ISHIDA CHECKWEIGHER DACS-GN OPERATION MANUAL

Table of Contents

Capacity
Reference Weight
Upper Limit
Lower Limit
OK-Upper Limit+ or OK-Lower Limit
OK-Upper Limit
OK-Lower Limit
Preset Tare
Load Cell (Twin-Cell Specification only)
Product Length
Speed
Conv. Speed
Charge Mixing Weight Deviation
Timing Setting
Product Code
Product Image
Conveyor Mode
Reject Setting
Reject Direction Setting
Output Signal Setting
Output Condition Setting
Output Timing Setting
N/G Stop Setting
Continuous N/G Count
Continuous N/G Stop
Over Weight Accept
Dynamic Calibration
Filter Simulation
Acquisition of Weigh Waveforms

PN : 100-017-7281-03

CHECKWEIGHER

DACS-GN

OPERATION MANUAL

WARNING

- **Do not carry out installation, operation, service, or maintenance until thoroughly understanding the contents of this manual.**
- **Keep this manual available at all times for installation, operation, service, and maintenance.**

ISHIDA CO., LTD.

IMPORTANT INFORMATION

WARNING

- **When performing installation, maintenance or inspection of the device, read this manual thoroughly. Be aware of the possible danger of the device and perform operation by following the instructions in this manual.**
- **Read this document carefully before starting any procedures.**

• SAFETY PRECAUTIONS

- This instruction manual specifies correct use of the device associated with cautionary statement in order for prevention of potential hazard.
- Do not carry out installation, service, or maintenance until thoroughly understanding the contents of this manual.
- Read through Section 1, "1 SAFETY", thoroughly and carefully prior to use of the device.The Section 1 specifies precautions essential for prevention of potential hazard to operator and any other person located close to the device.
- Keep this instruction manual readily accessible for the operator and any other person required.
- Cotact the distributor or the nearest Ishida Customer Support if you have any question or need further information on the device.

• INDEMNITY

ISHIDA CO., LTD. ACCEPTS NO RESPONSIBILITY FOR ANY DAMAGE AND/OR LOSS OF PROPERTY CAUSED BY THE FOLLOWINGS:

- USAGE OF THE DEVICE NOT IN ACCORDANCE WITH THIS MANUAL OR ASSOCIATED SPECIFICATION SHEET.
- USAGE OF THE DEVICE WITH ANY OTHER SOFTWARE PROGRAM THAN WE FORMALLY SUPPLIED FOR THE DEVICE.
- USAGE OF THE DEVICE WITH ANY OTHER PERIPHERAL DEVICE THAN THAT WHICH ISHIDA CO., LTD. GUARANTEES COMPATIBILITY WITH THE DEVICE.
- ANY OTHER MODIFICATION AND/OR REPAIR OF THE DEVICE THAN THAT WHICH ISHIDA CO., LTD. CONDUCTED.
- FORCE MAJEURE, INCLUDING BUT NOT LIMITED TO, ACTS OF GOD, FIRE, EARTHQUAKE, FLOOD OR ACCIDENT.
- FROM AN ACT BY A THIRD PARTY
- THE INTENTIONAL OR NEGLIGENT ACT BY CUSTOMERS
- IMPROPER USE BY CUSTOMERS
- USE UNDER ABNORMAL CONDITIONS

• WARRANTY

Ishida Co.,Ltd warrants to the customers that the device shall be free from defects in material and workmanship. THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE DEVICE.
ISHIDA CO.,LTD'S LIABILITY FOR BREACH OF WARRANTY SHALL BE LIMITED SOLELY AND EXCLUSIVELY TO REPAIRING OR REPLACING, AT ISHIDA CO.,LTD'S OPTION, THE DEFECTIVE DEVICE.
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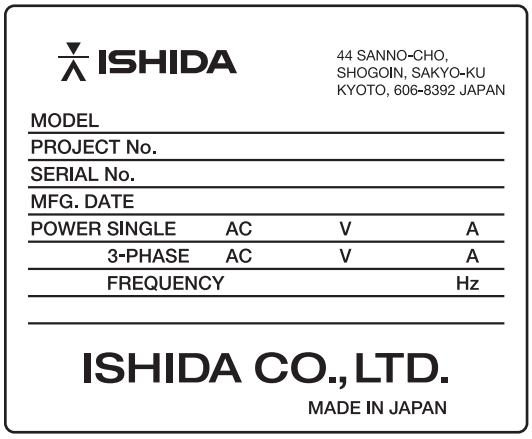
Any disclosure of such confidential information to third parties or unauthorized copying of the information contained herein, directly or indirectly, in whole or in part, is not permitted without prior written approval from Ishida Co., Ltd.
Ishida Co., Ltd. is the exclusive owner of the know-hows either expressly specified or implied in this manual.
Ishida Co., Ltd. grants to the customer non-transferable, non-exclusive license to use such know-hows in the manner described in this manual to the extent it is necessary to maintain the device.

• MISCELLANEOUS

Although this manual has been carefully edited, if there are any mistakes or if you have any questions, please check the machine type (model) and machine identification and contact your distributor or Ishida Customer Support.
The model and machine identification are indicated on the device plate attached to the device.
The information contained herein may be changed without prior notice.



Device Plate

OBJECTIVES AND ORGANIZATION OF THIS MANUAL

1. Purpose of this manual

   This manual is designed to provide users with information about the operation, maintenance, inspection, and installation of the Ishida DACS-GN series.

2. How to use this manual and how this manual is organized

   Chapters 1 through 5 contain basic information such as safety consideration, structure, and the operation of this device. From chapters 6 and on, more technical information is presented, such as detailed description of the device functions, including various data settings, and maintenance and inspection procedures. In order to acquire information which is necessary for your service, personnel involved in daily production using this device should read the early chapters, and personnel involved in management of the production line or maintenance of the device should read all chapters thoroughly.
   The organization of this manual, the contents of each chapter, and the intended readers are described in the table below. All personnel involved in operations with the equipment should select the required information to make effective use of this manual.

Note

The definition for each intended reader described in the table below is as follows:

• Operator:	Personnel who perform basic operations during daily production with the production line (i.e., operator level operations). **Do not perform any work in this manual that is targeted to any personnel other than Operators.**
• System administrator:	Personnel who, in addition to the operator level operations, perform registration for weighing and adjustment operations (i.e., administrator level operations). **Do not perform any work in this manual that is targeted to maintenance engineers or Ishida service engineers.**
• Maintenance engineer:	Personnel with specialized knowledge about the equipment who perform maintenance or inspection of the equipment (i.e. installation level operations). **Do not perform any work in this manual that is targeted to Ishida service engineers.**
• Ishida Service engineer:	Personnel who, in addition to the system administrator level operations, perform tuning when installing the equipment. **Unless otherwise noted, there is no limitation in performing any operation described in this manual.**

The following information is contained in this manual.

1. SAFETY PRECAUTIONS

Be sure to read and understand all information related to safety contained in this manual before attempting to operate, inspect or service this machine.
This information is included to instruct persons who own, install, operate, service or inspect this machine on the warning symbols, precautions which must be observed, the meanings of safety labels attached to the machine as well as sanitary precautions.

2. INTRODUCTION

This chapter describes special terminology used in this manual, machine specifications, configuration, and operation outlines.

3. INSTALLATION

This chapter describes the correct methods of installing the machine.

4. OPERATION PANEL

This chapter describes the components and functions of the operation panel unit (RCU).

5. PRODUCTION

This chapter describes the normal operations and describe the procedures for emergency stop, preparation, operation, and shutdown.

6. OPERATION AND FUNCTION

This chapter describes the setting procedure for product data and functions for applied operations.

7. CLEANUP PROCEDURES

This chapter describes procedures for cleaning the machine.

8. MAINTENANCE AND INSPECTION

This chapter describes the maintenance and inspection procedures required to keep the weighing function in optimum condition.

9. TROUBLESHOOTING

This chapter describes possible causes of failures/troubles and remedial actions.

10. OPTIONS FOR CHECKWEIGHER

This chapter describes the function of the options for checkweigher.

11. APPENDIX

INDEX

TABLE OF CONTENTS

6 OPERATION AND FUNCTION

1 SAFETY PRECAUTIONS

1.1 Summary

This chapter describes the proper use of the warning terms, precautions, and warning labels that are attached to the device. The warning terms must be observed by the owners and personnel who install, operate, maintain, and inspect this device.

WARNING

- **When installing, operating, maintaining, and inspecting the device, always follow the instructions and warnings found within this manual.**
- **When there are any questions or when anything is unclear, contact the distributor or Ishida customer support staff. Do not proceed with any operations until the required instructions are given.**

1.2 Warning Indications-Types and Definitions

The warning instructions contained in this manual, as well the indications on the labels attached to the machine, are ranked into three categories according to the level of hazard involved.
It is important that these indications be fully understood and complied with.

Table 1-1

Notation	Description
DANGER	If this hazard is not avoided, death or serious injury will probably result. This indicates an imminent danger, and extreme caution must be exercised to prevent a mishap.
WARNING	If this hazard is not avoided, there is a possibility of death or injury resulting.
CAUTION	If this hazard is not avoided, there is a possibility that light or moderate injury may result. It may also indicate that a possibility of damage to device exists.
NOTE	Used for cautionary or important information to be noted or emphasized.
TIP	Used to indicate reference information for operations or information which helps understanding of the device.

1.3 General Precautions

To prevent hazards to person and damage to properties, items described in this chapter must be strictly observed.
In addition, notes which are specific to this equipment as described in section "1.4 Special Precautions" must be strictly observed.

< Safety precautions regarding equipment installation >

Table 1-2

Degree of hazards	Possible hazards and its prevention methods
⚠ DANGER	**Electrical wiring work must be performed by a legally qualified person.** Electrical wiring work on the equipment must be performed by a legally qualified person. It is the violation of applicable laws and regulations for a person who is not legally qualified to perform electrical wiring work of the equipment. Faulty electrical wiring work may cause fire, electric shock, ground leakage, etc.
⚠ DANGER	**Ground the equipment.** The equipment must be connected to protective ground. Securely connect the equipment to protective ground by having a legally qualified person perform the electrical wiring work. Improper grounding may result in an electric shock
⚠ DANGER	**Connect the equipment to a power supply with the voltage and frequency as indicated in the specifications and on the device plate.** Connecting to a power supply with different voltage or frequency may result in equipment malfunction.
⚠ DANGER	**Avoid multiple-tap connection to a single outlet for power supply cable and other cables.** Otherwise it may cause burning or start a fire.
⚠ DANGER	**Do not pour water on the equipment. Do not install the equipment at a location exposed to moisture or condensation.** Except for water-resistant equipment, exposing to water will result in loss of performance, reduction in functions, equipment failure, or electric shock.
⚠ DANGER	**Install the equipment at a solid and level location.** Installing the equipment at an unstable or tilting location may cause loss of performance, functions, or roll-over of the equipment, resulting in injury.

Table 1-2

Degree of hazards	Possible hazards and its prevention methods
⚠ WARNING	**Install the equipment with sufficient distance maintained from other electronic devices.** Otherwise malfunction of the equipment or other electronic devices may occur.
⚠ WARNING	**Maintain necessary space for operation and maintenance.** Otherwise an operational error or injury may occur.
⚠ CAUTION	**Do not use the same power supply for devices which may result in malfunction or damage.** Otherwise the machine may malfunction or break down.

< Safety precautions regarding equipment operation >

Table 1-3

Degree of hazards	Possible hazards and its prevention methods
⚠ DANGER	**Do not touch the equipment with wet hand.** Doing so may result in electric shock.
⚠ DANGER	**Do not step on or pull wet or damaged cables of the equipment.** Doing so may result in electric shock, fire, or injury.
⚠ DANGER	**Do not put any object on the power supply cable and protect it from being damaged by the equipment or device placed on the cable.** Damaging the cable could result in electric shock or fire.
⚠ DANGER	**Do not try to disassemble, repair, or modify the equipment.** Do not try to disassemble, repair, or modify the equipment with tools such as screwdriver or spanner unless indicated in the instruction manual. Doing so may result in electric shock, fire or injury. All repairing the device can be performed by Ishida service department. Contact the distributor or Ishida Customer Support.
⚠ DANGER	**Be sure to check that there is no damaged parts or missing parts before starting operation.** Otherwise parts fragment may become mixed into a product handled by the equipment, resulting in a foreign matter contamination accident. Electric shock, fire or injury may result.

Table 1-3

Degree of hazards	Possible hazards and its prevention methods
DANGER	**Start operation after checking that nothing is placed on the equipment.** The object placed on the equipment may become mixed together with product handled by the equipment, resulting in a foreign matter contamination accident. Electric shock, fire or injury may result.
DANGER	**Operate the equipment with all the covers and doors closed.** Otherwise may result in loss of performance, reduction in functions, or injury.
DANGER	**Do not insert your hand or finger in the gap of the cover or door of the equipment.** Doing so may result in loss of performance, reduction in functions, or injury.
DANGER	**Conduct maintenance and cleaning of the equipment.** Make sure to conduct maintenance and cleaning of the equipment according to the instruction manual. Not doing so may result in loss of required hygienic level of foods handled by the equipment.
WARNING	**The equipment must be operated by a person who has read and understood the instructions in the manual.** Make sure to fully understand precautions, methods on operation and maintenance according to the instruction manual before operating the equipment. Otherwise electric shock, injury, fire, damage to the equipment or food poisoning caused by foods handled by the equipment, may occur.
WARNING	**Operate the equipment with appropriate clothes.** Be sure to fasten or zip up any fasteners on the clothes. Put on non-slip shoes and tightly tie the shoe laces. Remove any accessories that your are wearing. Remove tie and strap, or fasten them tightly with a clip. Cover your hair entirely with a hat or hair cap. Disregarding the above instructions may result in hair or fibers mixed into the product handled by the equipment and cause a foreign matter contamination accident. In addition, it may result in an injury caused by entanglement of foreign matter in the equipment.
WARNING	**Make sure that there is no other person around the equipment before operating the equipment.** Injury may occur when trying to operate the equipment suddenly while other person is near the equipment.
WARNING	**Do not touch the operating parts of the equipment unless indicated in the instruction manual.** Doing so may result in loss of performance, reduction in functions, or injury.

Table 1-3

Degree of hazards	Possible hazards and its prevention methods
⚠ WARNING	**Use fingers to operate the control panel.** Operating the control panel with other than fingers may result in damage of the control panel.
⚠ WARNING	**Do not ride on, lean against, or sit on the equipment.** Doing so may result in loss of performance, reduction in functions, or injury.
⚠ WARNING	**Use a stool or step ladder in accordance with its instruction manual and as indicated.** When using a stool or step ladder, make sure to follow the instructions in the manual as indicated. Otherwise it may result in injury.
⚠ WARNING	**Be sure to wait at least 5 minutes after turning off the power supply before conducting maintenance or inspection of the equipment.** Otherwise may result in electric shock.
⚠ WARNING	**Do not conduct any maintenance or inspection that is not described in the instruction manual.** Doing so may result in electric shock, fire or injury.
⚠ WARNING	**Do not turn off the main power supply switch during operation except in emergency.** Turning off the main power switch of the equipment during operation may delete the configuration and summary data.
⚠ WARNING	**For cleaning and sterilization, follow the procedure described in the chapter: CLEANUP PROCEDURES, for proper operation.** **Avoid sterilization that can affect durability of the parts such as ozone or chemicals.**
⚠ CAUTION	**Do not allow foreign objects or liquid such as insecticide to enter the protected sections of the equipment such as the main body, terminal box, and motor box.** They may lead to equipment malfunctions or breakdown.

1.4 Special Precautions

This section describes special safety and sanitary precautions for this device which, in addition to the previously mentioned precautions, should be carefully observed.

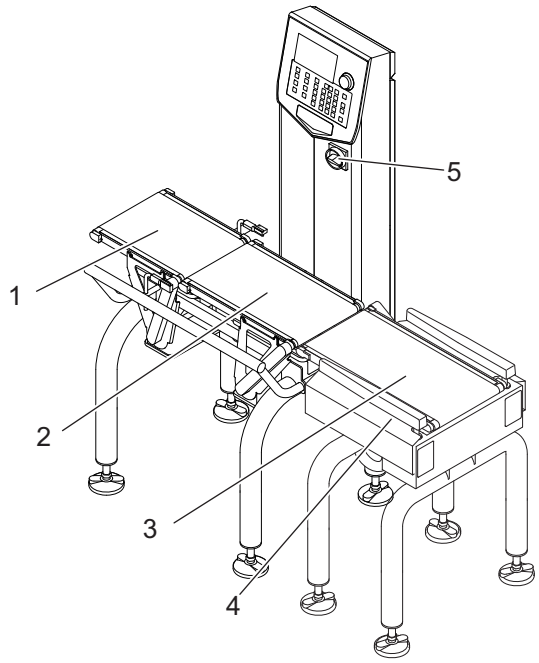


Fig. 1-1

Table 1-4

Degree of hazards	Possible hazards and its prevention methods	Fig. No.	Chapter
⚠ WARNING	Do not place your hand between conveyors. Otherwise, the conveyor may entangle your hands, which may cause an injury.	1, 2, 3	"2.2"
⚠ WARNING	When cleaning the device, the operator must turn OFF and lock the main power switch and keep the key in his possession during the work to prevent other personnel from starting the device accidentally, which may cause an electrical shock or injury.	5	"1.6"
⚠ CAUTION	Be sure that a chute of the rejecter device is installed before operating the device.	4	—
⚠ CAUTION	(When arm rejector is used) When supplying air, do not place your hand or an object on the conveyor. The arm may suddenly move and you may get injured.	1, 2, 3	—
⚠ CAUTION	During operation or just after stopping the device, do not touch the moving parts. Oil seal to protect the bearing is very hot due to frictional heat. Such temperature rise of oil seal is not abnormal.	1, 2, 3	—

Table 1-4

Degree of hazards	Possible hazards and its prevention methods	Fig. No.	Chapter
⚠ CAUTION	Route the wiring in the way that power voltage fluctuation due to load change does not exceed ±10%. Failure to do so may cause malfunction or damage to the device.	—	"3.2"
⚠ CAUTION	When relocating the device, consult the distributor or Ishida customer support. Inappropriate installation may result in inaccurate weighing.	—	"3"
⚠ CAUTION	Do not apply an excessive load to weigh conveyor. Doing so may damage the weighing part.	2	—
⚠ CAUTION	When the cleaning procedures specified, wipe with a dry cloth. Failure to do so may cause malfunction or damage to the device. For unpacked food, the risk of an unhygienic condition may occur through the usage of the device. To prevent such risk, clean the device properly depending on product type and processing methods. For cleaning methods, read and thoroughly understand Chapter 8 and follow the instructions.	—	"7"
⚠ CAUTION	Install this device in a location fulfilling the following conditions. Failure to observe the instructions may cause breakdown or malfunctions of the device. • Do not place in a location subject to dust, vibration, direct sunlight or extreme heat. • Do not place the device near equipment which generate electromagnetic interference. • Ambient temperature range: 0°C to 40°C • Ambient Humidity: 35% to 85% (no condensation) • Do not water the upper portion than the legs. • A hard level surface with minimum vibration. When a metal detector is connected, install the device so that the following conditions are also fulfilled. • Ensure that there is no moving metal objects near the device other than Ishida devices. • Do not place the device near metal detectors operating at identical frequency. • Ensure that the metal detector is fixed securely on the device.	—	"3"

Table 1-4

Degree of hazards	Possible hazards and its prevention methods	Fig. No.	Chapter
⚠ CAUTION	The conveyor is mounted by the spring force. When mounting or removing the conveyor, take extreme caution to the following: • Removing the conveyor: If the shaft is released from the hook, the moving part at the conveyor end is loosened and your hand may be caught in the conveyor frame. Take caution not to hold near the moving part. • Mounting the conveyor: When pushing the shaft at the conveyor end in the hook, hold the conveyor bracket with a finger taking care not to be pinched and push in carefully.	1, 2, 3	"7.3"
⚠ CAUTION	(When a metal detector is connected) When the setting value was changed during the production, stop the production to confirm the detecting sensitivity. Otherwise, the metal detector will not operate accurately for a certain period after the change of setting value during the production.	—	—
⚠ CAUTION	(When a metal detector is connected) <Information about detecting sensitivity> • Type of metal and detecting sensitivity The detective size of metal depends on the type of metal, such as steel, copper, aluminum, and stainless, because the metal detector's response to the metal and detection principle depend on the type of metal. Be sure of the following when confirming the detecting sensitivity. • Shape of metal and detecting sensitivity The detecting sensitivity is indicated by the diameter of the smallest metal ball to be detected. The sensitivity of metal bar depends on the angle when it passes through the metal detector. Note that non-magnetic metal is not detected due if the diameter of cross section is less than that of test piece due to the principle, regardless its length. • Product effect and detecting sensitivity Depending on the character of the product, the metal detector responses the product as if it is a metal. This effect is called "Product effect". Product effect depends on each products and the product effect for the same product depends so much on its state such as temperature, water or oil content. When the product effect is large, the detecting sensitivity needs to be decreased to prevent the masticating due to the product effect. In such case, note that the sensitivity to metal is also decreased. • Transition of product effect and detecting sensitivity Product effect changes according to the change of the state over time. To keep detecting sensitivity high, control the state of product so that the product effect is kept as small as possible.	—	—

1.5 Warning Labels

Warning labels which indicate points requiring particular caution are attached to the weigher at certain locations. Please take sufficient time to familiarize yourself thoroughly with the meanings and positions of these labels.

1.5.1 Warning Label Handling

- Check if all the warning labels are legible. If any letters or illustrations are unclear, clean or replace such labels.
- Clean the warning labels using a cloth, water, and neutral detergent.
  Do not use organic solvents or gasoline.
- If the warning labels are damaged, lost, or illegible, replace the labels.
  Check the machine type (model) and machine identification, and contact the distributor or Ishida customer support.

1.5.2 Warning Label Location

The diagram below shows the location of the warning label.

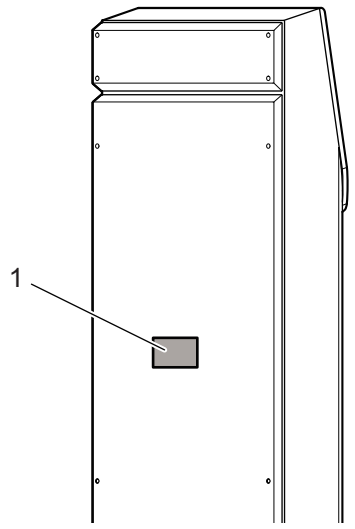


Fig. 1-2

Table 1-5

No.	Location	Label	Meaning of hazard	Prevention Method of hazard
1	Rear of the machine		ELECTRIC SHOCK	Disconnect from main power before opening.

1.6 Drive Power Shutdown and Indication

CAUTION

- **When performing maintenance or inspections, turn OFF the power supply to secure the safety of operator.**
- **Note that if the main power switch is turned OFF, the power is supplied to the main body circuit to the main power switch.**

When performing maintenance or inspections, the following procedure is recommended to prevent the other operators from accidentally turning ON the power supply.

- Lock the main power switch in the OFF position.
- Create an accident prevention tag and place it at power shut-off location.

The figure below shows the placement of a main power switch lock and accident prevention tag.

NOTE

- A main power switch lock and accident prevention tag are to be prepared by customers.

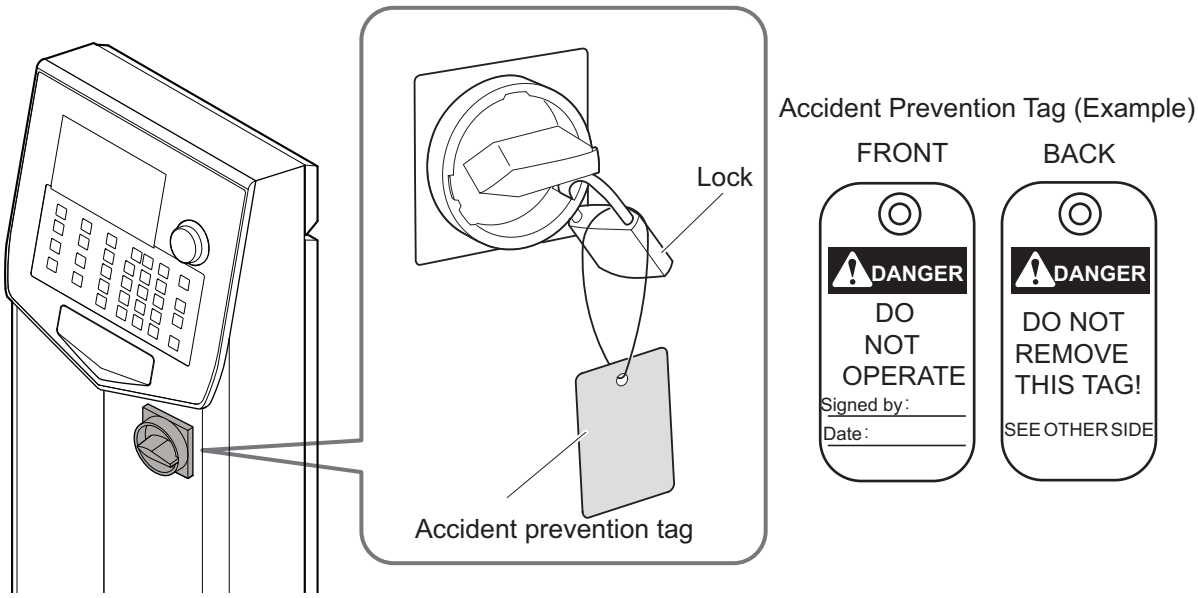


Fig. 1-3

2 INTRODUCTION

This chapter describes the special terminology used in this manual, installation specifications, configurations, and operation outlines.

2.1 Terminology

Some of the special terms used in this manual are explained below.

Table 2-1

Term	Definition
Product	The article which is being checkweighed.
Packer	The upstream equipment feeds product to the checkweigher.
Over	Measured weight of product that exceeds upper limit.
Under	Measured weight of product that is less than lower limit.
Proper	Measured weight of product that is within the range between upper and lower limit values.

2.2 Main Components

The name of each part and the function are described below.
* The figure below shows a checker with arm rejector (optional).

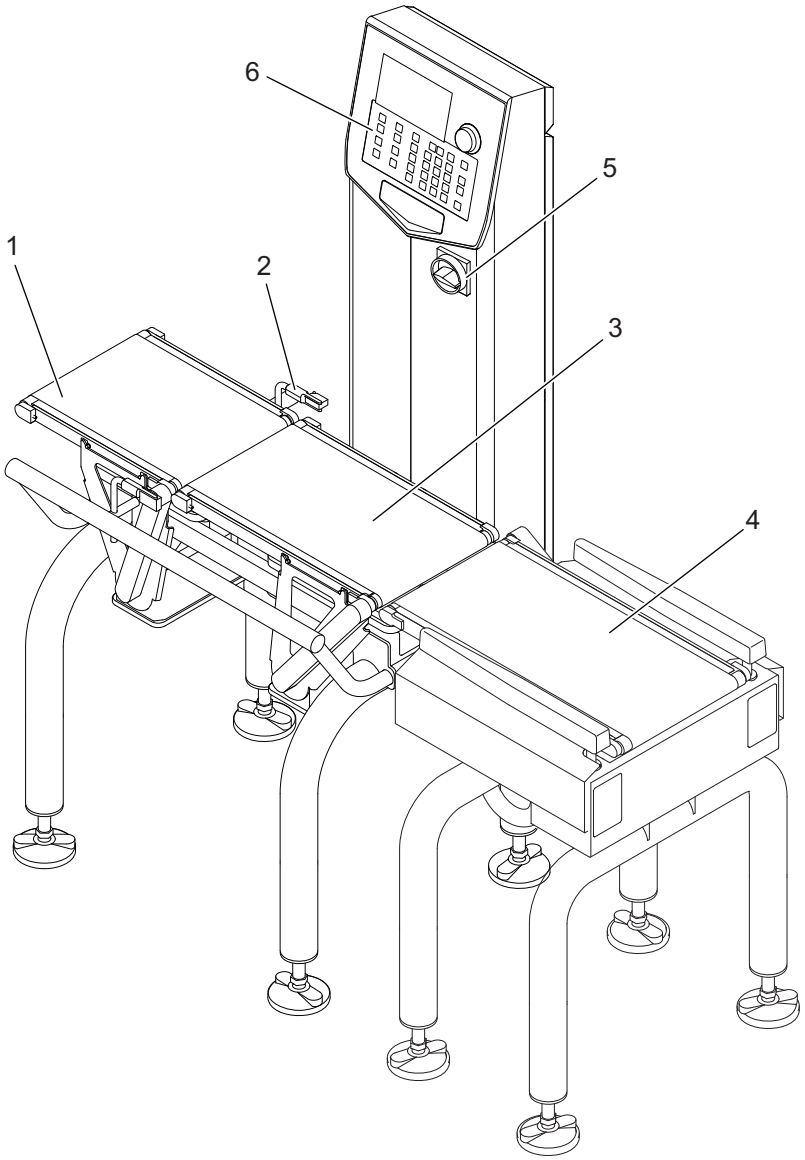


Fig. 2-1

Table 2-2

No.	Unit	Functional Description
1	Infeed Conveyor	Conveys the product to the weigh conveyor. Weighs the product on the weigh conveyor depending on the machine type. Do not overload or give a shock on it carelessly.
2	Photo Sensor	Detects that the product passed. 2 sets for the metal detector and weigher are equipped.

Table 2-2

No.	Unit	Functional Description
3	Weigh Conveyor	Weighs the product on the weigh conveyor. Do not overload or give a shock on it carelessly.
4	Rejector Device (option)	Diverts product based on weighing result.
5	Power Switch	Supplies/cuts power to the device.
6	Operation Panel	Used to set the operational condition and operate the device.

2.3 Operation Outline

This section describes the operation flow in which the product is infed to the infeed conveyor, weighed, and discharged.

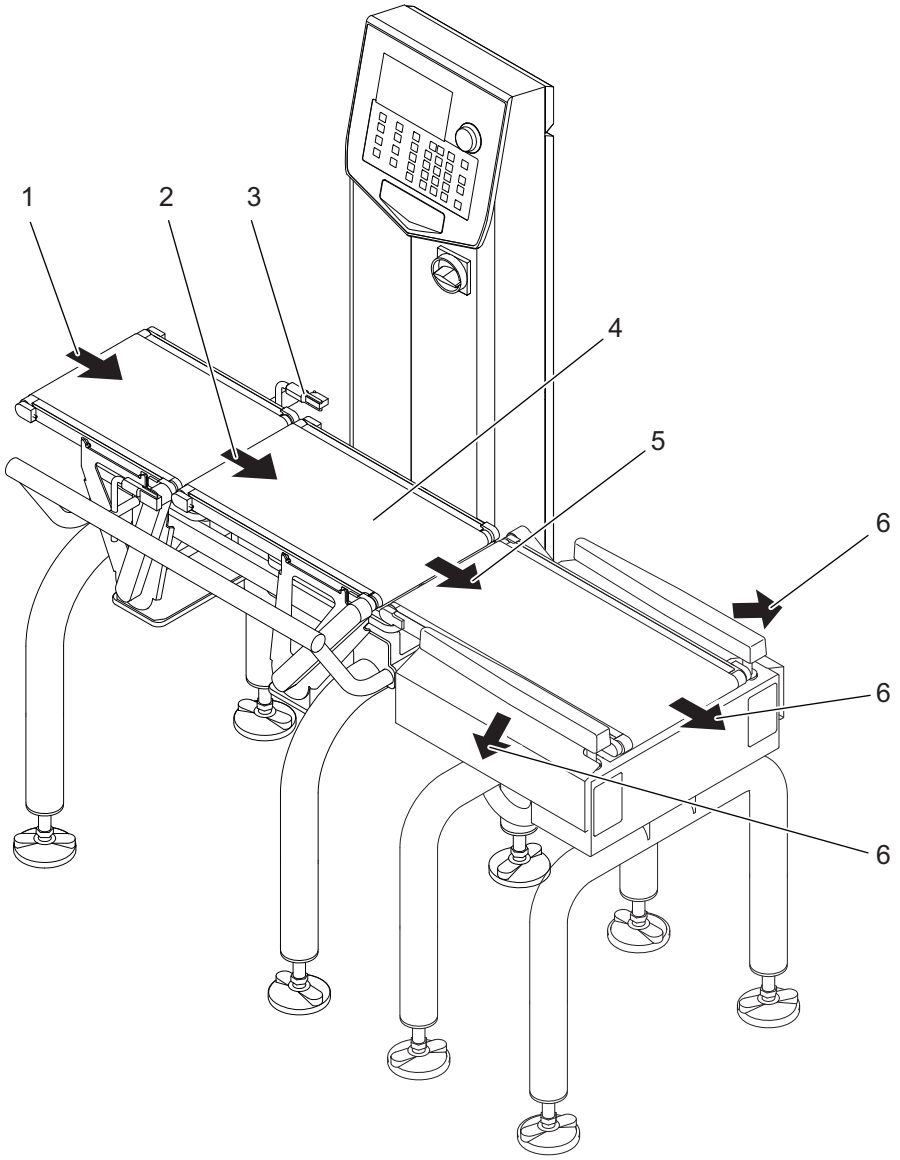


Fig. 2-2

1. Product is supplied from the upstream device such as a packer to the infeed conveyor.
2. Product is transferred from the infeed conveyor to the weigh conveyor.
3. Product on the weigh conveyor is detected by the photo switch.
4. Product is weighed on the weigh conveyor.
5. Product is discharged from the weigh conveyor.
6. When the optional rejector device is equipped, product may be diverted based on the weight and the metal detection results.

3 INSTALLATION

This chapter describes the correct methods to install the device.

⚠ CAUTION

- **When relocating the device, consult the distributor or Ishida customer support. Inappropriate installation may result in inaccurate weighing.**

3.1 Installation Condition

When installing the device, satisfy the following installation conditions.

- Indoors
- Do not water the upper portion than the legs. (SS specification)
- Ambient temperature range: 0°C to 40°C
- Ambient Humidity: 30% to 85% (no condensation)
- A hard level surface with minimum vibration.
- Sufficient area to perform maintenance is secured around the device.
- Ensure that there is no moving metal objects near the device other than Ishida devices.
- No RF systems or other equipment emitting electronic waves are placed near the device
- A sanitary area.
- The power outlet should be placed near the equipment, DACS-GN main body.

INTERFACE WITH EXTERNAL EQUIPMENT (UL)
For optional relay unit, external connection must be from SELV (Safety Extra Low Voltage) circuit within following maximum rating:

-When connected to a resistance load maximum voltage and contact current not to exceed 30V dc/5A.
-When connected to an inductive load maximum voltage and contact current not to exceed 30V dc/2A.

3.2 Preparing Power Source

To preparing power source, follow the warning and caution on the below.

WARNING

- **Electrical work must be conducted by an qualified electrical contractor or personnel.**

CAUTION

- **Do not use the same power source as for a machine that may generate noise.**
- **Install wiring so that the power supply voltage variations due to load change do not exceed ±10%.**
- **Power supply voltage for this device are single phase, 100 VAC and 200 VAC. Check the rating on the device plate attached on the rear of the body.**
- **Use the power outlet conforming to the specified voltage.**
- **Be sure to connect a ground wire to the outlet for Class 3 grounding.**

3.3 Installation Procedure

The installation procedures for the machine described below.

3.3.1 Preparations before Moving and Installing the Machine

1. Remove the weigh conveyor. (Refer to "7.3.1 Infeed and Weigh Conveyor Unit")
2. Attach the lock bolt for protecting the weighing mechanism to avoid the load applied on the load cell.
   - Remove the bolt for filling the hole on the bottom of the weigher and keep it somewhere safe.
   - Assemble the bolt and nut removed during installation and tighten the bolt by hand.
   - Use the nut to lock where it comes into contact with the load cell.

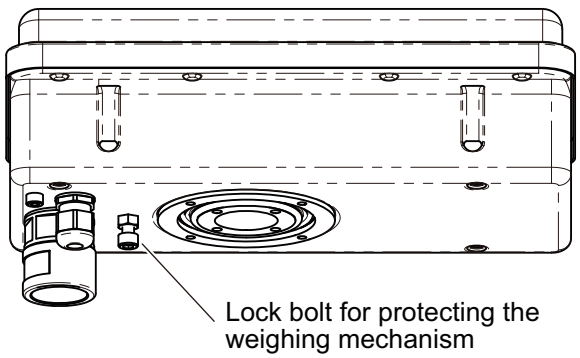


Fig.3-1

CAUTION

- **The load cell may be broken if over-tighten the lock bolt for protecting the weighing mechanism after contact with the load cell.**

3. Move and install the machine.

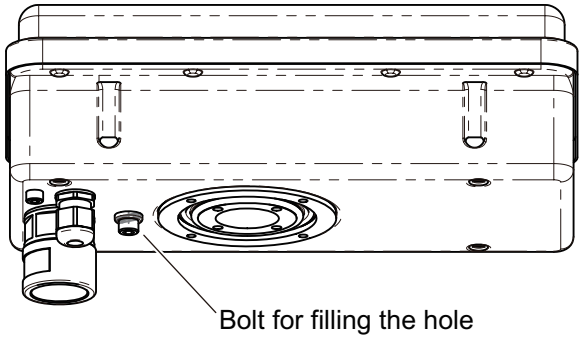


Fig.3-2

3.3.2 Preparations after Moving and Installing the Machine

1. Remove the lock bolt for protecting the weighing mechanism and attach the bolt for filling the hole that were kept somewhere safe.
2. Reattach the weigh conveyor.
3. Adjust the level of the machine and rejecter device (optional).

