As with all RF equipment, users are advised that the equipment should only be used in its normal operating position.

2. Certification

2.1 Occupational Health

TAGSYS Fast Tagging Station has been designed and tested to be in conformity with the European Standard EN 50364 “Limitation of human exposure to electromagnetic fields from devices used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications” in conjunction with the European Standard EN 50357 describing how to evaluate the exposure level.

2.2 Regulatory Notices

An RFID system typically composed of an RF emission device such as the Fast Tagging Station with its antenna is subject to national regulations that may differ by country.
One important item to consider is the maximum permissible magnetic field intensity at a distance of 10 meters from the antenna that must not exceed 42 dBµA/m in Europe and 38 dBµA/m in US.
The Fast Tagging Station meets these limits.

2.2.1 In Europe (CE and RTTE Directives)

The Fast Tagging Station complies with the European EMC directive. (CE Declaration of Conformity granted)
The Fast Tagging Station complies with the requirements of the Telecommunication Terminal Equipment Act (FTEG) and the RTTE Directive 1995/5/CE.
It is the responsibility of the TAGSYS Reseller to install the Fast Tagging Station as described in this User’s Guide or TAGSYS Documentation.
Any modification of the Fast Tagging Station is prohibited without the written consent of TAGSYS. Unauthorized modification may void the conformity of the equipment to CE and RTTE Directives and will void the TAGSYS warranty.

It is the responsibility of the CIT (Certified Integrators by TAGSYS) to install the Fast Tagging Station as described in this **User’s Guide** or in TAGSYS Documentation.

If the Fast Tagging Station is further integrated in a different product, it is the responsibility of the manufacturer of this complementary product to obtain the required approvals for this product.

2.2.2 In USA (FCC Directive)

Fast Tagging Station

WARNING TO USERS IN THE UNITED STATES
FEDERAL COMMUNICATIONS COMMISSION (FCC) RADIO INTERFERENCE STATEMENT 47 CFR Section 15.105(b)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different to that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NO UNAUTHORIZED MODIFICATIONS
47 CFR Section 15.21
CAUTION: This equipment may not be modified, altered, or changed in any way without signed written permission from TAGSYS SA. Unauthorized modification may void the equipment authorization from the FCC and will void the TAGSYS warranty.

ANTENNA REQUIREMENT
47 CFR Section 15.203
CAUTION: Installation of the equipment with an improper antenna may void the equipment authorization from the FCC and will void the TAGSYS warranty.

The Fast Tagging Station has been designed to comply with FCC 47 CFR Part 15 Rules.

Operation is subject to the following two conditions: (1) The system devices may not cause harmful interference, and (2) The library system devices must accept any interference received, including interference that may cause undesired operation.

2.2.3 In Canada

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.
This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

2.3 RoHS and WEEE Directives

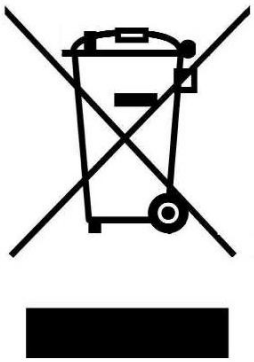
2.3.1 RoHS (Restriction of the uses of certain Hazardous Substances)

TAGSYS certifies that this product is compliant with the European Directive 2002/95/EC for the restriction in Electric and Electronic Equipments (RoHS) of the use of the following hazardous substances:

- Lead
- Mercury
- Cadmium
- Hexavalent Chromium
- Polybrominated biphenyl flame retardants
- Polybrominated diphenyl ether flame retardants

This declaration is based on information provided by our suppliers and subcontractors.

2.3.2 WEEE (Waste Electrical and Electronic Equipment)



This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE)
This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment.
For further information, please contact your local or regional authorities.

3. Introduction

The Fast Tagging Station is a device used to carry on library tagging operations in an accurate and fast way.

3.1 Main Features

- The Fast Tagging Station is placed on a desk. It consists of a roll dispenser and a TAGSYS RFID read/write device all in one.
- When used with TAGSYS RFID Tags, the Fast Tagging Station is able to dispense and program the tag automatically.
- The Fast Tagging Station can process all TAGSYS RFID Tags.

