

Benjamin CMC

- *Conveyor Medication Checking Unit* -



Users Manual

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TOSHO
Your best pharmacy solution

Preface

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The contents of this manual are subject to change without notice.

Unskilled, improper, or careless operations on the equipment can cause serious results. Limit the equipment users and maintainers only to personnel trained and authorized for particular tasks by the customer. Users and maintainers of the equipment shall read and understand operation-related manuals, maintenance related manuals, and other manuals provided by TOSHO Inc. before using the equipment.

Read, understand, and observe the Danger, Warning, and Caution statements.

In using the equipment, the customer shall follow the applicable safety and health regulations or standards set forth by the government or local authorities.

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Safety Standard information

1. Safety Standard

This system conforms to the following safety standards.

1) CE Marking Standard (conformed):

R&TTE Directive 1999/5/EC
LVD Directive 2006/95/EC
EN 50364
EN 61010-1
EN 61000-6-2, EN 61000-6-4
ETSI EN 301 489-3, ETSI EN 301 489-1
ETSI EN 300 330-2, ETSI EN 300 330-1

2. Compliance Statement

1) FCC Compliance Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Important: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

2) Canadian Compliance Statement

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Warranty and Liability for the Products

1. Warranty for the Products

1.1 TOSHO Inc. shall warrant Products

TOSHO Inc. shall warrant certain items supplied by TOSHO Inc. ("Products") to be free from defects in material and workmanship.

1.2 Warranty Period

The warranty period of the Products shall be one (1) year from the date when the Products satisfy the acceptance criteria.

1.3 Exception

Remedies of the Products user ("User") and TOSHO Inc. liability under this warranty shall not be available for the following troubles and damages:

- (1) Troubles and damages of the Products caused by the parts designated or supplied by the User.
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Even if the parts are supplied by TOSHO's authorized supplier, TOSHO Inc. is not liable to the troubles and damages of the Products caused by such parts' defects in material and workmanship.
- (3) Troubles and damages of the Products caused by the force majeure, including without limitation, governmental acts or directives; strikes; acts of God; war; insurrection, riot or civil commotion; natural disaster, fires, flooding; explosions.
- (4) Troubles and damages of the Products caused by the User's improvement without TOSHO's consent, misuse or use of improper process material.
- (5) Consequential damages, including, without limitation, damages resulting from inferior products or decrease of production, caused by misuse and breakdown of the Products.

1.4 Warranty is exclusive and in lieu of all other warranties

This warranty is exclusive and in lieu of all other warranties, whether expressed or implied, written or oral, statutory or otherwise, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose.

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The expenses required for the spare parts, labor, transportation, etc., in order to maintain the products after the expiration of the warranty period and consumable goods shall be borne by the User.

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TOSHO Inc. shall be liable for the personal injury resulting from TOSHO's performance or work of the Products, in accordance with the purchase contract of the Products and the applicable law.

3. Liability for damage due to operation of the Product

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Every user and service person must read, thoroughly understand operation related manuals, maintenance related manuals, and other manuals provided by TOSHO Inc. with respect to the Products and have sufficient training concerning operation of the Products. All Danger, Warning and Cautionary notices must be carefully read, thoroughly understood and strictly observed. The User assumes its responsibility to implement all Governmental, Federal, State and local safety regulations applicable to the use of the Products.

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- (3) Damages and loss resulting from operation of the Products.
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- (7) Consequential damages, including, without limitation, damages resulting from inferior products or decrease of production, caused by misuse or breakdown of the Products.

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You shall not manufacture, nor have any third party manufacture, any software which is similar to the Software, based on the technology, data, information, etc. obtained from the Software.

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Chapter 1, Introduction

This chapter outlines the structure of the manual and explains how to use it most efficiently.

1.1 How to use this manual

Make sure to store the manuals provided with this equipment in a specified place. The manuals can thus be referred to whenever necessary.

The manuals are published in parts according to the operation purposes and contents: more than one manual may be referred to at the same time.

To carry out the various operations described in this manual, users and/or engineers must be familiar with the equipment, operations, etc. We recommend that anyone responsible for such tasks take our certified training course before carrying out inspections and maintenance.

1.2 Intended use and users of this manual

This manual is intended for customers who have purchased the CMC to support understanding the operation of this device.


Note that the manual will fully benefit only those users who have participated in the recommended training.


1.3 Safety


This manual assumes that users understand Chapter 2: Safety and Environment of this manual. Please read and understand the Safety Section before moving forward into this manual.


In accordance with ANSI Z535.4-1988, this manual uses the following four warning labels consisting of a signal word and a warning symbol (an exclamation mark in a triangle) according to the seriousness of the hazards. Signal words represent the seriousness of potential hazards to system users and people working around the system.


A particular label is used to indicate notes containing useful information.
The labels are defined as follows.

Danger	
DANGER indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.	
	Warning type (heading) This is a danger label.

Warning	
WARNING indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.	
	Warning type (heading) This is a warning label.

Caution (personnel)	
CAUTION indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury to personnel.	
	Warning type (heading) This is a caution (personnel) label.

Caution (property)	
CAUTION without a warning symbol indicates a potentially hazardous situation that, if not avoided, may result in property damage.	
	Warning type (heading) This is a caution (property) label.

Note	
NOTE indicates necessary and useful information on operation or maintenance. This label is not a warning label.	
	This is a note label.

1.4 Structure of the manual

Chapter 1 Introduction

This chapter outlines the structure of the manual and explains how to use it most efficiently.

Chapter 2 Safety And Environment

This chapter discusses personal safety issues as well as care of the environment. Users should familiarize themselves with this information before using this equipment.

Chapter 3 About this Device

This chapter discusses the operation explanation for this equipment.

Chapter 4, Starting Conveyor Medication Checking

This chapter discusses the operation explanation for this equipment.

Chapter 5, Errors and Troubleshooting

This chapter describes how to deal with machine and application errors.

Chapter 6, Maintenance and Cleaning the Device

This chapter describes how to maintain and clean the device.

Chapter 7, Making An Inquiry Or Suggestion About Our Manuals

This chapter describes how to order and make suggestions about our product and manuals.

1.5 Unit names

In this manual, each of the units is referred to by its abbreviation.

These abbreviations are presented in the following list.

Unit name	Abbreviation
Conveyor Medication Checking Unit	CMC
Transportable Conveyor Tray	TCT
Material Safety Data Sheet	M.S.D.S

1.6 TOSHO Sales/Service Agencies

If an emergency or a system failure occurs, or if you have any questions about the system, contact your TOSHO sales or service representative at the address in the following list.

NOTE

Address and telephone numbers are subjects to change without notice.

Manufacturer name
TOSHO Inc
Overseas Dept.

Address
3-13-7, Higashi-Kojiya, Ohta-ku,
Tokyo 144-0033
Japan

Telephone number
+81-3-3745-0790

Fax number
+81-3-3745-1897

Local Agency name

Address

Telephone number

Fax number

Chapter 2, Safety And Environment

This chapter discusses personal safety issues as well as care of the environment. Users should familiarize themselves with this information before using this equipment.

2.1 Being aware of safety issues and environmental considerations

This section presents information for carrying operations while taking safety and the environment into consideration. This equipment has been designed with personal safety and care of the environment in mind. However, improper or incorrect procedures may:

- place users or those working in the vicinity in potentially hazardous situations.
- have a harmful effect on environment.

Users must therefore be familiar with safety and environmental issues relating to this equipment as well as procedures to ensure safety and protection of the environment.

2.2 Necessary information relating to safety

It is the responsibility of the users of this equipment to be aware of safety and environmental issues in relation to the equipment as well as to implement all applicable Governmental, Federal, State and local safety regulations. Furthermore, it is necessary that all users develop their knowledge of the following in order to ensure that the equipment is used as safely as possible.

- Safety issues relating to electricity
- Protective equipment
- Ergonomics
- Handling of chemicals
- Emergency procedures

2.3 Ergonomic hazards

This section describes ergonomic hazards and precautions which must be known to users. It is essential that users know this information in order to work safely and in consideration of the environment.

Before using the equipment, make sure to be aware of the potential hazards with the equipment.

2.3.1 Heavy load

Lifting a heavy load without support may cause muscle fatigue, or injury to the back or legs (especially if the load falls). When handling a heavy load, pay particular attention to the following. For information on hazardous issues relating the handling of heavy loads, refer to 2.4.5.1 Hazards caused by a heavy load.

NOTE

Heavy loads

We define a “heavy load” as an item in excess of 10 kg which must be lifted by an user.

- CMC weigh 25kg. Transport the item with two or more users.
- Hold the item firmly with both hands, each holding the corner of the device.
- Before lifting an item, measure it and determine how it should be transported. Make sure there are enough users are available to transport the object.
- Using a dolly or equivalent.
- When changing direction, hold the item firmly and as close to the center of the gravity of one's own body, bending the knees rather than the back. Then, keep one foot in place while moving other foot one step to pivot your body.
- When lifting a heavy load off the floor, your back is particularly susceptible to injury from the heavy load. Make sure to hold the item as close to the waist as possible and lift, bending the knees.

2.3.2 Installation environment

Pay attention sufficiently to the following basic requirements and the basic standard in selection of the installation site and the installation stand in case of practical use of this equipment.

1. Installation

- Place the unit on a flat, level surface in a dry area away from dust and moisture.
- Do not place the unit in direct sunlight, near heater or heat radiating appliances.
- Exposure to direct sunlight, smoke or steam can harm internal and external components.
- Do not place heavy objects on top of the unit.
- Do not place any liquids close to the unit.

2. Table Standard

Criteria	Fixed Dimension cm (in.)	Adjustable Dimension cm (in.)
Sitting workstation height (D) (assumes hands are primarily at work surface level)	maximum 76cm (30in.) minimum 71cm (28in.)	maximum 84cm (33in.) minimum 58cm (23in.)
VDT height (single monitor, measured to centerline)	maximum 119cm (47in.) minimum 94cm (37in.)	NA
VDT height (stacked monitors, measured to top line of top monitor)	maximum 140cm (55in.)	NA
Touch screen monitor height	maximum 107cm (42in.) (measured to uppermost active pad)	maximum 121.4cm (47.8in.) minimum 89.4cm (35.2in.) (measured to center of screen)
Microscope eyepiece height (assumes a standard work surface height of 30")	NA	maximum 137cm (54in.) minimum 122cm (48in.)
Work surface thickness	inimum 5cm (2in.)	NA
Work surface edge radius	minimum 0.65cm (0.25in.)	NA
Vertical leg clearance	minimum 67cm (26.5in.)	NA
Horizontal leg clearance-depth at knee level	minimum 51cm (20in.)	NA
Horizontal leg clearance-depth at foot level	minimum 66cm (26in.) depth × 25cm (10in.) vertical clearance	NA
Horizontal leg width clearance	minimum 61cm (24in.)	NA



2.3.3 Awkward posture

During maintenance or installation, an user may find him/herself assuming an awkward posture. To prevent musculoskeletal injuries, the user should try to assume correct posture and take frequent breaks to allow the muscles to relax. Avoid awkward work positions as follows:

- Always raising your head up

- Keeping the same posture continuously (such as twisting body, crouching down, bending over, etc.)

2.3.4 Repetitive motion

A repetitive motion is one where the same movement occurs repeatedly (e.g. every 2 or 3 seconds) over an extended period.

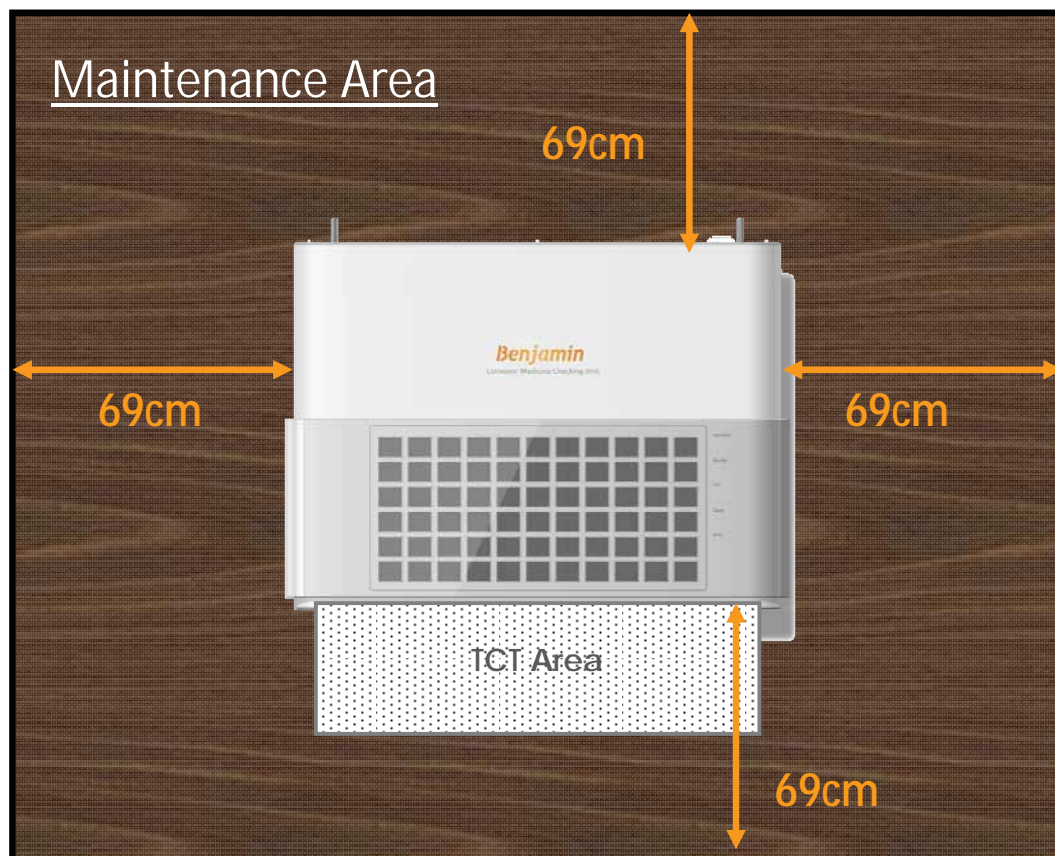
A repetitive motion such as turning a bolt, for example, may cause muscle fatigue or may damage or strain sinews. If the user maintains an awkward posture, a repetitive motion increases the load on his/her body. It is therefore necessary to take frequent breaks when carrying out repetitive motion work to avoid strain on and fatigue of muscles and sinews.