<Leveling Procedure>

- Use the level adjustment tool to adjust the length of the jack bolt so that a flow direction and a width direction of the weigh conveyor become exactly the same height.
- Adjust the jack bolt to prevent it from lifting off and eliminating a space and steps between the infeed conveyor and the fore stage conveyor.

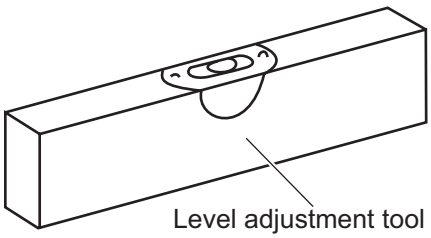


Fig.3-3

- Use the level adjustment tool to adjust the length of the jack bolt of the infeed conveyor so that a flow direction and a width direction of the infeed conveyor become exactly the same height.
- Make sure that products are transferred smoothly from the infeed conveyor to the weigh conveyor.

4. In the same way, adjust the level of the rejecter device (optional).

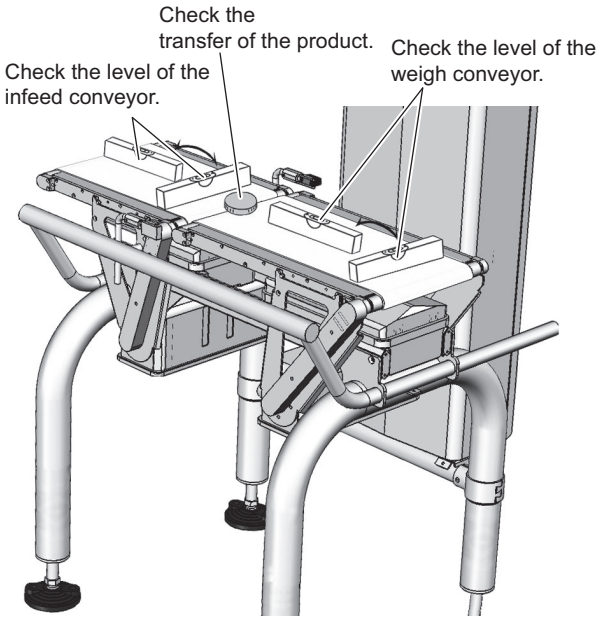


Fig.3-4

5. Tighten all the nuts for the jack bolts.

CAUTION

- **If the conveyers are spaced too far apart and there are any steps on them, a product transfer may become unstable, which deteriorates the accuracy. Lifting off the jack bolt also results in having looseness in the main body and lowering the accuracy.**
- **Adjust the both levels of the weigh conveyor and infeed conveyor using all the jack bolts.**
- **Forcibly adjusting the conveyor at one position may create a step when transferring the products on the conveyor.**
- **If the conveyers are spaced too far apart and there are any steps on them, a product transfer may become unstable, which causes a reject mistake due to a reject timing error.**

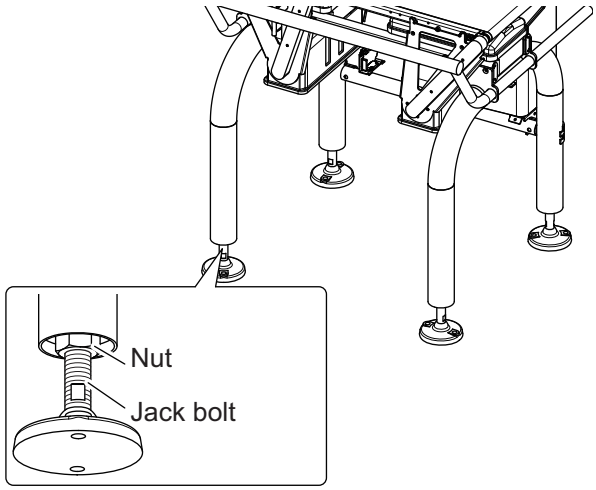


Fig.3-5

4 OPERATION PANEL

This chapter describes the components and functions of the operation panel unit.

WARNING

- **Be sure to read this chapter carefully before attempting operation.**

CAUTION

- **For operational procedures, Refer to "5 PRODUCTION".**

4.1 Operation Panel

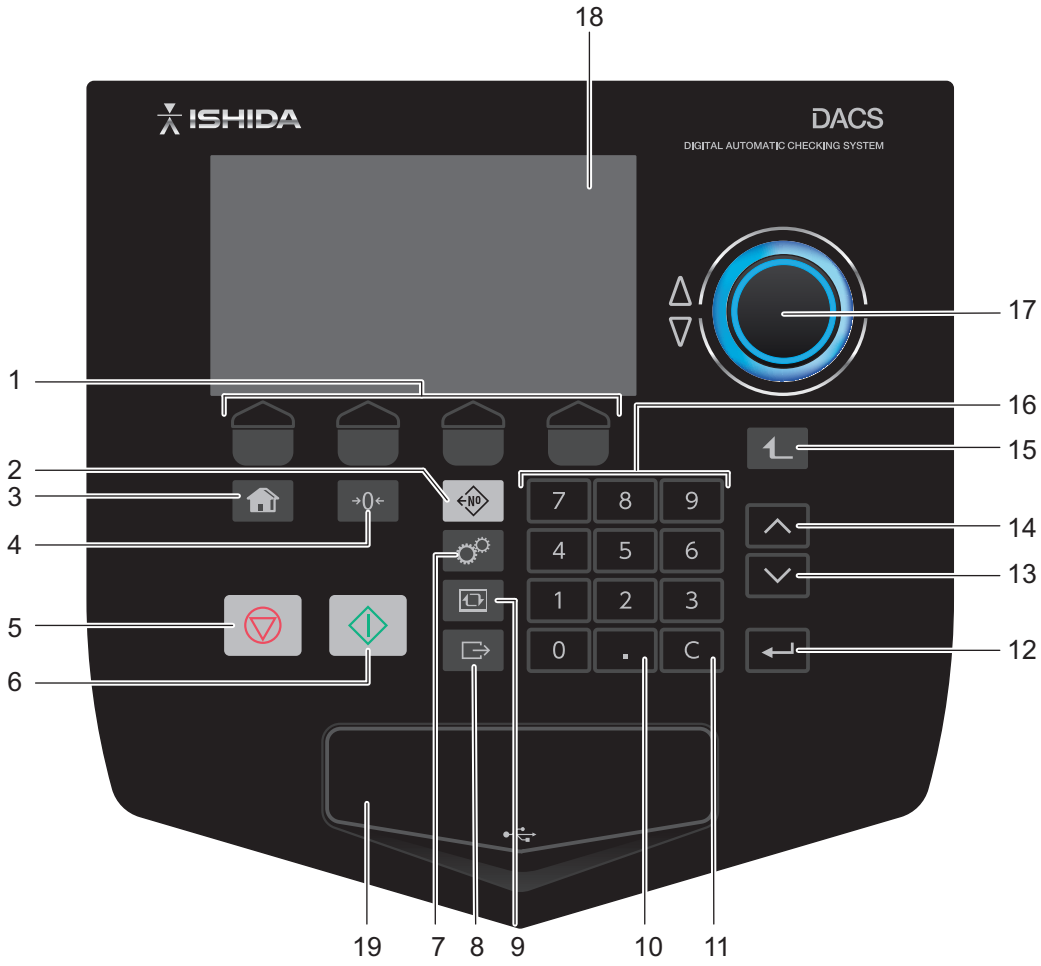


Fig. 4-1

Table 4-1

No	Name	Key	Function
1	[Function] key		Pressing each key when the menu is displayed on the above of the key on the screen, the function of the key is executed.
2	[Preset] key		Displays Preset Number Select Screen when pressed in standby state.
3	[Home] key		Displays Standby menu.
4	[Zero] key		Starts Zero adjustment when pressed in standby state. (Refer to "5.3.2 Zero Adjustment")
5	[Stop] key		Stops the conveyor when pressed in operation and returns the device to standby state.
6	[Start] key		Starts the conveyor when pressed in standby state.
7	[Setup] key		Displays Setup menu when pressed in standby state.
8	[Output] key		Displays Output menu.
9	[Display] key		Switches information display.
10	[Decimal point] key		Inputs decimal point.
11	[Clear] key		Cancels entered numeric values and characters.
12	[Enter] key		Executes selected value of the menu.
13	[Down] key		Moves the cursor down or decrease the input value by 1.
14	[Up] key		Moves the cursor up or increase the input value by 1.
15	[Exit] key		Ends or cancels current process and displays the previous screen.
16	[Numeric] keys		Inputs numeric values.
17	Command dial		Performs similarly to the [Up/Down] keys (13,14). Rotated clockwise: Moves the cursor down. Rotated counterclockwise: Moves the cursor up. Performs similarly to the ENTER key (12) when pressed. Displays the Function Command dialog menu "5.9 Function Dialog Menu" when pressed in the Operation Standby menu. Lights in Blue when the machine stops, green in production, and red when an error occurs. Performs similarly to the [Exit] key when passed and held.

Table 4-1

No	Name	Key	Function
18	Display Panel		Displays operational status, weigh settings, etc.
19	USB slot cover		1 USB slot is equipped inside.

4.2 Main Operations and Indications in this Manual

The operation of the RCU is mainly divided into three types.
In this manual, the three types of operation are indicated as below.

NOTE

- For the operation of device, refer to "5 PRODUCTION".

1. Select

   To align the cursor with the item with the [Up/Down] key or Command dial.

   - [Up] key
     Moves the cursor up.
   - [Down] key
     Moves the cursor down.
   - Command dial
     Moves the cursor up when rotated clockwise
     Moves the cursor down when rotated counterclockwise

2. Enter

   To input the selected item by pressing the [Enter] key or Command dial.

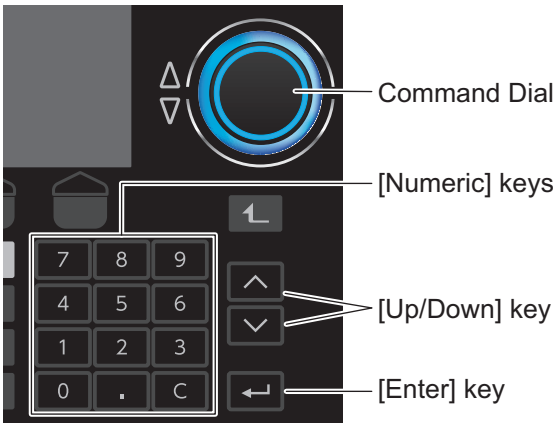


Fig. 4-2

3. Input the numeric value

   To input the numeric value directly with the [Numeric] keys, or select the number on the screen with the [Up/Down] key or Command dial.

   - [Numeric] keys
     Inputs the numeric value directly.
   - [Up] key 
     Increases the numeric value by 1.
   - [Down] key 
     Decreases the numeric value by 1.
   - Command dial
     Increases the numeric value by 1 when rotated clockwise.
     Decreases the numeric value by 1 when rotated counterclockwise.

4.3 Data Input Procedure for Alpha-numerical Values

Follow the procedure below to input alpha-numerical values via the operation panel.

1. Press the [Enter] key on the required Setup menu.
2. Input alpha-numerical values with [numeric] keys, [Up/Down] keys, or Command dial to the field on the screen.

   ▶The input values are displayed are highlighted.
3. Press the [Enter] key.

   ▶The input values are registered.

NOTE

- In this manual, the expression "input and enter" indicates to input alpha-numerical values via the operation panel, and register the value by pressing the [Enter] key or with Command dial.
- To correct the set alpha-numerical values, press the Clear key to clear the data, then re-input the data.

5 PRODUCTION

This chapter explains the procedures for an emergency stop, outline of the production from preparation to the end of the operation, description of the Standby menu, and output method.

5.1 Emergency Stop and Restart

To stop the machine in the event of emergency and then restart it, follow the procedures below.

⚠ CAUTION

- **Do not turn the power switch OFF during the operation unless in the event of the emergency. In normal conditions, stop the conveyor with the [STOP] key before turning the power switch OFF.**

<Emergency Stop Procedures>

1. Turn the power switch OFF by rotating it counterclockwise 90 degrees.

   ▶The machine stops.

   ▶The display of the RCU disappears.

<Restart Procedures>

1. Relieve the cause of the emergency stop.
2. Restart the production in normal procedures. (Refer to"5.4 Pre-Production Procedure")

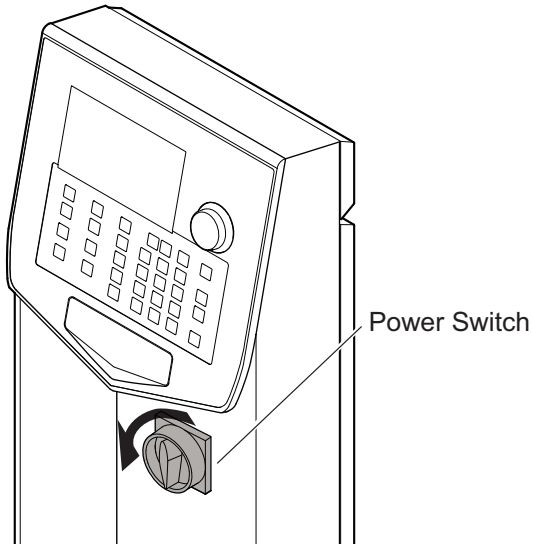


Fig. 5-1

5.2 Outline of the Production

This section describes the outline of the production.
For detailed production procedures, refer to "5.4 Pre-Production Procedure" and the subsequent sections.

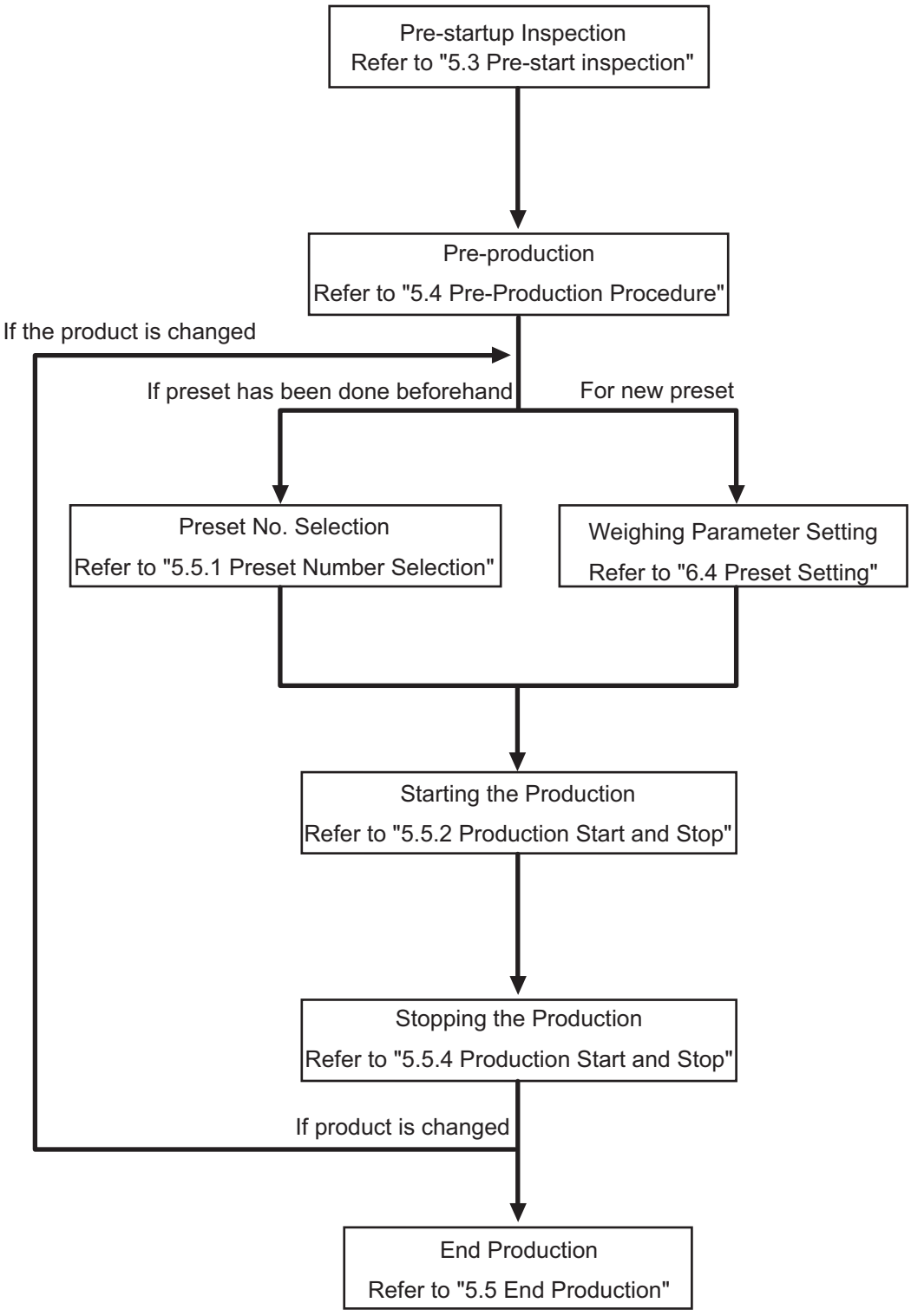


Fig. 5-2

5.3 Pre-start inspection

Perform the following pre-start inspection before production.

WARNING

- **For maintenance and inspections, unless instructed, the operator must turn OFF and lock the main power switch, and keep the key in his possession during the work (Refer to "1.6 Drive Power Shutdown and Indication").**

Table 5-1

Inspection Item	Inspection Detail	Action
Machine and vicinity of the machine.	Make sure that tools and any other irrelevant objects are not placed on top of or in the vicinity of the weighing machine.	If any, remove them.
	Make sure that the conveyor belt is not deformed or worn out.	If any, replace the conveyor belt.
	Make sure that photoelectric sensor is activated properly. (Refer to "5.3.1 Pre-start Checkup".)	If not, clean the sensor lens.
	Conveyors should not have any looseness. No unusual noise is generated from conveyor, motor and gear box. (Refer to "5.3.1 Pre-start Checkup".)	If unusual noise and meandering (* 1) are generated, contact your distributor or Ishida customer support.

*1 Refer to "8.1.2 Adjusting the Meandering".

5.3.1 Pre-start Checkup

Follow the procedure below to perform the check up before starting operation.

1. Check the inspection items carefully. (Refer to "Table 5-1 ")
2. Turn the power switch ON by rotating clockwise 90 degrees.

   ▶The Command Dial is lighted in blue.

   ▶The screen to check the preset data is displayed.

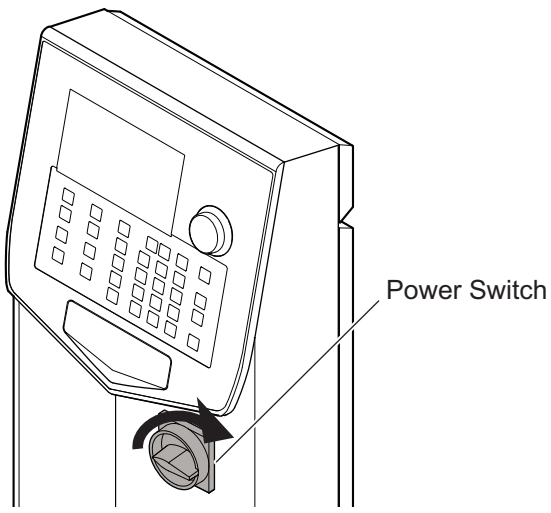


Fig. 5-3

▶After a while, zero adjustment Standby menu is displayed.

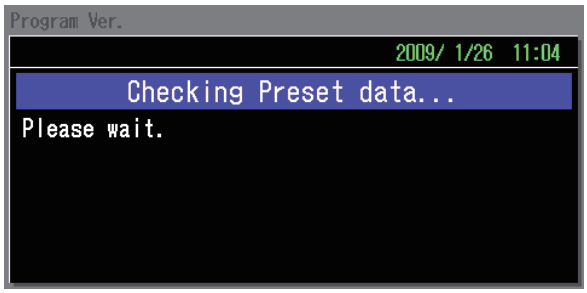


Fig. 5-4

3. Perform zero adjustment.
(Refer to "5.3.2 Zero Adjustment".)

▶When zero adjustment is completed, the display returns to the Standby menu.

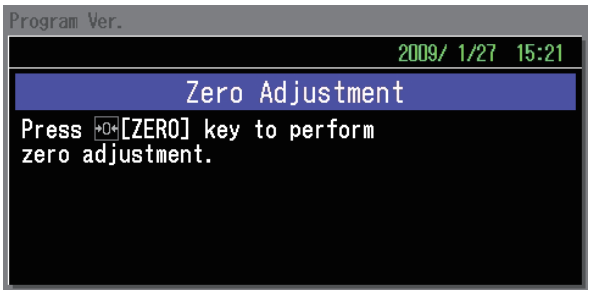


Fig. 5-5

4. Verify that the weight reading is "0 g".
(Refer to "5.4 Pre-Production Procedure".)

5. Place the span adjustment weight corresponding to the equipment capacity on the weight conveyor.
(For twin-cell specification, place it on the infeed conveyor as well.)

6. Verify that the weight reading indicates correct weight.

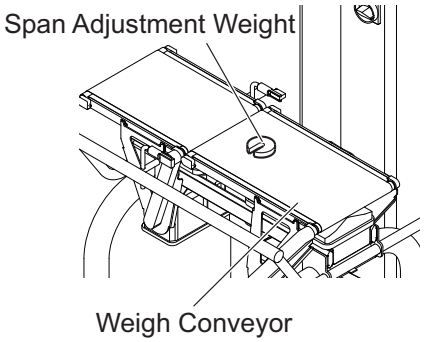


Fig. 5-6

NOTE

- The relevant span adjustment weight for your machine can be confirmed in "11 APPENDIX".
- If the weight reading is not correct, the machine requires span adjustment. Perform span adjustment following the instructions in
(Refer to "6.5.5 Span Adjustment").

7. Place a product on the weight conveyor. (For twin-cell specification, place it on the selectsd cell.)
8. Verify that the weight reading falls in the proper weight range.

NOTE

- For procedures on how to set the proper range, refer to "6.4.3 Reference Weight","6.4.4 Upper Limit+", and "6.4.5 Lower Limit-".

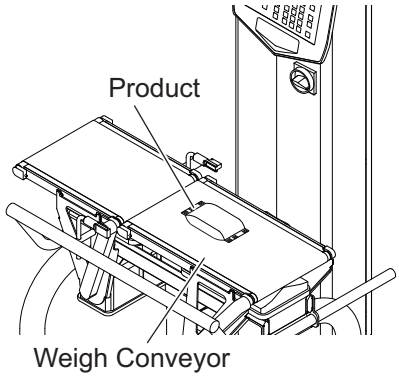


Fig. 5-7

9. Remove any remaining products from the weight conveyor, and press the [Start] key to start the conveyor.

NOTE

- If the "Startup Check" is set to "ON" in the System Configuration, the Check mode screen is used during production. (Refer to "6.3.1 Check Mode")
- If the belt is meandering, adjust the meandering.(Refer to "8.1.2 Adjusting the Meandering")

Fig. 5-8

10. Place the product on the Infeed conveyor.
11. Verify that the weight reading falls in the tolerable range.
12. Shield the photoelectric sensor of the infeed conveyor by hand.
    Check that the weight reading becomes "0 [g]" and the equipment rejects the product.

    ▶The sensor shielding for too long time may occur product length error.

NOTE

- For procedures on how to set rejecter operation, refer to "6.4.17 Reject Setting".

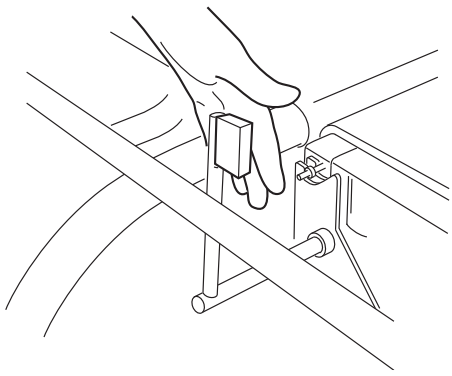


Fig. 5-9

13. Verify when the light is blocked from the sensor for a longer time, the photoelectric sensor error occurs and the conveyors stops.

5.3.2 Zero Adjustment

Zero adjustment sets the initial zero point of the load cell (weigh unit) mechanism without product to verify the accuracy of weighing.
Perform zero adjustment in the following situations.

- When performing the pre-production
- When changing the product to be weighed
- When performing span adjustment
- When zero error occurs

Follow the procedures below for zero adjustment.

1. Remove all products from the weight conveyor and press the [Zero] key.

   ▶Zero adjustment is started.

   ▶When zero adjustment is completed, the display returns to the Standby menu.

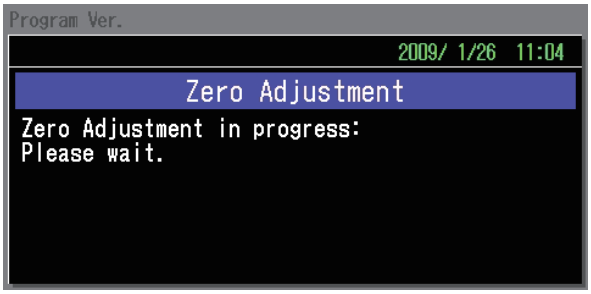


Fig. 5-10

5.4 Pre-Production Procedure

Before starting production, perform the following procedure.
Weighing operations can be started when this procedure is completed.

CAUTION

- **Before the pre-production, perform pre-start inspection according to "5.3 Pre-start inspection".**
- **Turn the power ON over 30 minutes prior to starting the production to stabilize the weighing mechanism.**

1. Remove any remaining products from the weight conveyor.
2. Turn ON the power switch rotating clockwise 90 degrees.

   ▶The Command dial is lighted in blue.

   ▶The screen to check the preset data is displayed.

   ▶After a while, zero adjustment Standby menu is displayed.

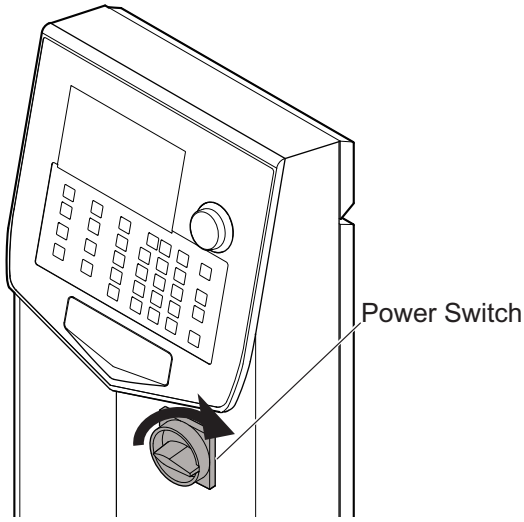


Fig. 5-11

3. Press the [Zero] key.

   ▶The Standby menu is displayed.

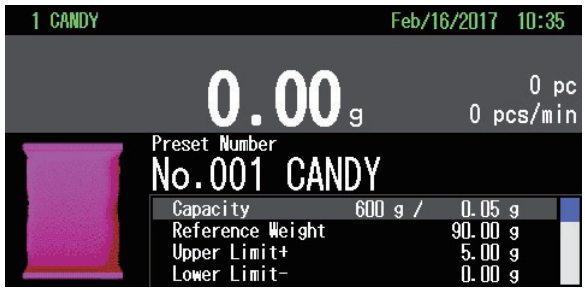


Fig. 5-12

5.5 Checkweigher Production

5.5.1 Preset Number Selection

When the preset number is programmed for the product, follow the procedure shown below to select preset number.
For a new product, set the weighing parameter of the product. (Refer to "6.4 Preset Setting".)

1. Press the [Setup] key in the Standby menu.

   ▶The Setup menu is displayed.

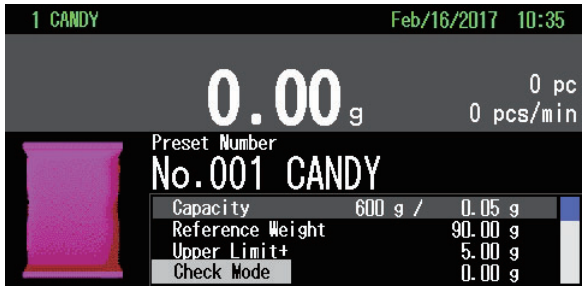


Fig. 5-13

2. Press the [Enter] key.

   ▶The Preset Number menu is displayed.

Fig. 5-14

NOTE

- The Preset Number menu is also displayed by pressing the [Preset] key.
- The preset number is also set by pressing [Up/Down] keys or [Numeric] keys.

3. Select and enter the preset number.

   ▶The Setup menu is displayed.

4. Press the [Exit] key.

   ▶The Standby menu for the selected preset number is displayed.

   ▶The preset number selection is completed.

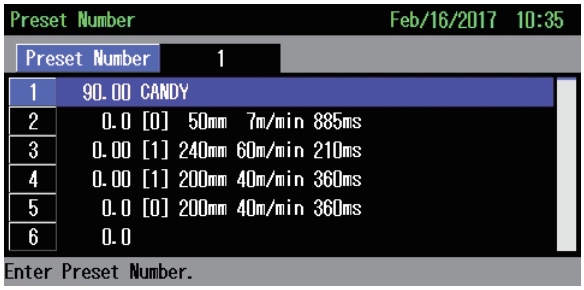


Fig. 5-15

5.5.2 Starting the Production

1. Press the [Start] key in the Standby menu.

   ▶The color of Command dial lamp is changed from blue to green.

   ▶The conveyor is started.

2. Place one product on the infeed conveyor.

   ▶The product is advanced to the weigh conveyor and weighed.

3. Check if the displayed weight is correct.

4. If the weight is correct, start infeeding products.
   If the weight is not correct, follow the instructions in <When Weight Is Incorrectly Displayed>.

Fig. 5-16

NOTE

- Check the inspection performance in a check mode before the product is infed.
- If the "Startup Check" is set to "ON", the mode changes to a check mode. (Refer to "6.3.1 Check Mode")

5.5.3 Inspection During Production

Regularly inspect the following items during production.

Table 5-2

Inspection item	Check point	Action
Belt condition	Visually check the infeed and weigh conveyor belts to verify that any damage, deterioration and, meandering are present.	Perform belt tension adjustment. (Refer to "8.1 Adjusting the Tension and Meandering of Infeed and Weigh Conveyor Belt")
Abnormal noise	Verify that the Infeed/Weigh conveyors are not meandering.	
	Verify that the Infeed/Weigh conveyors are not tensioned too much.	
	Verify that the rotating components generate no abnormal noises.	Contact your distributor or Ishida customer support.

5.5.4 Stopping the Production

1. Stop infeeding products.
2. Press the [Stop] key.

   ▶The color of Command dial lamp is changed from green to blue.

   ▶The conveyor is stopped.

NOTE

- Make sure that there is no product on conveyors. Otherwise, non-proper items may go through checkweigher without weighing when the machine is restarted.

Fig. 5-17

5.5.5 When Weight is Displayed Incorrectly

When an incorrect weight is displayed when the production starts, follow the procedure below.

1. Press the [Stop] key.

   ▶The color of Command Dial lamp changes from green to blue.

   ▶The conveyor is stopped.

2. Remove the product on the weigh conveyor.
3. Confirm that "0 g" is displayed on the screen.

   When "0 g" is not displayed, perform zero adjustment. (Refer to "5.3.2 Zero Adjustment")

4. Place the span adjustment weight on the weigh conveyor.
5. Confirm that the weight of span adjustment weight is displayed on the screen.

   When the weight for span adjustment weight is displayed, perform span adjustment. "6.5.5 Span Adjustment".

6. When "0 g" is displayed and the span adjustment weight is correct, confirm the weigh parameter settings are correct.

Fig. 5-18

5.6 End Production

When weighing operations are completed for the day, end the production by following the procedure below.

1. Press the [Stop] key.

   ▶The color of Command dial lamp changes from green to blue.

   ▶The conveyor is stopped and the screen displays the Standby menu.

2. Turn OFF the power switch.

   ▶The RCU display goes out.

   ▶The Command dial lamp goes out.

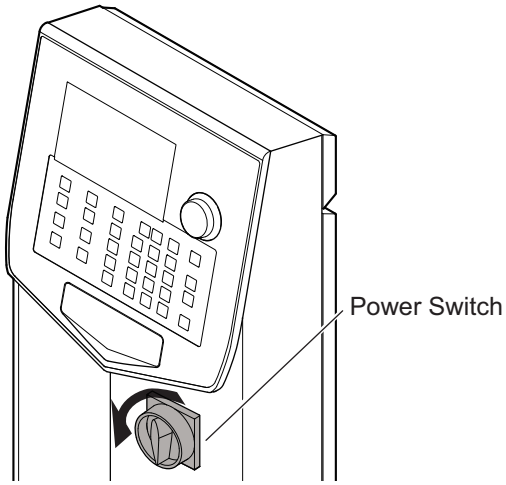


Fig. 5-19

5.7 Overview of the Items Displayed in the Standby Menu

"Table 5-3 " lists the items displayed in the Standby menu.

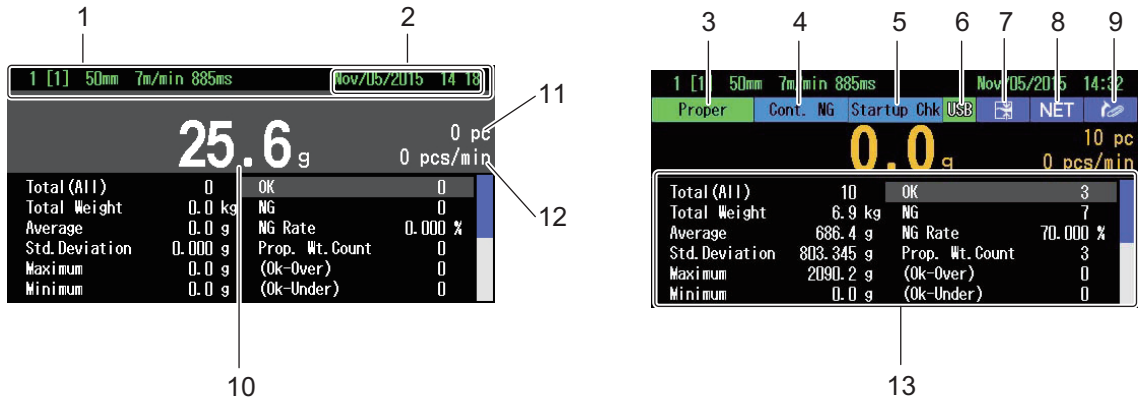


Fig. 5-20

Table 5-3

No.	Item	Function		
1	Status display	The preset and the device status are displayed every 1.5 seconds.		
		a	Preset number • Product name	Display the Preset number and Product name.
		b	FAN STOP	Display when the fan stops.
		c	Printer head is not in print position	Display the head of the printer (optional) is up.
		d	No paper on printer	Display when there is no paper on the printer (optional).
		e	Log in user name	Display a log in user name when the user log in is set to "ON".
		f	Automatic zero tolerance warning	Display after a zero error occurs if the Zero Error Reject Dir.(Refer to "6.4.17 Reject Setting") is set to be stopped. Also display the weight and judgment count (displays 5 when there is an error) for the zero error occurred.
		g	Zero Adjustment	Display when the zero adjustment is required after a zero error occurs.
2	Date and Time	Display the Date and Time.		

Table 5-3

No.	Item	Function		
3	Inspection result display	Display the following contents based on the weighing result.		
		a	Proper	Display when the inspected weight is in the range of (Reference Weight + Upper Limit) to (Reference Weight - Lower Limit).
		b	Over	Display when the inspected weight is over (Reference Weight + Upper Limit).
		c	Under	Display when the inspected weight is under (Reference Weight - Lower Limit).
		d	Pitch Error	Display when 2 or more products are placed in a row.
		e	Product Length Error	Display when 2 or more products are placed connectively.
4	Cont. NG display	Display when continuation NG are detected consecutively more than the set continuous N/G count.		
5	Startup Check	Display when "Startup Check" has not been performed even though the "Startup Check" is set to "ON". (Refer to "6.5.7.18 Standby Display Preference")		
	Exclude data	Display when the inspection result is excluded to be on statistical data. (Example: Test Mode)		
6	Checking USB	Display during connection to USB flash drive. If the USB flash drive is removed while it is displayed on the screen, the data may not be saved successfully.		
7	Dynamic Calibration setting	Display when the Dynamic Calibration is set.		
8	Preset Tare setting	Display when the Preset Tare is set.		
9	Metal Detection conjunction	Display when the Metal Detection is set to "ON".		
10	Weight display	Display weight of the weighing result.		
11	Count display	Display the counted number since the start of the inspection.		
12	Speed display	Display the inspection speed.(Refer to "6.5.7.5 Speed Display")		
13	Information display	Display various information by switching screens. (Refer to "5.8 Display of the Standby Menu")		

5.8 Display of the Standby Menu

The [Display] key is used to switch the display in the Standby menu.
There are eight types of data displays as in "Fig. 5-21 " thru "Fig. 5-27 ".
To switch the data display, follow the procedure below.