3.2 Components

The Fast Tagging Station consists of the following components:

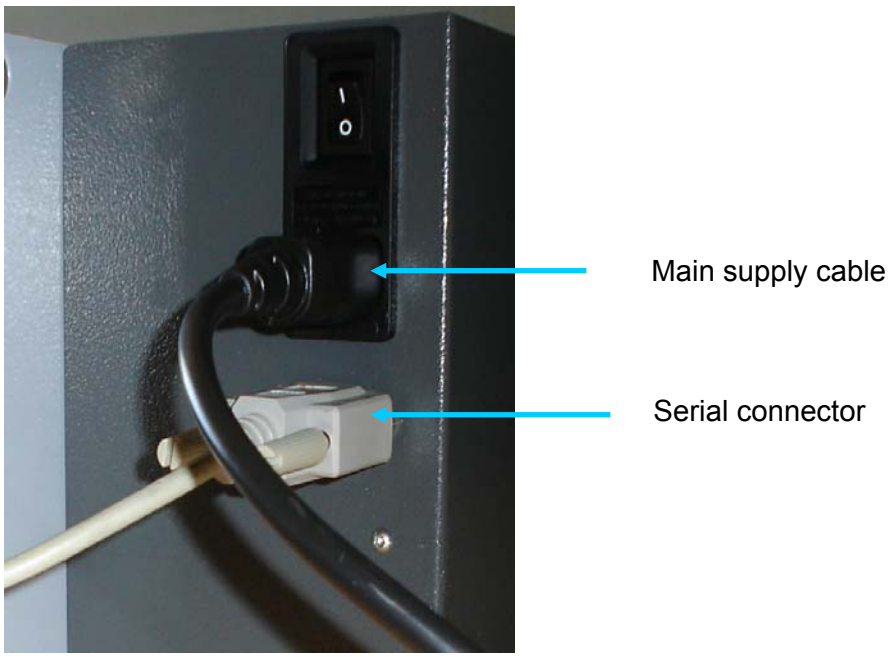
- 1 tagging instructions panel
- 1 Fast Tagging Station
- 1 serial cable with jumper cable
- 1 tag control tool
- 1 tag placement tool
- 1 sticker to paste on the Fast Tagging Station
- 1 CD-Rom (including all documentation)

4. Installation

3.1 Overview

3.1.1 Connections

Figure 1: Connections area



CAUTION: Only RS232 **shielded** serial cable must be used

Figure 2 : Power adaptor

1. Plug the main power connector of the Fast Tagging Station to the main power supply (this cable is not supplied as power supply cable depends on country standard)

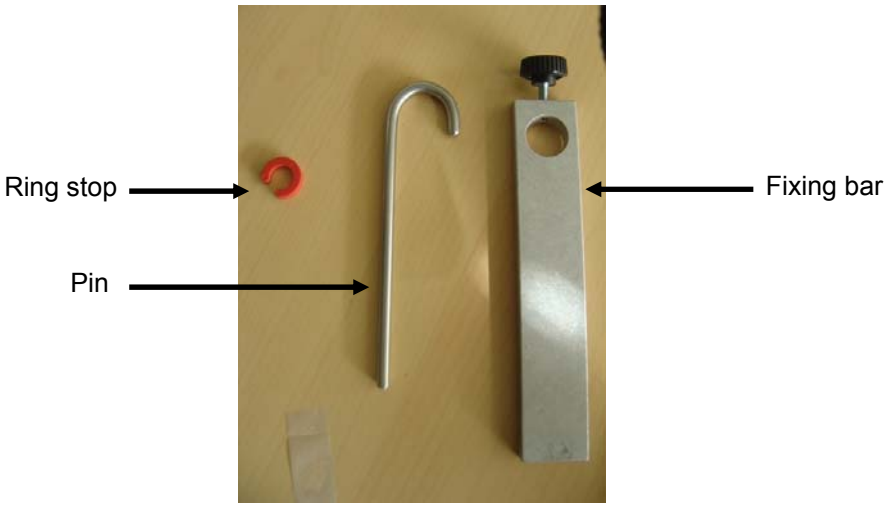
CAUTION: If 110V, then use the power adaptor supplied. Figure 2

2. Connect the serial connector of the Fast Tagging Station to any serial port of the host PC (use the serial cable provided)
3. Position the label roll as explained below:

3.1.2 Components Description

Figure 3: Fast Tagging Station overview

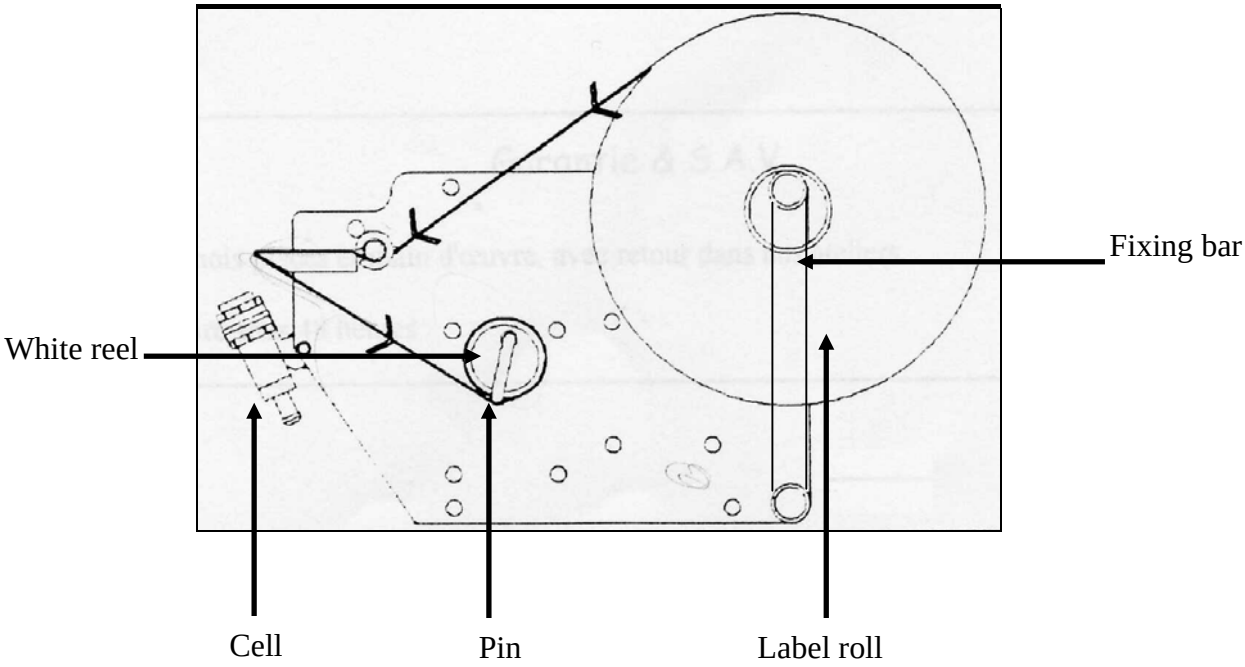
Figure 4: Pieces of the Fast Tagging Station



4.2 Position RFID tag roll on Fast Tagging Station

Before positioning the label roll, make sure the Fast Tagging Station is switched off.

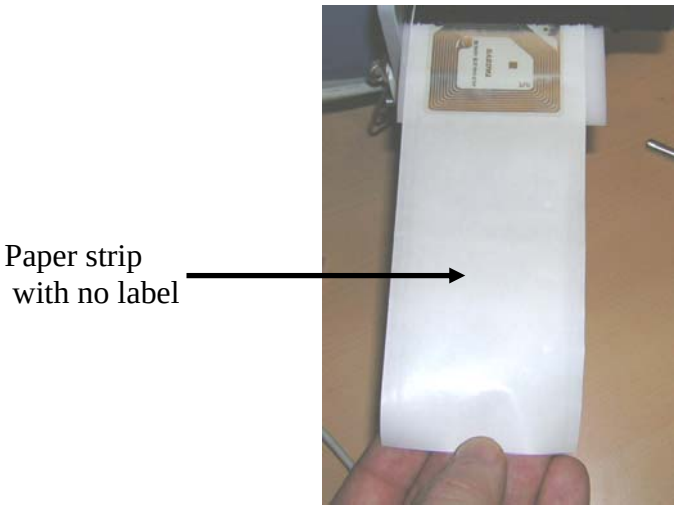
Figure 5: Fast Tagging Station



1. Position the label roll on the bear axe

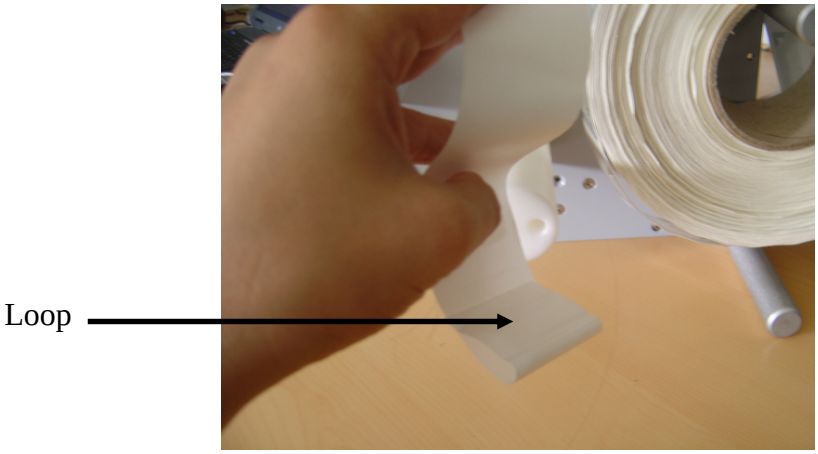
	Every TAGSYS RFID Tags type can be used in the Fast Tagging Station (except VHS and CDs form factors)