2.3.5 Access Area

The following figure shows the floor plan of the CMC.

The floor plan shows user access area and maintenance area.

Ensure the user access area and maintenance area are sufficient in space.



2.4 Potential hazards in the equipment

This section describes potential hazards in the equipment and precautions with which users must be familiar. It is important to be aware of these hazards to ensure that work can be carried out as safely as possible and in an optimum environment.

Before using the equipment, make sure to be aware of the potential hazards with the equipment.

2.4.1 Electrical hazards

Voltage power supply is used for this equipment. Touching this may cause an electric shock or a serious burn. Before carrying out maintenance of an electrical circuit or carrying out work close to the circuit, make sure to cut off the power (except in cases where the power must be turned on).

If repair or maintenance must be carried out in the current carrying parts, contact our service personnel.

Hazardous electrical points and details

No.	Hazardous points	Details
(1)	Electrical equipment	Electrical shock, burn, burnout, or fire caused by touching directly

2.4.2 Mechanical hazards

This equipment contains drive mechanisms including Tablet Cell, TCT Drawer, etc. and movable parts such as Slide Cover, etc.

This section describes mechanical hazards and precautions relating to each mechanism.

2.4.2.1 Hazards in the drive mechanism

While the equipment is operating, if the user's hands come close to the drive mechanism, there is a danger of getting caught into the drive mechanism, resulting in injury. Never bring the hands close to the mechanism during operation.

When maintaining the drive mechanism, make sure to cut off the power.

Hazardous points and details in the drive mechanism

No.	Hazardous points	Details
(1)	Tablet Cell	Injury caused by getting caught
(2)	TCT Drawer	Injury caused by touching directly

2.4.2.2 Hazards in the movable mechanism

If the TCT Drawer and Slide Cover are left open during maintenance or after maintenance has been completed, other users may collide with them, resulting in injury. TCT Drawer and Slide Cover must be closed when users are leaving the site.

Hazardous points and details in the movable mechanism

No.	Hazardous points	Details
(1)	Slide Cover	Injury caused by colliding with the Slide Cover left open. Hand injury caused by getting caught when opening/closing the Slide Cover
(2)	TCT Drawer	Injury caused by colliding with the TCT Drawer left open. Hand injury caused by getting caught when opening/closing the TCT Drawer.

2.4.3 Hazards caused by chemicals

Users who work with this equipment must be familiar with the characteristics of the chemical substances to be used, referring to the material safety data sheets (M.S.D.S.) or other sources.

NOTE

Abbreviations in this manual

In this manual, the term "M.S.D.S" means "Material Safety Data Sheet".

2.4.3.1 Hazards caused by grease and cleaning agent

During greasing or cleaning, it may be necessary to use grease or cleaning agent containing toxic chemical substances harmful to human body. When using such grease or cleaning agents, inhaling vapor may cause asphyxiation. Furthermore, allowing grease or cleaning agent to come into contact with the skin may cause irritation. When using such grease or cleaning agent, make sure to wear protective gear. For information on protective equipment, refer to **2.11.1.1 Wearing protective equipment**.

Also, read the M.S.D.S and understand the characteristic features of the chemical substances included in the grease or cleaning agent, how to control it, and its first aid treatment.

2.4.4 Hazards caused by nonionizing radiation

This equipment uses the following nonionizing radiation.

NOTE

Nonionizing radiation

Nonionizing radiation is an electric wave, visible light ray, etc. which includes relatively low energy so that the radiation target is not ionized.

2.4.5 Other hazards

This section describes other hazards the user must be aware of when handling this equipment.

2.4.5.1 Hazards caused by a heavy load

Lifting a heavy load item of this equipment may cause back injury. Dropping or colliding with such a load may also result in injury. If the item is to be lifted by users, make sure that the two or more users are available to lift the item. Use a dolly or equivalent to transport heavy items.

Hazardous points and details regarding heavy loads

No.	Hazardous points	Details
(1)	CMC	Back injury caused by carrying a heavy load injury caused by dropping or colliding with a heavy item

2.4.5.2 Hazards caused by damaged items

Excessive impacts or loads on the Slide Cover, cable connections, etc. may cause damage. Do not allow excessive impact or place excessive load on components in this equipment.

Hazardous points and details regarding damaged items

No.	Hazardous points	Details
(1)	Slide Cover	Damage caused by an excessive load and/or impact
(2)	TCT Drawer	Damage caused by an excessive load and/or impact
(3)	Cable connection	Cable broken by an excessive load and/or impact

2.5 Security devices in the equipment

This section describes security devices relating to hazardous factors in the equipment.

2.5.1 Security devices relating to the electric system

- The grounding wires are grounded at one point within the equipment.

2.5.2 Other security devices

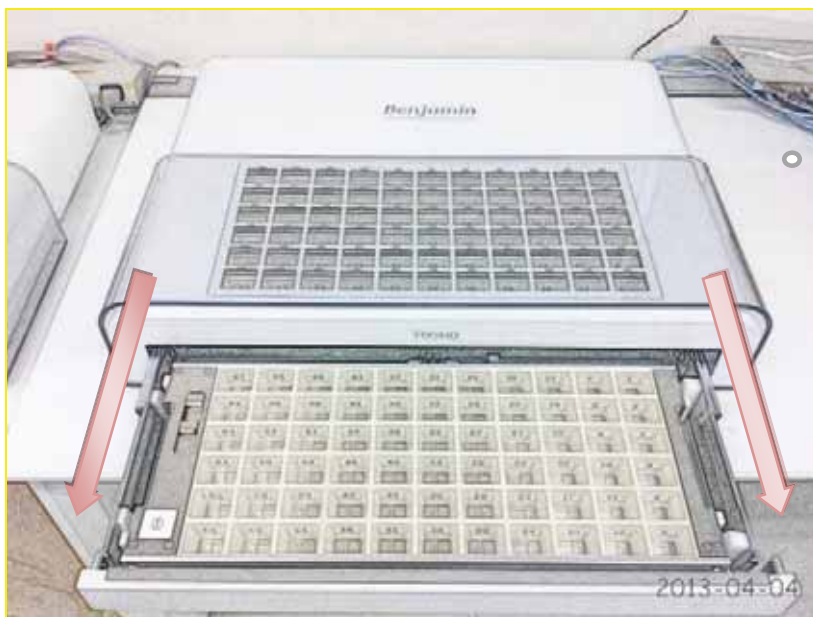
2.5.2.1 Protection sensor (Safety sensor)

An Protection sensor refers to a function which restricts operations that may cause damage to equipment or peripheral devices. It also minimizes the risk of personal injury.

The Protection sensor is detecting the open/close status of the Slide Cover. All machine movement/operation is restricted while the Slide Cover is open.

2.5.2.2 Indicator and Alarm sound

All 66 of the LED Guides will flash in yellow as an indicator, and alarm sound rings when the TCT Drawer moves out. When the indicator lights up and alarm sound rings, please be careful of the movement of TCT.



Indicator:

Yellow LED Flash
+
Alarm sound

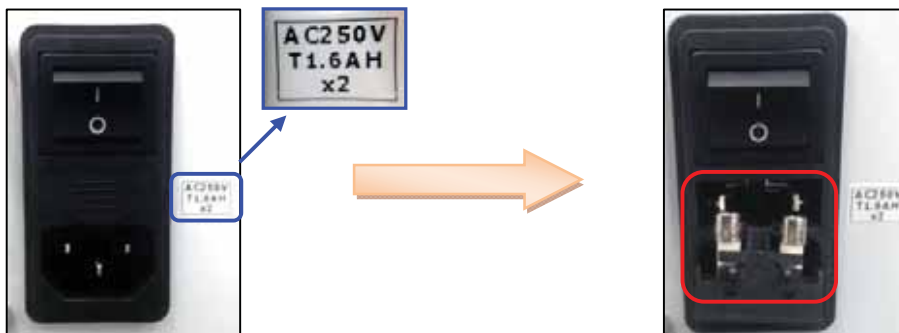
2.5.2.3 Power Fuse

2 pieces of Fuses are installed inside of the power plug unit. The location and specification are the following.

Specification

Ceramic Tube Fuse (Time Lug high breaking capacity)
AC250V T1.6AH ϕ 5x20mm 2 pieces

Location / Specification Label



Please see 2.6.1 for the location of the power plug unit.

2.6 Emergency procedures

To stop this equipment urgently (e.g. if a fire occurs, a hazardous situation occurs), cut main source of electrical power or remove the power plug. If the main switch is cut or the power plug is removed, all power lines shut off and the equipment stops.

Please undergo discipline beforehand in order to handle promptly when an emergency occurred.

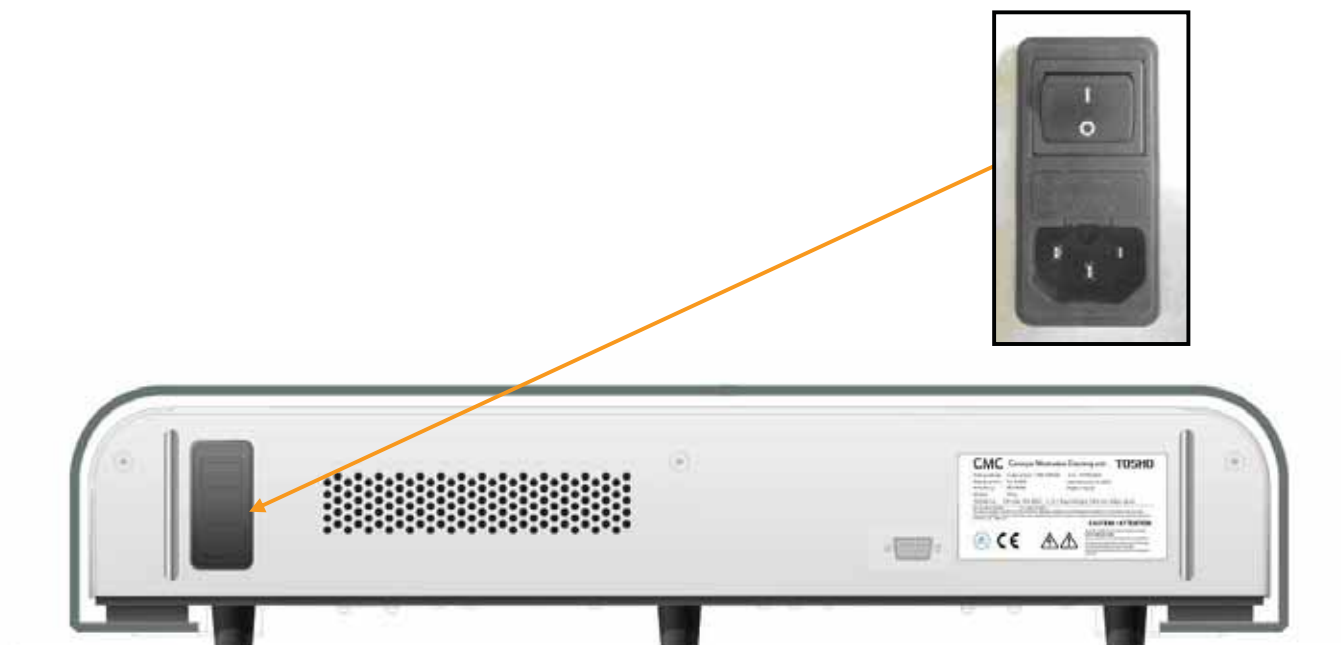
2.6.1 The location of the main switch and the power plug

The main switch and the power plug are located at the left back of the equipment.

Before handling this equipment, check the location of the main switch and the power plug.