1. Press the [Display] key in standby or production.

   ▶The each time of pressing the [Display] key switches the data display in the following order;

   [Weight Value Zoom Display]
   ("Fig. 5-21 ")

   =>[Preset Information Display]
   ("Fig. 5-22 ")

   =>[Histogram Display] ("Fig. 5-23 ")

   =>[X-Bar Chart Display] ("Fig. 5-24 ")

   =>[Last 20 Weight Data Display]
   ("Fig. 5-25 ")

   =>[Pitch Adjustment Display]
   ("Fig. 5-26 ")

   =>[Total Count Zoom Display]
   ("Fig. 5-27 ")

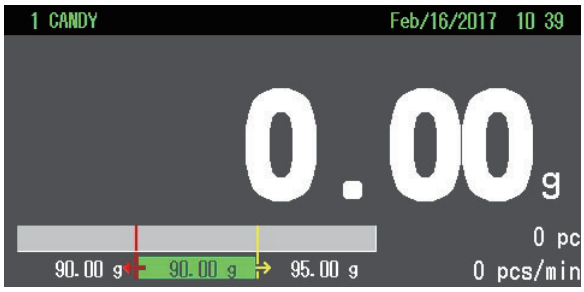


Fig. 5-21

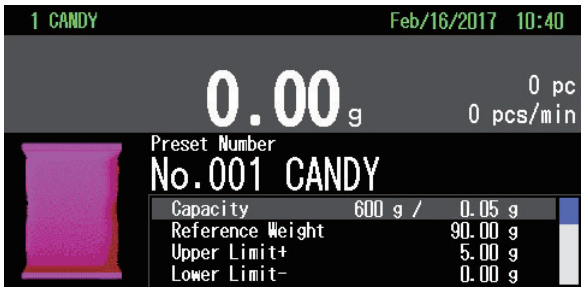


Fig. 5-22

Fig. 5-23

Fig. 5-24

NOTE

- On "Last 20 Weight Data Display" ("Fig. 5-25 "), non-proper items are indicated below.
  - Metal Detect !
  - Foreign Object Detect *
  - External /
  - Zero error ?
  - Product Length Error =
  - Pitch Error #
  - Under weight ▼
  - Proper weight (blank)
  - Over weight ▲
  - Continuous N/G @
  - Uninspected ×

- A product pitch is measured on the Pitch Adjustment Display ("Fig. 5-26). The "Minimum Pitch" indicates the minimum pitch measured.
  To reset the value for "Minimum Pitch", select "Minimum Pitch Clear" and press the [Enter] key.

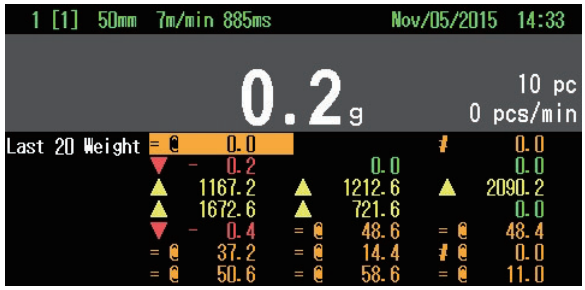


Fig. 5-25

Fig. 5-26

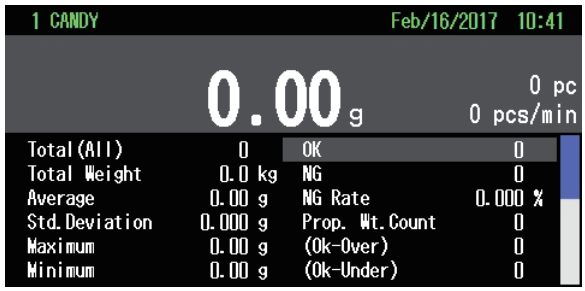
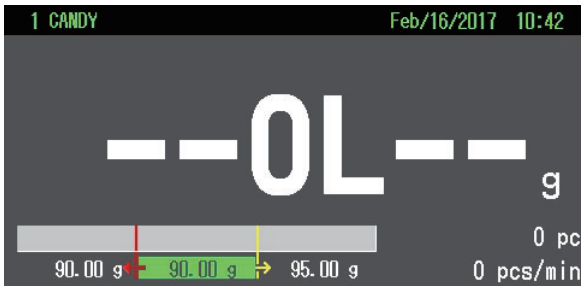


Fig. 5-27

NOTE

- The setting of display is memorized after turning OFF the machine.
- When the weight excesses the capacity (the upper limit) + 9 times of minimum grad (Overload), the weight is displayed as below in each Standby menu.



- When the weight is “Underload (under the lower limit)”, the weight is displayed as "----".

5.9 Function Dialog Menu

Function Dialog menu is displayed by pressing the [Enter] key or Command dial when the Standby menu is displayed. Each item on the menu has the same function as the corresponding key on the operation panel.

<Operation procedure of Function Dialog menu>

1. In the Standby menu, press the [Enter] key or Command dial.

   ▶The Function Dialog menu is displayed.

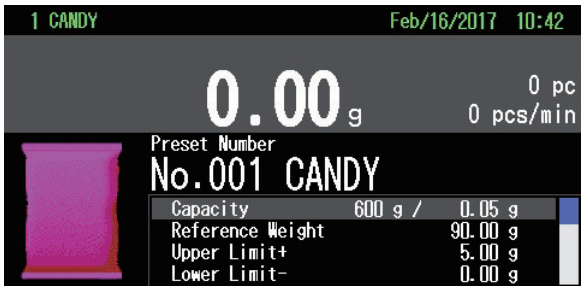


Fig. 5-28

2. Select and enter the item to be executed from the function list.

   ▶The selected item will be executed.

3. Select and enter the "Exit".

   ▶The Standby menu is displayed.

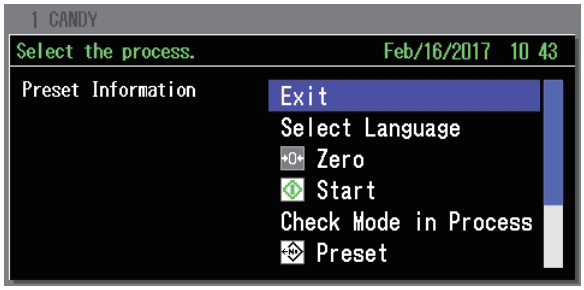


Fig. 5-29

NOTE

- Function Dialog menu can be displayed regardless the type of the Standby menu.
- The function list on the Function Dialog menu differs depending on the status of device (in production/stop).

5.10 Output

"Output" is a function to output the data such as total data to a printer (optional) or an USB flash drive.

Table 5-4 Output items

Key	Item	Function	Ref.
Output	Output Destination	Selects the output destination from "Printer" or "USB".	5.10.4.1
	Current Log Total	Outputs the total for the current product item. Current log shows data from the time the current preset was selected or the last "Clear All Totals" was executed (Available for USB/printer output).	5.10.1, 5.10.4
	All Lot Totals	Outputs all lot totals from the time the last "Clear All Totals" was executed (Available for USB/printer output).	
	Each Time Output	Outputs the weight of the product each time during production (Available for USB/printer output).	5.10.2
	Preset Setting Output	Outputs the preset setting (Available for USB/printer output).	5.10.1, 5.10.4
	All Preset Setting Output	Outputs all the preset setting (Available for USB output only).	
	Common Setting Output	Outputs the common setting (Available for USB/printer output).	
	Display access logs	Displays access log data.	
	Log Output	Outputs log data (Available for USB/printer output).	
	Span adjust Log Output	Outputs span adjust log (Available for USB/printer output).	
	Weight Log Output	Outputs weight log data (Available for USB output only).	5.10.1
	Proper Feed	Advances the paper by one line. Used when replacing paper roll or to leave a space between each record.	5.10.4
	Cancel	Interrupts the current output command, or ends Each Time Output.(Available for USB/printer output)	5.10.1, 5.10.4
	Clear All Totals	Clears stored total data.	5.10.3
	Clear Logs	Clears all the stored log data.	

5.10.1 USB Data Output

USB Data Output is the function to output each data of output menu into USB flash drive.
For USB output, follow the procedure below.

1. Open the USB slot cover at the bottom of operation screen, and insert the USB flash drive into the USB slot.

Fig. 5-30

CAUTION

- **Use the specified USB flash drive.**

2. Press the [Output] Key.

▶The Output menu is displayed

3. Select output item and enter it.

▶USB Data Output menu is displayed indicating the data is output into the USB flash drive (Refer to "5.10.5 Output Data Sample").

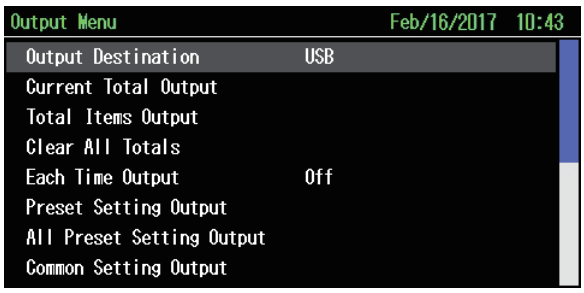


Fig. 5-31

CAUTION

- **Do not disconnect the USB flash drive while data is outputted into the USB flash drive.**

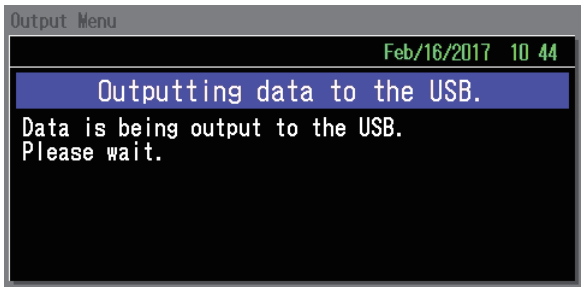


Fig. 5-32

▶When USB data output is completed, the display returns to the Output menu.

4. Press the [Exit] key.

▶The Standby menu is displayed.

NOTE

- Common setting output should be set by the site engineer or higher level personnel.
- "Weight Log Output" is displayed when "Weight Log Output" in the System Configuration in the Installation level.(Refer to "6.5.7.12 Weight Log")
- "Cancel" is used when canceling the Each Time Output into the USB flash drive.

5.10.2 Each Time Output

Each Time Output is the function to save the weight and the weighing result to USB or print it with a printer each time the inspection is conducted. For functions of setting each item, refer to Table 5-5 Description of each time output item.
To set the each time output, follow the procedure below.

1. Display the Output menu.
2. Select and enter the "Each Time Output".

   ▶The Each Time Output menu is displayed.

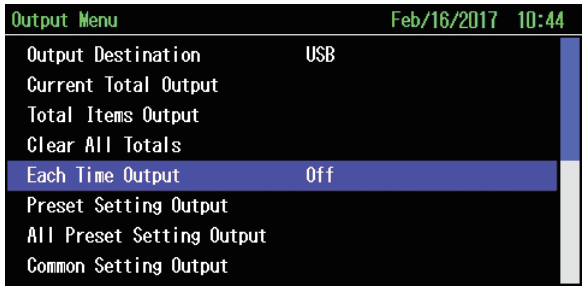


Fig. 5-33

3. To set the "OFF", Select and enter the "0".
   To set the "ON", Select and enter the "1".
   To set the "Always ON", Select and enter the "2".

   ▶The setting of each time output is reflected on the Output menu.

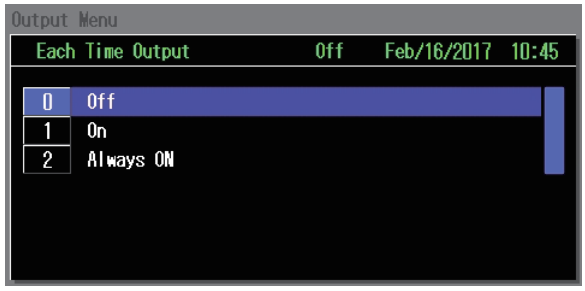


Fig. 5-34

Table 5-5 Description of each time output item

No.	Item	Function
0	OFF	Performs similarly to the [Cancel] is selected.
1	ON	Outputs the data to USB or printer each time. If restarted, the setting changes to "0" (OFF).
2	Always ON	Outputs the data to USB or printer each time. If restarted, the setting remains at "2" (Always ON) and output the data to USB or printer each time.

5.10.3 Clear All Totals, Clear Log

Clear All Totals and Clear Log are the functions to each total data displayed on the Production screen. When these functions are executed, the data stored up to that point is all cleared. For Clear All Totals and Clear Log, follow the procedure below.

NOTE

- Clear log should be set by the site engineer or higher level personnel.

1. Press the [Output] key in the Standby menu.

   ▶The Output menu is displayed.

2. Select from "Clear All Totals" and "Clear Log" and enter it.

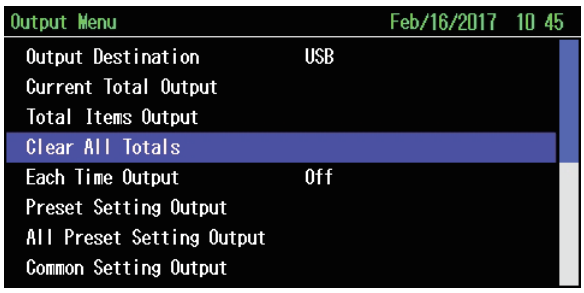


Fig. 5-35

NOTE

- In the Output menu, only 8 items can be displayed on the screen at a time. To display the other items, scroll the screen with the [Up / Down] keys or turn the Command dial.

   ▶The Confirmation screen for clearing data is displayed.

3. Press the [Enter] key.

   ▶The Data Clear screen is displayed.

   ▶When the data is cleared, the display returns to the Output menu.

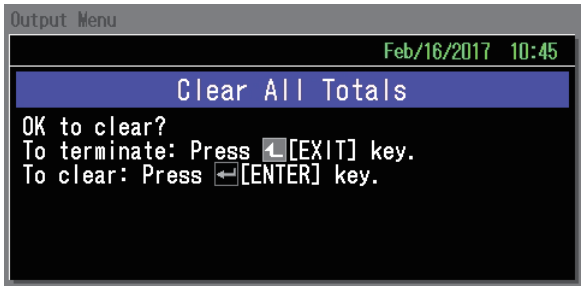


Fig. 5-36

4. Press the [Exit] key.

   ▶The Standby menu is displayed.

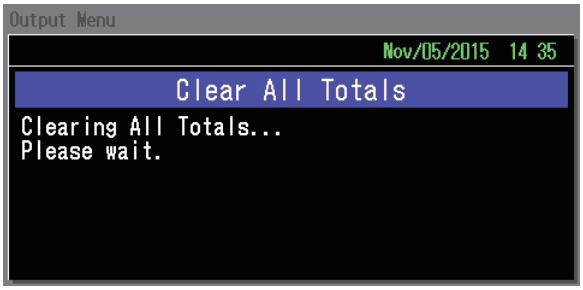


Fig. 5-37

5.10.4 Printer Data Output

Printer Data Output is the function to output each data of output menu into the optional printer.

NOTE

- Printer is optional.

5.10.4.1 Output Destination (When Printer is Installed)

When "Printer" is set to "ON" in System Configuration in the Installation level (Refer to "6.5.7.3 Printer"), the Output Destination is selectable from "Printer" and "USB". To set the Output Destination, follow the procedure below.

1. Press the [Output] key in the Standby menu.

   ▶The Output menu is displayed.

2. Select and enter the "Output Destination".

   ▶The Output Destination menu is displayed.

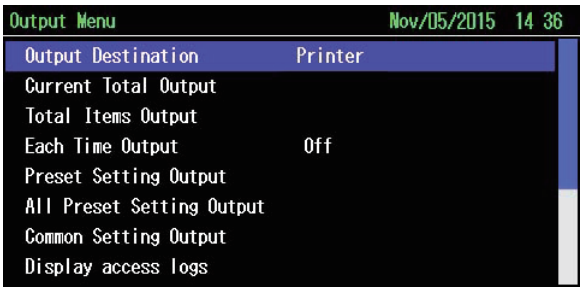


Fig. 5-38

3. To set Printer, Select and enter the "0".
   To set USB, Select and enter the "1".

   ▶The selected destination appears on the Output menu.

NOTE

- When "Printer" is set to "OFF" in System configuration in the Installation level, the output destination is automatically set to USB.

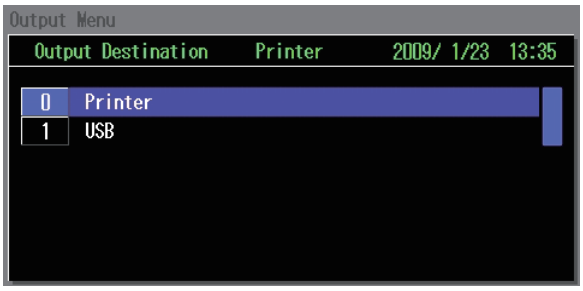


Fig. 5-39

5.10.4.2 Output of the printer

For Printer Data Output, follow the procedure below.

1. Press the [Output] key in Standby menu.

   ▶The Output menu is displayed.

2. Select output item and enter it.

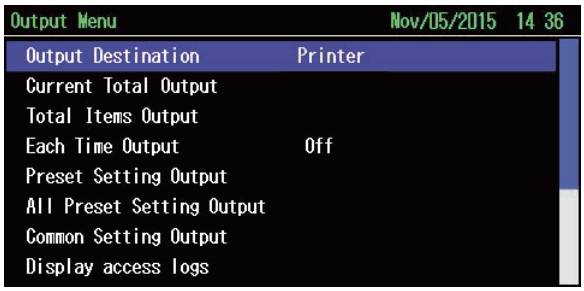


Fig. 5-40

NOTE

- Common setting output should be set by the site engineer or higher level personnel.
- The Output menu. As only 8 items can be displayed on the screen at a time, scroll the screen with the [Up/Down] keys or Command dial to display the other items.

   ▶Data is output into the printer (Refer to "5.10.5 Output Data Sample").

NOTE

- "Cancel" is used to cancel the data output or to end the "Each Time Output".

3. Press the [Exit] key.

   ▶The Standby menu is displayed.

5.10.5 Output Data Sample

"Fig. 5-41 ", "Fig. 5-42 ", "Fig. 5-43 ", and "Fig. 5-44 " are the samples for data output to USB and the Printer.

NOTE

- Printer is optional.

TIP

- The function is only for USB data output. Enabled when "Weight Log Output" is set to "Used" in System configuration. Data from the point set to "Used" is output. The output data indicates the values as follow." Date, Time, Millisecond, Auto-zero, Preset No, Total No, Weight data, Reject status (display), Weight judgement, Product length, Double-items, Foreign object, Metal determination, Metal detector1, Metal detector2, Continuous NG, External, Reject direction, SUM"
  Output data is in a CSV file format. The data opened with a text editor is displayed as shown "Fig. 5-43 ". The data opened with excel file shown as "Fig. 5-44 ". The description of the number for each item is given in "Fig. 5-45 ".

〈Current Log Total / All Lot Totals〉

```
Line Name:              O
------------------------
Total Data
------------------------
Total Start
      2020-Jun-24  19:34
Total End
      2020-Jun-24  19:37

Total Number:           1

Preset Number:          1
Name:

Code:

Refer. Wt:     100.00 g
Upper  Wt:   +  10.00 g
Lower  Wt:   -  10.00 g
Over Weight Accept:  Off

Total Items:          All
Total Count:       18
Total Wt:         1.8 kg
Mean Wt:       101.41 g
Standard D:    21.594 g
Max. Wt:       148.66 g
Min. Wt:        72.00 g
Range:          76.66 g


OK:                8
NG  :             10
NG Rate:       55.555 %
Proper Count:      8
Over Count:        4
Under Count:       6
Frgn Obj Cnt:      0
All Count:        18
Pit.Err.Rej:       0
Len.Err.Rej:       0
Wt Undetectd:      0
O Error Count:     0


X  =       1
  60.00 O           0
  70.00 XXO         2
  80.00 XXXXO       4
  90.00 XXXXO       4
 100.00 XXXXO       4
 110.00 XO          1
 120.00 XO          1
 130.00 O           0
 140.00 XXO         2
 150.00 O           0
 160.00 O           0
 170.00 O           0
 180.00 O           0
 190.00 O           0

Check Mode
Proper count:      0
Over   count:      0
Under  count:      0
```

Histogram

〈Each Time Output〉

```
Start Pack Weight Log
    2020-Jun-24  19:33
     1  148.66*   75.36*
     3   88.06*  126.96*
     5  109.70    85.92*
     7  113.74*   94.60
```

*Over weight
Under weight

〈Preset Setting〉

```
------------------------
Preset Parameters
------------------------
Date:          2020-Jun-24
Time:                19:37

Preset Number:           1
Refer.  Wt:     100.00 g
Upper   Wt:   +  10.00 g
Lower   Wt:   -  10.00 g
Length:             100 mm
Name:

Code:


Feed   Conv:     20 m/min
Weigh  Conv:     20 m/min
Rej. Conv:       20 m/min
Rej.Start:           0ms
Rej. On:             0ms
Arm Rej. Speed:     High
Sampling End:     1350ms
Re-Detect Down:    330ms
Filter:            916ms
Zero Down:        2596ms


Over Weight Accept:  Off
Weight Function:      On
```

Fig. 5-41

＜Log Output＞

```
------------------------
Log Data
------------------------
Date:          2020-Jun-24
Time:                19:31

20-06-24 19:28:46
Log Print
20-06-24 19:15:56
Power Off
20-06-24 19:17:00
Power On
20-06-24 19:17:03
Manual 0 Adjust
20-06-24 19:17:12
Set Chg          1->      2
20-06-24 19:17:37(  2)
Start DRV
20-06-24 19:17:45(  2)
Stop DRV
20-06-24 19:17:56
Log Print
```

Fig. 5-42

<Weight Log Output>

```
8/10/17,13:48:33,0,0,1,1,     0.0,13,3,1,1,0,0,0,0,0,0,3,143
8/10/17,13:48:33,0,0,1,1,     0.0,13,3,1,1,0,0,0,0,0,0,3,143
8/10/17,13:48:36,0,0,1,1,   968.8,3,5,1,0,0,0,0,0,0,3,89
8/10/17,13:48:39,0,0,1,1,     0.1,3,5,1,0,0,0,0,0,0,0,3,144
```

Fig. 5-43

＜Examples when opened with Excel＞

Date	Time	Mili Second	Auto Zero	Preset No.	Total No.	Weight Data	Reject Status (Display)	Weight Determ-ination	Product Length	Pitch Error	Foreign Object	Metal Determi-nation	For future expansion	For future expansion	Continu-ous NG	External	Reject Direction	SUM
2008/12/3	20:47:28	339	1	9	7	154.1	11	5	1	0	0	1	0	0	0	0	0	52
2008/12/3	20:47:30	599	1	9	7	5.25	2	1	1	0	0	0	0	0	0	0	0	132

Fig. 5-44

<Description of the number for each item>

Auto-zero

0	Auto-zero operation failed
1	Auto-zero operation completed

Reject Status (Display)

1	Proper Weight	16	Ext.1
2	Under Weight	17	Ext.2
3	Over Weight	18	Ext.3
4	Zero Error	19	Ext.
7	OK-under	20	Proper weight1
8	OK-over	21	Proper weight2
11	Metal Error		
12	Foreign Object		
13	Pitch Error		
15	Product Length Error		

Weight Judge

1	Under
2	OK-Under
3	Proper
4	OK-Over
5	Over
6	Zero error
7	Zero error
8	Proper weight2
9	Proper weight3

Product Length

1	Proper
2	Product Length Error

Double Item

0	OFF
1	Pitch Error

Foreign Object

0	OFF
1	Foreign Obj

Metal Detect

0	OFF
1	Metal NG

Continuous NG

0	OFF
1	Cont.NG

External

0	OFF
1	Ext.1
2	Ext.2
3	Ext.3
4	Ext.4

Reject Direction

0	Non
1	Stop

Fig. 5-45

5.10.6 Display Access Logs

Display Access Logs displays access log.
To set the Display access logs, follow the procedure below.

NOTE

- Display Access Logs should be set by the site engineer or higher level personnel.

1. Press the [Output] key in the Standby menu.

   ▶The Output menu is displayed.

2. Select and enter the "Display Access Logs".

   ▶The Display Access Logs menu is displayed.

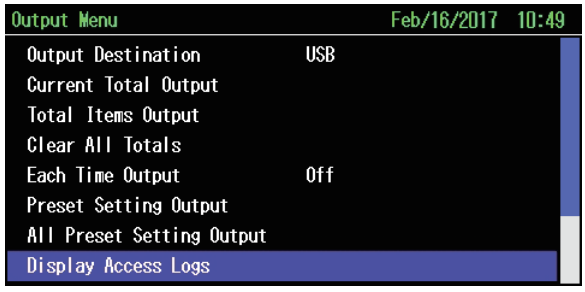


Fig. 5-46

NOTE

- Only up to 8 items can be displayed in the Display Access Logs menu at once. To display the rest of items, press the [Up/Down] key or scroll the screen with the command dial.

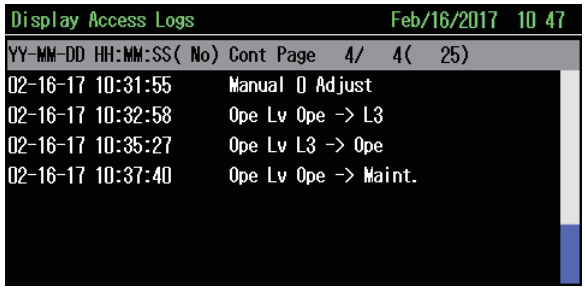


Fig. 5-47

6 OPERATION AND FUNCTION

This chapter describes the setting procedure for product data and functions for applied operations.

6.1 Overview of the Setting Item

*: Indicates that the item can be operated.

Table 6-1

Oper-ation key	Item				Operation level			Ref.
					Opera-tor	Site Engi-neer	Install-ation	
Preset	Preset number selection				*	*	*	—
Setup	Preset setting	Product Name				*	*	"6.4.1"
		Capacity				*	*	"6.4.2"
		Reference Weight				*	*	"6.4.3"
		Upper Limit+				*	*	"6.4.4"
		Lower Limit-				*	*	"6.4.5"
		OK-Upper Limit+				*	*	"6.4.6"
		OK-Lower Limit-				*	*	
		Preset Tare				*	*	"6.4.7"
		Load Cell *For Twin-cell Specification				*	*	"6.4.8"
		Product Length				*	*	"6.4.9"
		Speed				*	*	"6.4.10"
		Conv. Speed				*	*	"6.4.11"
		Detailed Setting	Charg, Mix Wgt. Dev.±			*	*	"6.5.7.13"
			Timing Setting	Feed Conv. Speed		*	*	"6.4.13"
				Weigh Conv. Speed		*	*	
				Reject Conv. Speed		*	*	
				Reject Start Time		*	*	
				Reject ON Time		*	*	
				Default Reject Time		*	*	
				Drive Weigh Standby Time		*	*	

Table 6-1

Oper-ation key	Item				Operation level			Ref.
					Opera-tor	Site Engi-neer	Install-ation	
Setup	Preset setting	Detailed Setting	Timing Setting	MD NG Input Delay Time		*	*	"6.4.13"
				Fine adjustment			*	"6.4.13"
				Auto Calculation			*	
			Product Code			*	*	"6.4.14"
			Image			*	*	"6.4.15"
			Conveyor Mode			*	*	"6.4.16"
			Continuous N/G Count			*	*	"6.4.19.1"
			Over Weight Accept			*	*	"6.4.20"
			Metal Detection			*	*	"6.5.7.2"
			Dynamic Calibration			*	*	"6.4.21"
			Filter Simulation			*	*	"6.4.22"
			Set. chg. during driving			*	*	"6.5.7.10"
	Preset Copy						*	"6.5.8"
	Access Level Change				*	*	*	"6.2"
	Check Mode				*	*	*	"6.3.1"
	Test Mode				*	*	*	"6.3.2"
	Reject Setting					*	*	"6.4.17.1"
	Output Signal Setting	Output Condition Setting				*	*	"6.4.18.1"
		Output Timing Setting				*	*	"6.4.18.2"
	Statistics & Output Setting	Output Destination				*	*	"6.5.4.1"
		Line name				*	*	"6.5.4.2"
		Total Automatic Change				*	*	"6.5.4.3"
		Total items				*	*	"6.5.4.4"
		Total Auto Output				*	*	"6.5.4.5"
		Batch Analysis				*	*	"6.5.4.6"
		Batch Total Auto Output				*	*	"6.5.4.7"
		Batch Total Time				*	*	"6.5.4.8"
		Batch Total Count				*	*	"6.5.4.9"
		Total Output Time				*	*	"6.5.4.10"

Table 6-1

Oper-ation key	Item		Operation level			Ref.
			Opera-tor	Site Engi-neer	Install-ation	
Setup	Statistics & Output Setting	Always Metal M Output		*	*	"6.5.4.11"
		Each Time Output		*	*	“6.5.4.12”
		Each Time Output Contents				"6.5.4.13"
		Clear Batch Totals		*	*	"6.5.4.14"
		Clear All Totals		*	*	"6.5.4.14"
		X-bar chart		*	*	"6.5.4.15"
		Histgram		*	*	"6.5.4.16"
	System Configu-ration	Weight Display			*	"6.5.7.1"
		Metal Detection			*	"6.5.7.2"
		Printer			*	"6.5.7.3"
		Reject Func. Select.			*	"6.5.7.4"
		Speed Display			*	"6.5.7.5"
		Tare Subtraction			*	"6.5.7.6"
		Dynamic Calibration			*	"6.5.7.7"
		Reject. in Dynamic Cali.			*	"6.5.7.8"
		Preset No. Memorize			*	"6.5.7.9"
		Set.Chg. during drivng			*	"6.5.7.10"
		Weight Zone			*	"6.5.7.11"
		Weight Log			*	"6.5.7.12"
		Charg. Mix. Wgt. Dev			*	"6.5.7.13"
		Test Mode			*	"6.5.7.16"
		Input Signal Port Setting			*	"6.5.7.14"
		Input Signal Setting			*	"6.5.7.15"
		User Log In			*	"6.6"
		Startup Check			*	"6.5.7.17"
		Standby Disp. Pref.			*	"6.5.7.18"
	Weigh Unit Setting				*	"6.5.11"
	Screen Capture	Screen Capture			*	"6.5.12"
		Verify Save Data			*	
	Date/Time Setting				*	"6.5.9"

Table 6-1

Oper-ation key	Item		Operation level			Ref.
			Opera-tor	Site Engi-neer	Install-ation	
Setup	Write/Road Set Value (USB)		*	*	*	"6.5.1"
	Level 1&2&3 Passcode Setting	Level 1 Passcode Setting			*	"6.5.10"
		Level 2 Passcode Setting			*	
	Span Adjustment			*	*	"6.5.5"
	Linear Correction			*	*	"6.5.6"
	Program Version Information		*	*	*	"6.5.2"
	License		*	*	*	"6.5.3"
Display	Total Count Zoom		*	*	*	"5.8"
	Weight Value Zoom		*	*	*	
	Preset Information		*	*	*	
	Histogram Display		*	*	*	
	X-Bar Chart Display		*	*	*	
	Last 20 Weight Data Display		*	*	*	
	Pitch Adjustment Display		*	*	*	
Output	Output Destination		*	*	*	"6.5.4.1"
	Current Total Output		*	*	*	"5.10.1", "5.10.4"
	Total Items Output		*	*	*	
	Clear All Totals		*	*	*	"5.10.3"
	Each Time Output		*	*	*	"5.10.2"
	Preset Setting Output		*	*	*	"5.10.4", "5.10.5"
	All Preset Setting Output		*	*	*	
	Common Setting Output			*	*	
	Display access logs		*	*	*	
	Log Output		*	*	*	
	Clear Log			*	*	"5.10.3"
	Weight Log Output		*	*	*	"5.10.4", "5.10.5"
	Span Adjustment Log Output			*	*	
	Proper Feed		*	*	*	
	Cancel		*	*	*	

6.2 Access Level Change

There are three operation levels: Operator level (Level 0), Site Engineer level (Level 1), and Installation level (Level 2). Operable items differ depending on the operation level.
The detail of each operation level is shown in "Table 6-2".

Table 6-2

Name	Operation Objected Person	Operation Details	Passcode	
Operator level (Level 0)	Operator	Basic operations for daily production line work.	Not required	Lower↑
Site Engineer level (Level 1)	System manager	In addition to the Operator level operations, registration for weighing and adjustment operation.	Required	
Installation level (Level 2)	Ishida Maintenance engineer	In addition to the Site Engineer level operations, adjustment and other operations required for installation of equipment.		Upper↓

The operation panel is set to the Operator level as default when power is turned on.
To switch the Operator level to a higher level, a passcode for the higher level is required.
passcodes are registered as the factory setting shown in the table below. To change the passcodes, refer to "6.5.10 Level 1&2&3 Passcodes Setting" in the Control Panel screen.
When switching from higher operation levels to a lower level, no passcode is required.

Table 6-3

Operation Level	Passcode
Site Engineer level	1
Installation level	2

CAUTION

- **Passcodes for the Site Engineer and higher operation levels are set in order to limit operations to authorized users for each operation. Passcodes need to be managed to avoid operation by unauthorized users.**

6.2.1 Switching to the Operator Level (Level 0)

No passcode is required for the Operator level.
For switching to the Operator level, follow the procedures below.

1. Press the [Setup] key in the Standby menu.

   ▶Setup menu is displayed.

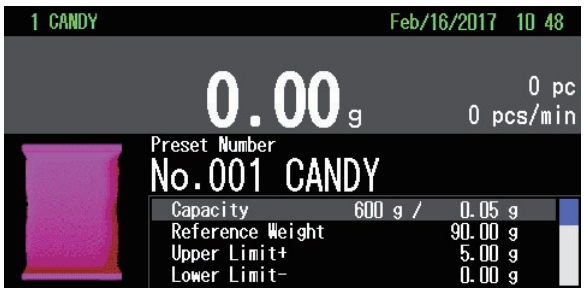


Fig. 6-1

2. Select and enter the "Access Level Change".

   ▶The Access Level Change screen is displayed.

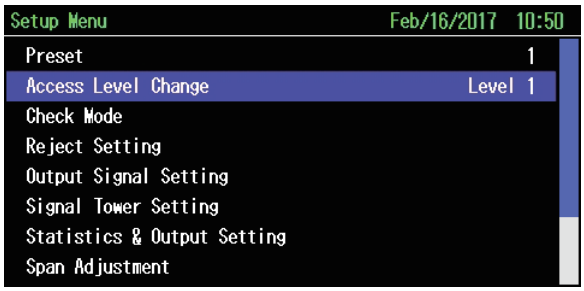


Fig. 6-2

3. Press the [Enter] key without entering anything into the passcode field.

   ▶The Setup menu for the Operator level appears.

   ▶Switching to the Operator level is completed.

Fig. 6-3

6.2.2 Switching to the Site Engineer Level (Level 1)

To switch the Operator level and the Installation level to the Site Engineer level, the passcode for the Site Engineer level is required.

1. Press the [Setup] key in the Standby menu.

   ▶The Setup menu is displayed.

2. Select and enter the "Access Level Change".

   ▶The Access Level Change screen is displayed.

Fig. 6-4

3. Enter the passcode for the Site Engineer level via the [numeric] keys and press the [Enter] key.

   ▶The Setup menu for the Site Engineer level is displayed.

   ▶Switching to the Site Engineer level is completed.

Fig. 6-5

6.2.3 Switching to Installation level (Level 2)

To switch the Operator level or the Site Engineer level to the Installation level, the passcode for the Installation level is required.
For switching to the Installation level, follow the procedures below.

1. Press the [Setup] key in the Standby menu.

   ▶ The Setup menu is displayed.

2. Select and enter the "Access Level Change".

   ▶The Access Level Change screen is displayed.

Fig. 6-6

3. Enter the passcode for the Installation level via the [numeric] keys and press the [Enter] key.

   ▶The Setup menu for the Installation level is displayed.

   ▶Switching to the Installation level is completed.

Fig. 6-7

6.3 Test Production

Test Production is an operating mode to test the weight inspection performance.
Test Production has two modes: a check mode and a test mode. The inspection performed during the test production is not totalled.

6.3.1 Check Mode

Check Mode is an operating mode to test the Reference Weight, Upper Limit, and Lower Limit that are set. Check results are stored in the access log.
For the settings of Reference Weight, Upper Limit, and Lower Limit, refer to "6.4.3 Reference Weight","6.4.4 Upper Limit", and "6.4.5 Lower Limit".

6.3.1.1 Description of the Check Mode Screen

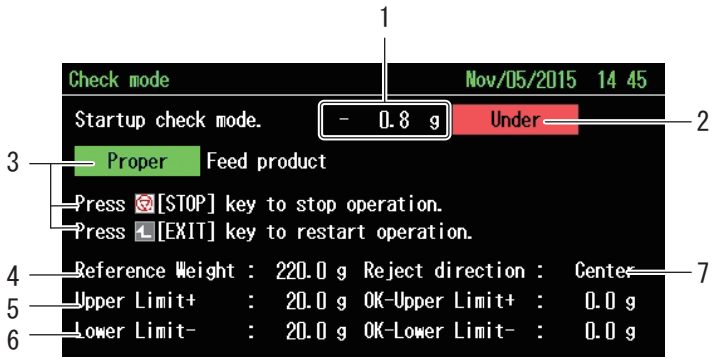


Fig. 6-8

Table 6-4

No.	Item	Function
1	Weight display	Displays the weight of the checked product
2	Inspection result	Displays the inspection results such as Proper, Over, and Under.
3	Operation procedure	Displays the next operation procedure.
4	Reference weight	Displays the Reference Weight that is set in the Preset.
5	Upper limit	Displays the Upper Limit that is set in the Preset.
6	Lower limit	Displays the Lower Limit that is set in the Preset.
7	Reject direction	Displays the reject direction for products.

6.3.1.2 How to Start the Check Mode during Stoppage

1. Display the Setup menu.
2. Select and enter the "Check mode"

   ▶The Check Mode in Process screen is displayed.

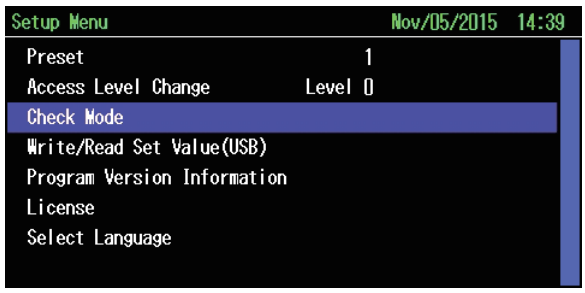


Fig. 6-9

3. Press the [Start] key.

   ▶The Check mode screen is displayed.