- Unwind 20 cm (8 in.) of the label roll and take off 3 to 4 labels to get a free-label strip



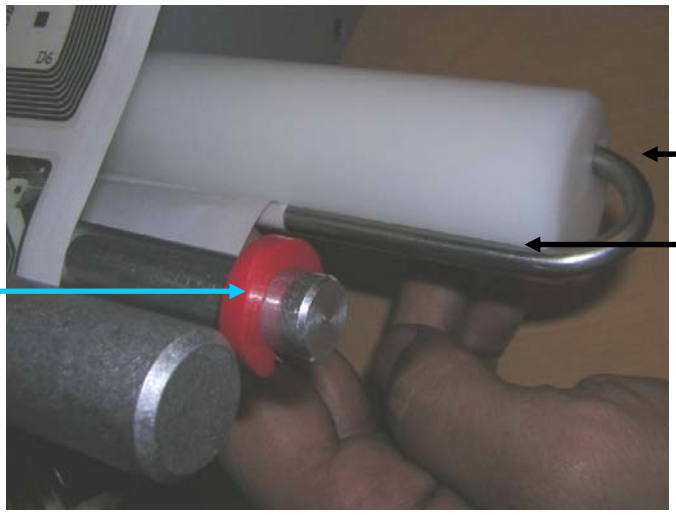
2. Pass the paper following arrows direction as shown Figure 5

Use adhesive tape to make a loop as shown

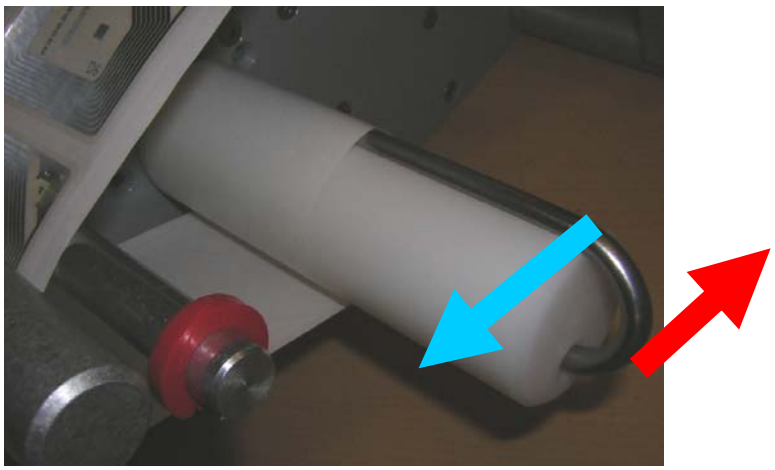


Slide the pin into the loop

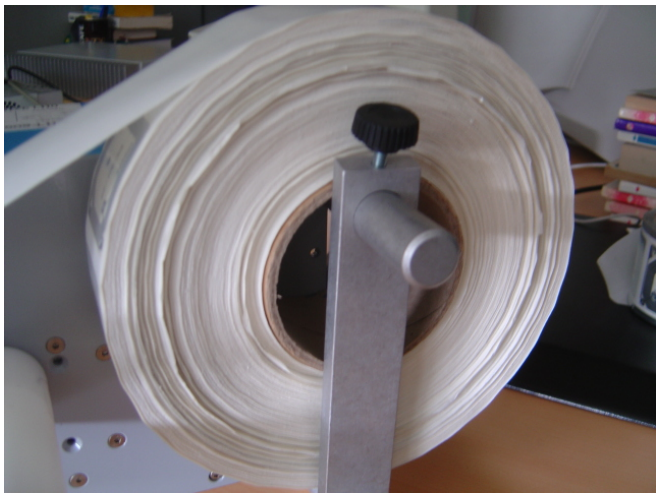
Insert the pin into the white reel slot and the pin-curved part in the hole
Slide the red ring on the axis to prevent the strip to shift away



Wind the paper band around the white reel to tighten it.



Fix the bar on the bear axe to maintain the roll.



4.3 Cell configuration

4.3.1 Function

It allows the main axis to rotate when the Fast Tagging Station is ON and it stops only when the optical cell detects a TAGSYS RFID tag to be peeled off.

The cell must be positioned with accuracy to ensure the TAGSYS RFID tag that coming out from the roll to be detected.

When the TAGSYS RFID tag is peeled off a new one is provide.