Rear View of CMC

Main Switch I/O and Power plug



2.6.2 Recovering from an emergency stop

- 1 Check that the whole working place is safe.
- 2 Check that the utilities of the working place is normally supplied.
- 3 Check that the equipment has not been damaged.
- 4 Start up the equipment, referring to the Operations Manual.



Make sure to work safely.

While users present around the equipment, or tools and/or other obstacles are left within the equipment when the equipment turns, it may happen that the motor and/or drive parts move unexpectedly, thus presenting a risk of serious injury to the user and/of damage to the equipment.

Before turning on the power supply of the equipment, make sure that the working place is safe, ensuring that no users, tools, removed covers or other obstacles are present to the immediate vicinity of the equipment.

2.7 Solution in the event of an emergency

If an emergency occurs, it is important to assess the conditions. Depending on the conditions, take actions quickly and in a composed manner. Incorrect or hasty assessment of the conditions surrounding the emergency may exacerbate the situation, resulting in serious injury or death of users and/or those working in the vicinity. In all emergency situations, protection of users is the first priority.

This section describes countermeasures in the event of an emergency. Read and understand the following information before carrying out appropriate actions.



Solution in the event of an emergency

If an error occurs and you cannot find a solution, contact our service personnel. Depending on the situation, we will carry out countermeasures immediately. For information on the contact addresses, refer to 1.6 TOSHO Sales/Service Agencies in this manual. You may need this address in an emergency: affix the contact list to the equipment or at an accessible point in the facility.

If you have your own emergency procedures, be sure to observe local regulations.

2.7.1 Solution if a fire occurs

- 1 Cut the main switch or remove the power plug to stop the equipment.



Precautions relating to power leakage and/or electric shock

Leaving the power on may result in a further accident due to a power leakage or an electric shock. Cut the main switch or remove the power plug to cut off the power.

- 2 Check that nobody has been injured.

If a person or persons has/have sustained injuries, move him/her/them to a safe location and treat him/her/them accordingly.

- 3 Depending upon the emergency situation, other equipment may be damaged and the entire floor may become dangerous. In such situations, evacuate the area in accordance with your company regulations, adhering to the instructions of your company's person in charge.



Recovering from an emergency stop

For information how to recover from the situation after the main switch was cut or the power plug was removed, refer to 2.6.2 Recovering from an emergency stop.

2.7.2 Solution if an earthquake occurs

- 1 Cut the main switch or remove the power plug to stop the equipment.



Precautions relating to power leakage and/or electric shock
Leaving the power on may result in a further accident due to a power leakage or an electric shock.
Cut the main switch or remove the power plug to cut off the power.

- 2 Check that nobody has been injured.

If a person or persons has/have sustained injuries, move him/her/them to a safe location and treat him/her/them accordingly.

- 3 Depending upon the emergency situation, damage to other work place may result in a hazardous situation on the floor.
In such situations, evacuate the area in accordance with your company regulations, adhering to the instructions of your company's person in charge.
- 4 After ensuring that the entire work place is safe, if it is possible to proceed, carry out the following steps, ensuring safety in the vicinity.
 4. 1 Check for damage to the equipment.
 4. 2 Check the installation positions of the equipment and peripheral devices.
 4. 3 Check that no parts are dropped within the equipment.
 4. 4 Check the condition of the wiring.
 4. 5 Start up the equipment, referring to the Operations Manual.

2.7.3 Solution if an accident occurs

- 1 Check that nobody has been injured. If a person or persons has/have sustained injuries, move him/her/them to a safe location and treat him/her/them accordingly.
- 2 Cut the main switch or remove the power plug to stop the equipment.



Precautions relating to power leakage and/or electric shock
Leaving the power on may result in a further accident due to a power leakage or an electric shock. Cut the main switch or remove the power plug to cut off the power.

- 3 Check with the person in charge for further information on the event that has occurred.



Equipment after an accident
If the equipment is operated without a cause analysis of an incident which has occurred, a similar incident may recur. Do not operate the equipment again until the reason for the first incident has been established.

2.7.4 Solution in the event of a power failure

- 1 Turn on the power of the equipment, referring to the Operations Manual.

NOTE

After recovering from a power failure, initialize the equipment.

NOTE

Information on how to recover from an emergency stop

For information how to recover from the situation after the main switch was cut or the power plug was removed, refer to 2.6.2 Recovering from an emergency stop.

2.8 Hazard warning

If problems occur or potential problems exist, hazard warnings occur and indicate the type and location of each problem, ensuring user safety. The hazard warning in this equipment is both visual and audible.

Visual warning

- Hazard warning label

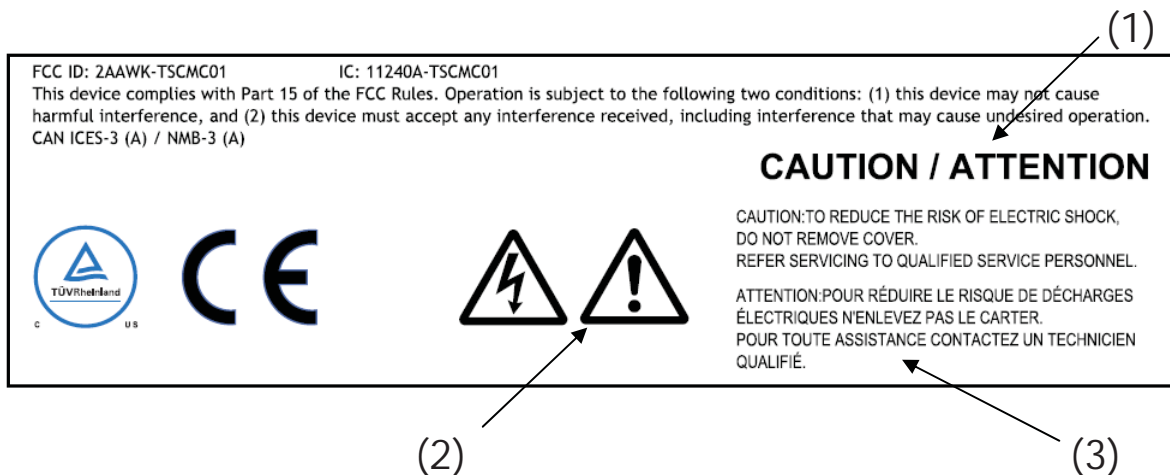
2.8.1 Hazard warning label

At the hazardous points in this equipment, hazard warning labels are affixed to warn users of the seriousness of the hazards. The hazard warning labels consist of pictograms, signal words, and messages; the pictogram helps to easily understand the type of the danger, the signal words indicates the seriousness of the hazards, and the message indicates the type of the danger, result if it is ignored, and procedures for avoiding it. When working in the area with the hazard warning label, read and understand the label and follow the indicated procedure for avoiding the danger.



Precautions when handling the hazard warning label

Do not contaminate or cover the surface of the hazard warning label and do not peel off the label. If it is difficult to read the label or is peeling off, contact our service personnel and affix a new warning label.



Name and meaning of the hazard warning label




No.	Name	Meaning
(1)	Signal Word	Indicates the seriousness of the hazards.
(2)	Pictogram	Indicates the type of the danger using a picture.
(3)	Message	Indicates the type of the danger, result if it is ignored, and procedure for avoiding the hazard.

2.8.1.1 Definition of the signal word

Signal words are used in the hazard warning labels affixed to the equipment.

The signal words represent the seriousness of potential hazards to users and those working in the vicinity of the equipment. Depending on the degree of severity, three types of the signal words are used as follows.




Definition of the signal word

Signal word	Definition
	DANGER indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.
	WARNING indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.
	CAUTION indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury to personnel.

2.8.1.2 Types and contents of the pictograms

The hazard warning labels affixed to the equipment uses the pictogram, with which users can easily understand the hazard related information. The types and contents of the pictograms are as follows.

Types and contents of the pictograms

Details	Pictogram	Meaning
Voltage		Hazardous Voltage There is a danger of electric shock.
Caution		Caution Refer Service to Qualified Service Personal.
Earth(ground) connection		This symbol indicates the requirement to properly earth (ground) the machine.

2.8.2 Type of the hazard warning label

The hazard warning labels indicating danger in this equipment are as follows.

Hazard warning labels


Seriousness of the hazards	Hazard warning label
WARNING	Hazardous voltage
CAUTION	Qualified Service Personal

FCC ID: 2AAWK-TSCMC01

IC: 11240A-TSCMC01


This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



CAN ICES-3 (A) / NMB-3 (A)



C

U S





CAUTION / ATTENTION

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

ATTENTION: POUR RÉDUIRE LE RISQUE DE DÉCHARGES
ÉLECTRIQUES N'ENLEVEZ PAS LE CARTER.
POUR TOUTE ASSISTANCE CONTACTEZ UN TECHNICIEN
QUALIFIÉ.

2.8.3 Location of the hazard warning label

The locations of the hazard warning labels indicating danger in this equipment are as follows.

Hazard warning label in the CMC

Rear



CMC

Conveyor Medication Checking unit

TOSHO

Rating voltage : single phase / 100-240VAC

Rating current : 1.3-0.65A

Frequency : 50/60Hz

Weight : 25kg

TOSHO Inc, ZIP code; 144-0033 3-13-7 Higashikojiya, Ohta-Ku, Tokyo, Japan

S/N: TSFP04001

Manufactured in 2013


Made in Japan


FCC ID: 2AAWK-TSCMC01


IC: 11240A-TSCMC01


This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAN ICES-3 (A) / NMB-3 (A)







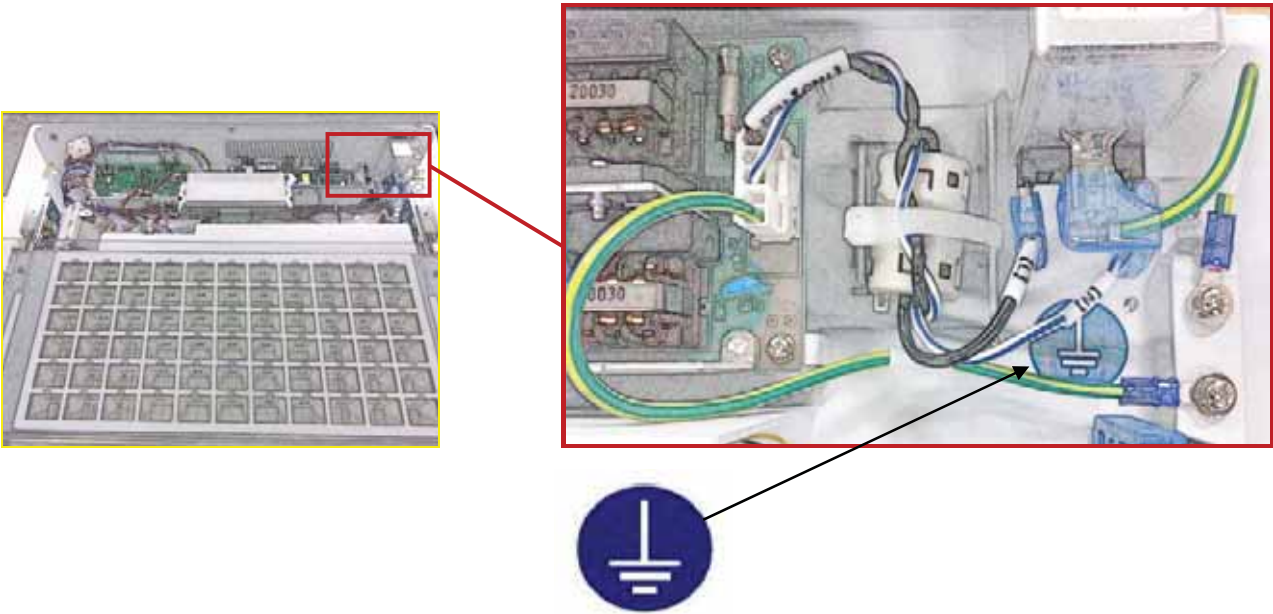


CAUTION / ATTENTION

CAUTION TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

ATTENTION POUR RÉDUIRE LE RISQUE DE DÉCHARGES
ÉLECTRIQUES N'ENLEVEZ PAS LE CARTER.
POUR TOUTE ASSISTANCE CONTACTEZ UN TECHNICIEN
QUALIFIÉ.

Interior



2.9 Preventing accidents

This section describes protective equipment designed to protect maintenance personnel from hazards.

Cycle	Description		TOOL ID
			A
Daily	Cleaning	Tablet Matrix	○
Daily	Cleaning	TCT	○

Appropriate measures to ensure safety during maintenance work are also discussed.

2.9.1 Safety measures to prevent accidents

This section describes safety measures to prevent accidents when using this equipment.

2.9.1.1 Wearing protective equipment

During maintenance, maintenance personnel have the risk of being exposed to chemical substances.

To protect maintenance personnel from these hazards, before carrying out maintenance, maintenance personnel must be sure to put on protective equipment.

NOTE

Before carrying out the following maintenance, maintenance personnel must put on wear protective gear. Before starting work, read this section thoroughly to ensure maximum safety.