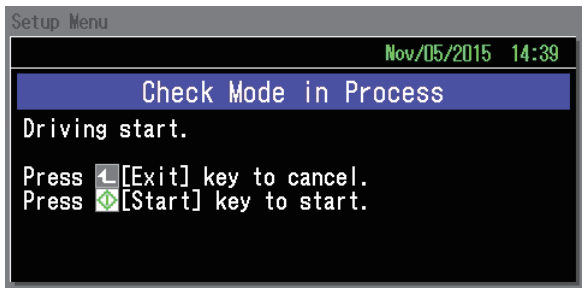


Fig. 6-10

6.3.1.3 How to Start the Check Mode during Operation

1. Press the [Function 2] key in the Standby menu.

   ▶The Check Mode in Process screen is displayed.

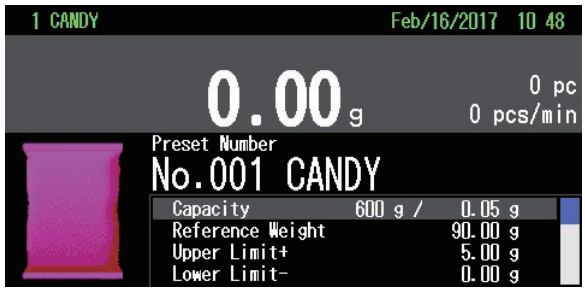


Fig. 6-11

2. Press the [Enter] key.

   ▶The Check mode screen is displayed.

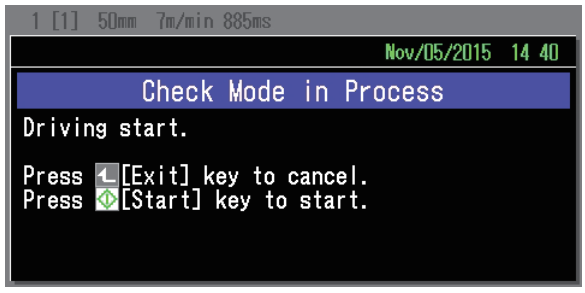


Fig. 6-12

6.3.1.4 Flow of Check Mode

1. Feed the Proper product.

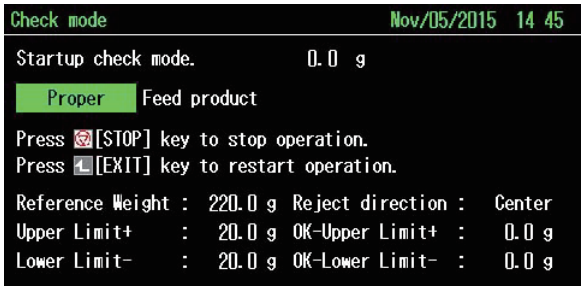


Fig. 6-13

2. Press the [Enter] key.

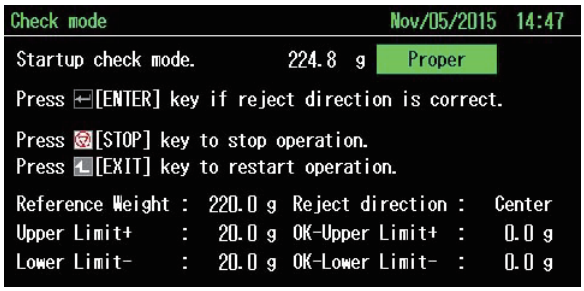


Fig. 6-14

3. Feed the Over product.

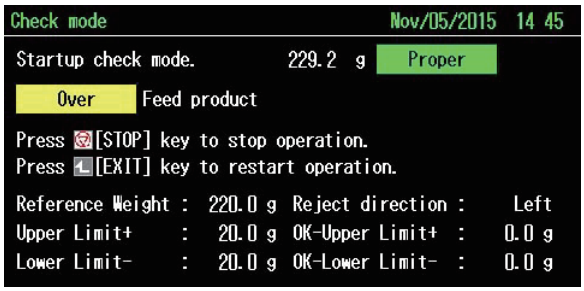


Fig. 6-15

4. Press the [Enter] key.

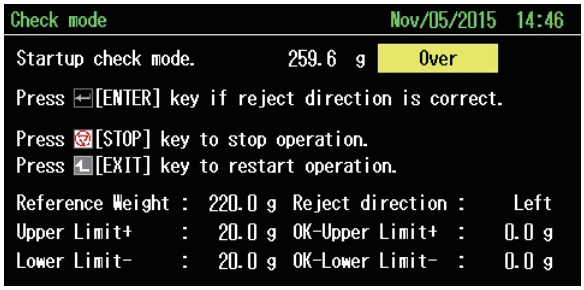


Fig. 6-16

5. Feed the Proper product.

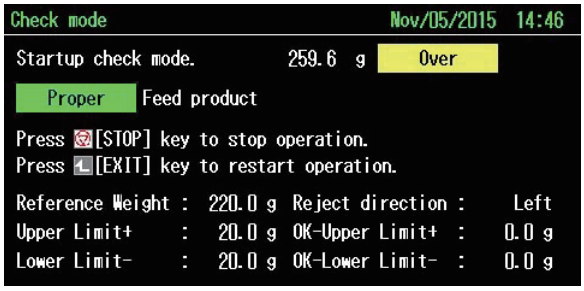


Fig. 6-17

6. Press the [Enter] key.

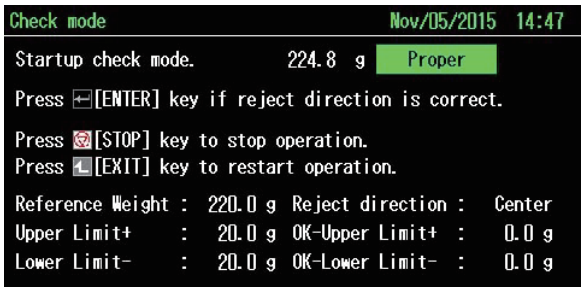


Fig. 6-18

7. Feed the Under product.

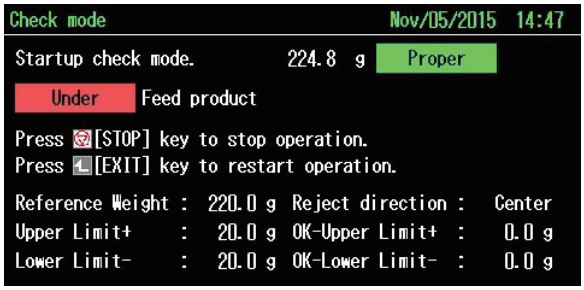


Fig. 6-19

8. Press the [Enter] key.

   ▶The Check Mode Complete screen is displayed.

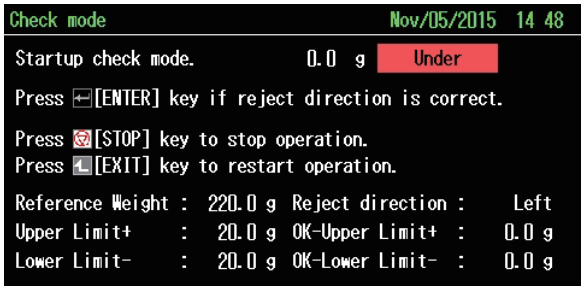


Fig. 6-20

9. Press the [Stop] key.

   ▶Check mode is completed.

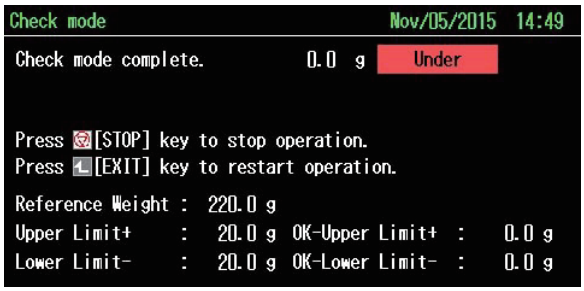


Fig. 6-21

NOTE

- If the [Exit] key or [Stop] key is pressed in a check mode without any instruction, the check mode is forcedly terminated, it is not completed but aborted.
- If the "Startup Check" is set to "ON" in the System Configuration, a check mode is used at the first operation after the power is turned on or the preset is changed. In this case, the standard production cannot be performed until the check mode is completed.

TIP

- If the "Metal Detection" is set to "ON" in the System Configuration, metal errors are additionally checked.
- The check mode can be started by pressing the [Function 2] key in the Standby menu or from the Function Dialog.

6.3.2 Test Mode

Test Mode is an operating mode to test any item regardless of Proper, Over, and Under.
Follow the procedures below test mode.

NOTE

- This item is enabled only when the "Test Mode" is set to "ON" in the System Configuration.
- The Reject conveyor and the reject function will stop in a test mode.
- Remove the product promptly when the product in a test mode is reached the Reject conveyor.

6.3.2.1 Description of Test Mode Screen

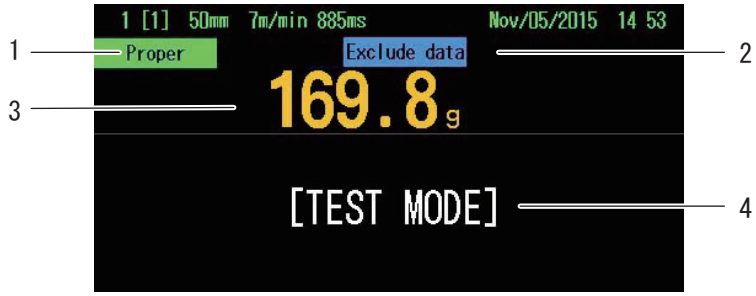


Fig. 6-22

Table 6-5

No.	Item	Function
1	Inspection result	Displays the inspection results such as Proper, Over, and Under.
2	Exclude data display	Displays when the inspection result is excluded to be on statistical data.
3	Weight display	Displays the weight of the checked product.
4	Test mode display	Displays the Test Mode is in operation.

6.3.2.2 How to Start the Test Mode during Stoppage

1. Display the Setup menu.
2. Select and enter the "Test Mode".

   ▶The Initiate Test Mode screen is displayed.

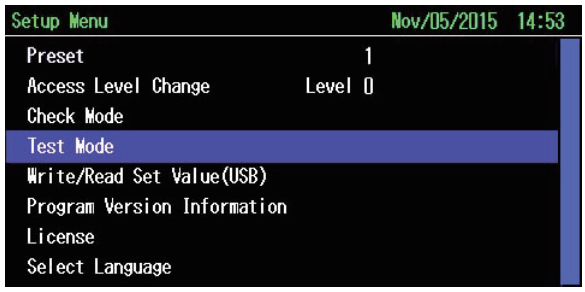


Fig. 6-23

3. Press the [Start] key.

   ▶Test mode is started.

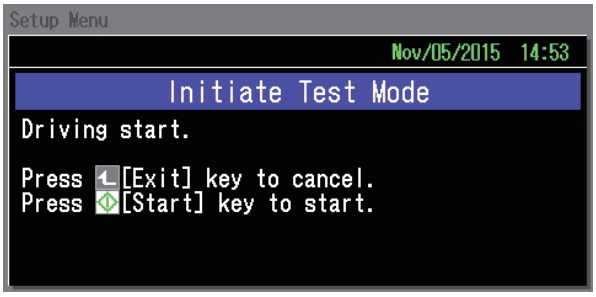


Fig. 6-24

6.3.2.3 How to Start the Test Mode during Operation

1. Press the [Function 1] key in the Standby menu.

   ▶The Initiate Test Mode screen is displayed.

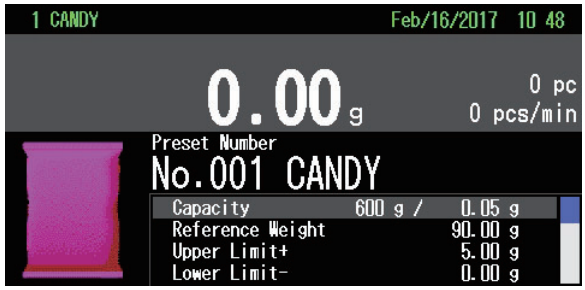


Fig. 6-25

2. Press the [Enter] key.

   ▶Test mode is started.

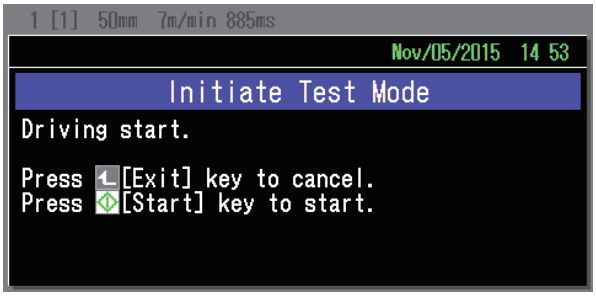


Fig. 6-26

6.3.2.4 How to Exit the Test Mode

1. Press the [Function 1] key.

   ▶The Check Mode Complete screen is displayed.

2. Press the [Enter] key.

   ▶Test mode is finished.

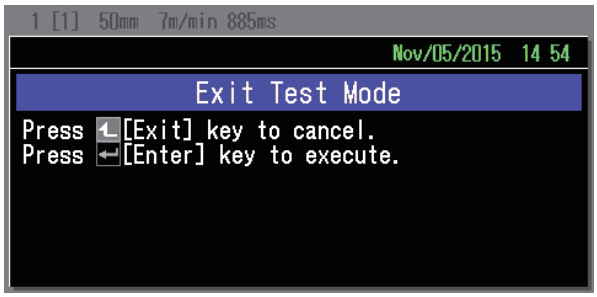


Fig. 6-27

NOTE

- Before exiting the test mode, make sure that there is no remaining product on the Weigh conveyor and the Reject conveyor.

TIP

- To exit the Test Mode during a test mode, press the [Exit] key or [Stop] key.
- To start or exit the Test Mode, press the [Function 1] key in the Standby menu. The Function Dialog (Refer to "5.9 Function Dialog Menu") can also start or exit the Test Mode.

6.4 Preset Setting

The Preset menu is to set the required weighing parameters prior to starting production. One set of the following 12 preset parameters is set for each product. There are 300 preset numbers, No.1 to No.300. Preset menu can be displayed by selecting the desired preset number in Preset Number menu. Follow the following procedure to display the Preset Setting screen.

NOTE

- Preset setting should be set by the site engineer or higher level personnel.

1. Display the Setup menu in Site Engineer Level. (Refer to "5.5.2 Switching to the Site Engineer Level (Level 1)")
2. Select and enter the "Preset".

   ▶The Preset Number menu is displayed.

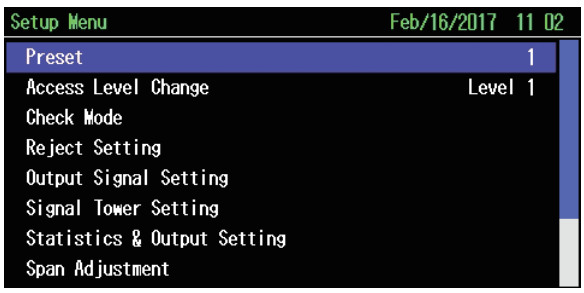


Fig. 6-28

3. Select and enter the desired preset number.

   ▶The Preset menu is displayed.

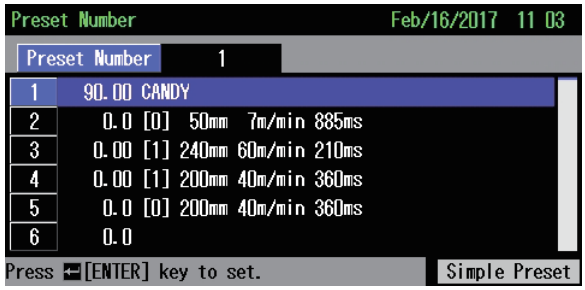


Fig. 6-29

TIP

- In addition to the above procedure, the Preset Number menu is displayed by pressing the [Preset] key in the Standby menu.

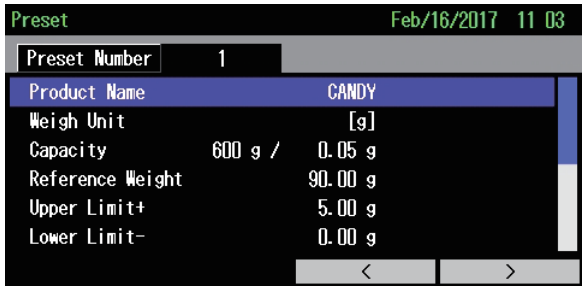


Fig. 6-30

NOTE

- Only up to 6 items can be displayed in the Preset screen at once. To display the rest of items, press the [Up/Down] key or scroll the screen with the command dial.
- To display the Preset menu (Detailed) screen, select "Detailed Setting" in the Preset screen and press the [Enter] key.

6.4.1 Product Name

Product Name defines the name of target product. Up to 12 characters can be set as the Product Name. To set the Product Name, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Product Name".

   ▶The Product Name setting screen is displayed.

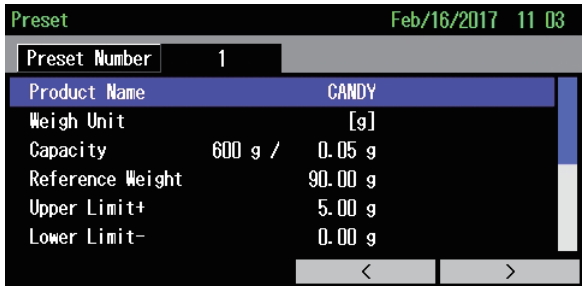


Fig. 6-31

3. Select and enter the characters to be entered.
4. After setting all the desired numeric value or characters, press the [Exit] key.

   ▶The setting of Product Name is reflected on the Preset menu.

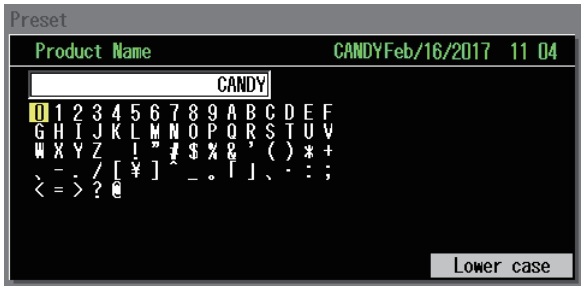


Fig. 6-32

6.4.2 Capacity

Capacity sets the weighing capacity and minimum grad. To set Capacity, follow the procedures below.

1. Display the Preset menu.
2. Select and enter "Capacity".

   ▶The Capacity menu is displayed.

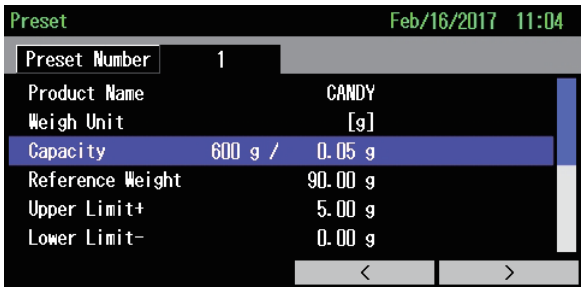


Fig. 6-33

3. Select and enter the "0" to Capacity 1500 g / Minimum grad.0.1 g.
   Select and enter the "1" to Capacity 600 g / Minimum grad.0.05 g.
   (This applies to the specification for DACS-GN-015. For other specification, refer to "11.1 Model Specifications".)

   ▶The message "Reference weight, Upper limit, Lower limit, and Tare are also cleared. OK?" is displayed.

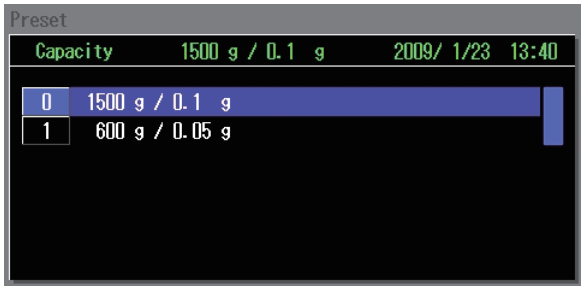


Fig. 6-34

4. Press the [Enter] key.

   ▶The setting of Capacity is reflected on the Preset menu.

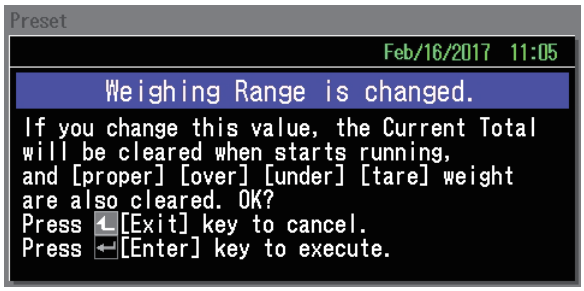


Fig. 6-35

6.4.3 Reference Weight

Reference Weight sets the weight of the product. The settable minimum unit is 0.1 g for the capacity 1500 g. To set Reference Weight, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Reference Weight".

   ▶The Reference Weight setting screen is displayed.

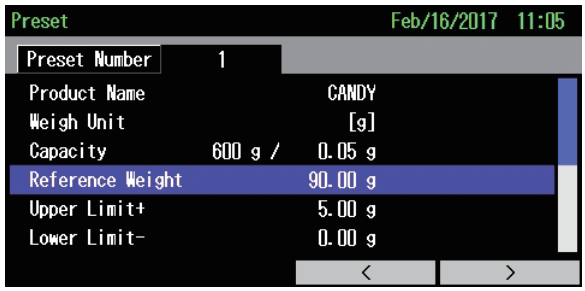


Fig. 6-36

3. Input and enter the numeric value.

   ▶The setting of Reference Weight is reflected on the Preset menu.

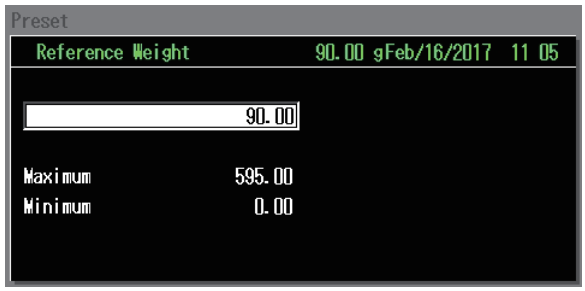


Fig. 6-37

6.4.4 Upper Limit+

Upper Limit+ defines the maximum upper offset from the standard weight as a proper product. The settable minimum unit is 0.1 g.
For example, if the Reference Weight is 100.0 g and the Upper Limit+ is 5.0 g, the product which weigh over 105.0 g is judged as over weight.
To set Upper Limit+, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Upper Limit+".

   ▶The Upper Limit+ setting screen is displayed.

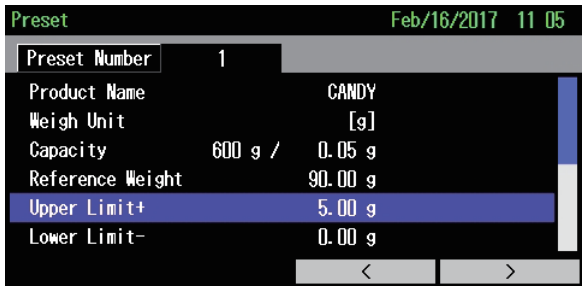


Fig. 6-38

3. Input and enter the numeric value.

   ▶The setting of Upper Limit+ is reflected on the Preset menu.

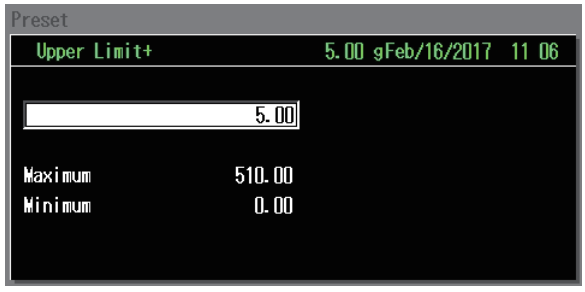


Fig. 6-39

6.4.5 Lower Limit-

Lower Limit- defines the minimum lower offset from the standard weight as a proper product. The settable minimum unit is 0.1 g.
For example, if the reference weight is 100.0 g and the Lower Limit- is 5.0 g, the product which weighs less than 95.0 g are judged under weight.
To set Lower Limit-, follow the procedures below.

1. Display the Preset menu.
2. Select and enter the "Lower Limit-".

   ▶The Lower Limit- setting screen is displayed.

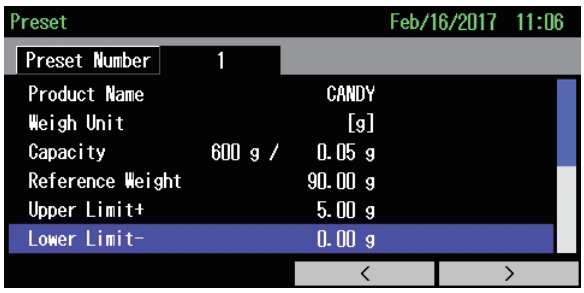


Fig. 6-40

3. Input and enter the numeric value.

   ▶The setting of Lower Limit- is reflected on the Preset menu.

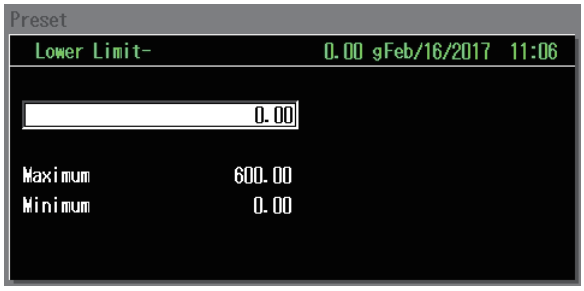


Fig. 6-41

6.4.6 OK-Upper Limit+ or OK-Lower Limit-

This item classifies the weight into 5 zones such as Over, OK-over, Proper, OK-under, and Under (the proper weight range is divided into three zones).
For details, refer to "6.5.7.11 Weight Zone (Switching the 3 Zone/5 Zone)".

NOTE

- When the weight zone is set to "3 Zone" in the System configuration of the installation level, the "OK-Upper Limit+" and "OK-Lower Limit-" are not displayed.

6.4.6.1 OK-Upper Limit+

OK-Upper Limit+ defines the upper limit recognized as the proper weight by deviation from the reference weight.
The range specified with the "OK-Upper Limit+" and "Upper Limit+" is the "OK-over".
Accordingly, set the "OK-Upper Limit+" < "Upper Limit+".

Example: If the Reference Weight is 100.0 g, the Upper Limit+ is 10.0 g, and the OK-Upper Limit+ is 5.0 g, the product which over 105.0 g is judged as "OK-over" and over 110.0 g is "Over".

To set the OK-Upper Limit+, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "OK-Upper Limit+".

   ▶The OK-Upper Limit+ screen is displayed.

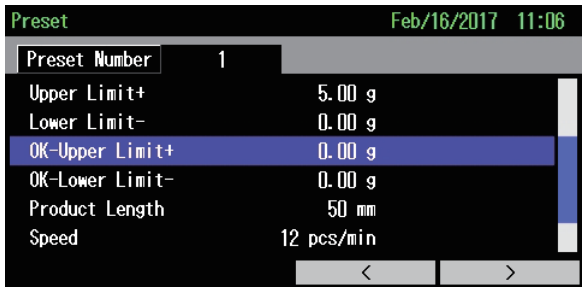


Fig. 6-42

3. Input and enter the numeric value.

   ▶The setting OK-Upper Limit+ is reflected on the preset menu.

   ▶OK-Upper Limit+ is completed.

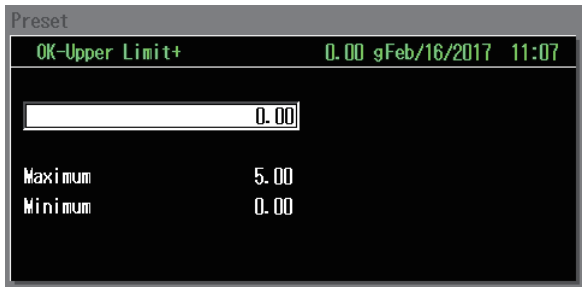


Fig. 6-43

6.4.6.2 OK-Lower Limit-

OK-Lower Limit- defines the lower limit recognized as the proper weight by deviation from the reference weight.
The range specified with the "OK-Lower Limit-" and "Lower Limit-" is "OK-under".
Accordingly, set the "OK-Lower Limit-" < "Lower Limit-".

Example: If the Reference Weight is 100.0 g and the Lower Limit- is 10.0 g, and the OK-Lower Limit- is 5.0 g, the product which under 95.0 g is judged as "OK-under" and under 90.0 g is "Under".

To set OK-Lower Limit-, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "OK-Lower Limit-".

   ▶The OK-Lower Limit- screen is displayed.

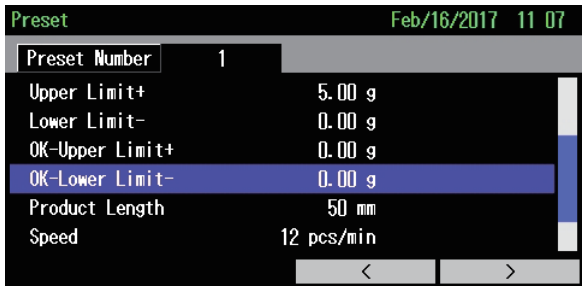


Fig. 6-44

3. Input and enter the numeric value.

   ▶The setting OK-Lower Limit- is reflected on the preset menu.

   ▶OK-Lower Limit- is completed.

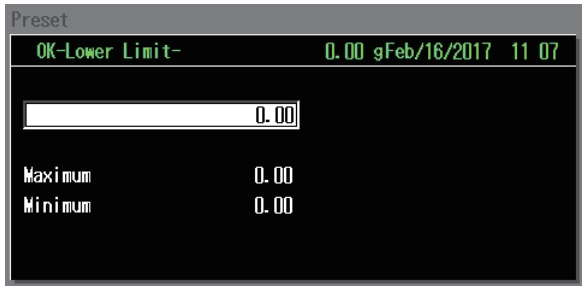


Fig. 6-45

6.4.7 Preset Tare

Preset Tare is used to check net weight of product by tare (weight of the container and package, etc.)subtraction.

NOTE

- This item will not be displayed on the Preset menu if the Tare Subtraction item is set to OFF in the System Configuration in the Installation Engineer level.

To set the Preset Tare, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Preset Tare".

   ▶Preset Tare setting screen is displayed.

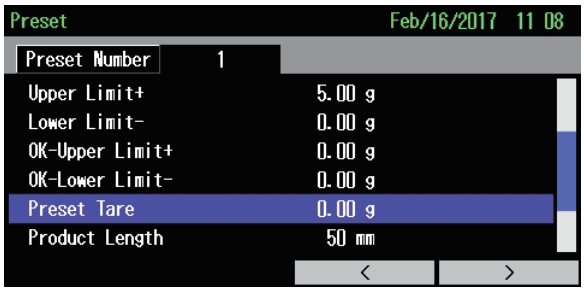


Fig. 6-46

3. Input and enter the numeric value.

   ▶The setting of Preset Tare is reflected on the Preset menu.

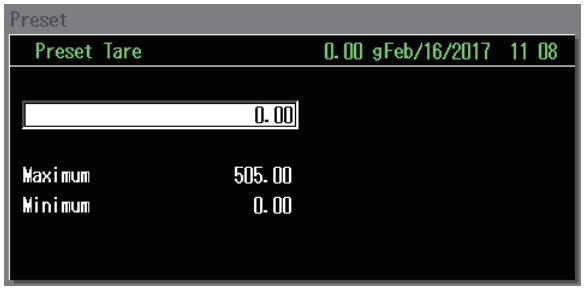


Fig. 6-47

6.4.8 Load Cell (Twin-Cell Specification only)

Load Cell is to select the load cell used for weighing during the production from "Main (Infeed)", "Sub(Weigh)" and "All". Regardless the setting, the both load cells are used for weighing while the machine stops.
To select the load cell, follow the procedure below.

1. Display the Preset Menu.
2. Select and enter "Load Cell".

   ▶The Load Cell Menu is displayed.
3. Set "0" to use the Main (Infeed) load cell,
   "1" to use the Sub (Weigh) load cell,
   "2" to use the both load cells.

   ▶The setting of Load Cell is reflected on the Preset Menu.

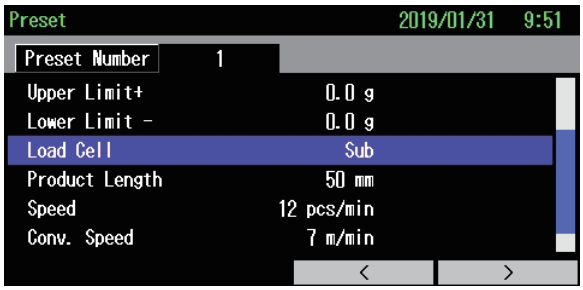


Fig. 6-48

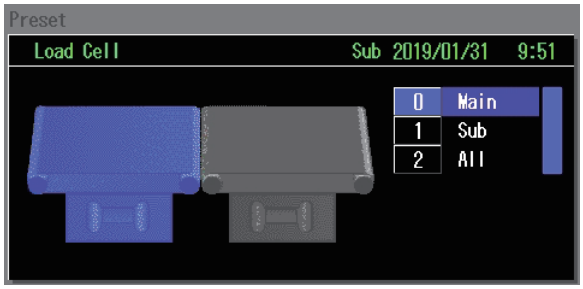


Fig. 6-49

6.4.9 Product Length

Product Length defines of the length of the target product.
To set the Product Length, follow the procedure below.

NOTE

- If the Auto Calculation is set to "OFF" in the timing setting of Installation level, the product length cannot be set.

1. Display the Preset menu.
2. Select and enter the "Product Length".

   ▶Product Length setting screen is displayed.

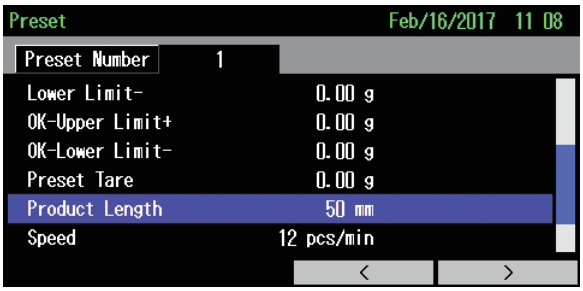


Fig. 6-50

3. Input and enter the numeric value.

   ▶The setting of Product Length is reflected on the Preset menu.

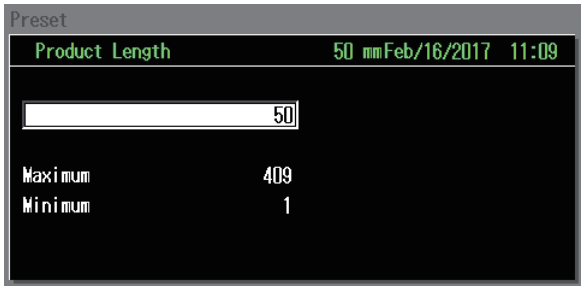


Fig. 6-51

6.4.10 Speed

Speed automatically calculates the Conv. Speed in a batch by setting the speed of the conveyor line to Speed. To set Speed, follow the procedure below.

NOTE

- If the Auto Calculation is set to "OFF" in the timing setting of Installation level, the Speed cannot be set.

TIP

- The speed is multiplied by 1.25 to automatically calculates the Conv. Speed.

1. Display the Preset menu.
2. Select and enter the "Speed".

   ▶The Speed screen is displayed.

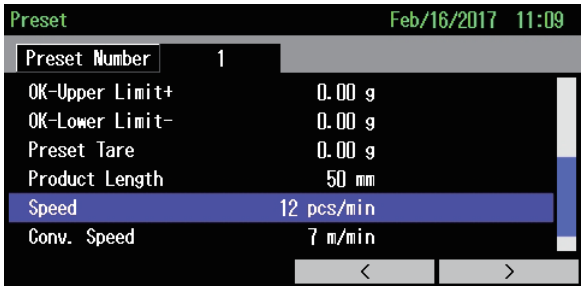


Fig. 6-52

3. Input and enter the numeric value.

   ▶The setting Speed is reflected on the preset menu.

   ▶Speed is completed.

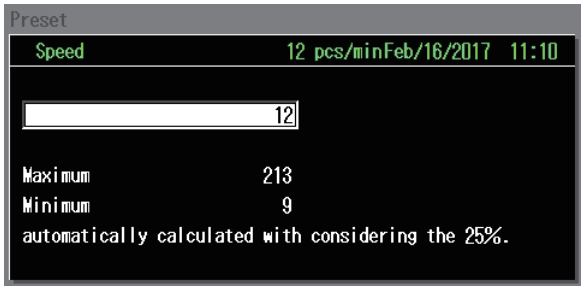


Fig. 6-53

6.4.11 Conv. Speed

Conv. Speed defines the speed for the infeed, weigh, and reject conveyors in a batch.
To set Conv. Speed, follow the procedure below.

NOTE

- If the Auto Calculation is set to "OFF" in the timing setting of Installation level, the Conv. Speed cannot be set.

1. Display the Preset menu.
2. Select and enter the "Conv. Speed".

   ▶The Conv. Speed screen is displayed.

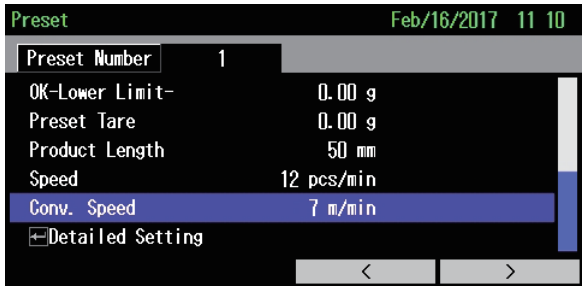


Fig. 6-54

3. Input and enter the numeric value.

   ▶The setting Conv. Speed is reflected on the preset menu.

   ▶Conv. Speed is completed.