The cell configuration is crucial for efficient use of the Fast Tagging Station.

In case the strip does not stop to the desired position, quickly switch off the Fast Tagging Station.

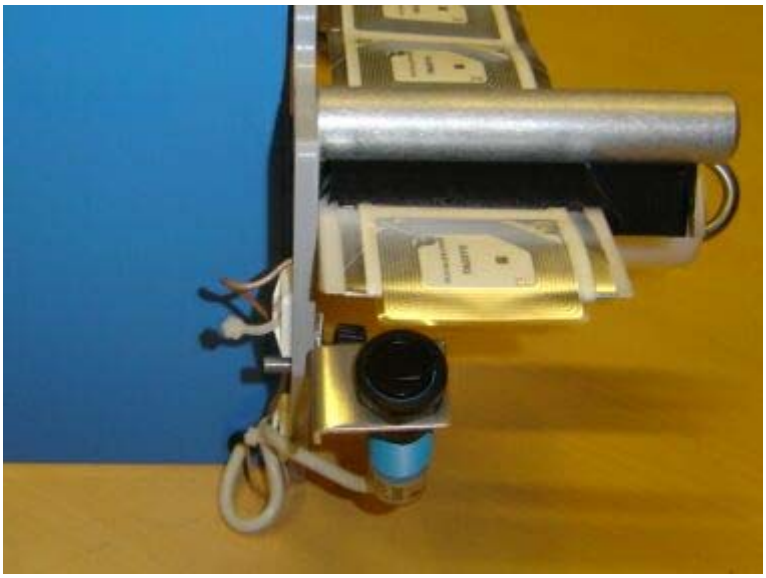
4.3.2 Configuration

CAUTION: If the cell is badly positioned, the label roll can unwind when switched ON.
In that case

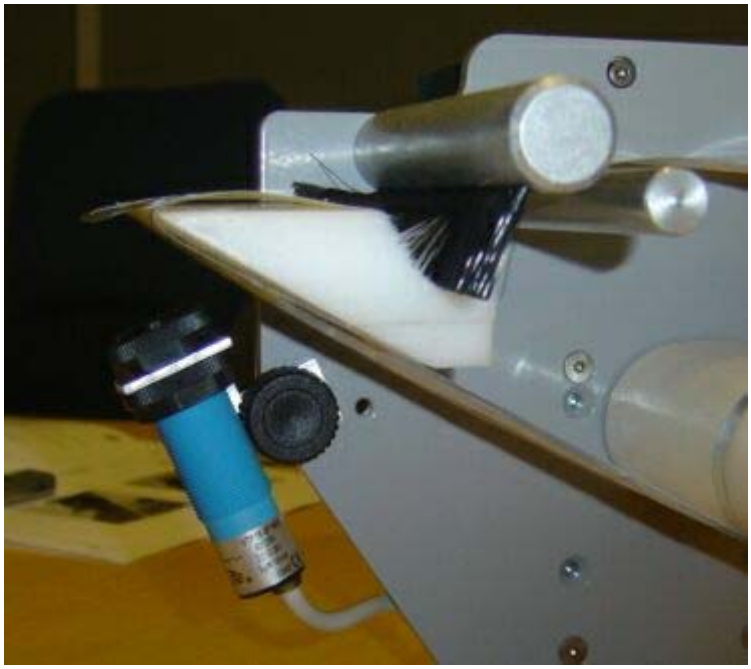
1. Mask the cell with your finger to stop the roll unwinding
2. Switch OFF the Fast Tagging Station

Reset the cell to the correct position (back and forth ensure the cell being adequately masked by the tag)

By default, the cell is well positioned. Test on one tag first. The engine should stop when the tag is positioned as shown on the picture.



If not, adjust the position of the cell by unscrewing the black roller. Screw it back after.



5. Operations

5.1 What tagging consists of?

Tagging consists of the following operations:

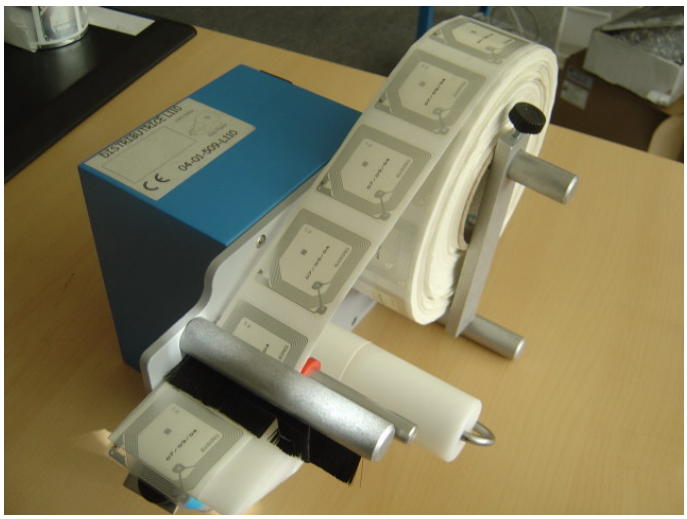
- Scanning the barcode or typing either Code or Title of the item and the retrieval of its associated data in the database.
- Programming the TAGSYS RFID Tag with data extracted from the database.
- Attaching the label to the item. (Use converted TAGSYS RFID Tags)
- If non-converted TAGSYS RFID Tags are used then add a library logo sticker
- Control tagging quality