2.9.1.2 Protective equipment list

The protective equipment required for periodical inspection is shown in the following list:

For information on how to wear protective equipment, refer to the instruction manual for each equipment.

Protective equipment list

Protective equipment	Function	Tool ID
Chemical-proof gloves	To be worn when handling chemicals.	A

2.9.1.3 Operations which require protective equipment

NOTE

Contact our service personnel

Machine maintenance of CMC, shall be done by TOSHO's certified engineers only.

Users of this equipment shall not try to fix or replace and parts of the equipment. Be sure to contact our service personnel for machine maintenance and repair.

2.9.2 Precautions to prevent accidents

This section describes safety maintenance precautions to prevent injury of users or damage to the equipment.

2.9.2.1 Precautions related to general operation

Observe the following precautions when carrying out operation or maintenance.



Prior to using the equipment

Before using the equipment, the following must be observed. If not, users are exposing themselves to risk of injury and increasing the likelihood of accidents.

NOTE

Contact our service personnel.

If work cannot be carried out according to a given procedure, or if you have any questions relating to safety, operation, or maintenance works, contact our service personnel.

- Read the manuals provided with this equipment.
- Participate in the certified training course carried out by our engineers or persons who previously took the course.
- Familiarize yourself with the emergency shut-off procedures of the equipment. For information on these procedures, refer to 2.6 Emergency procedures.
- Participate in a training course on cardiopulmonary resuscitation (CPR) techniques.
- Remember the emergency procedures, the locations of a first-aid box and fire extinguishers as well as the procedures for using these. The locations of the fire extinguishers must be posted in the operation area.
- Remember the evacuation paths and areas in an emergency. Do not place any obstacles in the evacuation paths. An illustration of the evacuation paths must be posted in the operation area.
- Before operating the equipment during maintenance, bring to the attention of those working in the immediate vicinity the fact that the equipment is about to be started. Check that no tools, or removed covers are present to the vicinity of the unit and then proceed, ensuring that the operating environment is safe.
- Do not touch voltage circuitry.
- After maintenance work has been completed, restore all interlocks and unit covers to their original positions.
- Whenever a hazardous condition is observed, report this immediately to your superior.
- The emergency contact list must be posted in the operation area.
- Use suitable tools in an appropriate manner, as described in the Maintenance Manual.
- Use only tools of a size that matches relevant screws or bolts.
If a tool of the wrong size is used, parts may be damaged.
- Place tool, jig, or parts in a secure location, out of the way.

Placing these in a location which will cause an obstruction exposes users to risk of injury.

- Position a cover to in order to catch screws if dropped.
Position a cover under the section which screws or small parts are removed. If these parts fall, the cover will allow them to be retrieved.
- When installing parts, do not pinch wire rods or wires.
If these parts pinched during installation, the wires may be damaged or broken and may result in failure of the equipment.
- If liquids leak and flow into electrical circuits or electrical components, electric leakage may occur. If liquids leak, Cut the main switch or remove the power plug to cut off the power of the equipment.
- Heavy loads must be lifted by at least two persons. The load per person should not exceed 10 kg.
- When transporting the equipment or parts, always carry items by holding the framework or securely fastened sections. Be careful not to fall over casters, wiring, or piping.

2.9.2.2 Precautions when handling electrical circuits

Observe the following precautions when carrying out maintenance of electrical circuits.

- Make sure that grounding complies with the local and national laws applicable to your location.
If the equipment is not grounded properly, it may cause electric shock and result in serious injury or death in extreme cases. Make sure that grounding complies with applicable laws for safe operation of the equipment.
- If the leakage breaker is activated, repair the point at which the leakage occurred, ensuring safety at all times, and then turn on power again.
- Do not repair the voltage circuits.
If it is necessary to repair the voltage circuits, contact our service personnel. (Hazardous voltage warning labels are affixed to voltage points.)
- If it is not necessary to operate this equipment during maintenance, turn off the power.
Carrying out maintenance with the power ON exposes users to risk of injury; (the drive mechanism may pinch fingers or hands); there is also a risk of receiving an electric shock.
- When carrying out maintenance, follow the procedures in the maintenance manuals.
- Do not carry out maintenance of or near current-carrying parts by oneself. Carry out maintenance where other workers are present or where they can watch you or hear you.
- If maintenance is to be carried out near a live electrical circuit, make sure you are not wearing anything metal.

2.9.2.3 Precautions when handling parts of the mechanical system

Observe the following precautions when carrying out maintenance of mechanical system.

- Care should be taken not to get your fingers or hands caught in or by movable parts.
- The drive mechanism contains motor-operated parts. Consequently, there is a risk that the hands or fingers may get caught.
If an operation is to be carried out near motor-operated drive mechanism, cut off the power of the motor.

2.9.2.4 Precautions when handling chemical substances

Observe the following precautions when carrying out maintenance involving chemical substances.

- Before handling chemicals, make sure to wear protective equipment such as chemical-proof glasses. If chemicals spatter or spill, carry out appropriate countermeasures, referring to the relevant M.S.D.S.
- When disposing of chemicals or cloths contaminated with chemicals, follow the M.S.D.S and observe local and national laws applicable to your location.
- When handling chemical substances from which toxic gas may be generated, make sure to wear chemical-proof glasses, chemical-proof gloves, and a protective mask.

2.9.2.5 Precautions when handling protective equipment

Observe the following precautions in relation to protective equipment used during maintenance.

- When carrying out maintenance, make sure to wear protective equipment if necessary.
For information on the types and functions of this protective equipment, refer to 2.9.1.1 Wearing protective equipment. For information on part models, refer to the Maintenance Manual.
- For information on how to wear protective equipment, refer to the instruction manual for each equipment.
- If protective equipment is contaminated or damaged, its protective function is diminished.
Check protective equipment periodically for contamination or damage. Before each use, also check this equipment.
- Do not use damaged protective equipment.

2.10 Treatment of wastes

This section describes how to treat waste resulting from maintenance of the equipment.

As for OEM items, refer to the OEM Manual for information on waste disposal. If you are using different parts (parts which have not been recommended by TOSHO Inc.), refer to the instruction manual which accompanies that part or parts.

2.10.1 Treatment of contaminants resulting from maintenance

The contaminants resulting from maintenance of the equipment must be treated as waste for disposal. Follow the instructions below for information on how to treat the waste appropriately.

Disposal of lubricants

To dispose of waste lubricant, follow the M.S.D.S as well as the local and national laws applicable to your location. In addition, dispose of cloths and/or gloves used for the work in the same manner, which will have been contaminated with associated chemicals.

Cleaning of parts

To dispose of waste liquid of the cleaning agents used for cleaning, follow the M.S.D.S as well as the local and national laws applicable to your location. In addition, dispose of cloths and/or gloves used for the work in the same manner, which will have been contaminated with associated chemicals.

Treatment of other chemical substances

Dispose of other chemical substances in methods appropriate to each characteristic according to M.S.D.S as well as the local and national laws applicable to your location. Do not mix different chemical substances; this can cause chemical reactions, yielding toxic gases and/or triggering fires.

2.10.2 Solid waste subject to controls

Various solid wastes result from maintenance of this equipment. These wastes are collected by TOSHO Inc. Please contact our sales representatives or service personnel.

For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

2.10.3 Hazardous points and parts during disposal

To relocate or dispose of this equipment, disassemble the equipment into the parts which can be transported or disposed of as necessary. These operations may involve dangers from chemicals, magnets, and objects with dangerous shapes, as described below.



Restrictions to users

Insufficient understanding of the hazards associated with this equipment could cause accidents resulting in serious injury or death. The relocation and/or disposal of this equipment must be performed only by users with an adequate understanding of the aforementioned hazards as well as practical competence in handling the equipment properly.



Precautions when handling chemicals

After cleaning, pack double-package any packageable parts whenever possible.
Any area that cannot be cleaned must be closed off with lids to prevent leakage if toxic gases or reaction products can leak out of the area.

Objects with dangerous shapes

Materials such as glass, silicon, and ceramics can fragment easily and consequently can cause injury, especially to the hands. Any person handling such fragmented objects must wear thick gloves.

2.10.4 Disposal of this equipment

When this equipment is disposed, this equipment is collected by TOSHO Inc. Please contact our sales representatives or service personnel.

For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

Chapter 3, About this Device

This chapter discusses the operation explanation for this equipment.

3.1 General Use

The Conveyor Medication Checking Unit (CMC) is designed to operate in collaboration with TOSHO's Automatic Tablet Packing Machine [Main TOPRA series or XANA series].

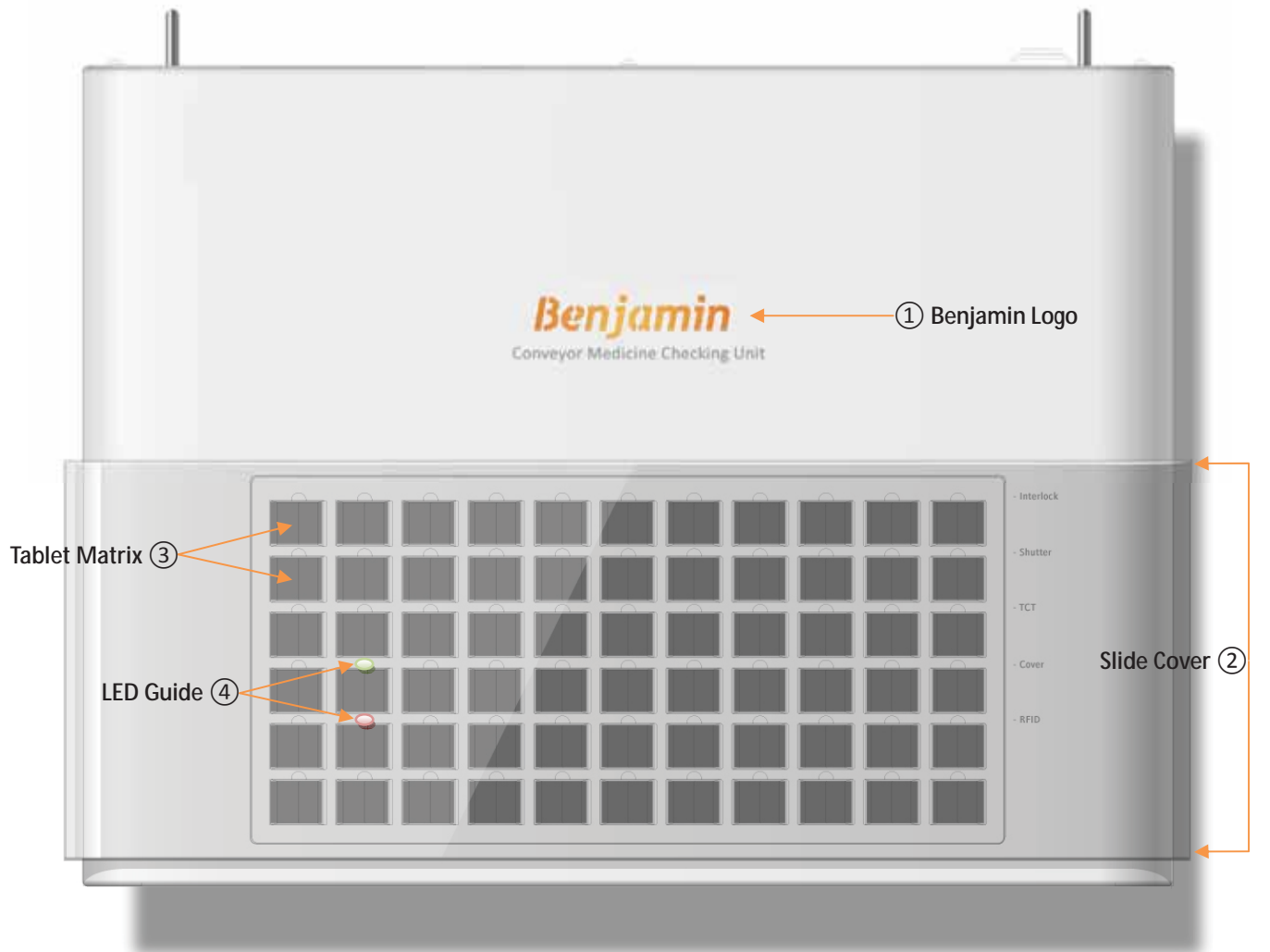
CMC was developed in order to utilize the use of these products, and to ensure safety for tablet packaging conveyor system.