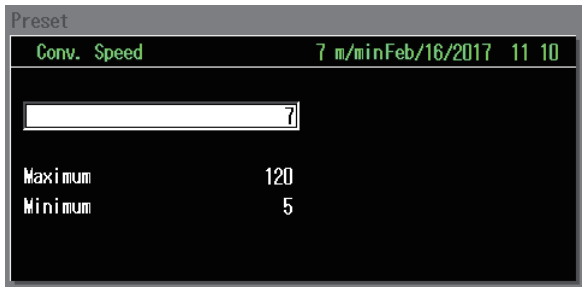


Fig. 6-55

6.4.12 Charge Mixing Weight Deviation±

Charge Mixing Weight Deviation defines the adjacent weight variation for reference to judge an error when connected with the bagger.
When an error is judged, the Charg.Mix.Wgt.Dev± count will be counted up in the Standby menu (Refer to "Fig. 5-27 ") The Judgment criteria is "Under, then Over" and also "Total weight (Reference Weight) is within 2 (Charg, Mix Wgt. Dev.±) range ".

Example: If the Reference Weight" is 100.0 g and the Charg, Mix Wgt. Dev.±" is 20.0 g, Under, then Over, and also the total weight is between 180.0 g and 220.0 g, the Charg.Mix.Wgt.Dev± count will be counted up.

To set Charge Mixing Weight Deviation, follow the procedure below

NOTE

- If the "Charg, Mix Wgt. Dev.±" is set to "OFF" in the System configuration of the installation level, the item of "Charge Mixing Weight Deviation" is not displayed. (Refer to "6.5.7.13 Charge Mixing Weight Deviation")

1. Display the Preset menu.
2. Select and enter the "Charg. Mix. Wgt. Dev".

   ▶The Charge Mixing Weight Deviation setting screen is displayed.

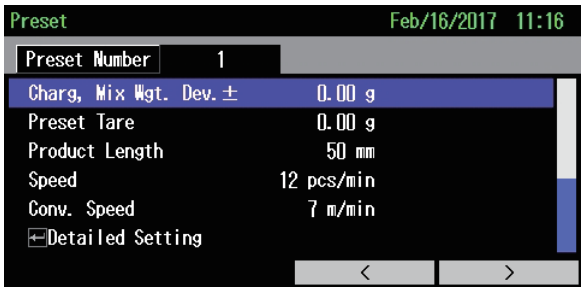


Fig. 6-56

3. Input and enter the numeric value.

   ▶The setting of Charge Mixing Weight Deviation is reflected on the Preset menu.

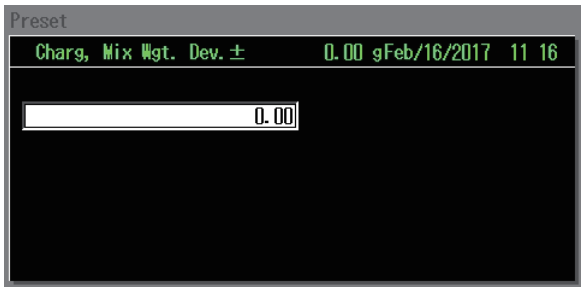


Fig. 6-57

6.4.13 Timing Setting

Timing Setting is used to adjust operational timing for the machine components to achieve a smooth flow of the product across the conveyors.
To set each timing parameters, follow the procedure below.

NOTE

- If the Auto Calculation is set to "OFF" in the timing setting of Installation level, speed of the infeed conveyor and the weigh conveyor cannot be set.
- If the "Metal Detection" is set to "OFF" in the System Configuration of Installation level, the MD NG Input Delay Time cannot be set.

Table 6-6

Item	Function
Feed Conveyor Speed	Sets the speed of Infeed conveyor.
Weigh Conveyor Speed	Sets the speed of Weigh conveyor.
Reject Conveyor Speed	Sets the speed of Reject conveyor.
Reject Start Time	Sets the timing of starting the rejector.
Reject ON Time	Sets the time interval of rejector action.
Default Reject Time	Sets the waiting time until the default reject starts.
Drive Weigh Standby Time	Sets the waiting time until the drive weigh starts.
MD NG Input Delay Time	Sets the metal detect signal output delay.
Arm Rejector Speed	Sets the arm speed of the rejector.
Output Signal 32 Delay (XT101)	Sets the Output Signal Delay.

Table 6-6

Item	Function
Output Signal 35 Delay (XT101)	Sets the Output Signal Delay.
Output Signal 38 Delay (XT101)	
Output Signal 41 Delay (XT101)	
Auto Calculation	Sets ON or OFF of the Auto Calculation.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Timing Setting".

   ▶The Timing Setting menu is displayed.

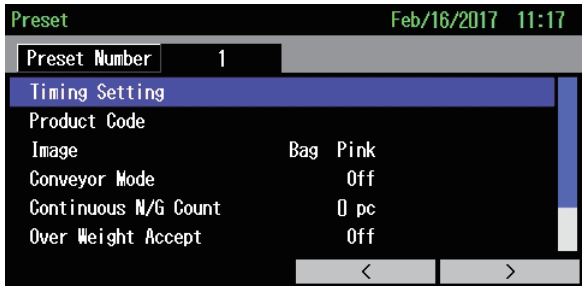


Fig. 6-58

4. Select and enter the desired timing parameter.

   ▶The setting screen for each parameter is displayed.

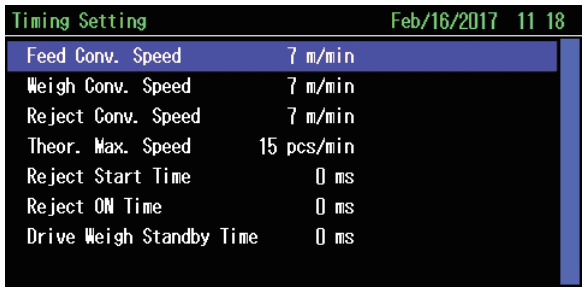


Fig. 6-59

5. Input and enter the numeric value.

   ▶The setting of each parameter is reflected on the Timing Setting menu.

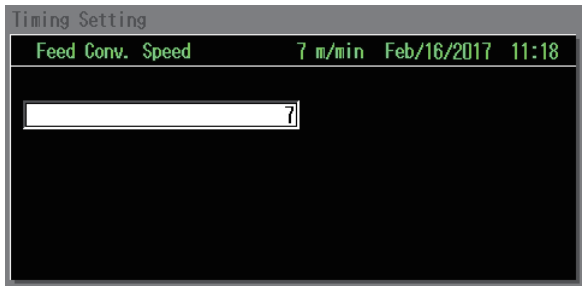


Fig. 6-60

6.4.14 Product Code

Product Code defines the code number of the product to be displayed on the RCU. Up to 12 characters can be set as the Product Code. To set the Product Code, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Product Code".

   ▶The Product Code setting screen is displayed.

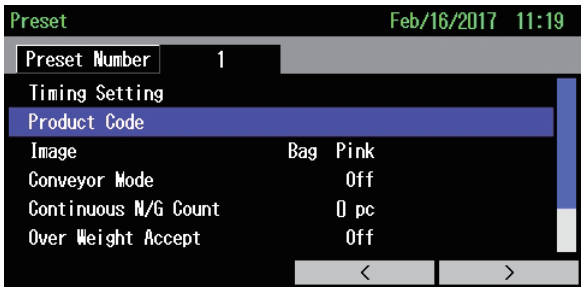


Fig. 6-61

4. Select and enter the characters to be entered.
5. After setting all the desired numeric value or characters, press the [Exit] key.

   ▶The setting of Product Code is reflected on the Preset menu.

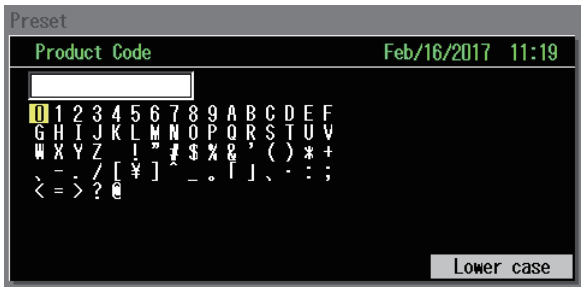


Fig. 6-62

6.4.15 Product Image

Product Image is to set the color and shape of the image of target product displayed on the bottom left of the Standby menu, by each preset number.
To set the Product Image, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Product Image".
4. Press the [Enter] key again.

   ▶The Product Image menu is displayed.
5. Select and enter the "Product Shape".

   ▶The Product Shape menu is displayed.

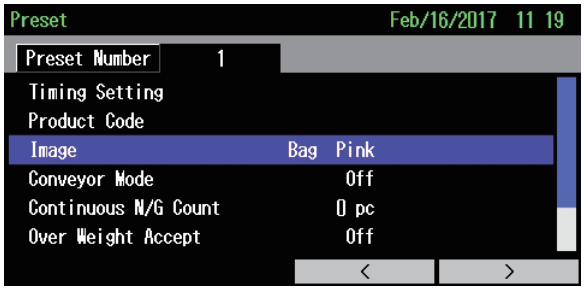


Fig. 6-63

Fig. 6-64

6. Select and enter the shape of image.

   ▶The setting of Product Shape is reflected on the Product Image menu.

7. Select and enter the "Product Color".

   ▶The Product Color menu is displayed.

Fig. 6-65

8. Select and enter the desired color.

   ▶The setting of Product Color is reflected on the Product Image menu.

Fig. 6-66

NOTE

- When set "Preset No." as the Product Image, the Product Color is not settable.

6.4.16 Conveyor Mode

Conveyor Mode is an operating mode in which the conveyor is allowed to operate without performing allocation judgments such as weight judgments and metal determination. (Statistical totaling not performed.) To set, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.

3. Select and enter the "Conveyor Mode".

   ▶The Conveyor Mode setting screen is displayed.

4. Select and enter the "0" to deactivate the Conveyor Mode.
   Select and enter the "1" to activate the Conveyor Mode.

   ▶The Preset menu for the Conveyor Mode setting will be displayed.

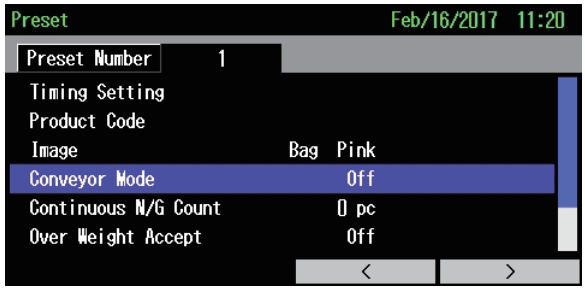


Fig. 6-67

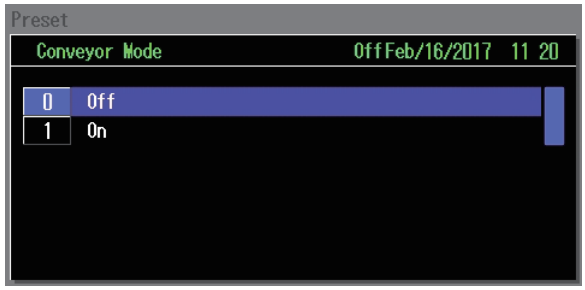


Fig. 6-68

6.4.17 Reject Setting

Rejector Setting is to set the rejector direction and output signal parameters and Cont.NG. Refer to the figure below. For Continuation NG is refer to "6.4.19 N/G Stop Setting".
The rejector is optional. To set the reject setting, follow the procedures below.

NOTE

- When the "Reject Setting" is set to "by Preset" in the System Configuration in Installation level (Level 2), Rejector Setting menu is displayed in the Preset menu. When set to “For All”, the Rejector Setting is displayed in the Setup menu. (Refer to "6.5.7.4 Reject Func. Select.")

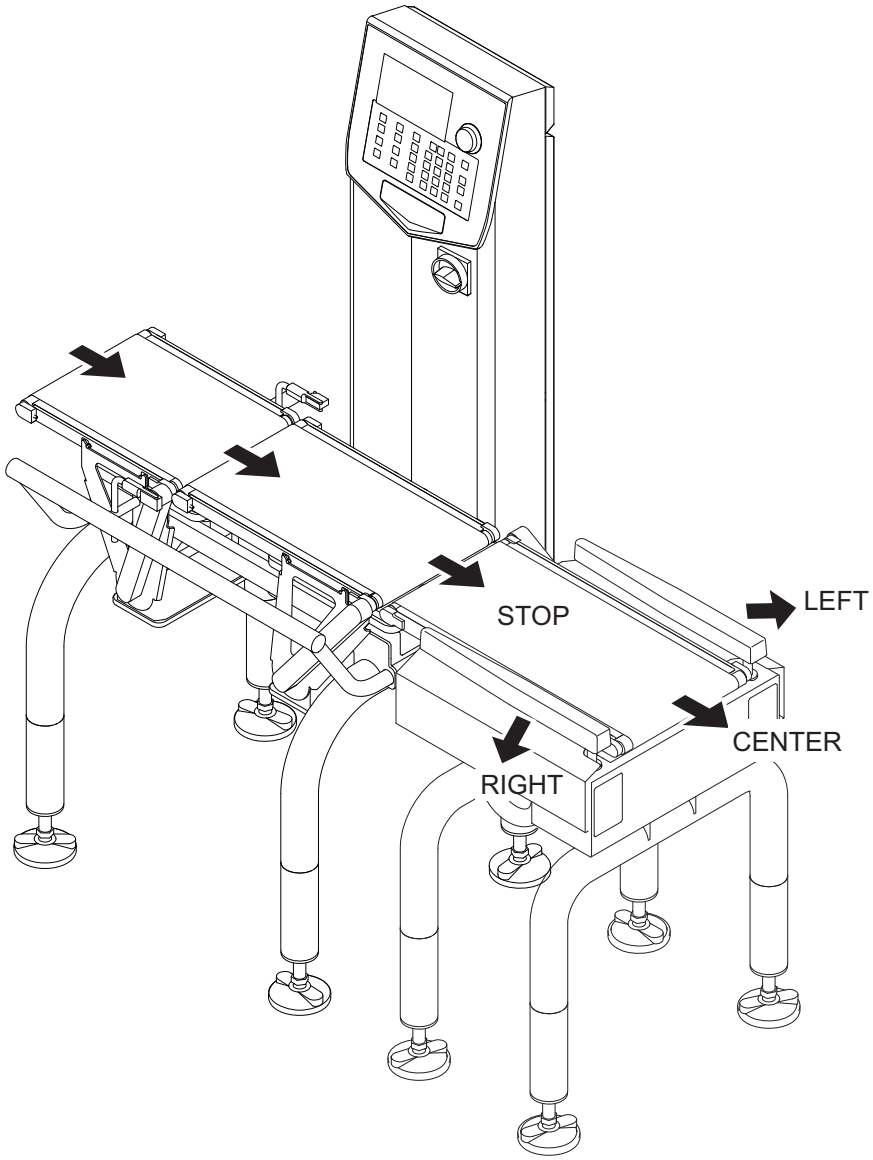


Fig. 6-69

< Overview of the Reject Setting Item >

The rejecter setting items and functions are given below. For the setting procedure, refer to the relevant procedure described in "Reference".

NOTE

- If Metal Detection is set to "OFF", Metal Detect Rej. Dir. in the System configuration of the installation level, the Metal Detection Signal cannot be set.

Table 6-7

Item	Function	Reference
Proper Wt. Rej. Dir.	Sets the reject direction for proper weight items.	"6.4.17.1 Reject Direction Setting"
Over Wt. Rej. Dir.	Sets the reject direction for over weight items.	
Under Wt. Rej. Dir.	Sets the reject direction for under weight items.	
OK-over Rej. Dir.	Sets the reject direction for "OK-over" items.	
OK-under Rej. Dir.	Sets the reject direction for "OK-under" items.	
Default Rej. Dir.	Sets the reject direction for the uninspected item (e.g., the item that was passed without blocking the incoming light from the photoelectric sensor).	
Metal Detect Rej. Dir.	Sets the reject direction for metal-containing items when a metal detector is connected.	
Ext. 1 Rej. Direction	Sets the reject direction for items when a signal is input from the External unit 1. (When the External unit 1 is not used, no setting is required.)	
Ext.2 Rej. Direction	Sets the reject direction for items when a signal is input from the External unit 2. (When the External unit 2 is not used, no setting is required.)	
Zero Error Reject Dir.	Sets the reject direction for items when a Zero error occurs.	
Pitch Error Rej. Dir.	Sets the reject direction for items when a pitch error occurs.	
Foreign Obj. Rej. Dir.	Sets the reject direction when a foreign object is detected in the product.	
Product Length Error Rej. Dir.	Sets the reject direction for items when 2 or more product packages are placed connectively.	
Continuous N/G Stop	Sets whether checkweigher will be stopped when Continuous N/G occurs.	"6.4.19.2 Continuous N/G Stop"

6.4.17.1 Reject Direction Setting

Reject Direction is used to set the direction to divert the product when each status occurs.
To set the Reject Direction, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Reject Setting".

   ▶The Reject Setting menu is displayed.

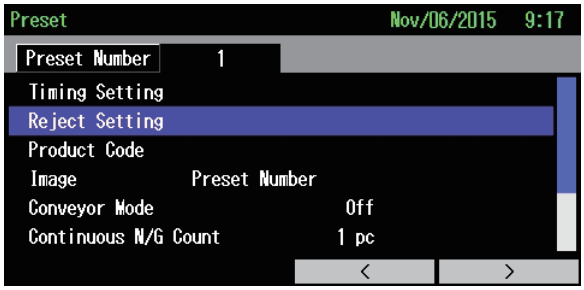


Fig. 6-70

4. Select and enter the Reject Direction to be set.

   ▶The Reject Direction menu is displayed.

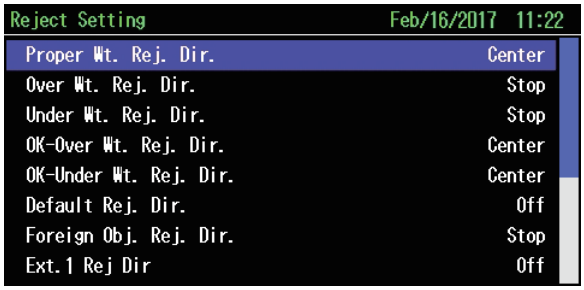


Fig. 6-71

5. To set "Stop", Select and enter the "1".
   To set "Center", Select and enter the "2".
   To set "Left", Select and enter the "3".
   To set "Right", Select and enter the "4".

   ▶The setting of each Reject Direction is reflected on the Reject Setting menu.

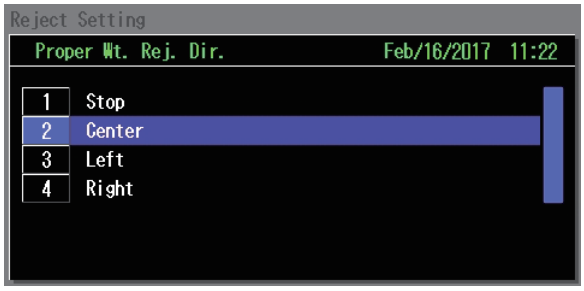


Fig. 6-72

6.4.18 Output Signal Setting

< Overview of the Output Signal Setting Item >

The output signal setting items and functions are given below. For the setting procedure, refer to the reference column below.

Table 6-8

Item	Function	Reference
Operation*	Sets the signal to be output during operation.	"6.4.18.1 Output Condition Setting"
Conveyor-running*	Sets the signal to be output while the conveyor is running.	
Stop*	Sets the signal to be output during stoppage.	
Error Stop*	Sets the signal to be output during error stoppage.	
Proper Wt.	Sets the signal to be output when a proper item passes.	

Table 6-8

Item	Function	Reference
Over Wt.	Sets the signal to be output when an over weight signal passes.	"6.4.18.1 Output Condition Setting"
Under Wt.	Sets the signal to be output when an under weight signal passes.	
OK-over Wt.	Sets the signal to be output when the "OK-over" item passes.	
OK-under Wt.	Sets the signal to be output when the "OK-under" item passes.	
Metal Detection	Sets the signal to be output when a metal-containing item passes.	
Ext. 1-2	Sets the signal to be output for the item to be rejected in the set direction when a signal is input from External unit 1.	
Pitch Error	Sets the signal to be output for the item to be rejected in the set direction when an pitch error occurs.	
Frn Obj.	Sets the signal to be output for the item to be rejected in the set direction when a foreign object error occurs.	
Product Length Error	Sets the signal to be output for the item to be rejected in the set direction when an product length error occurs.	
Rej. Dir. 1	Sets the signal to be output for the item to be rejected to the left side.	
Rej. Dir. 2	Sets the signal to be output for the item to be rejected to the right side.	

6.4.18.1 Output Condition Setting

Output Condition Setting menu defines which port should be used to output a signal corresponding to each condition such as overweight and under operation.
Output Condition Setting menu is as follows.

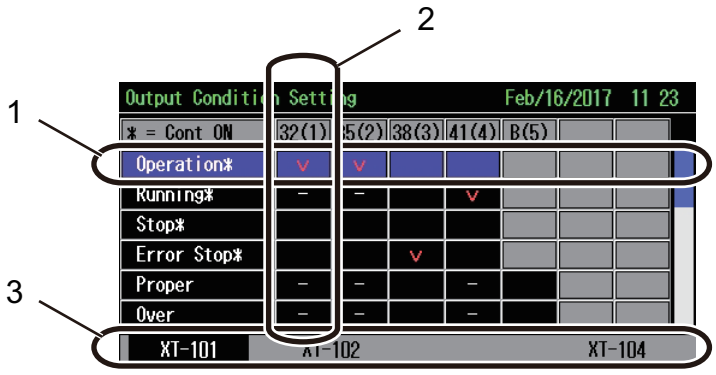


Fig. 6-73

Table 6-9

No.	Function
1	The signal setting status for each condition is displayed. - V mark: Set - Blank: Not set - - mark: Setting impossible (Conveyor synchronization, Under operation, and others have been set.)

Table 6-9

No.	Function
2	The signal setting state for each port is displayed.
3	The setting target line is displayed. The current setting target is displayed in white. In the screen above, XT-101 is the target.

To set the output condition, follow the procedures below.

1. Display the Setup menu screen.
2. Select and enter the desired output signal.

   ▶The Output Signal menu screen is displayed.

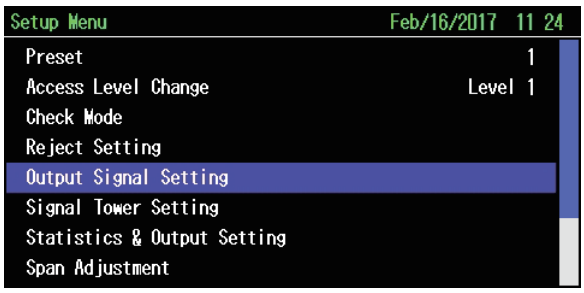


Fig. 6-74

3. Select and enter the output condition setting.

   ▶The warning screen is displayed.

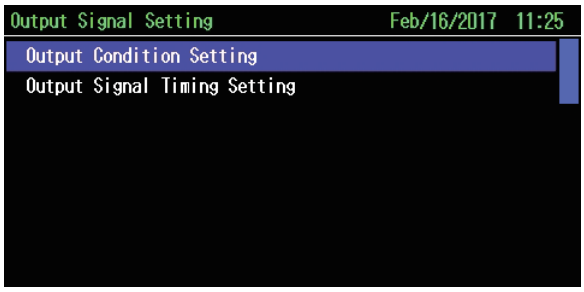


Fig. 6-75

4. Press the [Enter] key.

   ▶Output Condition Setting menu screen is displayed.
   All signals currently output are turned off.

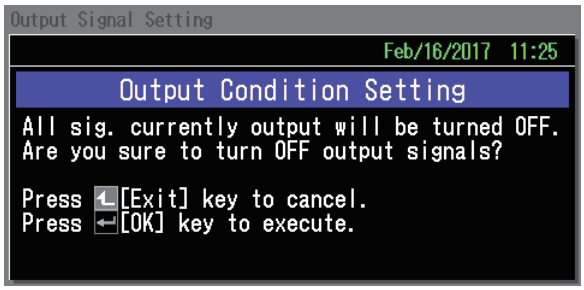


Fig. 6-76

5. Select the preferred line with a [Function] key.
   Selects XT-101 with the [Function 1] key, XT-102 with the [Function 2] key, and XT-104 with the [Function 4] key.
6. Select and enter the preferred conditions with the [Up] or [Down] key.

   ▶Output Condition Setting menu screen is displayed.

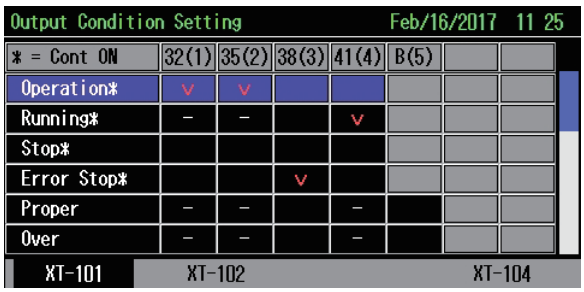


Fig. 6-77

7. Press the [Enter] key when the warning screen is displayed.

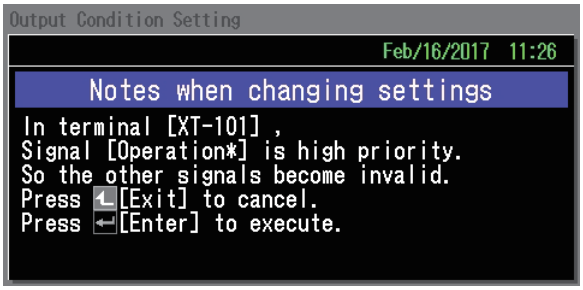


Fig. 6-78

NOTE

- The warning screen is displayed when a signal cannot be overlapped in the line due to the conditions such as under operation or conveyor synchronization.

8. Set "ON" or "OFF", then press the [Exit] key.
9. Press the [Exit] key after completing the setting.

   ▶Stopped signal is output.

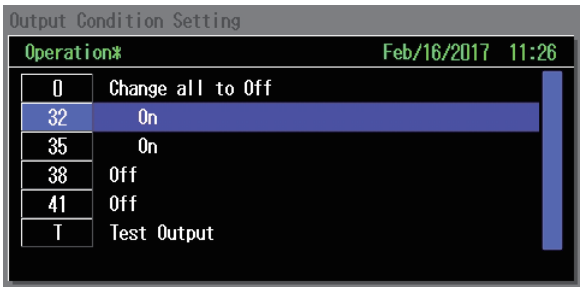


Fig. 6-79

TIP

- When selecting "Test Output", signals are output from all set ports and lines.
- Press any key to cancel the output.
- Buzzer does not support the test output.

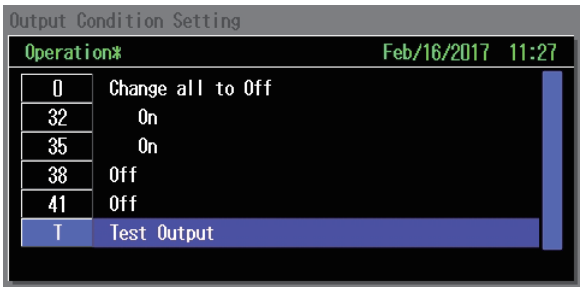


Fig. 6-80

TIP

- Short cut keys are follows.

[1] key: "ON/OFF" of the selected line 32.
[2] key: "ON/OFF" of the selected line 35.
[3] key: "ON/OFF" of the selected line 38.
[4] key: "ON/OFF" of the selected line 41.
[C] key: Sets "ON/OFF" to all ports of the selected line.

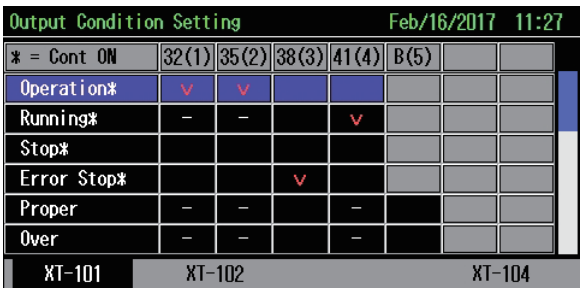


Fig. 6-81

6.4.18.2 Output Timing Setting

In Output Timing Setting, the output delay time, ON Time, and flashing interval can be set for each port. Output Timing Setting menu screen is as follows.

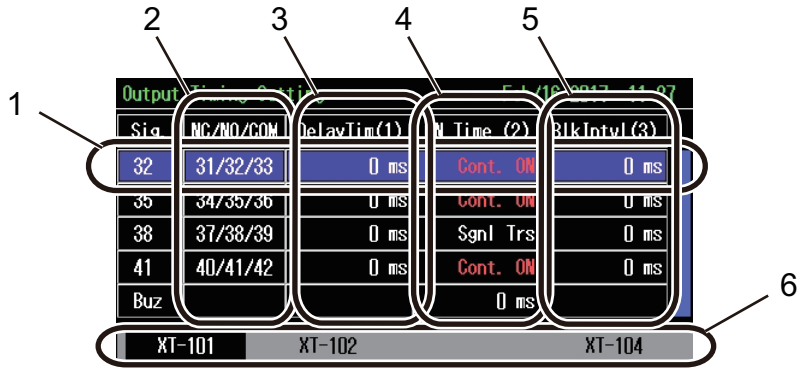


Fig. 6-82

Table 6-10

No.	Function
1	Displays the timing setting state for each port. Select the preferred port with the [Up] or [Down] key.
2	Displays the terminal number of NC/NO/COM.
3	Displays the delay time for each port.
4	Displays the ON Time for each port.
5	Displays the flashing interval for each port.
6	Displays the setting target lines. The current setting target is displayed in white characters. In the screen above, XT-101 is the target.

TIP

- Buzzer can be set ON Time only.
- When the ON Time is displayed as "Continuous ON" in red, the port has been set as a signal of "under operation" or "conveyor synchronization". They can be set only "Continuous ON" so that signals will not be overlapped.
- When "Continuous ON" displayed at the Output Signal ON Time is alternately flashing in red and white, the port has been set as a signal of "Stopped*" or "Error Stop*". Although "Stopped*" or "Error Stop*" is output as "Continuous ON", they can be overlapped with other signals. Other signals are output in Output Signal ON Time displayed in white.

For the output timing setting, follow the procedures below.

1. Display the Setup menu screen.
2. Select and enter the desired output signal.

   ▶The Output Signal menu screen is displayed.

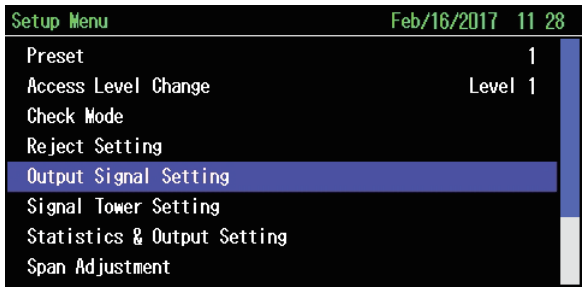


Fig. 6-83

3. Select and enter the output signal timing setting.

   ▶The output timing setting screen is displayed.

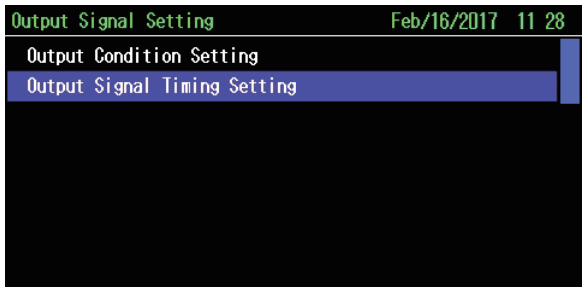


Fig. 6-84

4. Select the preferred line with a [Function] key.
   Selects XT-101 with the [Function 1] key, XT-102 with the [Function 2] key, and XT-104 with the [Function 4] key.
5. Select and enter the port.

   ▶The port item menu is displayed.

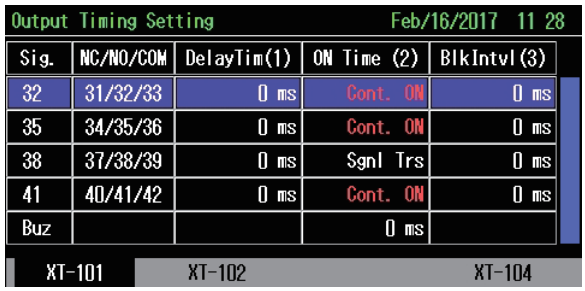


Fig. 6-85

6. Select the setting item.

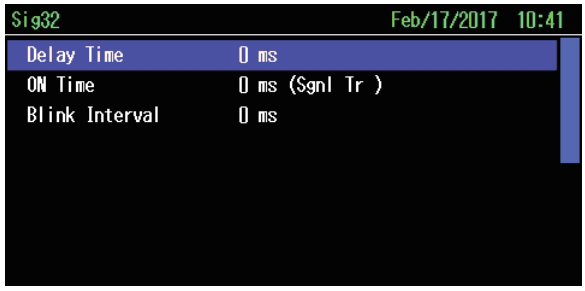


Fig. 6-86

7. Input and enter numerical value.
8. Press the [Enter] key after completing the setting.

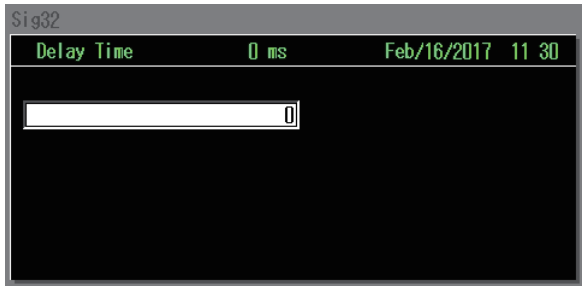


Fig. 6-87

TIP

- Short cut keys are follows.

[1] key: "Delay time" of the selected line.
[2] key: "Output Signal ON Time" of the selected line.
[3] key: "Flashing interval" of the selected line.

- If Output Signal ON Time is set to "0 ms", the signal keeps the current state until the next weighing is completed or stopped. (Signal transition)
- If Output Signal ON Time is set to "30000 ms", the signal keeps the current state until the current weighing is stopped. (Continuous ON)

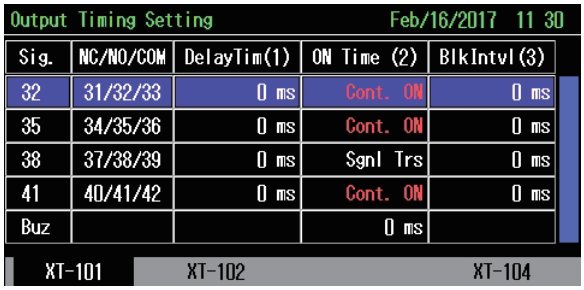


Fig. 6-88

6.4.19 N/G Stop Setting

N/G Stop Setting automatically stops the machine (Continuous N/G Stop) when N/G (Other than Proper) continuously occurs more than the set number of products (Continuous N/G Count). This also outputs signals (Continuous N/G Output) from the machine.

6.4.19.1 Continuous N/G Count

Continuous N/G Count defines the number to be regarded as continuous N/G.
To set the Continuous N/G Count, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Continuous N/G Count".

   ▶The Continuous N/G Count setting screen is displayed.

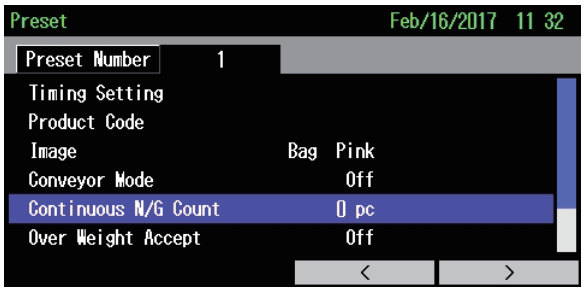


Fig. 6-89

4. Input and enter the numeric value.

   ▶The setting of Continuous N/G Count is reflected on the Preset menu.

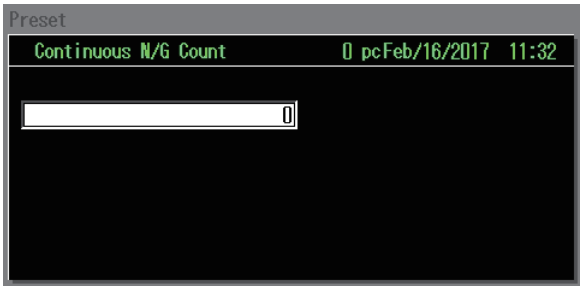


Fig. 6-90

TIP

- When set to "0", the Continuous N/G Stop and Continuos N/G Output are deactivated.

6.4.19.2 Continuous N/G Stop

Continuous N/G Stop defines whether or not to automatically stop the machine when N/G (Other than Proper) continuously occurs more than the set number of products (Continuous N/G Count Signal). The number of rejected items is set in "Continuous N/G Count" of the Preset menu.
To set the Continuous N/G Stop, follow the procedure below.

1. Display the Reject Setting menu.
2. Select and enter the "Continuous N/G Stop".

   ▶Continuous N/G Stop screen is displayed.

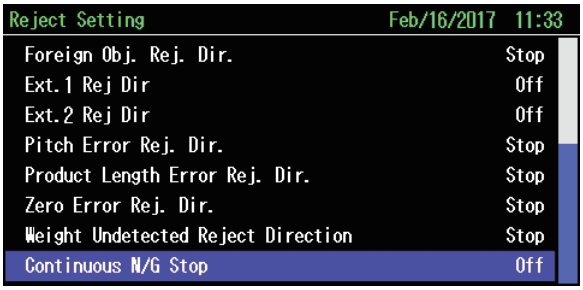


Fig. 6-91

3. To deactivate the Continuos N/G Stop, Select and enter the "0".
   To activate the Continuous N/G Stop, Select and enter the "1".