To reduce the initial tagging period, it is important that tagging be carried out with such efficiency that each item is tagged and verified correctly the first time.

5.2 Benefits of using the Fast Tagging Station

The Fast Tagging Station is a tool that speeds up the tagging process. It combines a semi-automatic label dispenser with a RFID reader embedded. It allows programming the TAGSYS RFID tag positioned over the cell.

The Fast Tagging Station allows to program up to 4 tags per minute per person.



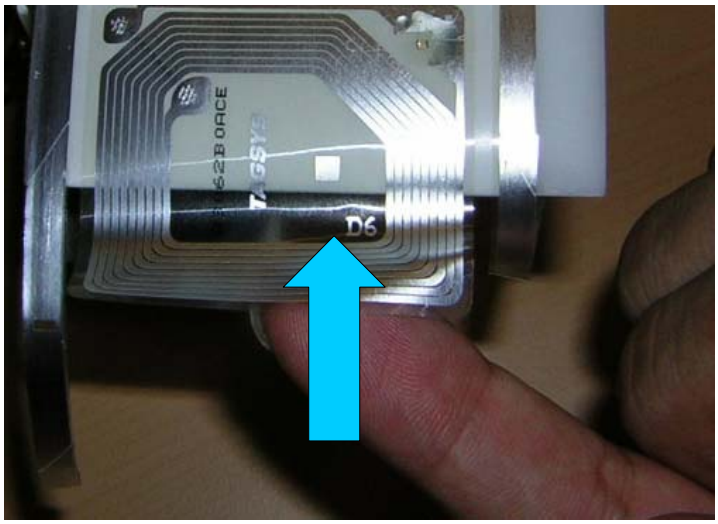
6. Fast Tagging Station Use

1. Power up the Fast Tagging Station
   - Make sure the cell is well positioned.
   - Connect the Fast Tagging Station to your PC
2. Each time a tag is provided, program it with the software
3. Peel off the tag.

a - The label to peel appears as shown

Label's part unstuck

b - Put your finger under the Label's part unstuck as shown and pull it back



7. Fast Tagging Station Demo Software

5.1 Purpose of the Fast Tagging Station Demo software

TAGSYS provides demonstration software to illustrate the tagging operation sequence. It writes into the tag all the permanent data defined in the **ISO Library Mapping Software Guide**.

It shows the differences of memory mapping between the Folio20 and the Folio320 and the Folio370.

Please refer to **ISO Library Mapping Software Guide** for more information.

To install the demonstration software,

- Launch Setup.exe and follow on the displayed instructions.

7.2 Recommended algorithm

We recommend to develop a software using the **ISO Library SDK** (available on www.tagsysrfid.com, partner section with username and password).

Please refer to **ISO Library SDK** documentation for more information.

7.2.1 Cataloguing operation

This operation does not involve RFID manipulations and can be integrated in the Figure 6: Converting Operation FlowChart.
In this operation you collect all the information to be written into the tag's memory that is the permanent data (barcode, location, etc …).
Carry on this operation by manual entry using a software or a database access.

Prepare data to write into the tag
Fill the object item from the class LIBTSMAPXLib.LibTSMapItem. Set the permanent data :