3.2 Machine Specification

Subject	Description
Product Name:	Conveyor Medication Checking Unit CMC
Dimension:	W 614 mm × D 472 mm × H 134 mm
Environment:	Pharmacy/Hospital pharmacy/Dose manufacturing facility/ Drug store/Chemist's shop FOR INDOOR USE ONLY
Applicable Directives:	R&TTE Directive 1999/5/EC, LVD Directive 2006/95/EC
Applied Standards:	EN50364 EN 61010-1 EN 61000-6-2, EN 61000-6-4 ETSI EN 301 489-3, ETSI EN 301 489-1 ETSI EN 300 330-2, ETSI EN 300 330-1
Installation Environment:	Indoor and air-conditioned environments only
Temperature:	0-40°C
Humidity:	20-85%
Rated Voltage:	Single phase 100 -240V AC
Rated Current:	1.3 – 0.65A
Frequency:	50/60Hz (no device needed for switching)
Fuse:	HBC AC250V 1.6A × 2
Weight:	25Kg ± 0.5Kg
Noise level:	under 70dB
TCT ID Tag	Half output power (100mW) ISO15693 high bit rate 26.48Kbps One subcarrier 1-out-of-4 13.56MHz

3.3 Machine Parts Name

3.3.1 CMC UNIT



Rear View



Front View



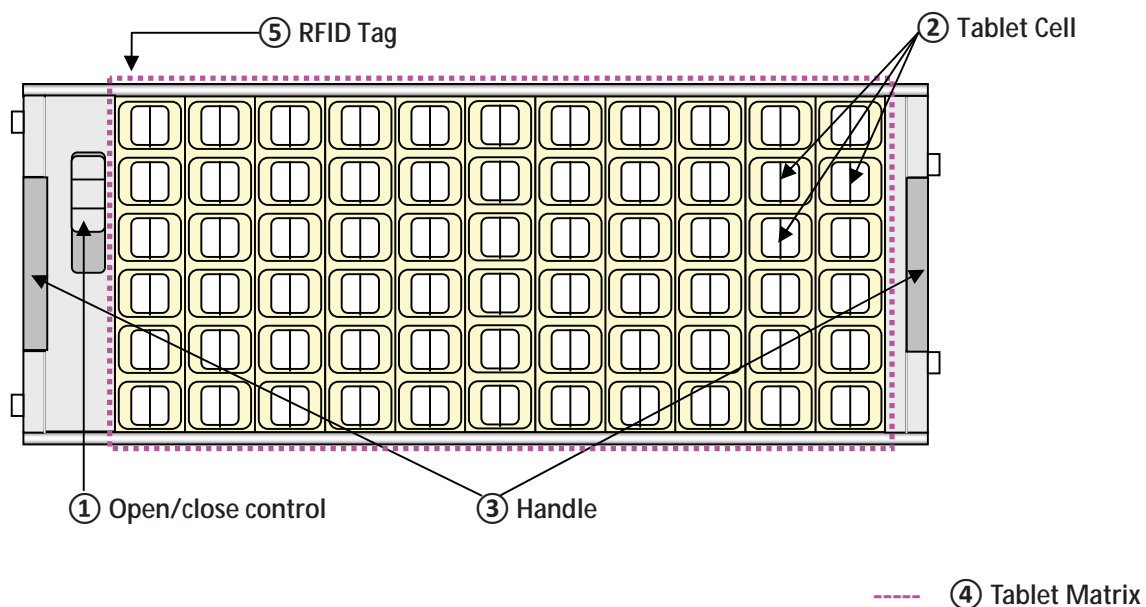
⑨ Cell Shutter



Shutter Movement

No.	Name	Description
①	Benjamin Logo	Lighted when device is powered on
②	Slide Cover	Lid for the Tablet Matrix
③	Tablet Matrix	Matrix to fill the tablets
④	LED Guide	LED light to guide users on filling tablets
⑤	USB Socket	Connection to Control PC
⑥	Main Power I/O	Main machine power switch
⑦	Power Supply	Power Supply Cable
⑧	TCT Drawer	Drawer to insert and exit the TCT Unit
⑨	Cell Shutter	Open/close Shutter where the tablets drop

3.3.2. TCT UNIT



- * There are 66 cells per each TCT Unit. (They are numbered in each cell).
- * Handles are not designed to carry the TCT around for long distance.
- * The 1st pouch (Cell) starts from the upper right corner, counting downwards.

No.	Name	Description
①	Open/Close Control:	Opens and Closes the shutter to all of the Cells
②	Tablet Cell:	Tablet filling Cell (each Cell represents one pouch)
③	Handle:	Handle to carry the TCT Unit
④	Tablet Matrix:	Matrix of 66 Cells
⑤	RFID Tag:	RFID Tag which holds unique information

Chapter 4, Starting the Conveyor Medication Checking

This chapter discusses the operation explanation for this equipment.

The Conveyor Medication Checking System (CMC) is controlled by the controlling software Benjamin; run by a Windows based PC installed separately. Benjamin is part of the FILIA system and it accesses TOSHO's FILIA database.



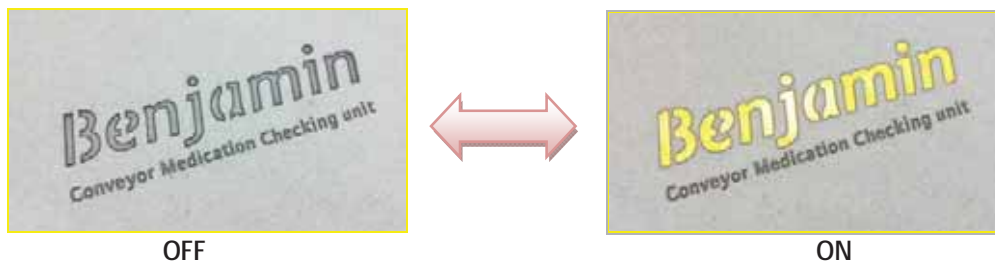
** FILIA System needs to be installed and connected to Benjamin, in order for it to function/operate.*

4.1 Turning the Power on

Turn the power of the CMC on, by accessing the I/O switch.



When CMC is turned on, Benjamin Logo on the center of the device will light up.



When the power is turned on, CMC will Blink all colors of the LED and open the TCT Drawer.



Make sure to visually check whether all LED lights are active, and make sure to check inside the TCT to see if no medications are placed inside.

NOTE

- Users have the obligation to check the device before use.
- TOSHO Inc. is NOT responsible for Any medication errors caused by LED malfunction and TCT leftovers.

4.2 Login

The user needs to Login to Benjamin in order to use the System and CMC. Users may Login using an ID Barcode, or by typing in their Password.

** All users need to have their ID and Password registered in the FILIA System before using Benjamin.*

Sample ID Card



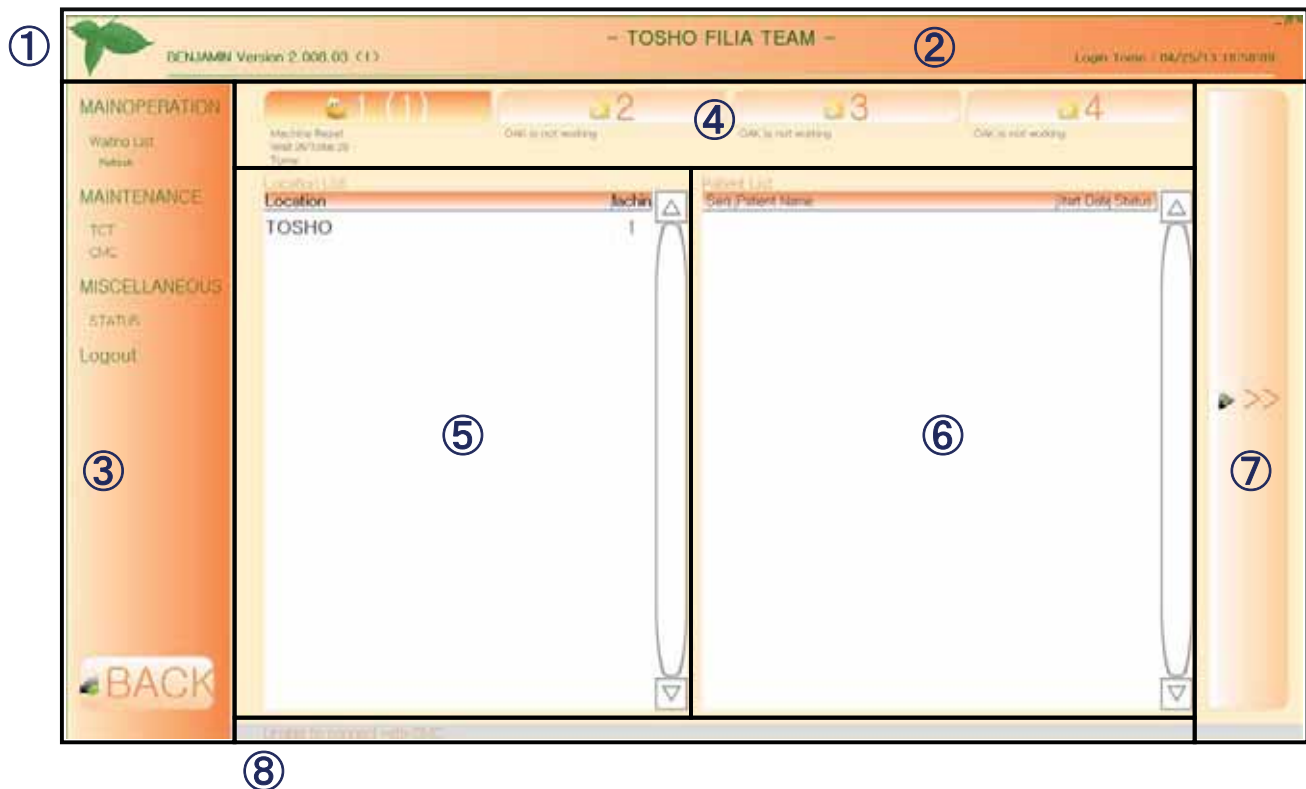
*** ID Card shown above is for sample only. They are not included.*

PASSWORD

Read Barcode or use PC keyboard to input the password.

When PASSWORD is confirmed, the login screen slides away, and the Main Screen of Benjamin will be available for control.

4.3 Screen Explanation



1> Leaf Icon

By clicking the Leaf Icon on the upper left side, the Benjamin Setup window will appear.

2> Banner

The Banner on the top shows the system version on the left side and Login information on the right side.

3> Menu Bar

The Menu Bar is can be opened by clicking the side bar on the very left side.
This Menu is used to switch operations, such as the Maintenance or CMC control.

4> Machine Status

Control Machine numbers are shown under the Banner.
All Oak (machine) status which are handled by this Benjamin are shown in this area.

5> Main and 6> Sub Window

List window shows the list of Locations, Patients, Medicine and so on.

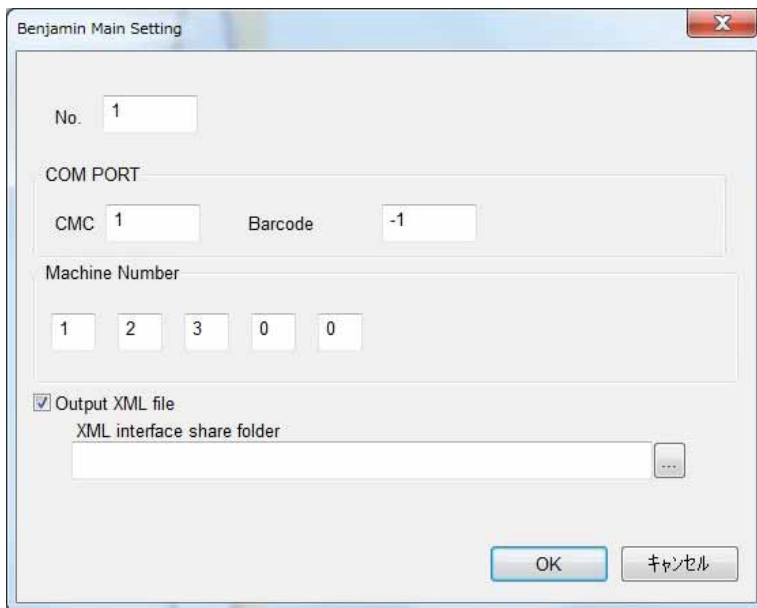
7> Operation Buttons

Operation Buttons on the right side are where action buttons, such as START, CONTINUE and RETURN buttons are placed.

8> CMC and TCT Status

The bottom row shows the current status of the CMC and the TCT.

4.4 Main Setup



CMC No.

Please type in the CMC No.

Default is "1". It should set to another number, only if there are multiple CMCs at sight.

COM Port

CMC com port

Please type in the COM Port number that the CMC is connected to.

In most cases COM Port "1" should be set as Default.

Barcode com port

Benjamin System Barcode Reader uses the Keyboard interface.

Please input the any numbers that are needed to read the barcodes correctly.

The Default number is [-1]. Please set the number according to the Barcode Reader that you are using.

Machine Number

Machine Numbers boxes represent the XANAs that this Benjamin System/CMC will be handling.

Please type in the OAK/XANA No. in the empty boxes.

For example, if there are 3 XANA machines and if you want to prepare the conveyors for all 3 of your machines, type in 1, 2, 3 into the empty boxes.

** 5 XANA/OAKs are the maximum numbers of machines each Benjamin/CMC can handle.*

Output XML file

Please select the share folder for the XML interface.