   ▶The setting of the Continuos N/G Stop is reflected on the Reject Setting screen.

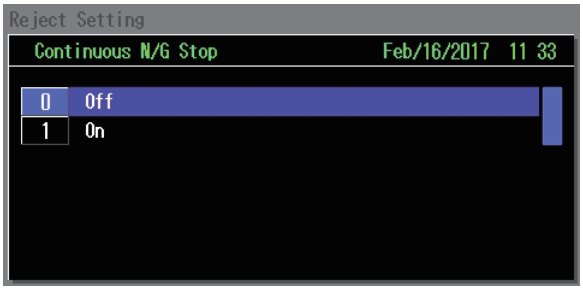


Fig. 6-92

6.4.20 Over Weight Accept

Over Weight Accept is set to ON when over weight products are to be judged as proper weight. When Over Weight Accept is enabled, over weight items are included in the totals for allowable products.
To set the Over Weight Accept, follow the procedure below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.

3. Select and enter the "Over Weight Accept".

   ▶The Over Weight Accept menu is displayed.

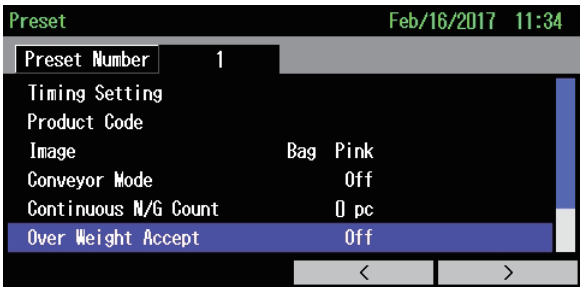


Fig. 6-93

4. To deactivate Over Weight Accept, Select and enter the "0".
   To activate Over Weight Accept, Select and enter the "1".

   ▶The setting of Over Weight Accept is reflected on the Preset menu.

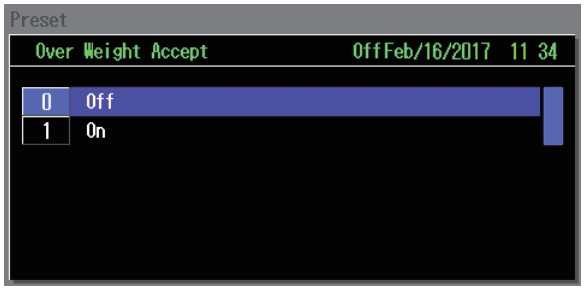


Fig. 6-94

6.4.21 Dynamic Calibration

Dynamic Calibration corrects the weighing result during production. This is used when there are differences in the weighing result between during production and in a stationary state due to lift forces or other factors. The weighing result during production become closer to in a stationary state by setting Dynamic Calibration.
Example: If the weighing result is 100.0 g in a stationary state and the during production is 99.0 g, the weighing result is corrected to approximately100.0 g by setting the Dynamic Calibration.
To set the Dynamic Calibration, follow the procedure below.

NOTE

- When Dynamic Calibration is set to OFF in the System Configuration of the Installation level, Dynamic Calibration menu will not appear.
- When any of Capacity, Reference Weight, Preset Tare, Product Length, or Conv. Speed is changed, Dynamic Calibration will be initialized. In this case, execute the Dynamic Calibration again.
- All preset dynamic calibration settings are initialized when performing the span adjustment. (Refer to "6.5.5 Span Adjustment".) In that case, perform the dynamic calibration again.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Dynamic Calibration".

   ▶Dynamic Calibration Standby menu is displayed.
4. Place the product on the weigh conveyor.
5. Press the [Enter] key.
   Press the [Exit] key to cancel.

   ▶The screen indicating the static weighing is in progress is displayed.

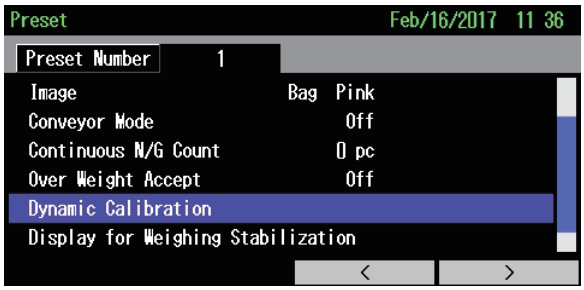


Fig. 6-95

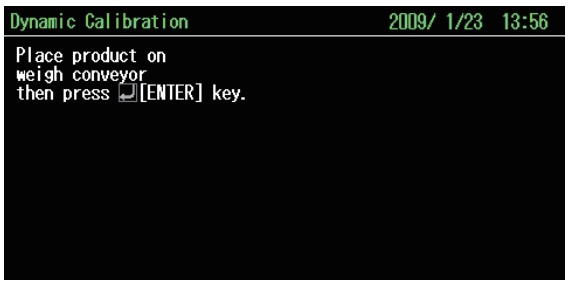


Fig. 6-96

▶When static weighing calculation is completed, the Dynamic Calibration screen is displayed.

Fig. 6-97

6. Remove the product from the weigh conveyor and press the [Start] key.

   ▶The weigh conveyor starts.

   ▶The screen with message indicating the Dynamic Calibration is in progress screen displayed.

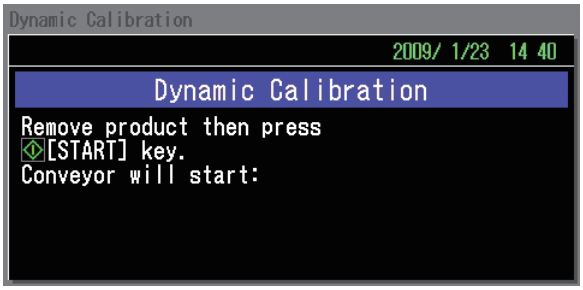


Fig. 6-98

7. Place the product which was placed in the step 3 on the infeed conveyor.
8. Place the product when it is discharged from the weigh conveyor.
9. Repeat the step 7 and 8 until the weigh conveyor stops automatically.

   ▶When weighing is stabilized, the Dynamic Calibration is completed.

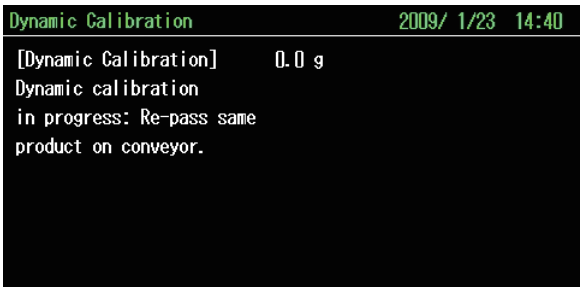


Fig. 6-99

NOTE

- If the weight is out of the range of 10% tolerance from the reference weight in the static weight calculation and dynamic calibration, the display as in the right will appear Access Denied screen and dynamic calibration will be stopped.

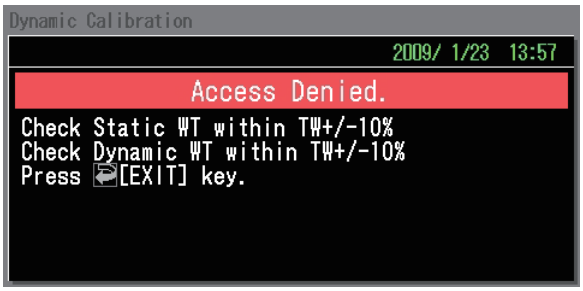


Fig. 6-100

6.4.22 Filter Simulation

Filter Simulation supports filter setting. This simulates the filter effects by applying desired filter to the weigh waveforms of the actual product, which allows the operator to check the filter effects while setting.

6.4.22.1 Acquisition of Weigh Waveforms

This item is used to acquire the weigh waveforms for filter simulations.
To set acquisition of weigh waveforms, follow the procedure below.

1. Start production.
2. Feed the products.
3. Press the [Stop] key.
4. Press the [Preset] key.

   ▶The Preset menu is displayed.
5. Select and enter the Detailed Setting.

   ▶The Preset menu (Detailed) screen is displayed.
6. Select and enter the "Display for Weighing Stabilization".

   ▶The acquired weigh waveform is displayed.

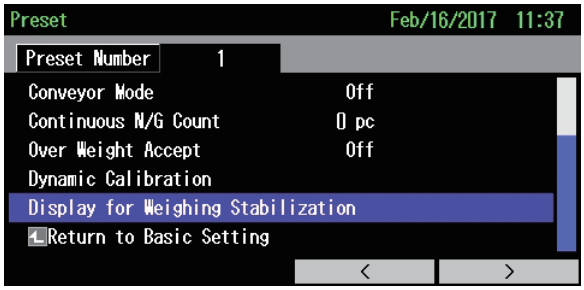


Fig. 6-101

TIP

- Weigh waveforms can be acquired in a test mode or check mode.
  (Refer to "6.3 Test Production".)

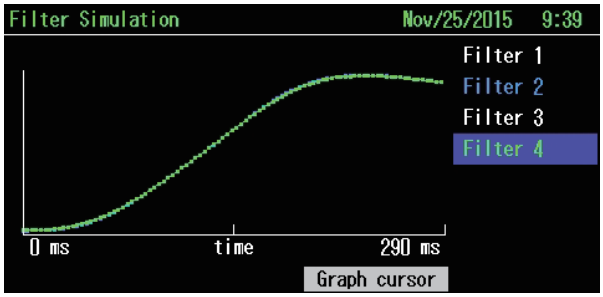


Fig. 6-102

6.4.22.2 Operation of Filter Simulation Screen

This item is used to simulate the filter with the acquired waveform. The Filter Simulation screen has two modes; a filter selection mode and graph cursor mode.
To operate the Filter Simulation, follow the procedure below.

NOTE

- If Auto Calculation is set to "ON" in the timing setting of Installation level, the Filter Simulation cannot be selected.
- The filter 2, filter 3 and filter 4 may not be set depending on the Preset Setting.

< Filter Selection Mode >

Filter Selection Mode is a mode to select a filter to simulate and change the filter setting.

1. Press the [Function 4] key.

   ▶A cursor is displayed on the set filter.

   ▶The graph is displayed by the blue line.

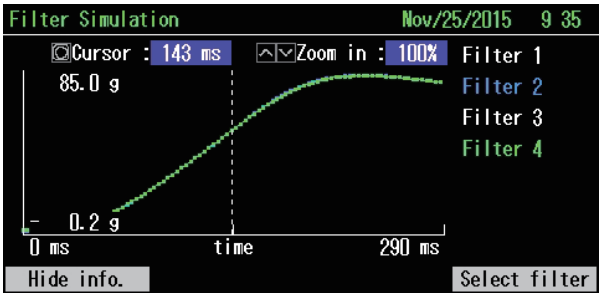


Fig. 6-103

2. Select a filter that you want to simulate.

   ▶The set filter is displayed in blue, and the filter selected with a cursor is displayed in green.

   ▶In a graph, the waveform using the set filter is displayed in blue, the waveform using the filter selected with a cursor is displayed in green.

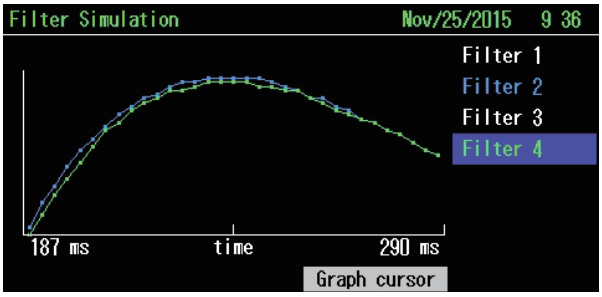


Fig. 6-104

3. Press the [Enter] key.

   ▶The Filter change confirmation screen is displayed.

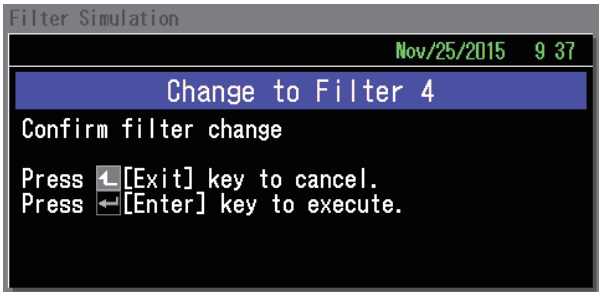


Fig. 6-105

4. Press the [Enter] key.

   ▶Filter is changed.

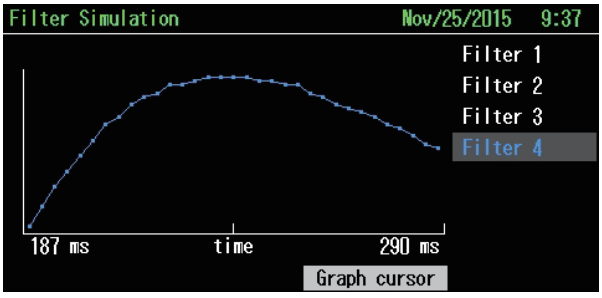


Fig. 6-106

< Graph Cursor Mode >

Graph Cursor Mode moves the graph cursor and zooms in a graph.

1. Press the [Function 3] key.

   ▶The cursor position, horizontal magnification ratio, and the maximum and maximum values of the graph are displayed.

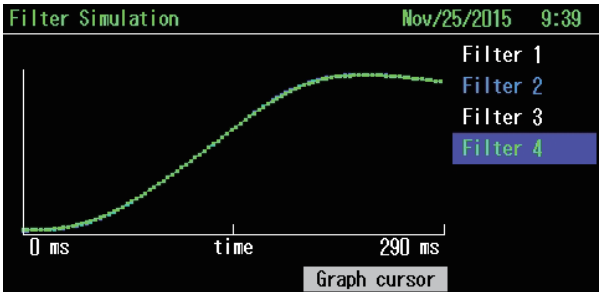


Fig. 6-107

2. Rotate the command dial.

   ▶The vertical bar (cursor) moves to the dotted line in the graph.

   ▶The value in the cursor position is changed.

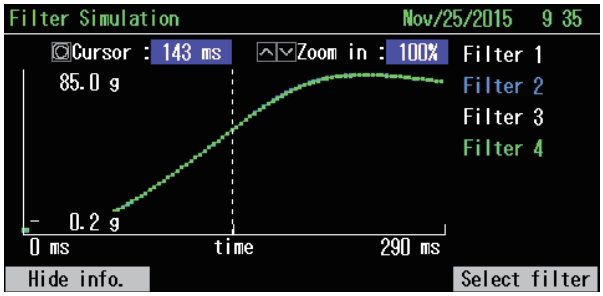


Fig. 6-108

3. Press the [Up/Down] key.

   ▶The graph is zoomed in centered on the cursor position.

   ▶The horizontal magnification ratio is changed.

4. Press the [Function 1] key.

   ▶The indications of the cursor position, horizontal magnification ratio, and maximum and maximum values of the graph disappear.

   ▶To display the indications of the cursor position, horizontal magnification ratio, and maximum and maximum values of the graph, press the [Function 1] key again.

5. Press the [Function 2] key.

   ▶In case that the graph is zoomed in, the whole graph is displayed.

   ▶The horizontal magnification ratio becomes 100%.

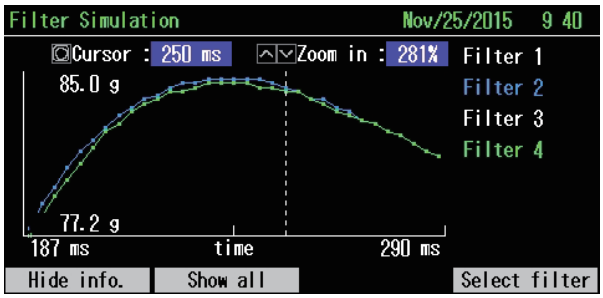


Fig. 6-109

6.4.23 Set. chg. during driving

NOTE

- Setting change during the driving should be set by the site engineer or higher level personnel.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.

3. Select and enter the "Set. chg. during driving".

   ▶The Set. chg. during driving screen is displayed.

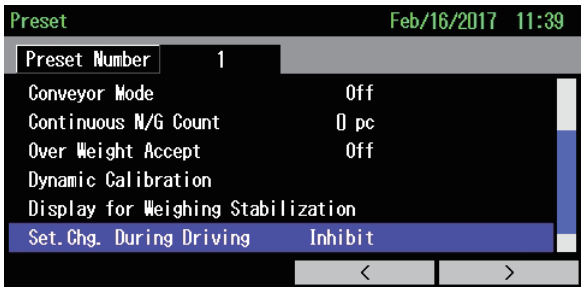


Fig. 6-110

4. To set "Inhibit Overwrite", select and enter the "0".
   To set "Accept Overwrite", select and enter the "1".

   ▶The Preset menu for the Set. chg. during driving setting will be displayed.

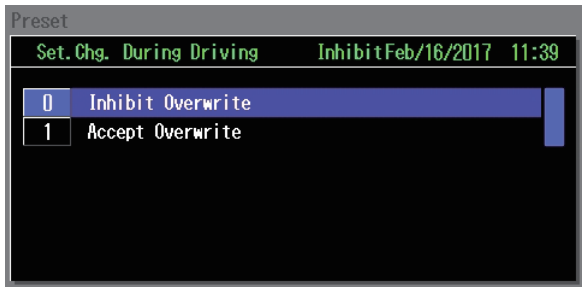


Fig. 6-111

6.4.24 Setting the Special X-bar Chart

This item is used to customize the display of the X-bar chart screen. Items such as X-bar Sample Count, X-bar Ref., X-bar Upper Limit, and X-bar Lower Limit can be set.

NOTE

- If X-bar Chart in the Statistics & Output Setting menu is set to "Standard", the above items are not displayed. (Refer to "6.5.4.15 X-bar chart")

6.4.24.1 X-bar Sample Count

The X-bar chart screen defines the number of products plotted for one point.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "X-bar Sample Count".

   ▶The X-bar Sample Count Setting screen is displayed.
4. Input and enter the numeric value.

   ▶The Total clear check screen is displayed.

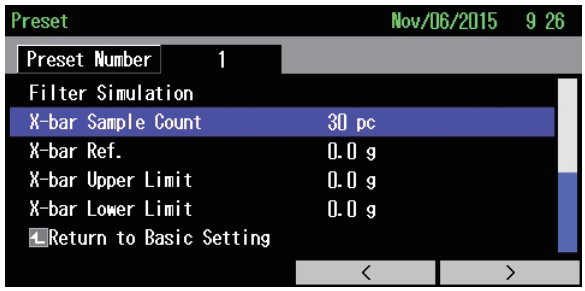


Fig. 6-112

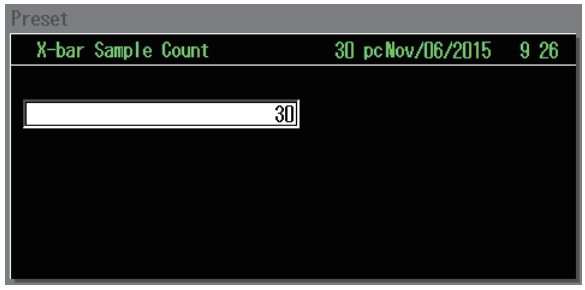


Fig. 6-113

5. Press the [Enter] key.

   ▶The Preset menu for the X-bar Sample Count setting will be displayed.

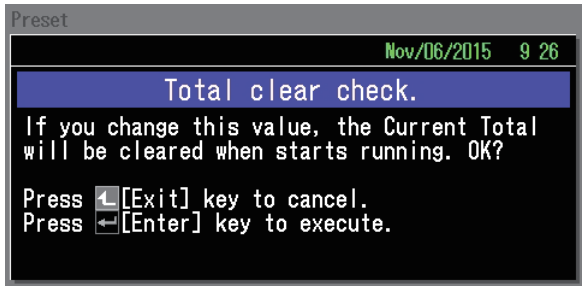


Fig. 6-114

6.4.24.2 X-bar Ref.

X-bar Ref. determines the center value for chart in the X-bar chart screen.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "X-bar Ref.".

   ▶The X-bar Ref. Setting screen is displayed.

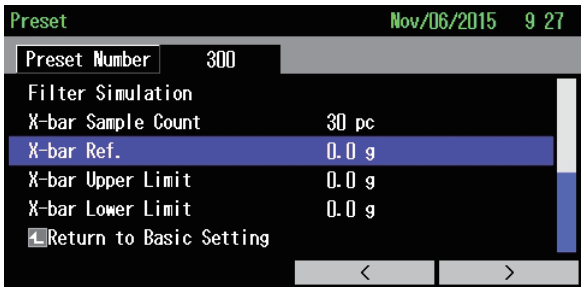


Fig. 6-115

4. Input and enter the numeric value.

   ▶The Total clear check screen is displayed.

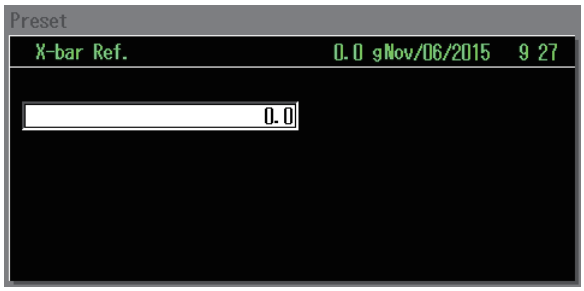


Fig. 6-116

5. Press the [Enter] key.

   ▶The Preset menu for the X-bar Ref. setting will be displayed.

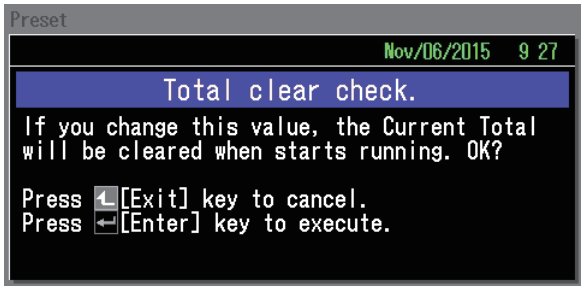


Fig. 6-117

6.4.24.3 X-bar Upper Limit or X-bar Lower Limit

X-bar Upper Limit or X-bar Lower Limit determines the upper limit or lower limit for chart in the X-bar chart screen.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "X-bar Upper Limit (X-bar Lower Limit)".

   ▶The X-bar Upper Limit (X-bar Lower Limit) Setting screen is displayed.

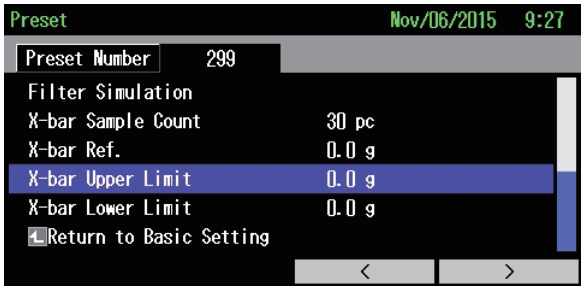


Fig. 6-118

4. Input and enter the numeric value.

   ▶The Total clear check screen is displayed.

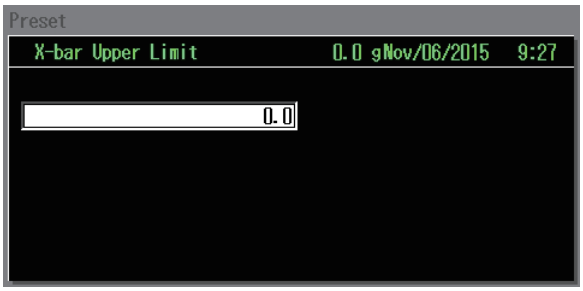


Fig. 6-119 X-bar Upper Limit

Fig. 6-120 X-bar Lower Limit

5. Press the [Enter] key.

   ▶The Preset menu for the X-bar Upper Limit (X-bar Lower Limit) setting will be displayed.

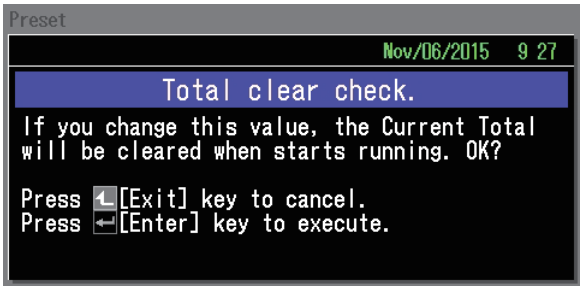


Fig. 6-121

NOTE

- When the relationship of "Upper Limit > center value > Lower Limit" does not exist, the X-bar chart is not displayed correctly.

6.4.25 Setting of the Special Histogram

This item is used to customize the display in the Histogram screen. Items such as Histogram Base and Histogram Gap can be set.

NOTE

- If Histogram is set to "Standard" in the Statistics & Output Setting menu, the above items are not displayed. (Refer to "6.5.4.16 Histogram")

6.4.25.1 Histogram Base

Histogram Base determines the center value for vertical axis on the Histogram screen.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Histogram Base".

   ▶The Histogram Base Setting screen is displayed.
4. Input and enter the numeric value.

   ▶The Total clear check screen is displayed.

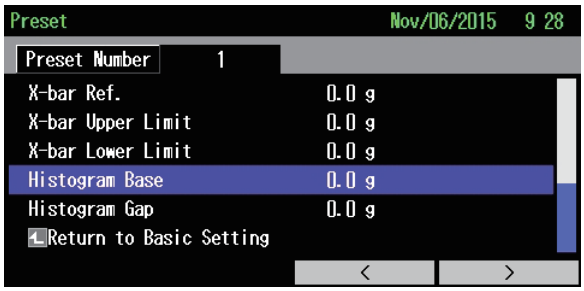


Fig. 6-122

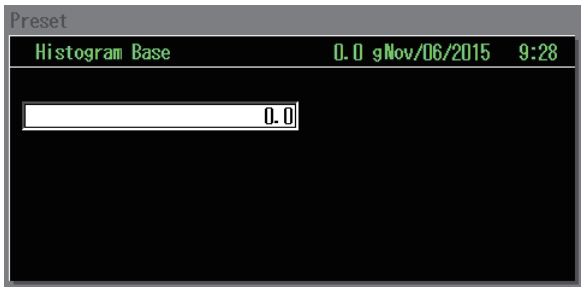


Fig. 6-123

5. Press the [Enter] key.

   ▶The Preset menu for the Histogram Base setting will be displayed.

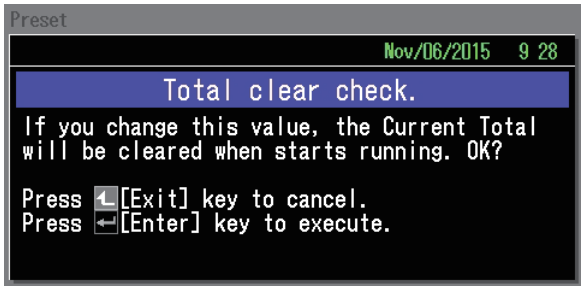


Fig. 6-124

6.4.25.2 Histogram Gap

Histogram Gap determines the weight gap for vertical axis on the Histogram screen.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Histogram Gap".

   ▶The Histogram Gap Setting screen is displayed.

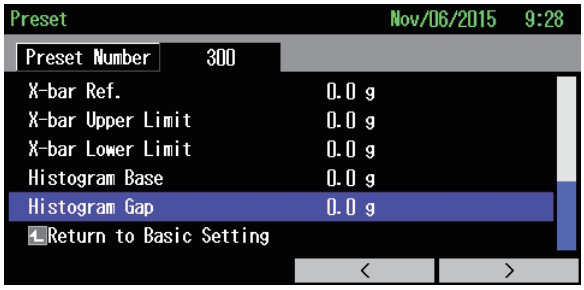


Fig. 6-125

4. Input and enter the numeric value.

   ▶The Total clear check screen is displayed.

Fig. 6-126

5. Press the [Enter] key.

   ▶The Preset menu for the Histogram Gap setting will be displayed.

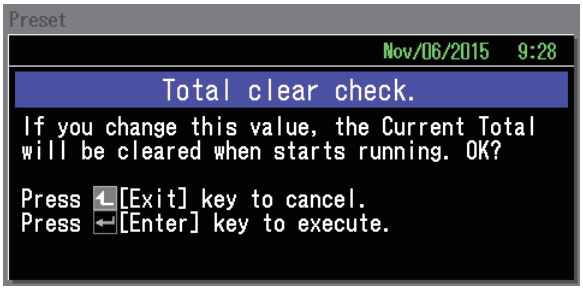


Fig. 6-127

6.4.26 Useful Preset Change

This is a function to support the preset setting.

6.4.26.1 Preset Number Change on the Preset Screen

This item is used to change the preset number on the Preset screen.

< Changing to the next preset number >

1. Display the Preset menu.
2. Press the [Function 4] key.

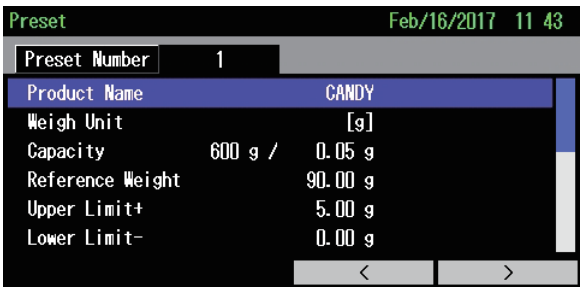


Fig. 6-128

< Changing t to the previous preset number >

1. Display the Preset menu.
2. Press the [Function 3] key.

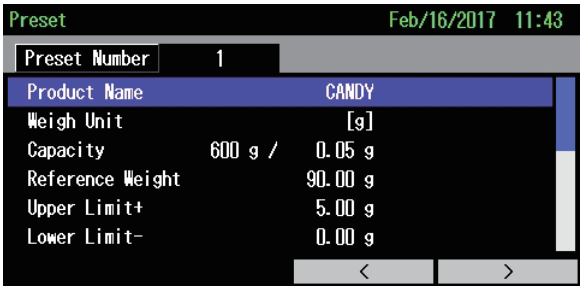


Fig. 6-129

< Changing to any preset number >

1. Display the Preset menu.
2. Input the preset number.
3. Press the [Function 4] key.

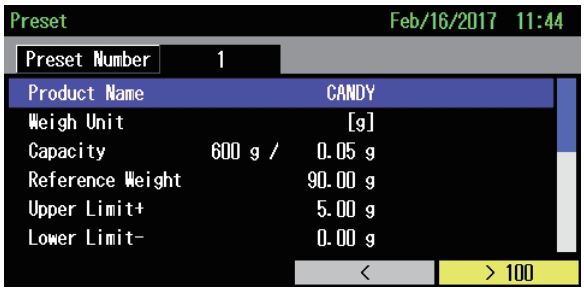


Fig. 6-130

6.4.26.2 Preset Setting Change in the Standby Menu

This item is used to directly enter values for the Preset Setting on the Preset Information screen.
The items (Reference Weight, Upper Limit, Lower Limit, OK-Upper Limit, OK-Lower Limit, Conv. Speed (Feed, Weigh, Reject Conveyor speed are changed in a batch) can be changed.
Values of the above items can be set even during production.
To preset setting change, follow the procedure below.

NOTE

- To change the Preset Setting in the Standby menu during production, the initial setting is required by the Installation level personnel. For procedures on how to set, refer to "6.5.7.10 Set. chg. during driving".
- The change of the preset setting should be set by the site engineer or higher level personnel.

1. Display the Preset Information screen.
2. Select the setting you want to change and press the [Enter] key.

   ▶An input box is displayed.
3. Input and enter the numeric value.

   ▶Input data is reflected on Preset Information screen.

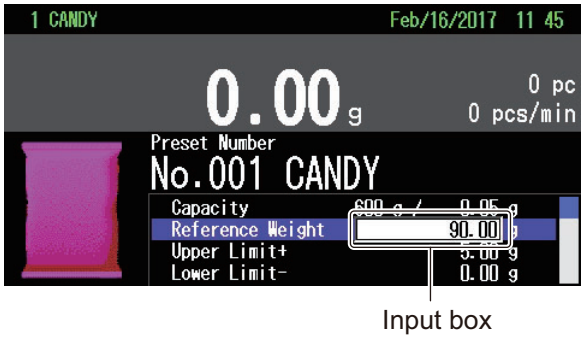


Fig. 6-131

NOTE

- When the Conv. Speed is changed during production, products can be forcibly discharged until the weigh becomes stable.

6.4.26.3 Simple Preset Setting

Simple Preset Setting can set Preset according to the guidance on the screen.
Simple Preset, follow the procedure below.

NOTE

- Simple Preset should be set by the site engineer or higher level personnel.

1. Display the Preset Number Select screen.
2. Select and enter the desired preset number.
3. Press the [function 4] key.

   ▶The Simple Preset screen is displayed.

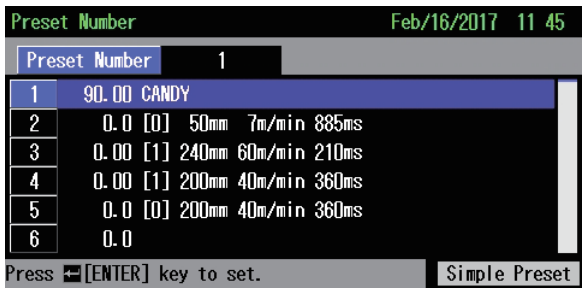


Fig. 6-132

4. Enter a value according to the screen.
   (For item, refer to "Table 6-11 Overview of Simple Preset Item".)

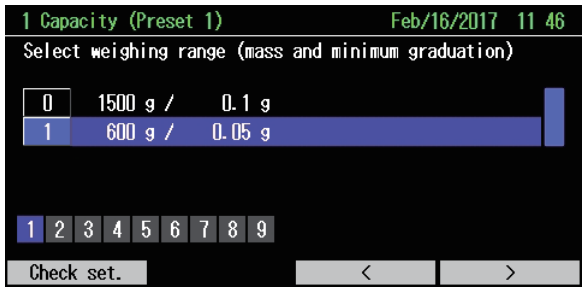


Fig. 6-133

5. When Check settings screen is displayed, Select and enter the "Update Current Preset Settings".

   ▶The Change preset screen is displayed.

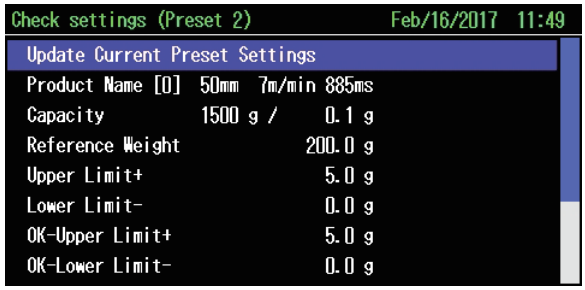


Fig. 6-134

6. Press the [Enter] key.

   ▶The Preset Number Select screen is displayed.

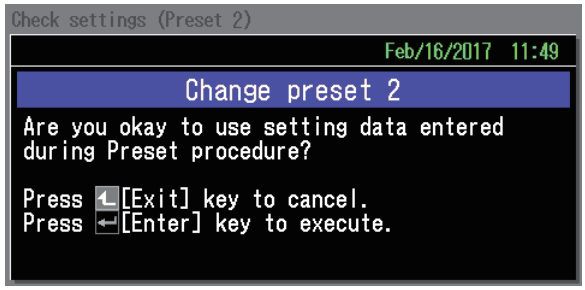


Fig. 6-135

NOTE

- If the [Exit] key is pressed before the [Enter] key after selecting "Update Current Preset Settings", the entered value is not reflected to Preset Setting.

Table 6-11 Overview of Simple Preset Item

No.	Item	Reference sections
1	Capacity	"6.4.2 Capacity"
2	Reference Weight	"6.4.3 Reference Weight"
3	Upper Limit	"6.4.4 Upper Limit+"
4	Lower Limit	"6.4.5 Lower Limit-"
5	OK-Upper Limit	"6.4.6.1 OK-Upper Limit+"
6	OK-Lower Limit	"6.4.6.2 OK-Lower Limit-"
7	Preset Tare	"6.4.7 Preset Tare"
8	Product Length	"6.4.9 Product Length"
9	Speed	"6.4.10 Speed"

TIP

- To check the setting value, press the [Function 1] key during setting.
- To return to the precious item, press the [Function 3] key during setting.
- To skip the item, press the [Function 4] key during setting.

6.5 Setup Menu

Setup Menu defines the common settings to all the presets.
To display the setup menu, follow the procedure below.

1. Press the [Setup] key in the Standby menu.

   ▶The Setup menu for the Operator level is displayed.

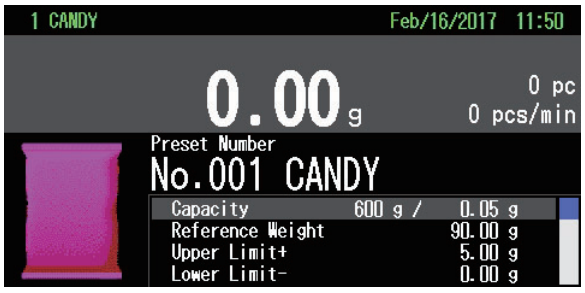


Fig. 6-136

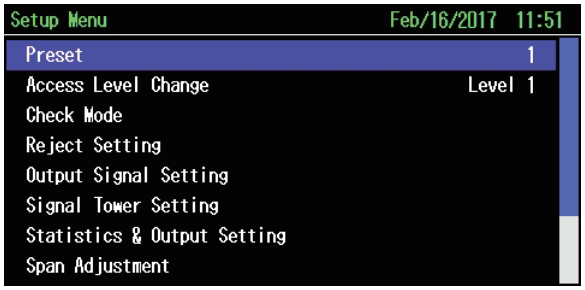


Fig. 6-137

6.5.1 Write/Read Set Value

Write/Read Set Value writes the set values for preset or common settings into the USB flash drive and read such saved set values from the USB flash drive into the machine.