- Barcode
- Location
- Type
- Referenced
- Order
- Number of items

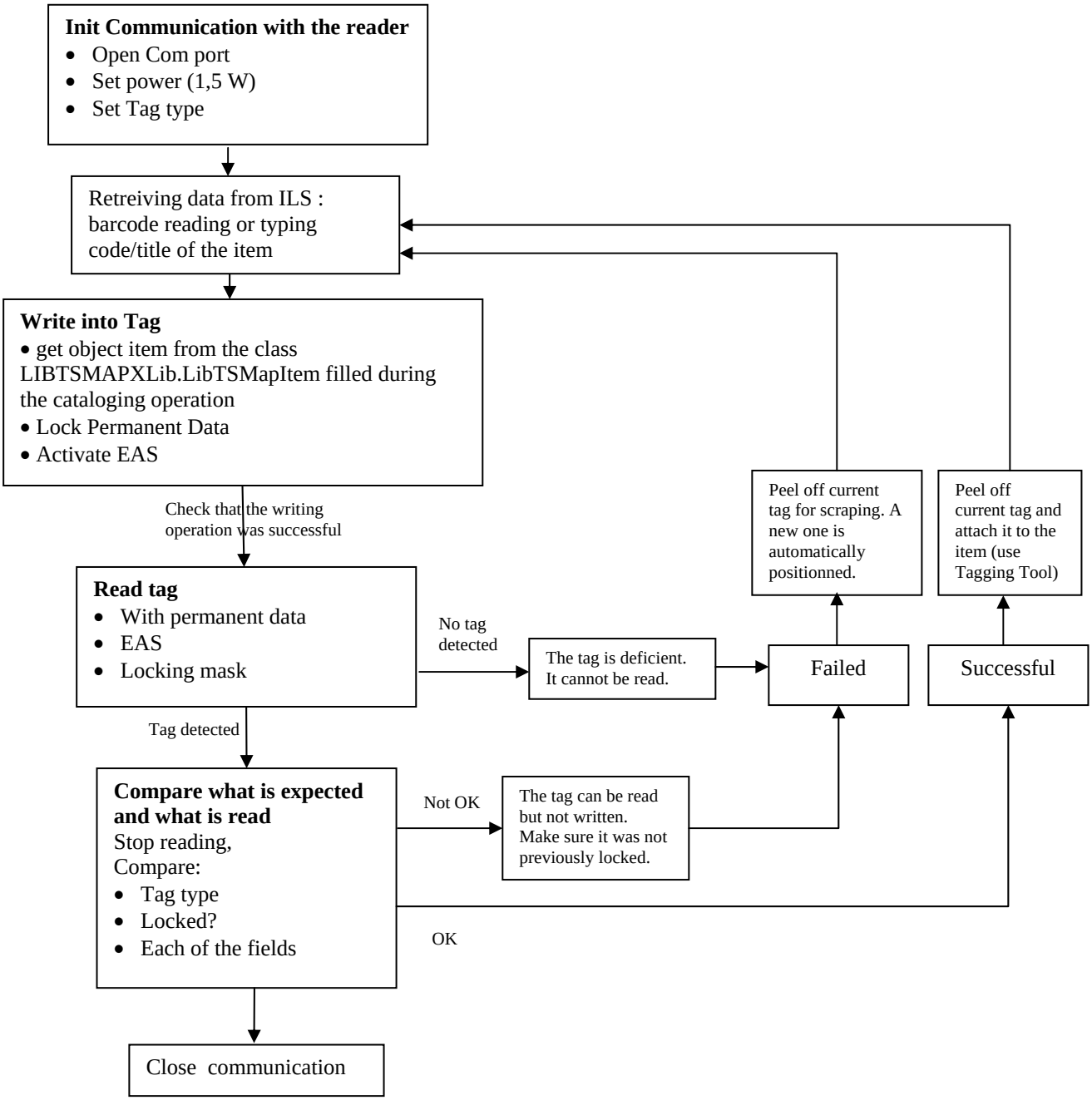
(See Folio220 limitations in **ISO Library Mapping Software**) using manual entries or database access

7.2.2 Converting operation

This operation involves RFID manipulations. In order to carry on fast and efficient operation, all data to be programmed into the tag must be set in the database and available by entering the barcode, a code or the title. A communication with the reader is opened at the beginning of the process and closed at the end.
As many tags as use can be processed as long as the communication is opened.

- First, position the tag on the antenna.
- Second, write the information into the tag.
- Third, check that the writing operation has been successful. To do so, read the tag.
- Fourth, check all the fields.
- Reiterate the operation with another tag and other data.

Figure 6: Converting Operation FlowChart



8. Maintenance

- Please refer to **Return station Guide**
- Make sure the cell is well positioned.

9. Warranty Conditions

TAGSYS warrants that its L-SP2 shall comply with the functional specifications set forth herein for a period of one year from the date of delivery to the Buyer.
This warranty is valid for the original Buyer of the Product and is not assignable or transferable to any other party.
TAGSYS cannot be responsible in any way for, and disclaims any liability in connection with the operation or performance of:

- Any product in which the Product is incorporated;
- Any equipment not supplied by TAGSYS which is attached to or used in connection with the Product; or,
- The Product with any equipment.