**This function is only used for interface with Box Dispensing Machines.*

4.5 Start Operation

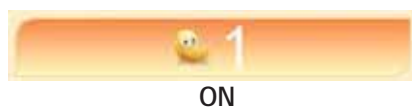


Brief Explanation

When the Prescription Order is sent from the FILIA System, all of the received Orders for the machines that are registered for this Benjamin, should appear in the Location List.

Location List

The Location Name and Machine Number are shown in the Location List.
Machines may be switched on and off by pressing the buttons shown below.



The Location and Patient List will only show the Orders for those which are turned on.

Patient List

All patients in that Location is shown in the Patient List.

Seq: Sequence No.

Patient Name: The Name of the Patient

Start Date: The date when the Prescription Starts

Status: Deleted, Skip or Oak

Operation

Highlight the LOCATION that you want to start, and then press the START button.

Refresh

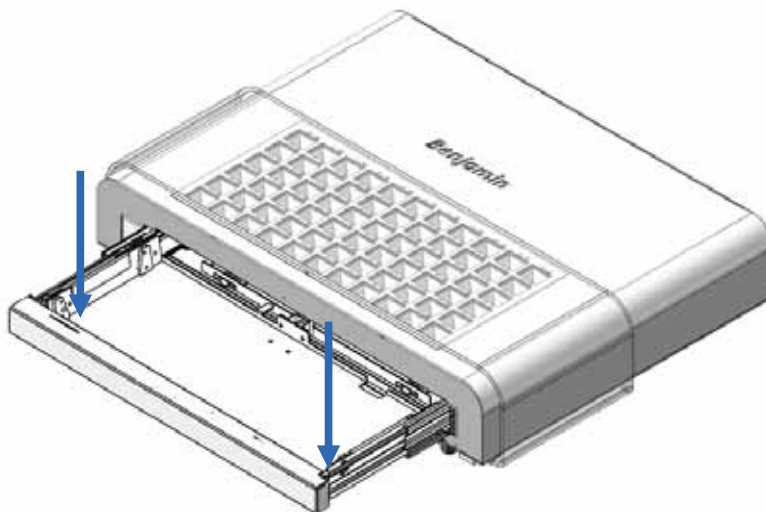
The Refresh function in the Menu Bar may be used in case sent orders are not shown in the Location List.

4.6 Insert TCT

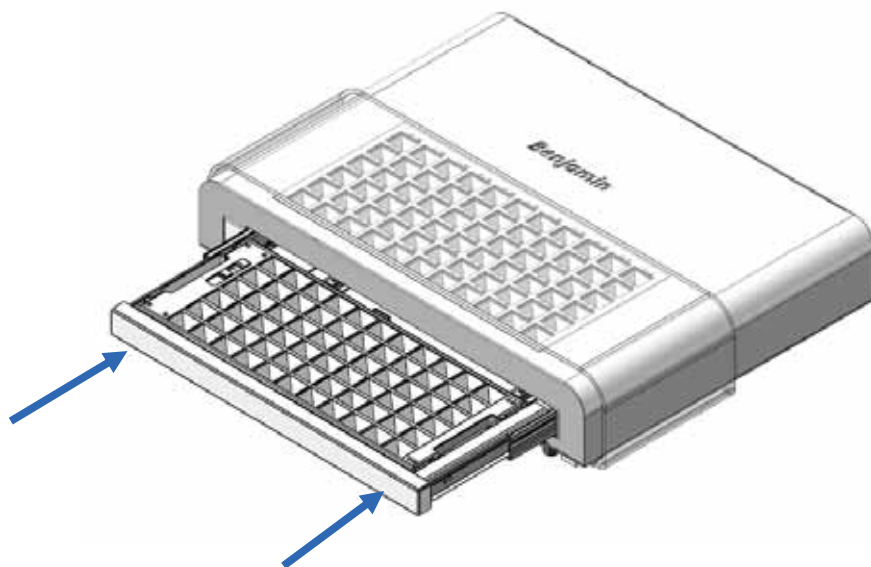


Insert TCT

The TCT Drawer will automatically come out at this Screen.
Please set a new TCT into the Drawer.



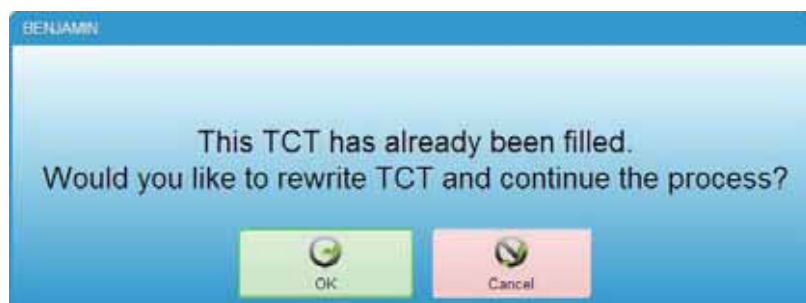
1. Open the TCT Drawer and place the TCT carefully.



2. Push in the TCT Drawer, then the CMC will read the RFID tag and recognize which patient.

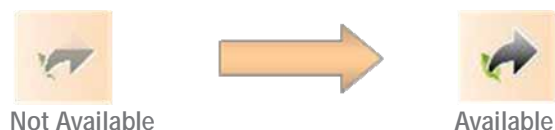
TCT Check

When the TCT is inserted in the Drawer, Benjamin will check the database and make sure that this TCT has already been dispensed.



When Benjamin detects that the TCT has not been dispensed yet, it will show a warning popup screen to choose whether to continue the process or cancel.

When the TCT is checked and ready to start the preparation, the "Please set TCT" message on the top and bottom will disappear and the CONTINUE ICON will become available.



4.7 Medicine Preparation

BENJAMIN Version 2.008.003 <1> - TOSHO FILIA TEAM - Login Time: 04/28/13 18:20

Delete selected patient Skip Fill by Oak

(1)TOSHOSHOP/No.1 Debuke Onk

Seq	Patient Name	Chart Date	Chart Status
1	Debuken Chino	20130425	
2	Dan Fukusima	20130425	
3	Andrew Tamura	20130425	
4	Heichi Kizugai	20130425	
5	Tomoko Watanabe	20130425	
6	Nachi Shibuya	20130425	

Seq	Medicine Name	Qty	Shelf
1	GLIMEPIRID 1 MG WITH PRO	336	
2	ATACAND 20	128	
3	CABASER 1 MG	640	

Fill this location by OAK

Unable to connect with CMC

Medicine Preparation

All Patients in this Location will appear in the Patient List, shown on the left side.

All the Medicine that is used for this Location, and the total amount of tablets will appear in the Medicine List.

Seq: Sequence No.
Medicine Name: The names of the medicines.
Qty: The quantity of the tablets.
Shelf: The Shelf Location from the database.

Please prepare all the medicine at this stage, and continue the operation by pressing the CONTINUE ICON on the right.

BENJAMIN Version 2.008.03 <1> Login Time : 04/25/13 13:22:12

- TOSHO FILIA TEAM -

Please scan Medicine barcode

Delete this patient
 Skip
 Fill by Qsk

03T05H00patients1 / No.1 Osaka Chuo [ECT-1/1]

Medicine Name	Lot Number	Expiration Date
1 GUMEPRED 1 MO WINTHROP	56	20130500 25500
2 ATACAND 250	21	00130500 534
3 CABASER 1 MO	140	20130500 9966

Medicine Name

Lot Number Expiration Date

Unable to connect with COM1

Medicine Information

Please scan the Medicine Barcode.

When the Barcode is recognized, the medicine name should appear in the Medicine Name Box.

Medicine Name <div style="border: 1px solid black; padding: 5px; text-align: center; font-size: 1.2em; font-weight: bold;">GLIMEPIRID 1 MG WINTHROP</div>					
Medicie Barcode : 25560			Validity Date : --- / -- / --		
Lot Number <div style="border: 1px solid black; height: 20px; width: 100%;"></div>			Expiration Date <div style="border: 1px solid black; height: 20px; width: 100%; background-color: #f0f0f0;"></div>		

LOT Number

Enter the LOT Number by using the Virtual Keyboard and press the ENTER key.

Medicine Name					
GLIMEPIRID 1 MG WINTHROP					
Medicine Barcode : 25560			Validity Date : ---- / -- / --		
Lot Number			Expiration Date		
Barcode	Lot Number	Expiration Date	Type	Qty	Deblister Date
3333					

Expiration Date

Enter the Expiration Date also by using the Keyboard and press the ENTER key.

Please check if Expiration Date Use is turned on in the OAK Setup.



OAK
Machine Control System

All applications are linked within the FILIA system. Expiration Date would not be able to be used, if OAK is not using it. (For OAK setup, refer to OAK Users Manual)

OAK setup

Machine general setup

Machine number (1-20) Topra4001ce2

IP Lon number

Cutter ☒ Not use ☐ By location ☐ By patient

RFID com ☒ Cassette and shelf check

☐ Use Hi resolution print mode Barcode com

Interface

☐ Refill event use ☐ C ☐ S Refill event

☐ MDM connection MDM interface folder

Maximum number of pouches in ☐ Doctor

☐ Old barcode method(18len) Half tablet ID ☒ CODE+1 ☐ CODE+Space+1 ☐ Order no.

OAK function

☒ Expiration date use ☒ Merge same location ☐ Deblister date use

☒ Benjamin TCT use ☒ Cassette and Conveyor button use ☐ Auto start

☐ Doesn't check validity ☐ Validity patient don't dispense ☐ Doesn't set last lot number as default

☐ Pre conveyor check mode ☐ Re-Dispense when lot was changed

Left No. Right No. Clover URL

*When *Pachira Barcode is scanned instead of the Original Medicine Barcode, Medicine Name, LOT Number and Expiration Date will be automatically filled in.*



**Pachira Barcode is a special barcode which holds Medicine Name, Amount of Tablets, LOT Number and Expiration Date. For detail information about PACHIRA, please contact TOSHO Sales/Service Agencies. (refer to 1.6)*

4.9 Fill Matrix

Benjamin Version 2.000.00 (13) **- TOSHO FILIA TEAM -** **Login Time: 04/25/13 13:44:13**

Please fill the Medicine into the correct matrix

Delete this patient **Skip** **Fill by Oak**

Medicine List:

Medicine Name	Qty	Lot Number	Expiration Date
1. GLIMEPIRID 1 MG WINTHROP	56	20130508	25540
2. ATACAND ZID	21	20130508	554
3. CABAZEP 1 MG	140	20130508	99456

Medicine Name: GLIMEPIRID 1 MG WINTHROP
Medicine Barcode: 20540
Lot Number: ABCABC
Expiration Date: 2013/12

Barcode	Lot Number	Expiration Date	Type	Qty	Deblistered Date
3333	ABCABC	201312		0	20130425

Matrix:

	0.5T	1T	2T	3T	OTHER
1		1	1	1	1
2		2	2	2	2
3		1	1	1	1
4		1	1	1	1
5		2	2	2	2
6		1	1	1	1

Close

Fill Matrix

After the correct information is imputed to the system, all the information is shown to be checked.

Barcode: The Barcode of the Medicine.
LOT Number: The entered LOT Number.
Expiration Date: The entered Expiration Date.
Type: Narcotic or Non-Narcotic
Qty: The total amount of tablets.
Deblistered Date: The date that this medicine was Deblistered

1. Open the Cover







Slide the Slide Cover of the CMC Device to open.



2. Fill in the Medicine

Fill in the tablets according to the screen and the LED on the CMC correctly.

Tablet amount information

 ALL	Displays all of the medicines in this filling
 0.5T	Half Tablet
 1T	One Tablet
 2T	Two Tablets
 3T	Three Tablets
 OTHER	Other amount of tablets

Amount of tablets are clearly recognized in the Benjamin display and by the color linkage between the display and the LED guide on CMC.

NOTE

- The LED guide and Benjamin software is designed to support the filling process. CMC is not designed to check whether the user has filled the cell with the correct medicine with correct amounts.
- TOSHO Inc. is NOT responsible for any miss filing of the medicine.

3. Close the Cover

Slide the Slide Cover of CMC to close.



Continue this process until the patient is done.
TCT Tray will be released after one patient is done.

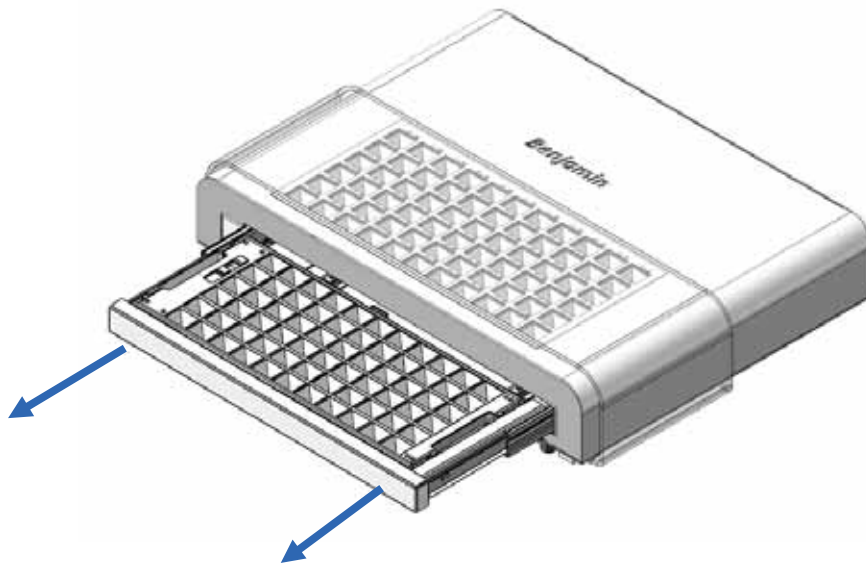
4.10 Take out TCT

When all the filling is done, TCT Drawer will pop out half-way automatically.