6.5.1.1 Write Preset Setting

Write Preset Setting saves the preset setting into USB flash drive.
To operate the Write Preset Setting, follow the procedure below.

1. Display the Setup menu.
2. Select and enter the Write/Read Input and enter the numeric value.

   ▶The Write/Read Set Value screen is displayed.

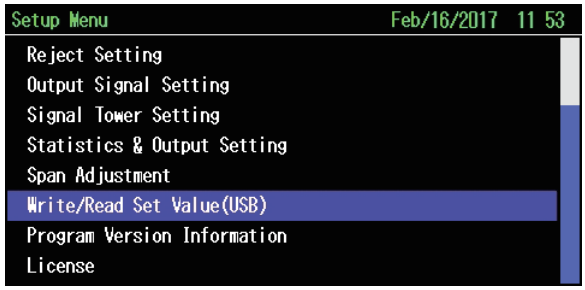


Fig. 6-138

3. Select and enter the "Write Preset Setting".

   ▶Confirmation screen for the Write Preset Setting is displayed.

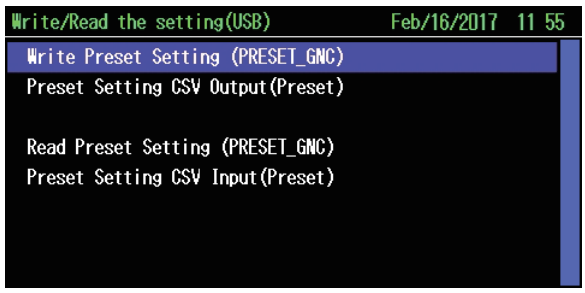


Fig. 6-139

4. Press the [Enter] key.

   ▶Writing the setting screen is displayed.

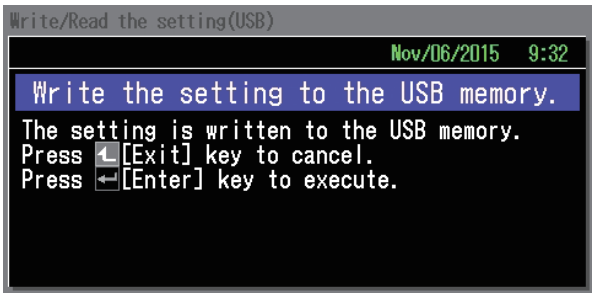


Fig. 6-140

   ▶Writing the setting screen is displayed.

Fig. 6-141

5. Press the [Exit] key.

   ▶Write/Read Set Value screen is displayed.

Fig. 6-142

NOTE

- Write Preset Setting saves a "wc" folder as well as four folders named "PRESET", "PRESET_GNC", "PRESETMD", and "PRESETMD_GNC" folders into USB flash drive. If a file of the same name exists, the existing file is automatically overwritten with the new file.
- Make sure that the saved file is successfully stored with the PC.
- Do not edit the saved file.

6.5.1.2 Read Preset Setting

Read Preset Setting reads the settings stored in USB flash drive to the main body.
To operate the Read Preset Setting, follow the procedure below.

NOTE

- Read Preset Setting should be set by the site engineer or higher level personnel.

1. Display the Setup menu.
2. Select and enter the "Write/Read Set Value".

   ▶Display the Write/Read Set Value screen.

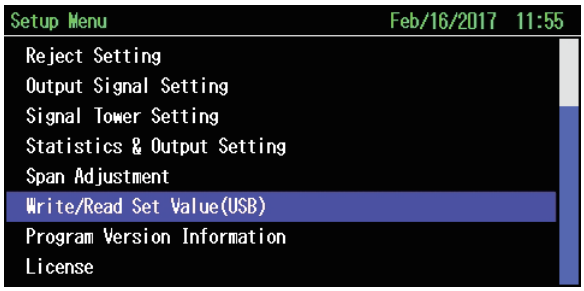


Fig. 6-143

3. Select and enter the "Read Preset Setting".

   ▶The Confirmation screen for Read Preset Setting is displayed.

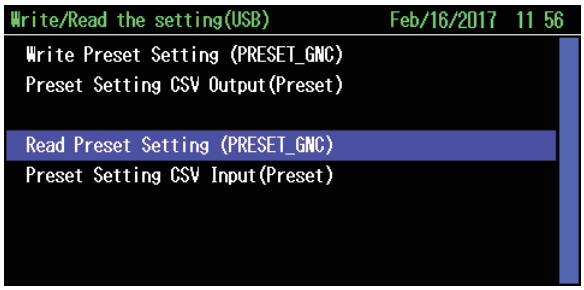


Fig. 6-144

4. Press the [Enter] key.

   ▶The Read Preset Setting screen in progress is displayed.

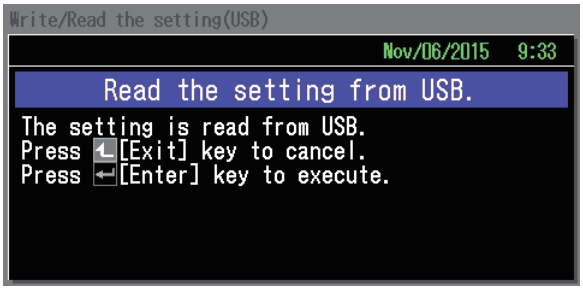


Fig. 6-145

   ▶The Read Preset Setting completed screen is displayed.

Fig. 6-146

5. Press the [Exit] key.

   ▶Display the Write/Read Set Value screen.

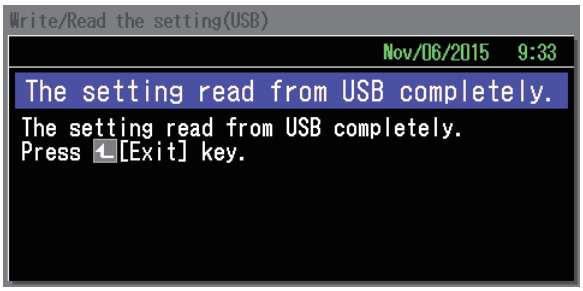


Fig. 6-147

6.5.1.3 Preset Setting CSV Output/Input

"Preset Setting CSV Write" saves some of the preset settings into the CSV file. "Preset Setting CSV Read" reflects the edited CSV file on the PC to the preset setting.
To operate the Preset Setting CSV Output/Input, follow the procedure below.

NOTE

- Preset Setting CSV Output / Input should be set by the site engineer or higher level personnel.

1. Display the Setup menu.
2. Select and enter the "Write/Read Set Value".

   ▶Display the Write/Read Set Value screen.

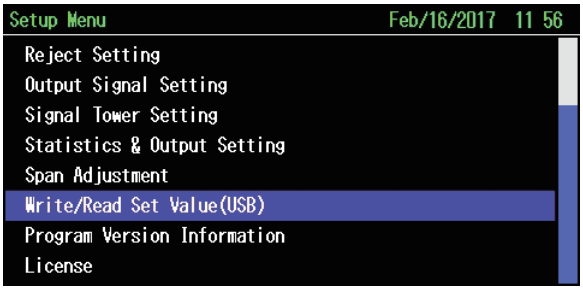


Fig. 6-148

3. Select and enter the "Preset Setting CSV Output/Input".

   ▶The Confirmation screen for Preset Setting CSV Output/Input is displayed.

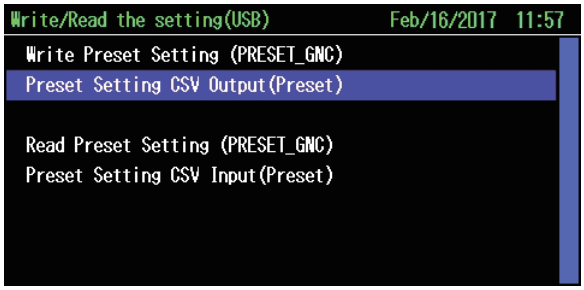


Fig. 6-149

4. Press the [Enter] key.

   ▶The Preset Setting CSV Output/Input screen in progress is displayed.

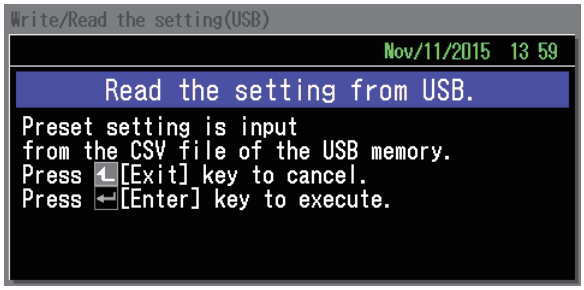


Fig. 6-150

   ▶The Preset Setting CSV Output/Input completed screen is displayed.

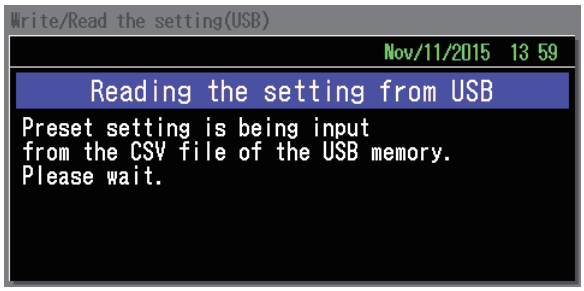


Fig. 6-151

5. Press the [Exit] key.

   ▶Display the Write/Read Set Value screen.

Fig. 6-152

NOTE

- Preset Setting CSV Output saves the "wc" folder and "preset" file (CSV file) into USB flash drive. If a file of the same name exists, the existing file is automatically overwritten with the new file.
- Do not use a comma [,] when editing the "preset" file for Product Name or Product Code. Otherwise Preset Setting CSV Input fails.

6.5.2 Program Version Information

The current program version information is displayed.
For operating this screen, follow the procedure below.

1. Display the Setup menu.
2. Select and enter the "Program Version Information".

   ▶Program Version Information screen is displayed.

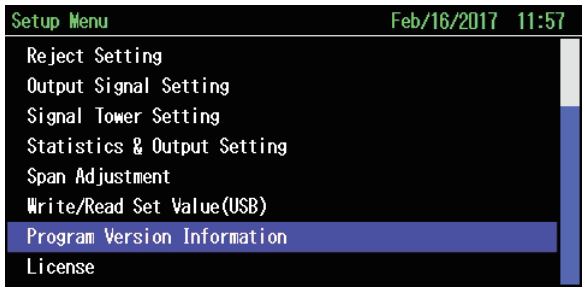


Fig. 6-153

3. Press the [Function 1] key to see the main program information.

   Press the [Function 2] key to see the sub.
   Press the [Function 3] key to see the etc.

4. Press the [Exit] key to exit.

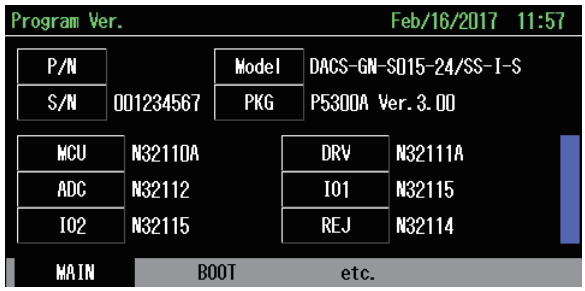


Fig. 6-154

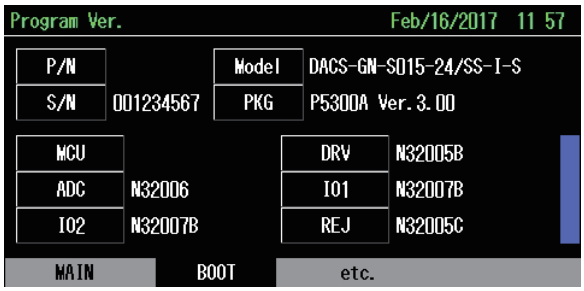


Fig. 6-155

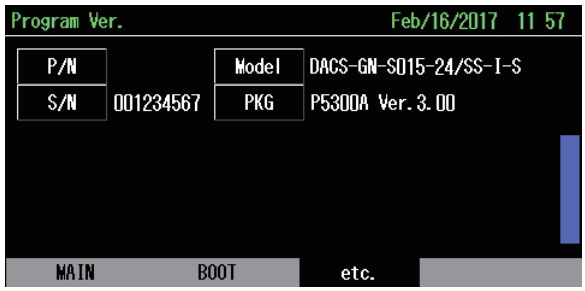


Fig. 6-156

6.5.3 License

This item is used to check the special functions applied to this machine.

1. Display the Setup menu.
2. Select and enter the "License".

   ▶The License screen is displayed.

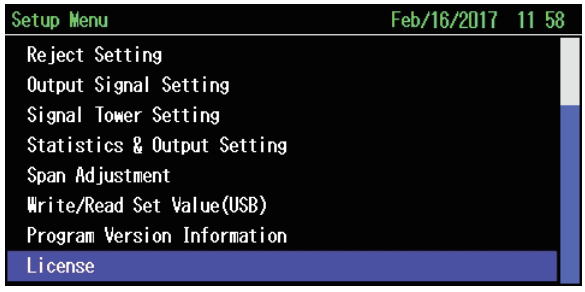


Fig. 6-157

NOTE

- The license agreement is required to use the special functions. To use License, contact the distributor or Ishida customer support.

Fig. 6-158

6.5.4 Statistics & Output Setting

Statistics & Output Setting Menu sets the weigh data statistics and their parameters.
To display the Statistics & Output Setting, follow the procedure below.

NOTE

- Statistics & Output Setting should be set by the site engineer or higher level personnel.

1. Display the Preset menu.
2. Select and enter the "Statistics & Output Setting".

   ▶The Statistics & Output Setting menu is displayed.

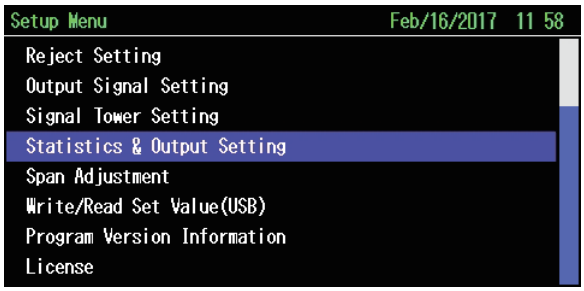


Fig. 6-159

6.5.4.1 Output Destination

For the Output Destination, refer to "5.10.4.1 Output Destination (When Printer is Installed)".

6.5.4.2 Line Name

Line Name is used to set the machine's name in order to identify it when multiple machines are operated.
To set Line Name, follow the procedure below.

1. Display the Statistics & Output Setting screen.
2. Select and enter the "Line Name".

   ▶The Line Name setting screen is displayed.

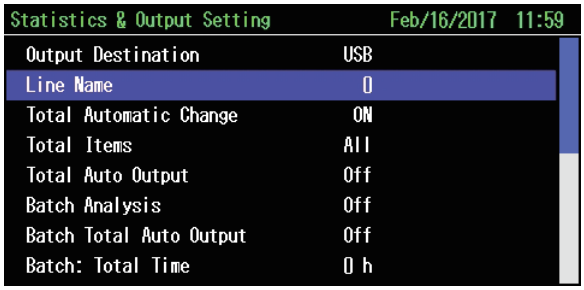


Fig. 6-160

3. Select and enter the category of character from the left column.
4. Select and enter the characters to be entered from the right column.
5. After setting all the desired numeric value or characters, press the [Exit] key.

   ▶The setting of Line Name is reflected on the Preset menu.

Fig. 6-161

6.5.4.3 Total Automatic Change

Total Automatic Change defines the timing to automatically reset total count or the level for setting change. (Refer to "Table 6-12 "). To set the Total Automatic Change, follow the procedure below.

NOTE

- Regardless of the Total Automatic Change setting, frequently backup the total count and properly manage it.

Table 6-12

No.	Item	Function
0	ON	This is the standard setting. Automatically switches the total count and clears the total display according to the preset number or setting changed.
1	OFF When input with the standby display	Automatically clears the total count according to the preset number or setting changed. (Same as when set to "ON") Note that the following items are added only on the Preset Information screen. (Refer to "5.8 Display of the Standby Menu") • Total counts are not cleared after the setting change. • The setting can be changed by the Operator Level.
2	OFF	Total counts are not cleared. To clear the total counts, perform the Clear All Totals. The histogram display (Refer to "5.8 Display of the Standby Menu") and the Histogram range with the total count output are changed after clearing the total counts. However, the total counts are automatically cleared when starting the operation after changing the preset number, capacity, and weight unit.

1. Display the Statistics & Output Setting screen.
2. Select and enter the "Total Automatic Change".

   ▶The Total Automatic Change screen is displayed.

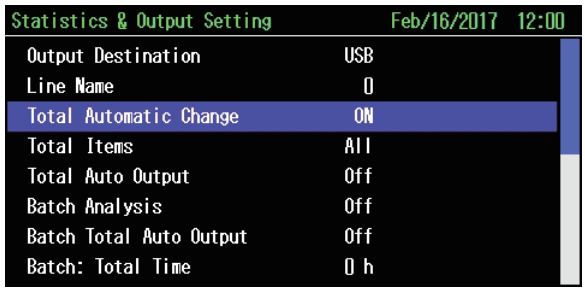


Fig. 6-162

3. Select and enter the item.
   (Refer to "Table 6-12 ")

   ▶The Statistics & Output Setting screen for the Total Automatic Change setting will be displayed.

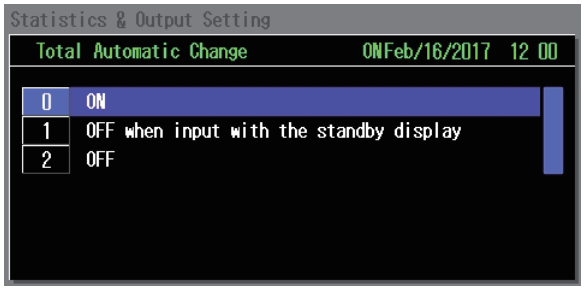


Fig. 6-163

6.5.4.4 Total Items

Total Items is used to set whether the all products or only the accepted products are to be on statistical data. To set Total Items, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Total Items".

   ▶The Total Items menu is displayed.

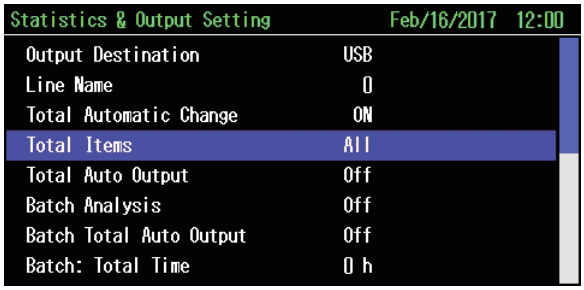


Fig. 6-164

3. To select all the products, Select and enter the "0"
   To select only the accepted products, Select and enter the "1".

   ▶The setting of Total Items is reflected on the Statistics & Output Setting menu.

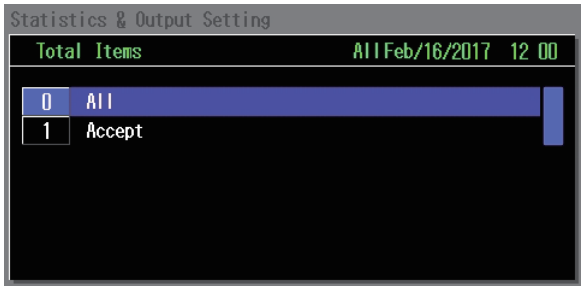


Fig. 6-165

6.5.4.5 Total Auto Output

Total Auto Output sets whether totals from the previous preset numbers are automatically output or not when the preset number are changed and operation is started.
To set the Total Auto Output, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Total Auto Output".

   ▶The Total Auto Output menu is displayed.

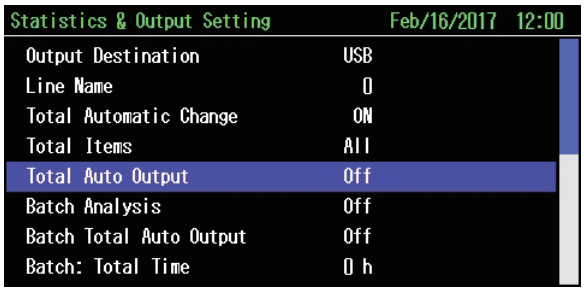


Fig. 6-166

3. To deactivate Auto Output, Select and enter the "0",
   To activate Auto Output, Select and enter the "1".

   ▶The setting of Total Auto Output is reflected on Statistics & Output Setting menu.

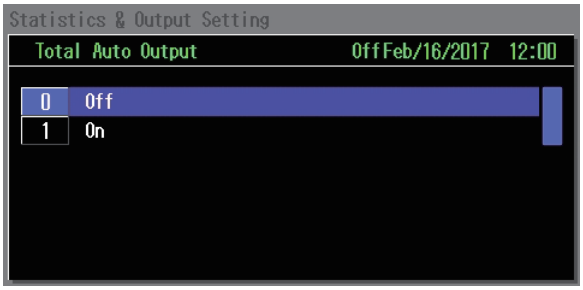


Fig. 6-167

6.5.4.6 Batch Analysis

Batch Analysis is used to select a batch method from the following; OFF (no analysis), Time (time interval analysis), Count (by weighed product count), or Accept Count (by accepted product count). To set the Batch Analysis, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Batch Analysis".

   ▶The Batch Analysis menu is displayed.

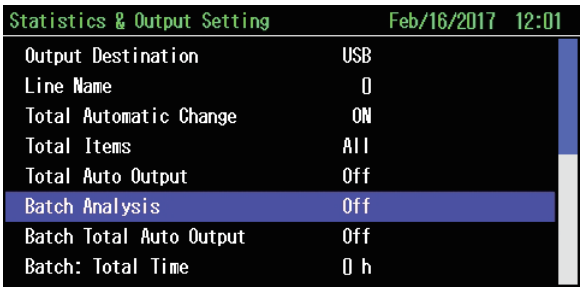


Fig. 6-168

3. To set to OFF, set "0"
   to set by weighed product count, set "1",
   to set by the time interval analysis, set "2",
   to set by accepted product count, set "3".
4. Press the [Exit] key.

   ▶The setting of batch analysis is reflected on the Statistics & Output Setting menu.

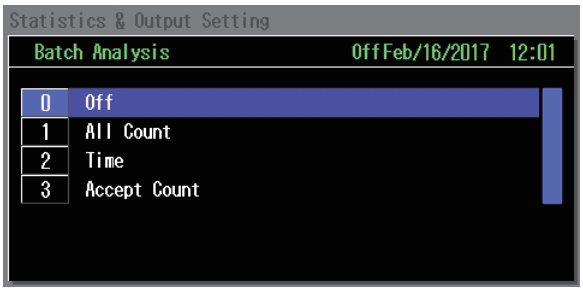


Fig. 6-169

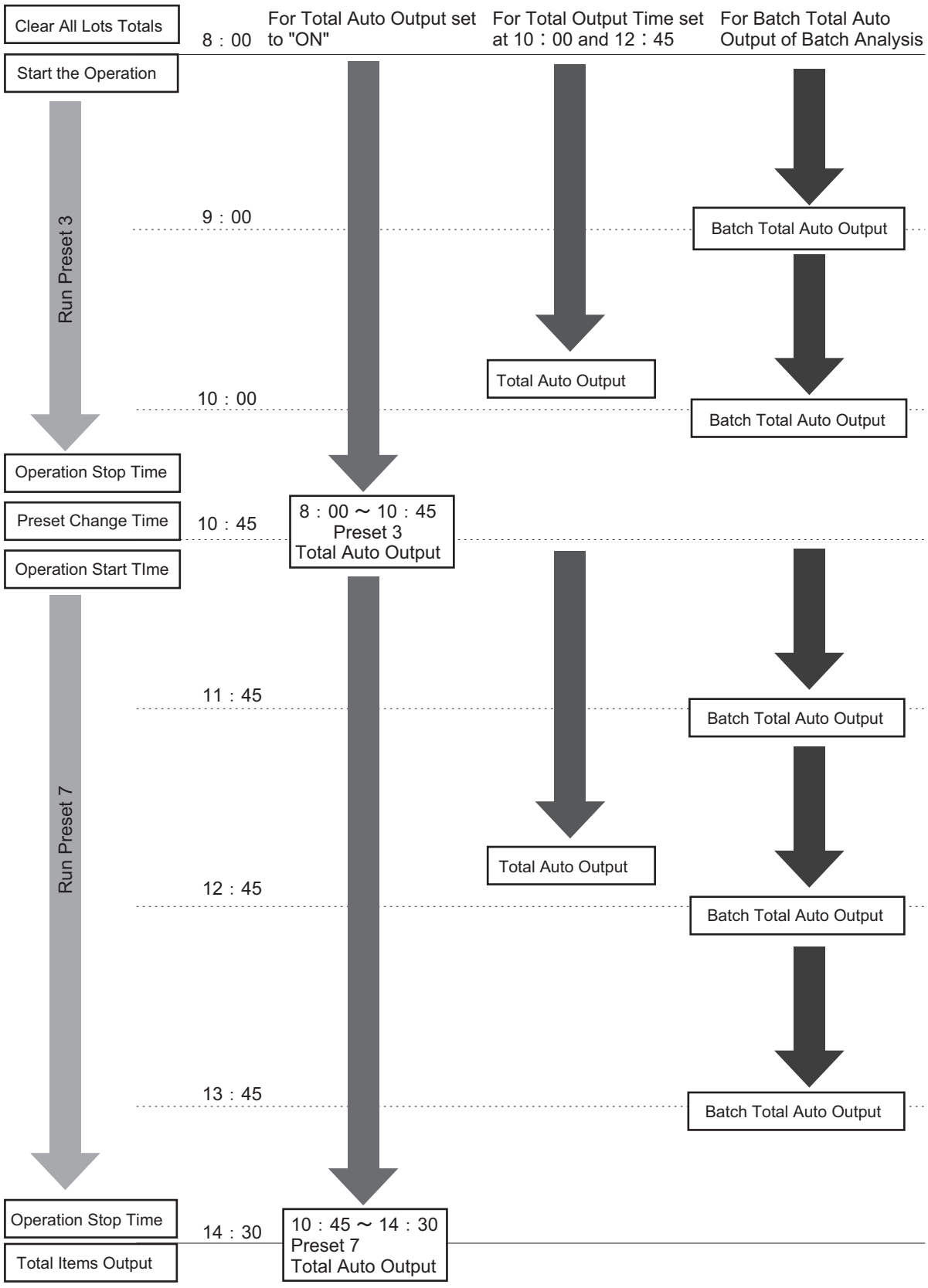

Clear All Lots Totals
Start the Operation
Run Preset 3
Operation Stop Time
Preset Change Time
Operation Start TIme
Run Preset 7
Operation Stop Time
Total Items Output
8 : 00
For Total Auto Output set to "ON"
For Total Output Time set at 10 : 00 and 12 : 45
For Batch Total Auto Output of Batch Analysis
9 : 00
Batch Total Auto Output
Total Auto Output
10 : 00
Batch Total Auto Output
10 : 45
8 : 00 ~ 10 : 45
Preset 3
Total Auto Output
11 : 45
Batch Total Auto Output
Total Auto Output
12 : 45
Batch Total Auto Output
13 : 45
Batch Total Auto Output
14 : 30
10 : 45 ~ 14 : 30
Preset 7
Total Auto Output

Fig. 6-170

6.5.4.7 Batch Total Auto Output

Batch Total Auto Output is used to select whether to automatically output or not the results of a Batch Analysis. To set Batch Total Auto Output, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Batch Total Auto Output".

   ▶The Batch Total Auto Output menu is displayed.

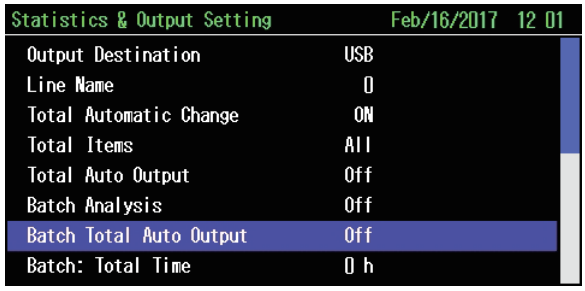


Fig. 6-171

3. To deactivate the output, set "0", to activate the output, set "1".

   ▶The setting of Batch Total Auto Output menu is reflected on Statistics & Output setting menu.

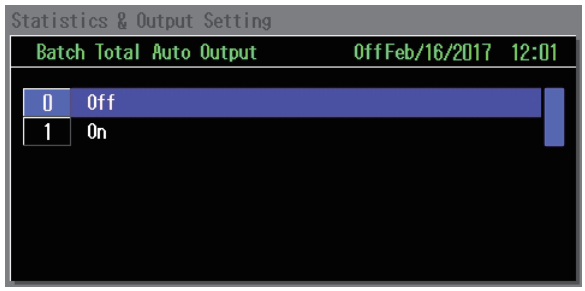


Fig. 6-172

6.5.4.8 Batch Total Time

Batch Total Time is used to set the time interval between batch totals output.
To set Batch Total Time, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Batch Total Time".

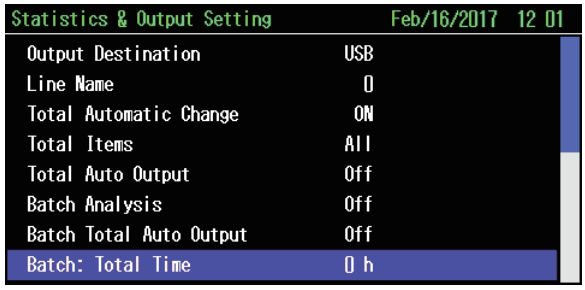


Fig. 6-173

3. Input and enter the numeric value.

   ▶The setting of Batch Total Time is reflected on the Statistics & Output Setting menu.

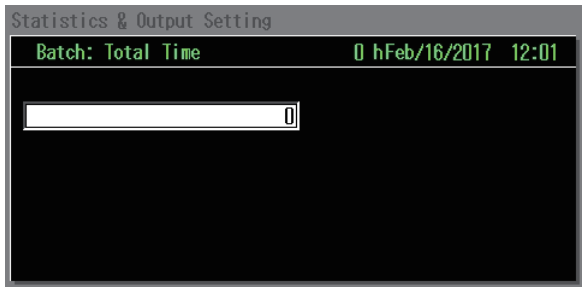


Fig. 6-174

6.5.4.9 Batch Total Count

Batch Total Count is used to set the product count between batch totals output.
To set Batch Total Count, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Batch Total Count".

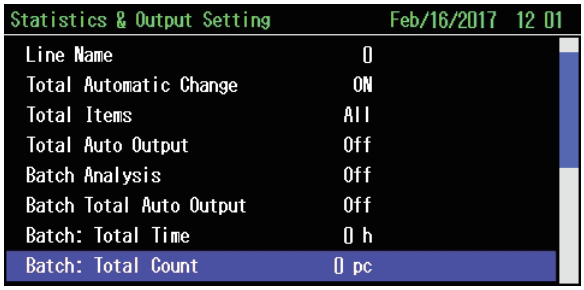


Fig. 6-175

3. Input and enter the numeric value.

   ▶The setting of Batch Total Count is reflected on the Statistics & Output Setting menu.

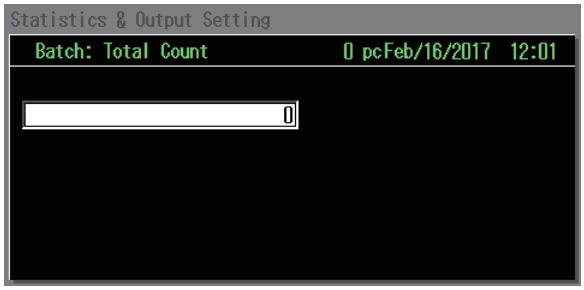


Fig. 6-176

6.5.4.10 Total Output Time

Auto Lots Total Time is set to "ON" in the System Configuration in the Installation level.
When this function is set, all lot totals are automatically output at the scheduled time. When the output is completed, Clear All Totals is performed.
To set the Auto Lots Total Time, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Auto Lots Total Time".

   ▶The Auto Lots Total Time menu is displayed.

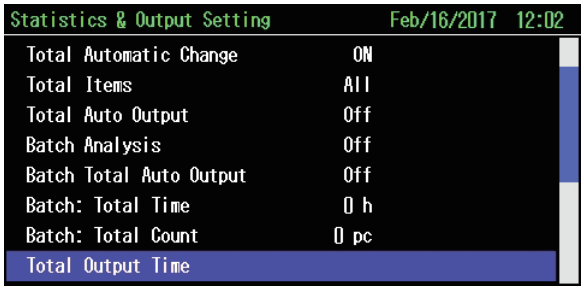


Fig. 6-177

3. Select and enter the desired items.

NOTE

- Up to 4 items are settable for this function.

   ▶The Auto Lots Total Time setting screen is displayed.

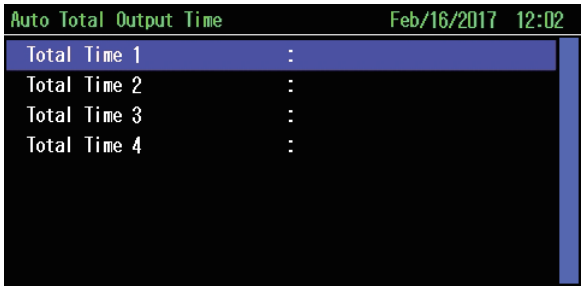


Fig. 6-178

4. Set the time with the [numeric] keys in 24-hour format. (Example: set 1308 for 1:08 p.m.)
5. Press the [Enter] key.

   ▶The setting of the time is reflected on the Auto Lots Total Time setting screen.
6. To cancel output of any of Auto Lots Total Time, press the [Clear] key to delete the set time.
7. Press the [Exit] key.

   ▶The setting of Auto Lots Total Time is completed.

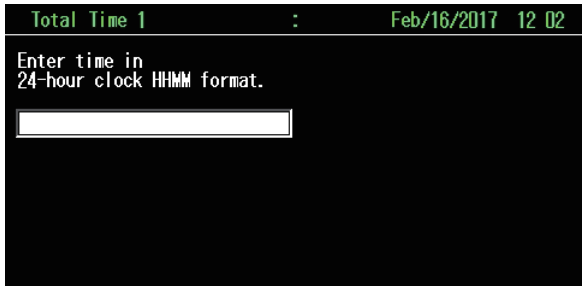


Fig. 6-179

6.5.4.11 Always Metal M Output

Always Metal M Output selects whether or not to display the metal detection error next to the weight value of the Each Time Output result. To set the Always Metal M Output, follow the procedure below.

NOTE

- If Metal Detect is set to "OFF" in the System Configuration of the Installation level, items of Always Metal M Output are not displayed.

TIP

- For Each Time Output, refer to "5.10.2 Each Time Output".

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Always Metal M Output".

   ▶The Always Metal M Output menu is displayed.

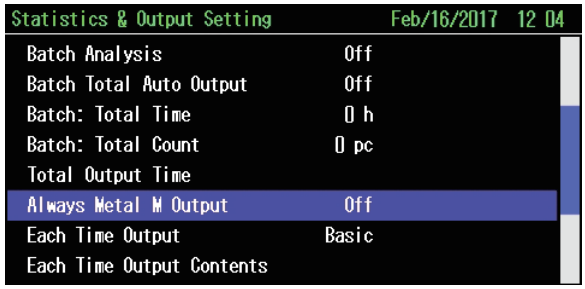


Fig. 6-180

3. To deactivate the Always Metal M Output, Select and enter the "0".
   To activate the Always Metal M Output, Select and enter the "1".

   ▶The Statistics & Output Setting menu for the Always Metal M Output setting will be displayed.

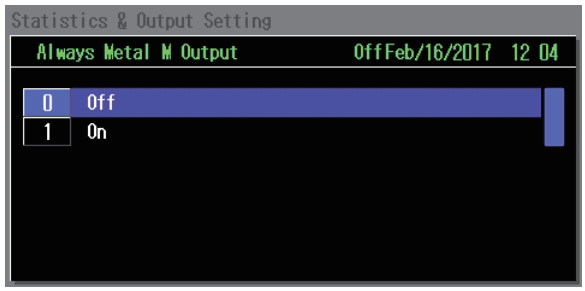


Fig. 6-181

6.5.4.12 Each Time Output

Each Time Output selects the result display next to the weight value of Each Time Output. For details, refer to "6.5.4.13 Each Time Output Contents".
To set the Each Time Output, follow the procedure below.

TIP

- For Each Time Output, refer to "5.10.2 Each Time Output".

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Each Time Output".

   ▶The Each Time Output menu is displayed.

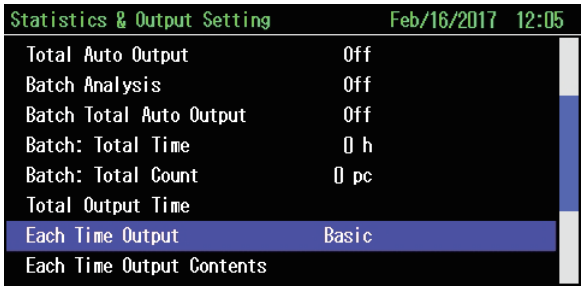


Fig. 6-182

3. To Basic the output, set "0",
   To Detailed the output, set "1".

   ▶The Statistics & Output Setting menu for the Each Time Output setting will be displayed.

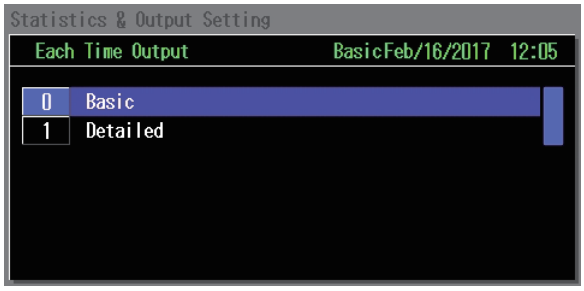


Fig. 6-183

6.5.4.13 Each Time Output Contents

Each Time Output Contents displays the result display next to the weight value of Each Time Output. This also tests output.
To set the Each Time Output Contents, follow the procedure below.