This warranty only applies to the Product and excludes all other equipment.
Optimal operation and performance of the Product are obtained by using TAGSYS' readers, by applying TAGSYS installation guidelines and by having your installation reviewed by a CIT (Certified Integrator by TAGSYS) technical consultant.
The TAGSYS warranty does not cover the installation, maintenance or service of the Product and is strictly limited to the replacement of Products considered as defective by TAGSYS and returned according to the return procedure defined below; in such case, TAGSYS will, at TAGSYS' option, either replace every defective Product by one new Product or refund the purchase price paid by Buyer to TAGSYS for the defective Product.

9.1 Warranty Exclusions

The following conditions are not covered under the warranty:

- Defects or damages resulting from storage of the Product under conditions that do not comply with TAGSYS specifications or normal usage.
- Defects or damages resulting from use of the Product in abnormal conditions (abnormal conditions being defined as any conditions exceeding the ones stated in the product specifications).
- Defects or damages from misuse, accident or neglect.
- Defects from improper testing, operation, maintenance or installation.
- Defects from alteration, modification except modifications or adjustments specifically described in this Product reference guide, adjustment or repair, or any attempt to do any of the foregoing, by anyone other than TAGSYS.
- Any action on the product that prevents TAGSYS to perform an inspection and test of the Product in case of a warranty claim.
- Tampering with or abuse of the Product.
- Any use or incorporation by the Buyer or a third party of TAGSYS' Product into life saving or life support devices or systems, or any related products; TAGSYS expressly excludes any liability for such use.

9.2 General Provisions

This warranty sets forth the full extent of TAGSYS responsibility regarding the Product.
In any event, TAGSYS warranty is strictly limited to (at TAGSYS' sole option) the replacement or refund of the Products purchase price to TAGSYS, of Products considered as defective by TAGSYS.
The remedy provided above is in lieu and to the exclusion of all other remedies, obligations or liabilities on the part of TAGSYS for damages, whether in contract, tort or otherwise, and

including but not limited to, damages for any defects in the Products or for any injury, damage, or loss resulting from such defects or from any work done in connection therewith or for consequential loss, whether based upon lost goodwill, lost resale profits, impairment of other goods or arising from claims by third parties or otherwise.
TAGSYS disclaims any explicit warranty not provided herein and any implied warranty, guaranty or representation as to performance, quality and absence of hidden defects, and any remedy for breach of contract, which but for this provision, might arise by implication, operation of law, custom of trade or course of dealing, including implied warranties of merchantability and fitness for a particular purpose.

9.3 How to Return Defective Products

The Buyer shall notify TAGSYS of the defects within 15 working days after the defects are discovered.
Defective Products must be returned to TAGSYS after assignment by a TAGSYS Quality Department representative of an RMA (Return Material Authorization) number. No Products shall be returned without their proof of purchase and without the acceptance number relating to the return procedure.
All Products must be returned in their original packaging.
All Products shall be returned with a report from the Buyer stating the complete details of the alleged defect.
Call +33 4 91 27 57 36 for return authorization and shipping address.
If returned Products prove to be non-defective, a charge will be applied to cover TAGSYS' analysis cost and shipping costs.
If the warranty does not apply for returned Products (due to age, or application of a warranty exclusion clause), a quote for replacement will be issued, and no replacement will be granted until a valid purchase order is received. If no purchase order is received within 30 days after the date of TAGSYS quote, TAGSYS will return the products and charge the analysis cost and shipping costs.
All replaced Products shall become the property of TAGSYS.
The Product Return Form is included on the following page. This form should accompany any product you need to return to TAGSYS for analysis in the event of a problem.

Product Return Form

Customer Profile:

Company: .....
Address: .....
.....
.....
City & State: .....
Zip Code: .....
Country: .....

Contact Name: .....
Contact e-mail: .....
Contact Phone: .....
Contact Fax: .....

Order identification:

Product Name: .....
Order Number (OEF): .....

Invoice Number: .....
Return Quantity: .....

Reason for return:

.....
.....
.....
.....
.....

To inform TAGSYS of this return, please email it to

RMA@tagsysrfid.com

Address to ship the product with this document attached:

TAGSYS
QUALITY DEPARTMENT
180, chemin de Saint Lambert
13821 La Penne sur Huveaune France

To inform TAGSYS of this return, please also fax it to your Customer Service Representative

+33 491-275-701

Return Procedure:

The product returned will go through stringent quality controls.
A final analysis report will be sent to you as soon as possible.
Please contact your Quality Service representative for further details.

+33 491-275-736

This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE)
This means that this product must be handled pursuant to European Directive 2002/96/EC in order to be recycled or dismantled to minimize its impact on the environment.
For further information, please contact your local or regional authorities.