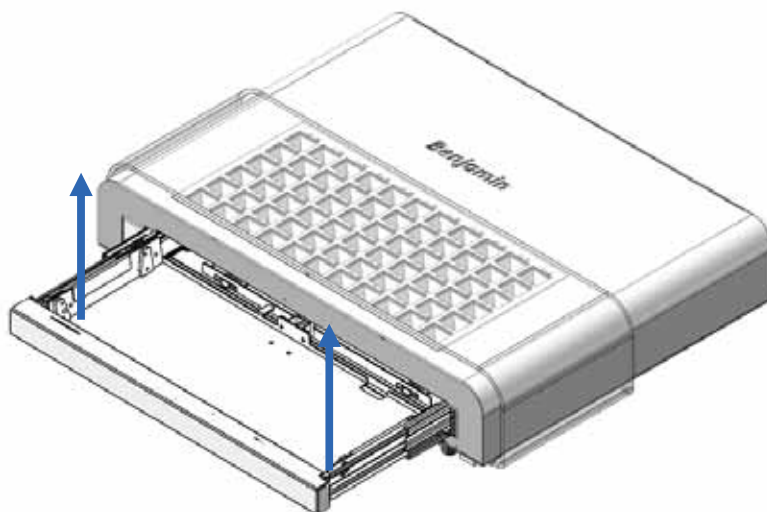


Precautions when Drawer comes out

Before the drawer pops out, the LED guide will flash with a buzzer sound, alerting that the drawer would be popping out. Keep hands, parts of your body or any objects away from the TCT Drawer area.

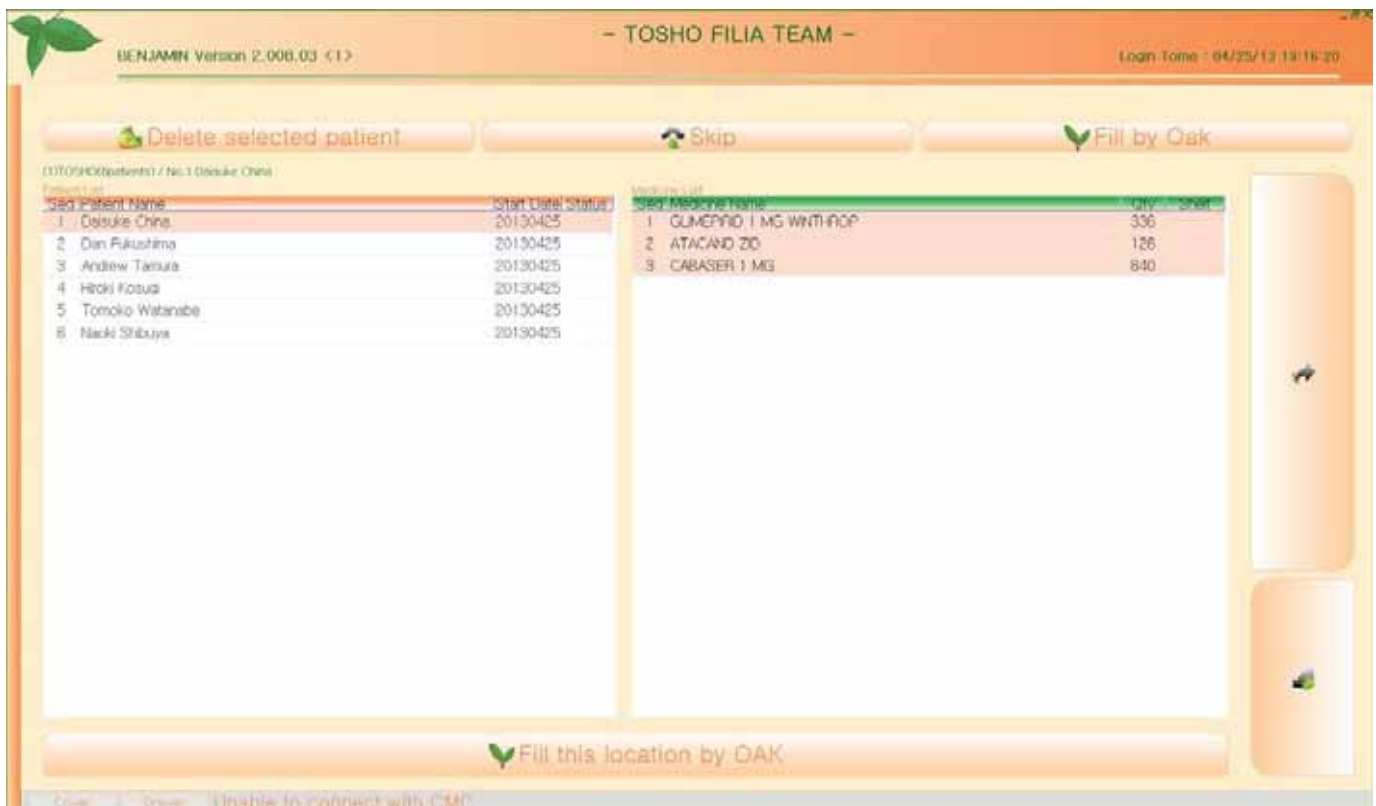


1. Pull out the TCT Drawer all the way in the direction of the blue arrow.



2. Carefully lift the TCT Unit out.

4.11 Delete Location



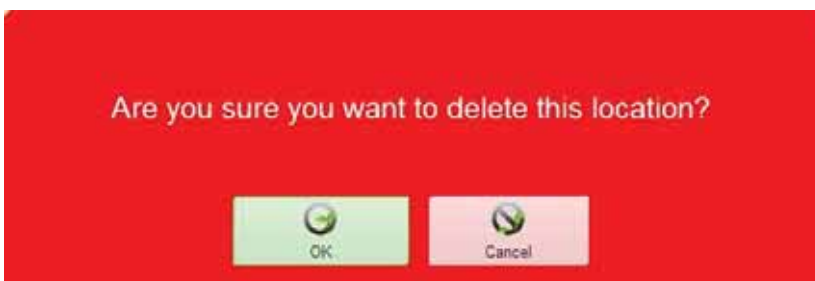
Delete this Location

All Orders are handled by Location as a batch.

In some rare cases, the received Location Order may need to be canceled. In such case, please select the Location and press the START icon.



Press the button shown above in order to delete this location.



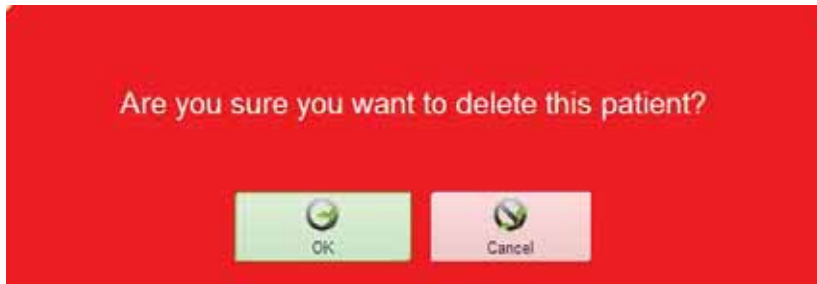
A confirmation popup screen should appear before the location is deleted.

Press OK if you are sure you want to delete and Cancel if you want to cancel this process.

4.12 Delete and Skip Patient

Delete selected Patient

When you need to delete a specific patient and not the whole location, highlight the patient from the Patient List and then press the button shown below.



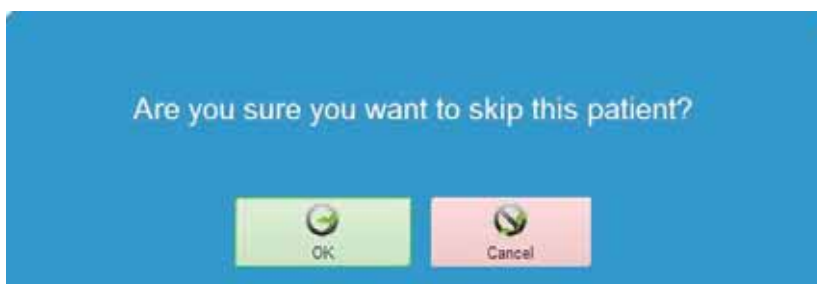
A confirmation popup screen will appear, to confirm your action before deleting the selected patient.

NOTE

When patients are deleted, they will be deleted from the entire FILIA system. Even when the OAK system has already received the Order from Maple, it will not dispense this patient when it is deleted here in Benjamin.

Skip

When you wish to skip a patient and come back to him afterwards, select the patient from the Patient List and then press the button shown below.

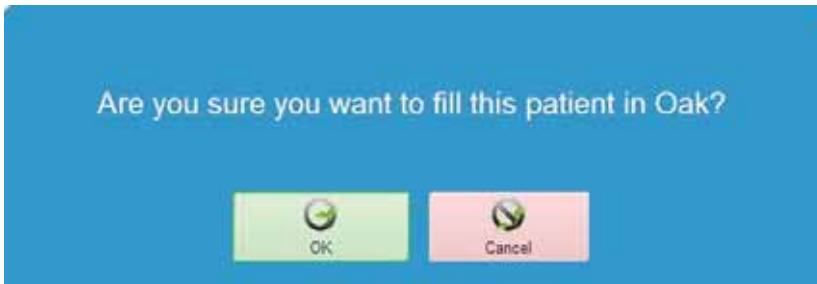


A confirmation popup screen will appear, to confirm your action before skipping the selected patient.

4.13 Fill by OAK

Fill by OAK

You may choose to skip the conveyor preparation by Benjamin and choose to fill the conveyor by the OAK system. In such case, please select the patient from the Patient List and press the button shown below.



A confirmation popup screen will appear, to confirm your action before sending the selected patient order to the OAK system.

Chapter 5, Errors and Trouble Shooting

This chapter describes how to deal with machine and application errors.

5.1 Mechanical Error

CMC will check all of the motor parts (moving parts) to make sure the device is functioning correctly. In case CMC detects an error, CMC will light the LED in red and will not be able to continue. Error possibilities are listed below.

- Slide Cover is open
- TCT Drawer is not closed

Please check the devices mentioned above, and reboot CMC.

If rebooting CMC does not solve the problem, please contact your maintenance agency. For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

5.1.1 Static electricity/First Transient Burst

The machine may stop due to power noise and static electricity.(caused by contact spark from ON/OFF of the relay). If the machine stops, unplug and plug the USB cable located at the back of the machine.

5.1.2 Power Cable

When the power cable is damaged, please contact your maintenance agency. For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

5.2 RFID Error

RFID Read/Write Error occurs when the RFID on the TCT, could not be read or written.

When RFID error occurs, it is important to distinguish whether the problem is the RFID Read/Write device inside the CMC or the RFID Tag implemented in the TCT.

Please try inserting another TCT and if the error still appears, please contact your maintenance agency. For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

Read Error



Write Error



5.3 Communication Error

5.3.1 Disconnection Error

When there is a problem in the CMC, it will handle this error as a Disconnection Error and Shut off the communication between CMC and Benjamin.

This is to ensure safety for the misfilling of any medication to the conveyor.

NOTE

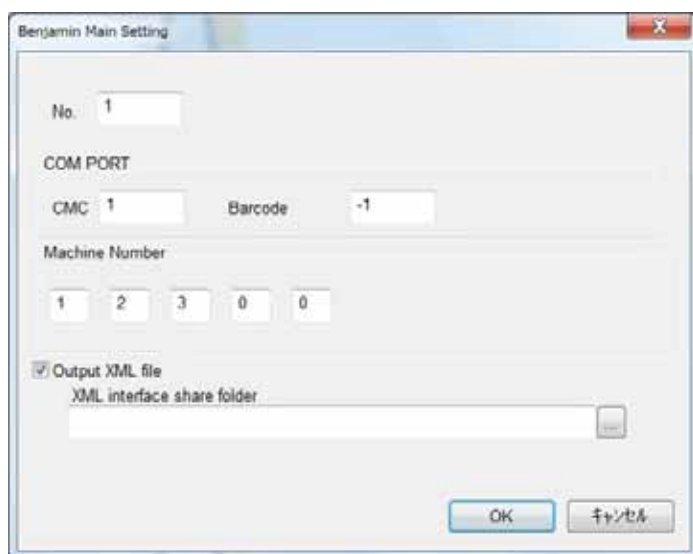
When a disconnection error occurs, the Benjamin application will lock, and the medication filling process will not be able to continue.

5.3.2 TabContV4.1.dll Error

When Benjamin cannot communicate with the set up COM port, or when it fails to communicate with TabContV4.1.dll, it will show the following popup.



In case of this event, please open the setup screen and check the COM port number.



Please check Windows Device manager to make sure that the COM port connected to CMC is correct.

If the COM port is set up correctly, please check the Benjamin Folder under the FILIA folder, and check if TabContV4.1.dll exists.

When TabContV4.1.dll error still remains, please contact your maintenance agency.
For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.



Clear out medicine when problems occur

Make sure to clear out the medicine in CMC Matrix and also all the cells in TCT, to avoid misfiling of the patient's prescription, when any type of error occurs.

Chapter 6, Maintenance and Cleaning the Device

This chapter describes how to maintain and clean the device.

6.1 Machine maintenance

Mechanical machine maintenance of any kind should not be handled by the users of this device.
Please contact your maintenance agency if the device is not properly working, and/or periodical machine maintenance.

For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

6.2 TCT Maintenance

Transportable Conveyor Trays must be registered to the FILIA system before it may be used.

Insert the TCT that needs to be registered, and open the TCT Maintenance Screen from the Menu bar.

TCT Code	Count	Flag	TCT Name	Revision	TCT Seq	Updated Date	Update Time
00001	0		Micky Mouse			2013/01/01	12:11:44
00002	0		Donald Duck			2013/01/01	12:12:12
00003	0					2013/01/01	12:13:55

All TCTs registered in the FILIA System will show in the list box shown above.

READ

Please press the READ button to make sure that the TCT is able to be read correctly.

WRITE

Then press the WRITE button to write an unique number to the RFID and register it to the FILIA system.

Registering Names to TCT

You may register Tray Names for your convenience.

Tray Names will appear in the OAK application when the trays are needed for dispensing.

** Tray Names do not have to be registered, if not needed.*

TCT Code	Count	Flag	TCT Name	Revision	TCT Seq	Updated Date	Update Time
00001	0		Micky Mouse			2013/01/01	12:11:44
00002	0		Donald Duck			2013/01/01	12:12:12
00003	0					2013/01/01	12:13:55

Select the TCT that you want to name.

The selected TCT should be highlighted (green) when chosen.

Double click the TCT Name area which you want to name/rename.

00003	0		Peter Pan	
-------	---	--	-----------	--

Enter the Name, and press [Enter]

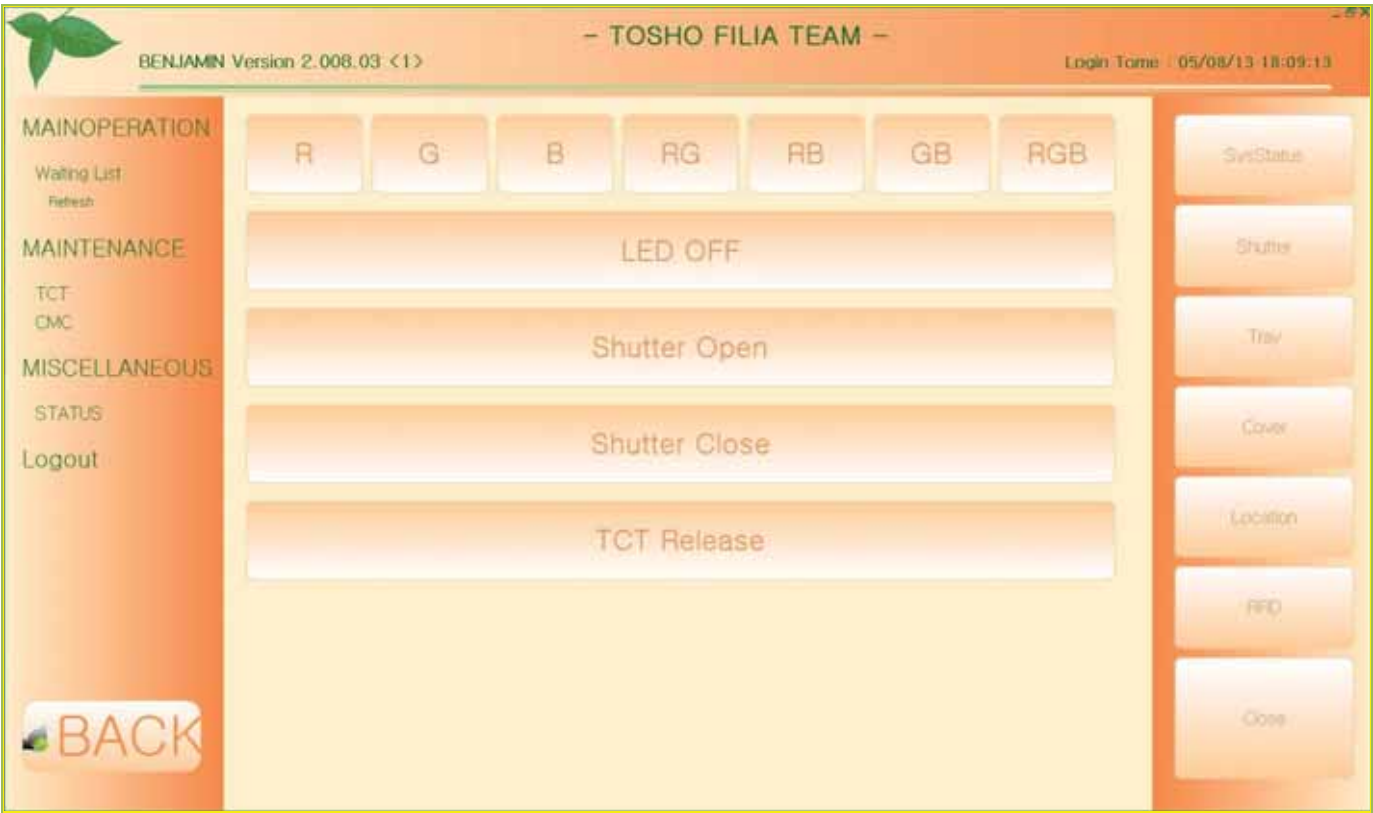
00003	0		Peter Pan	
-------	---	--	-----------	--

The entered name should be saved and should be displayed as the screen shown above.

6.3 CMC Maintenance

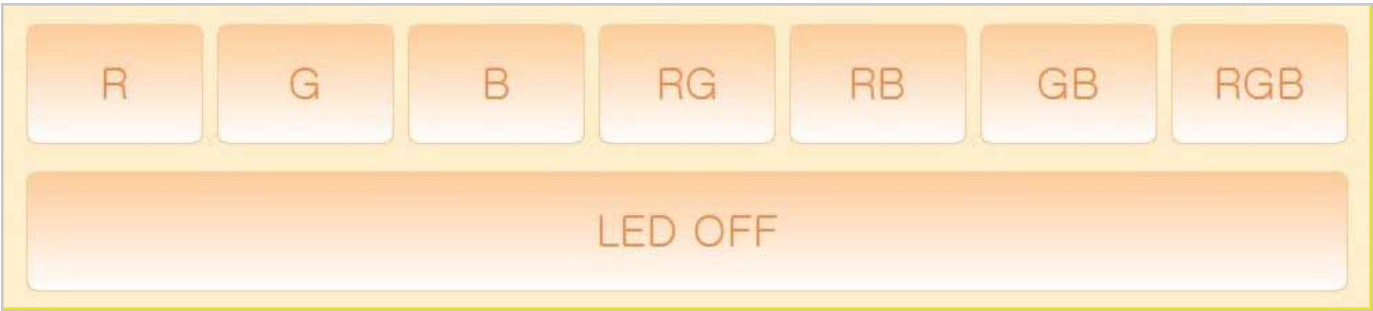
CMC Maintenance is used for maintenance purpose only.
Main purpose is to check if CMC is functioning correctly, or to check if all LED lights are lighting accurately.

Please open the CMC Maintenance Screen from the Menu bar.



Checking the LED Guide

The first part of CMC maintenance is checking if the LED Guides are lighting correctly.



Colors of the LED are expressed in RGB, as shown in the screen above.

RGB	Color
R	Red
G	Green
B	Blue
RG	Yellow
RB	Purple
GB	Aqua
RGB	White

All 66 LEDs should light up according to the colors you choose.
Press [LED OFF] button to turn off the LEDs.

Checking the LED lights if they are lighting correctly is a very important.
The lights of the LED is a main and also a crucial part of this device (system)



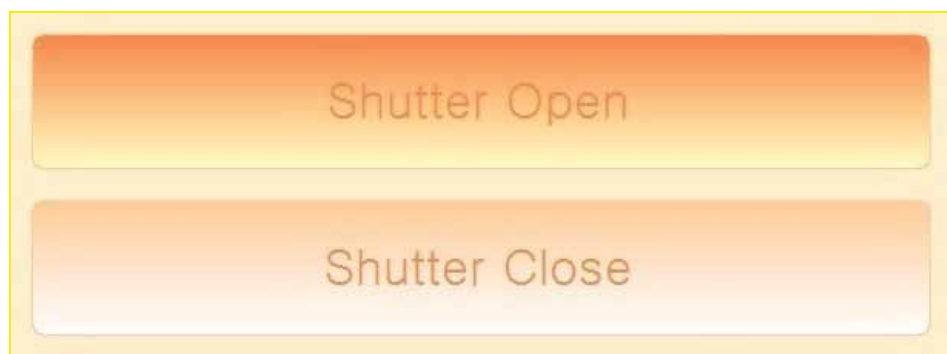
LED lights need periodical checking

Misreading the LED may cause misfiling of the medication and therefore cause mistakes in the patient's prescription.

Please contact your maintenance agency if the device is not properly working immediately.
For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

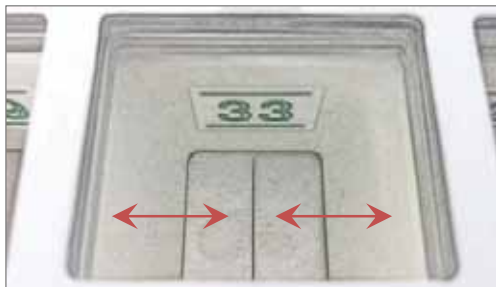
Checking the Shutter

The second part of CMC maintenance is checking if the Cell Shutters are opening and closing correctly.



Press [Shutter Open] to open the shutters.
Shutters will all open and not close.

Make sure the Shutters are open all the way.



↔ Shutter Movement

When Shutters are not open all the way, tablets may not fall into the TCT trays below.



Cell Shutters need periodical checking

Malfunction with cell s shutters may cause misfiling of the medication and therefore cause mistakes in the patient's prescription.

Please contact your maintenance agency if the device is not properly working immediately.
For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

Checking the TCT Drawer

The last part of CMC maintenance is checking if the TCT Drawer releases the TCTs correctly.



6.4 Cleaning the Device

Cleaning of this device should be done as much as possible.

We assume that the users of this device have the knowledge of pharmaceutical profession.

Cleaning the equipment carefully is a very important process to avoid machine malfunctions and medicine contamination.

6.4.1 Exterior



Please slide the Slide Cover open, and wipe all the Matrix Cells from the external side of the device.

By using the Benjamin application, Open and Close the Cell Shutter and carefully wipe the Cell Shutters.

The Safety Sensor system will automatically, turn off the device when the Slide Cover is opened, however, just to be safe, please turn off the power of the device, before you start cleaning the shutters.

6.4.2 Interior

Internal cleaning of the CMC device is considered to be maintenance, and should not be handled by users of this device. Please contact your maintenance agency if the device is not properly working, and/or periodical machine maintenance.

For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

Chapter 7, Handling Chemical Materials

This chapter describes how to handle chemical substances used in this equipment.

7.1 Handling chemical materials

To ensure safety, this section describes the procedures for handling chemical substances used in this equipment.

7.1.1 M.S.D.S

The M.S.D.S is from the chemical manufacturers. For information on chemical substances provided with this equipment or those specified by us, the corresponding M.S.D.S can be obtained from us.

To obtain the M.S.D.S for chemical substances provided when the equipment is delivered to you or provided as a part of service parts, contact our sales representatives or service personnel.

For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

Chapter 8, Making an Inquiry or Suggestion about our Manuals

This chapter describes how to order our manuals.

8.1 Ordering manuals

To order additional manuals or re-order manuals due to a loss or damage, contact our sales representatives or service personnel.

For detailed contact information, refer to 1.6 TOSHO Sales/Service Agencies.

Revision History

Revision No.	Description of Document	Changed Date
1.00	First edition	11/08/2010
2.00	Rewritten for TUV modification	05/22/2013
2.10	Added	08/08/2013
	2.5.2.3 Power Fuse	
	5.1.1 Static Electricity/First Transient Burst	
	5.1.2 Power Cable	
	Modified	
	2.8.3 Location of the hazard warning label	
	3.2 Machine Specification	