TIP

- For Each Time Output, refer to "5.10.2 Each Time Output".

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Each Time Output Contents".

   ▶The Each Time Output Contents screen is displayed.

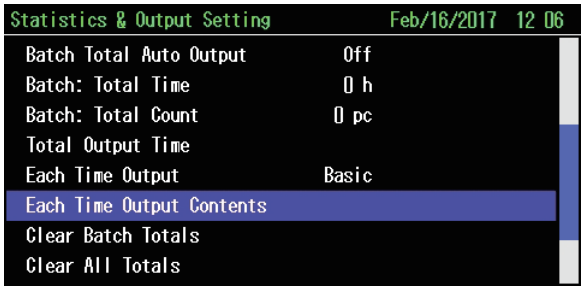


Fig. 6-184

3. To test output, Select and enter the "Output".

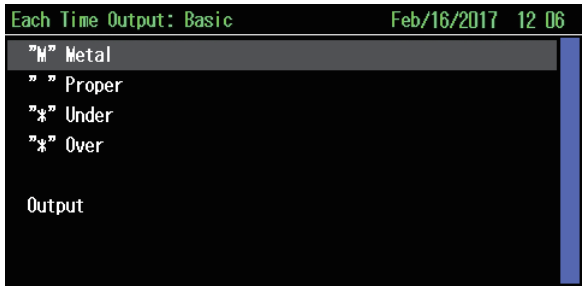


Fig. 6-185

NOTE

- Each Time Output: The simplified display is shown below.
  - Metal M
  - Proper (Blank)
  - Under *
  - Over *

- Each Time Output: The detailed display is shown below.
  - Proper (Blank)
  - Under L
  - Over H
  - Metal M

  - Ext.1、Ext.2 A
  - Pitch Error T
  - Product Length Error D
  - Zero Error Z
  - Cont. NG !
  - Foreign Obj. F

6.5.4.14 Clear Batch Totals, Clear All Totals

These functions are used to clear the Batch Totals, and All Totals displayed on the Production screen. When the total data is cleared, the data up to the point is all cleared.
To clear each data, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select the item from "Clear Batch Totals", "Clear All Totals" then enter.

   ▶The confirmation screen for the selected item is displayed.

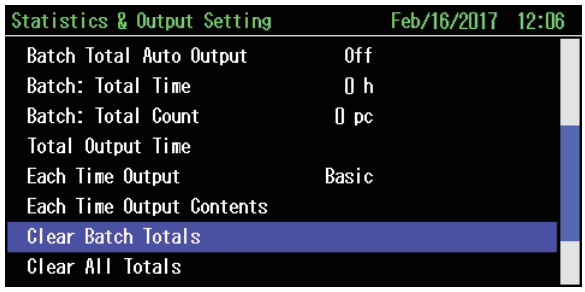


Fig. 6-186

3. Press the [Enter] key.

   ▶The screen indicating the data is being cleared is displayed.

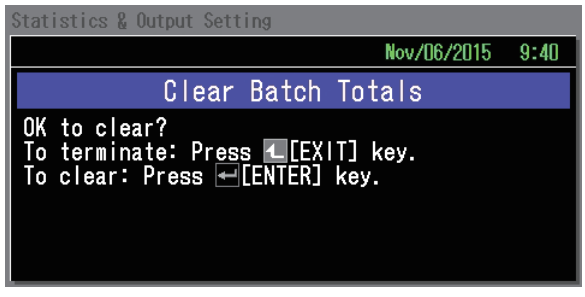


Fig. 6-187

▶When the data is completely cleared, the display returns to the Statistics & Output Setting menu.

4. Press the [Exit] key.

   ▶The Statistics & Output Setting menu is displayed.

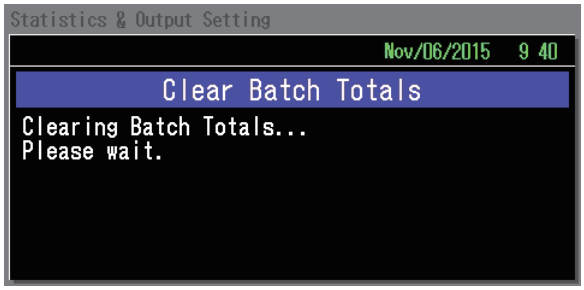


Fig. 6-188

6.5.4.15 X-bar chart

X-bar chart selects to set "Normal" or "Special" for X-bar chart display in the Standby menu.

If "0" (Standard) is set, automatically calculates the maximum and maximum values of the chart, and display entirely. It calculates the average weight for 20 items and plots one point.
If "1" (Special) is set, manually sets the maximum and maximum values, the center value of the chart. It also sets the number of products plotted for one point (Refer to "6.4.24.1 X-bar Sample Count".)
To set the X-bar chart, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "X-bar chart".

   ▶The X-bar chart screen is displayed.

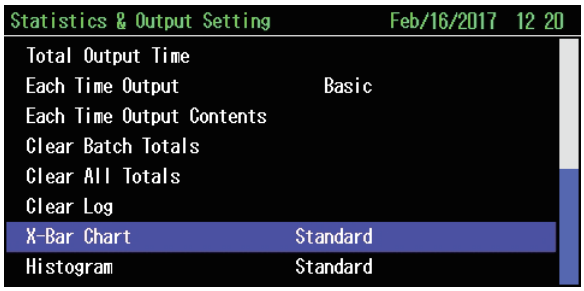


Fig. 6-189

3. To set "Normal", Select and enter the "0".
   To set "Special", Select and enter the "1".

   ▶The Statistics & Output Setting menu for the X-bar chart setting will be displayed.

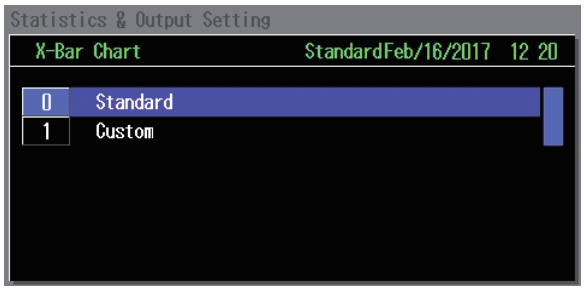


Fig. 6-190

6.5.4.16 Histogram

Histogram selects to set "Normal" or "Special" for histogram display in the Standby menu.

If "0" (Standard) is set, the center value for histogram is set based on the reference weight, interval is set based on the upper limit and lower limit. If "1" (Special) is set, the center value and interval can be set for histogram (Refer to "6.4.25 Setting of the Special Histogram".)
To set the Histogram, follow the procedure below.

1. Display the Statistics & Output Setting menu.
2. Select and enter the "Histogram".

   ▶The Histogram screen is displayed.

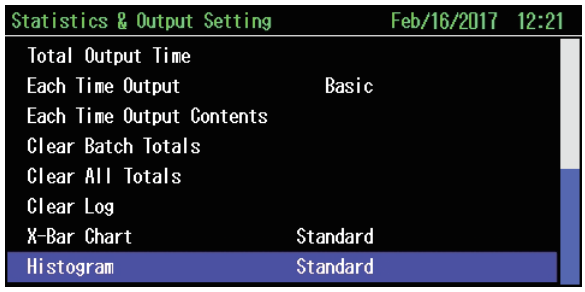


Fig. 6-191

3. To set "Standard", Select and enter the "0".
   To set "Custom", Select and enter the "1".

   ▶The Statistics & Output Setting menu for the Histogram setting will be displayed.

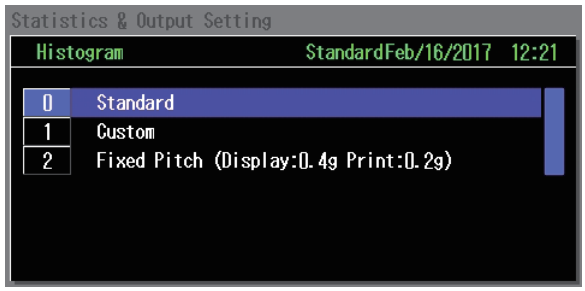


Fig. 6-192

6.5.5 Span Adjustment

Span Adjustment is performed by placing a span weight in the center of the weigh conveyor (for twin-cell specification, infeed or weigh conveyor) so that the weight is programmed into the weigher as a reference. Use the type of weight displayed on the Span Adjustment menu.
To perform Span Adjustment, follow the procedure below.

NOTE

- Span Adjustment should be set by the site engineer or higher level personnel.
- Be sure to use the span adjustment weights which are standard accessory.
  As an example, the following provides the procedure when using a 1000.0 g span weight.

<For not Twin-Cell Specification>

1. Perform zero adjustment. (Refer to "5.3.2 Zero Adjustment").
2. Remove the wind cover (option).
3. Display the Setup menu.
4. Select and enter the "Span Adjustment".

   ▶The Span Adjustment menu is displayed.

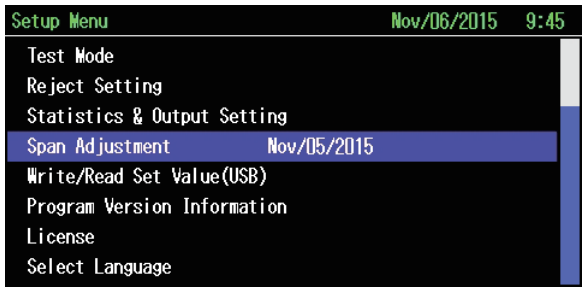


Fig. 6-193

5. Place the span adjustment weight in the center of weigh conveyor.

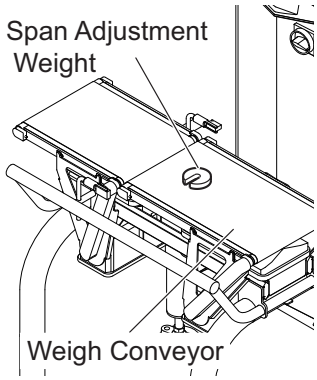


Fig. 6-194

6. Press the [Enter] key.

   ▶The span adjustment starts and the Span adjustment in progress screen appears.

   ▶When the span adjustment is completed, the Span adjustment completed screen appears.

Fig. 6-195

7. Remove the span adjustment weight from the weigh conveyor.
8. Reattach the wind cover (option).
9. Press the [Exit] key.

   ▶The Setup menu is displayed.

10. Perform the zero adjustment. (Refer to "5.3.2 Zero Adjustment".)

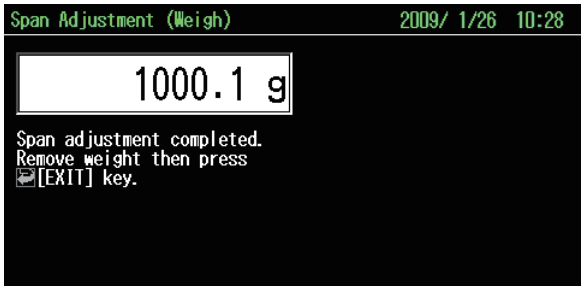


Fig. 6-196

<For Twin-cell Specification>

1. Perform zero adjustment. (Refer to "5.3.2 Zero Adjustment".)
2. Remove the wind cover (option).
3. Display the Setup menu in the Site Engineer level.
4. Select and enter "Span Adjustment".

   ▶The screen to select the conveyor to perform span adjustment ("Fig. 6-197 ") is displayed.
5. Select and enter "0" (Main, Infeed load cell).

   ▶The Span Adjustment Menu for In feed conveyor ("Fig. 6-198") is displayed.
6. Place the span adjustment weight in the center of Infeed conveyor.
7. Press the [Enter] key.

   ▶The span adjustment starts and the message “Span adjustment in progress” appears.
8. Remove the span adjustment weight from the Infeed conveyor.
9. Press the [Exit] key.

   ▶The screen to select the conveyor to perform span adjustment ("Fig. 6-197 ") is displayed.

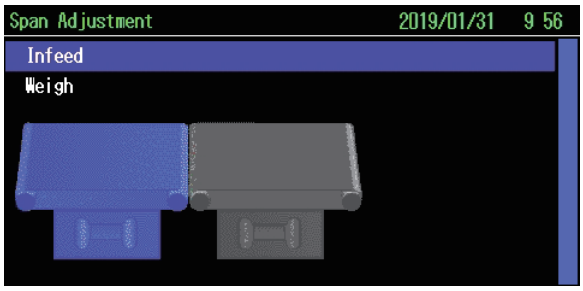


Fig. 6-197

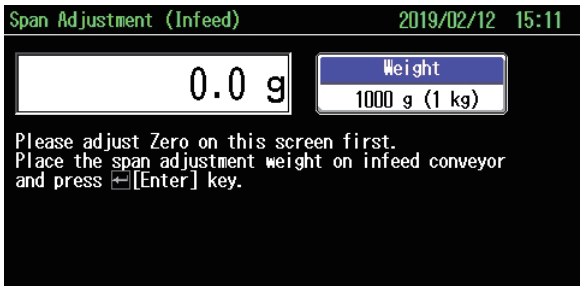


Fig. 6-198

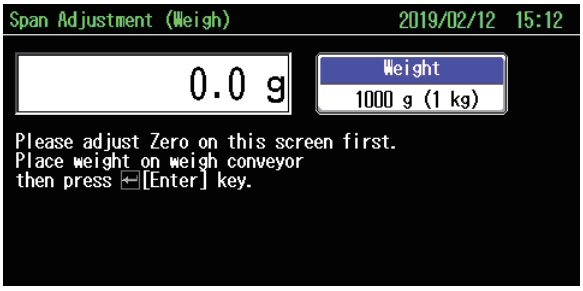


Fig. 6-199

10. Select and enter "1" (Sub, Weigh load cell).

    ▶The span adjustment screen for weigh conveyor is displayed.

11. Place the span adjustment weight in the center of weigh conveyor.

12. Press the [Enter] Key.

    ▶The span adjustment starts and the message "Span adjustment in progress" appears.

13. Remove the span adjustment weight from the weigh conveyor.

14. Reattach the wind cover (option).

15. Press the [Exit] key.

    ▶The Setup Menu is displayed.

    ▶Perform zero adjustment. (Refer to "5.3.2 Zero Adjustment".)

6.5.6 Linear correction

When the weighing sensor is electromagnetic sensor (Force balance type) it is necessary to perform linear correction.
Linear correction corrects a linearity of the weight within the weigh range.
To perform linear correction, follow the procedure below.

NOTE

- Linear correction is operational only when the weighing sensor is force balance type.
- Linear correction should be set by the site engineer or higher level personnel.
- Make sure to use the provided linear adjustment weight.
- Perform the Linear Correction after adjusting the span.

1. Carry out the zero adjustment.
   (Refer to "5.3.2 Zero Adjustment".)
2. Remove the wind cover (option).
3. Display the Setup menu for the Site Engineer level.
4. Select and enter the "Linear correction".

   ▶The linear correction screen appears.

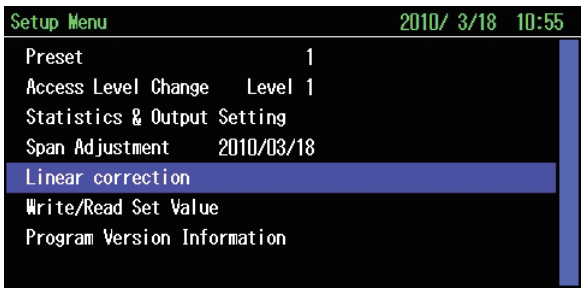


Fig. 6-200

5. Select and enter the "Linear Adjust".

   ▶[The Linear Adj. (1st) screen appears.

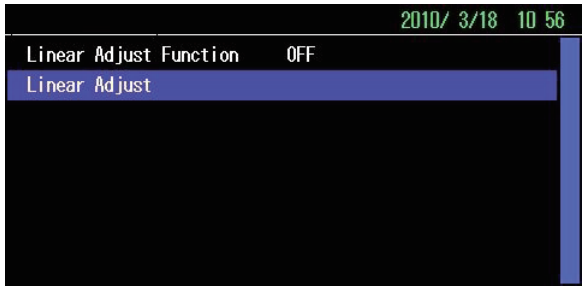


Fig. 6-201

NOTE

- Linear adjustment is carried out a total of 5 times.
  5 different linear adjustment screens, from 1st to 5th, are therefore displayed.

6. Press the [ENTER] key, ensuring that there is no weight on the weigh conveyor.

   ▶[The Linear Adj. (2nd) screen appears.

Fig. 6-202

7. Place the specified linear adjustment weight in the middle of the weigh conveyor.
8. Press the [ENTER] key.

   ▶[The Linear Adj. (3rd) screen appears.

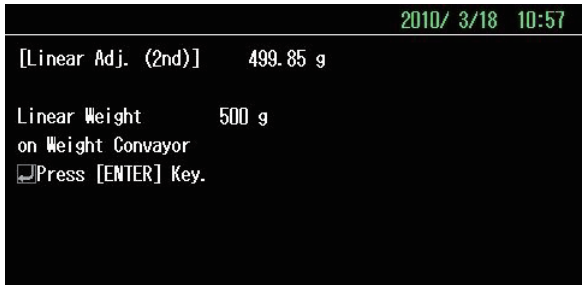


Fig. 6-203

9. Place the specified linear adjustment weight in the middle of the weigh conveyor.
10. Press the [ENTER] key.

    ▶[The Linear Adj. (4th) screen appears.

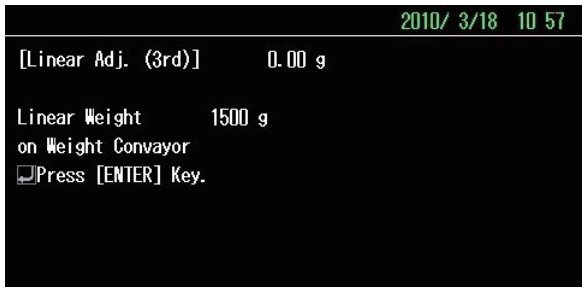


Fig. 6-204

11. Place the specified linear adjustment weight in the middle of the weigh conveyor.
12. Press the [ENTER] key.

    ▶[The Linear Adj. (5th) screen appears.

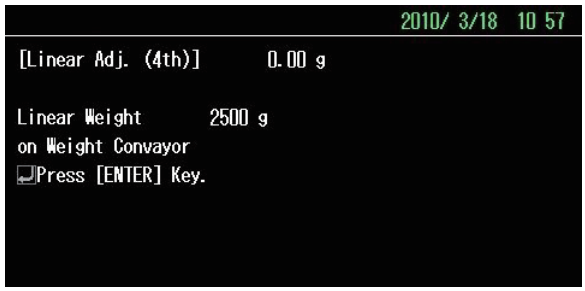


Fig. 6-205

13. Place the specified linear adjustment weight in the middle of the weigh conveyor.
14. Press the [ENTER] key.

    ▶Linear adjustment has now been completed. The linear adjustment completion screen appears.

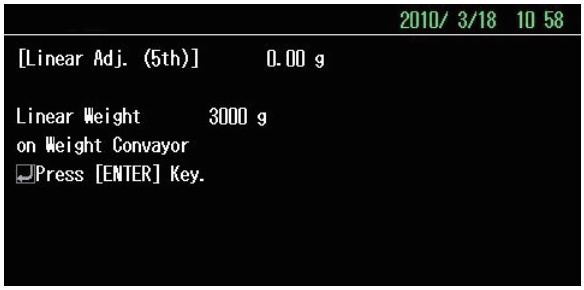


Fig. 6-206

15. Remove the linear adjustment weight from the weigh conveyor.
16. Replace the wind cover (option).
17. Press the [EXIT] key.

    ▶The Setup menu appears.

18. Carry out the zero adjustment.
    (Refer to "5.3.2 Zero Adjustment".)

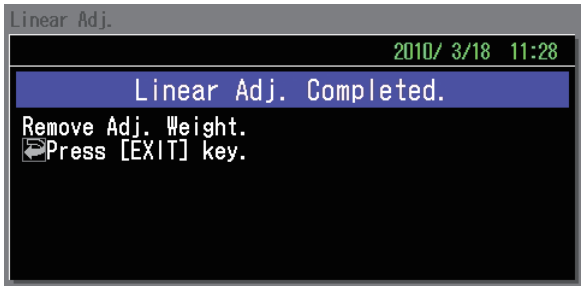


Fig. 6-207

6.5.7 System Configuration

In System Configuration, system-related items such as selecting options and type of rejector. (Refer to"Table 6-1 ") To display the System Configuration menu, follow the procedure below.

NOTE

- System Configuration should be set by the site engineer or higher level personnel.

1. Display the Setup menu in the Installation level.
2. Select and enter the "System Configuration".

    ▶The System Configuration menu is displayed.

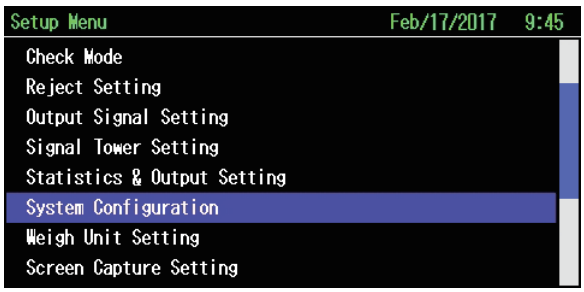


Fig. 6-208

6.5.7.1 Weight Display

This item sets the weight display during production.
Follow the procedure below to set the Weight Display.

NOTE

- The following weight values can be displayed during operation.
  Absolute value: The actual weight is displayed.
  Deviation value: The degree of deviation from the reference value is displayed.

1. Display the System Configuration menu.
2. Select and enter the "Weight Display".

   ▶The Weight Display menu is displayed.

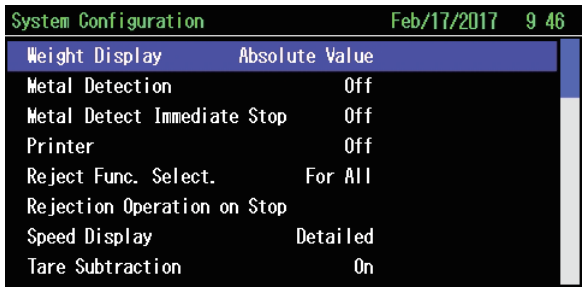


Fig. 6-209

3. Select and enter the "0" when displaying Absolute value.
   Select and enter the "1" when displaying Deviation value.

   ▶The setting is reflected on the System Configuration menu.

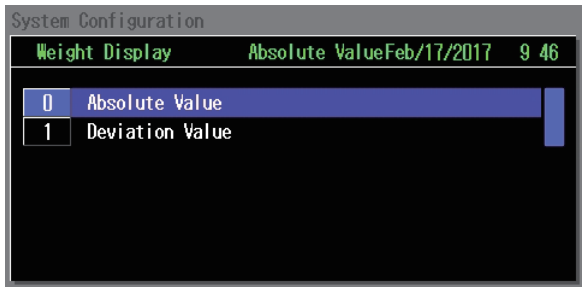


Fig. 6-210

6.5.7.2 Metal Detection

Metal Detection defines whether to reflect the detection to the weighing result when a single metal detector and contact signal are connected.
To set the Metal Detection, follow the procedure below.

1. Display the System Configuration menu.
2. Select and enter the "Metal Detector".

   ▶The Metal Detector screen is displayed.

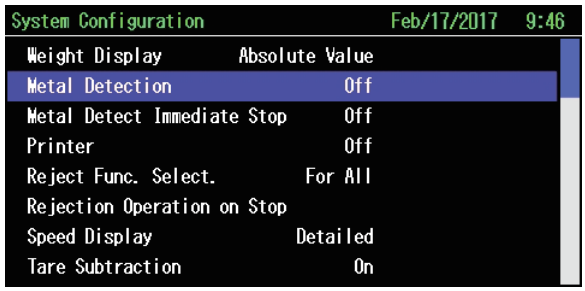


Fig. 6-211

3. To set "OFF", Select and enter the "0".
   To set "ON", Select and enter the "1".

   ▶The setting is reflected on the System Configuration menu.

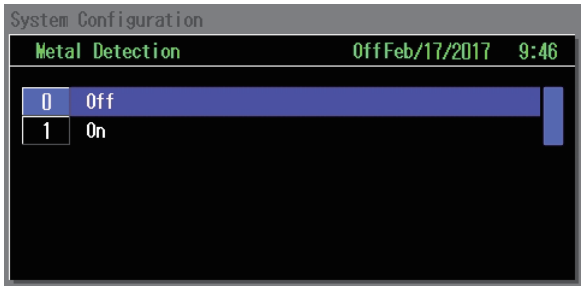


Fig. 6-212

6.5.7.3 Printer

This item sets whether the optional printer is installed or not. Follow the procedure below to set the Printer.

1. Display the System Configuration menu.
2. Select and enter the "Printer".

   ▶The Printer menu is displayed.

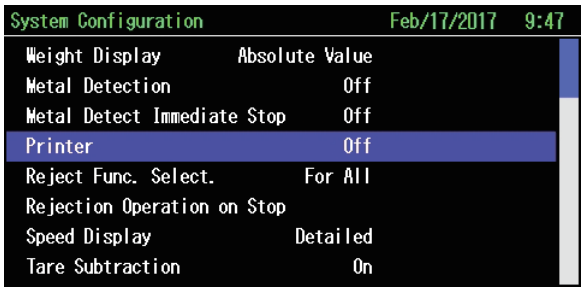


Fig. 6-213

3. Select and enter the "0" when a printer is not installed.
   Select and enter the "1" when a printer is installed.
4. Press the [Exit] key.

   ▶The setting is reflected in the System Configuration menu.

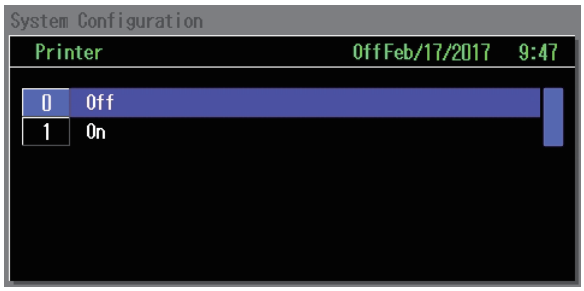


Fig. 6-214

6.5.7.4 Reject Func. Select.

Follow the procedure below to set the Reject Function Selection.

1. Display the System Configuration menu.
2. Select and enter the "Reject Func. Select".

   ▶The confirmation screen is displayed.

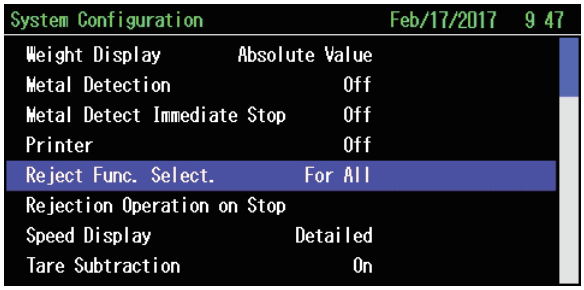


Fig. 6-215

3. Press [Enter] key.

   ▶The Reject Func. Select. is displayed.

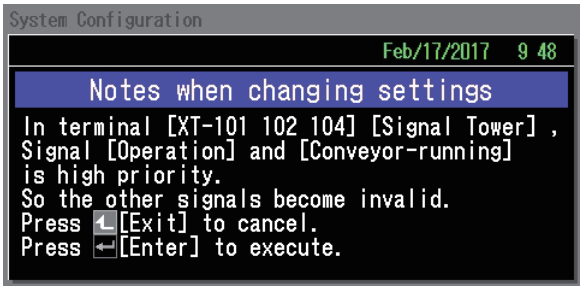


Fig. 6-216

4. Enter For All (0) to set rejector for all preset.
   Enter By Preset (1) to set by preset.

   ▶The setting is reflected on the System Configuration menu.

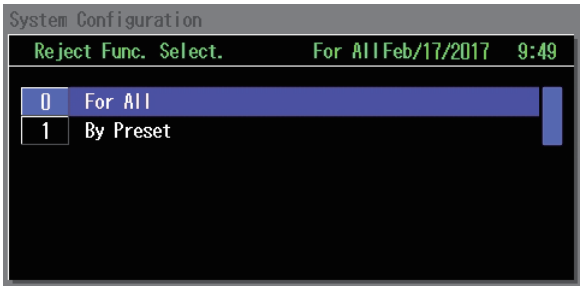


Fig. 6-217

6.5.7.5 Speed Display

Speed Display selects the definition for "Speed" values displayed in the Standby menu from "Detailed" or "Basic".

< Detailed >

If "0" (Detailed) is set, up to 100 product pitches will be stored and the average value will be calculated. The value of "60 seconds (1 minute) divided by the average value" is displayed as actual speed.
The display interval is every 10 seconds. If no product is weighted for 10 seconds, the display will be cleared.

$$\text{Actual speed (pcs / minute)} = \frac{60\ \text{(second)}}{\alpha\ \text{(second)}} \leftarrow \text{Average value for 100 pitches}$$

NOTE

- The pitch average value is reset at 0 (second) each time the operation starts. The value will not be updated when the operation starts for the first time as the pitch is not judged.

TIP

- Updating is performed for each weighing.

< Basic >

If "1" (Basic) is set, "the number of products to weigh for 10 seconds × 6" is displayed as actual speed. (Equal to DACS-G before Ver.4, and before DACS-WN)

TIP

- Updating is performed for every 10 seconds.

< Setting procedure >

To set the Speed Display, follow the precedure below.

1. Display the System Configuration menu.
2. Select and enter the "Speed Display".

   ▶The Speed Display screen is displayed.

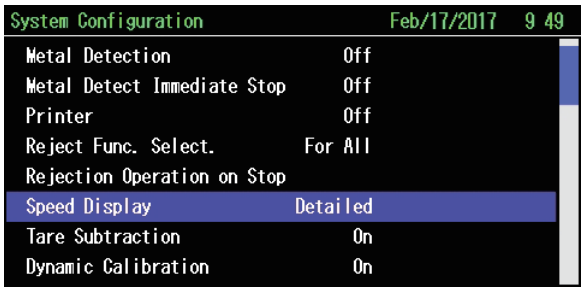


Fig. 6-218

3. To set "Detailed", Select and enter the "0".
   To set "Basic", Select and enter the "1".

   ▶The setting is reflected on the System Configuration menu.

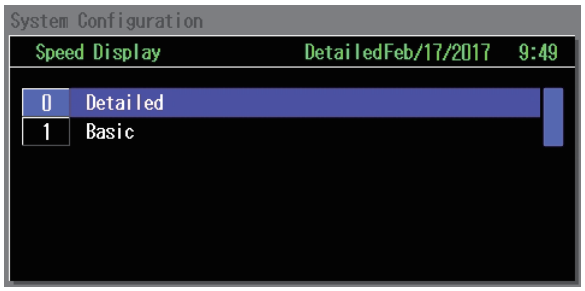


Fig. 6-219

6.5.7.6 Tare Subtraction

This item sets whether to activate the tare subtraction or not.
Follow the procedure below to set the Tare Subtraction.

1. Display the System Configuration menu.
2. Select and enter the "Tare Subtraction".

   ▶The Tare Subtraction menu is displayed.

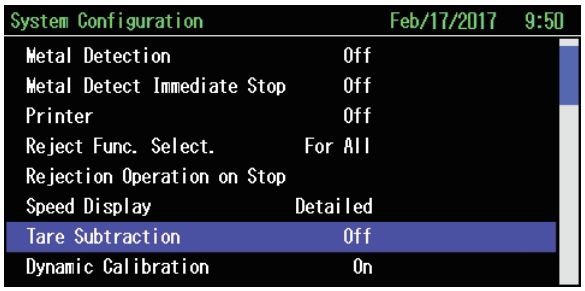


Fig. 6-220

3. Select and enter the "0" to deactivate the Tare Subtraction,
   Select and enter the "1" to activate the Tare Subtraction.

   ▶The setting is reflected on the System Configuration menu.

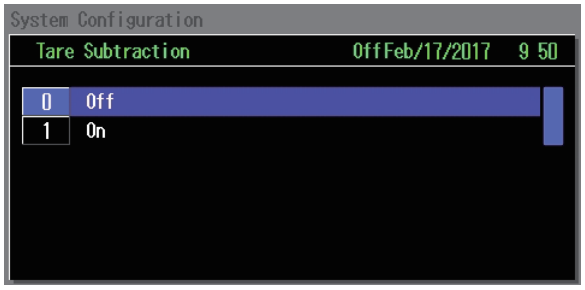


Fig. 6-221

TIP

- For the preset tare setting, refer to "6.4.7 Preset Tare".

6.5.7.7 Dynamic Calibration

This item sets whether to activate the Dynamic Calibration. Follow the procedure below to set the Dynamic Calibration.

1. Display the System Configuration menu.
2. Select and enter the "Dynamic Calibration".

   ▶The Dynamic Calibration menu is displayed.

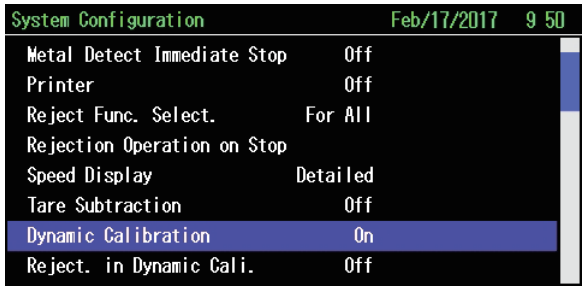


Fig. 6-222

3. Select and enter the "0" to deactivate Dynamic Calibration,
   Select and enter the "1" to activate Dynamic Calibration.

   ▶The setting is reflected on the System Configuration menu.

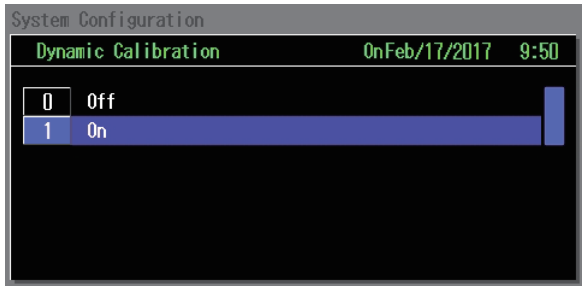


Fig. 6-223

TIP

- For the dynamic calibration setting, refer to "6.4.21 Dynamic Calibration".

6.5.7.8 Reject. in Dynamic Cali.

This item is used to select whether or not to perform the reject operation for dynamic calibration (Refer to "6.4.21 Dynamic Calibration"). To set the Reject. in Dynamic Calibration, follow the procedure below.

NOTE

- To set this item, select "Preset setting" -> "Reject setting" -> " REJECT_BYPASS_DIR".
- To display this item, set Dynamic Calibration to "ON".

1. Display the System Configuration menu.
2. Select and enter the "Reject. in Dynamic Cali.".

   ▶The Reject. in Dynamic Calibration screen is displayed.

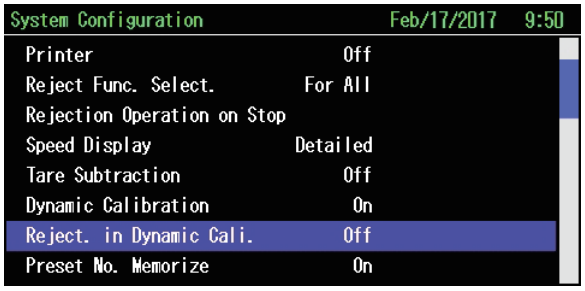


Fig. 6-224

3. To set "OFF", Select and enter the "0".
   To set "ON", Select and enter the "1".

   ▶The setting is reflected on the System Configuration menu.

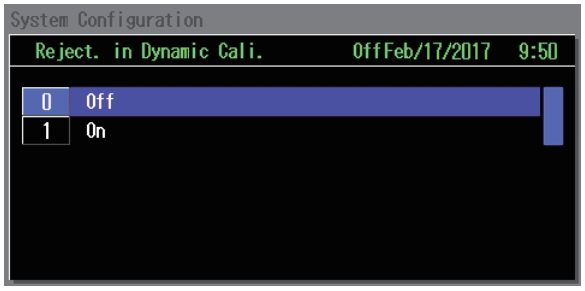


Fig. 6-225

6.5.7.9 Preset Number Memorize

This item sets whether to memorize the preset number before power-off.
Follow the procedure below to set the Preset Number Memorize.

1. Display the System Configuration menu.
2. Select and enter the "Preset Number Memorize".

   ▶The Preset Number Memorize screen is displayed.

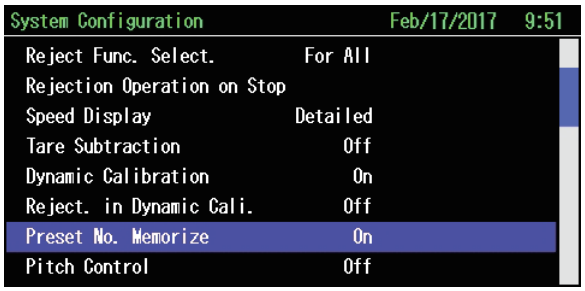


Fig. 6-226

3. Select and enter the "0" to deactivate the function,
   Select and enter the "1" to activate the function.

   ▶The setting is reflected on the System Configuration menu.

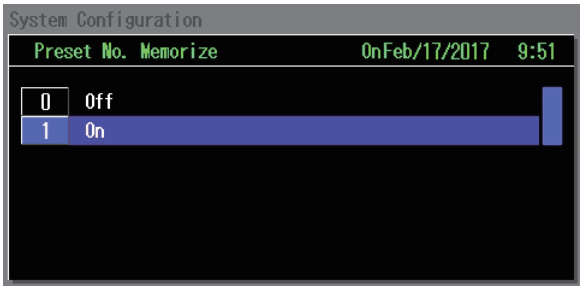


Fig. 6-227

6.5.7.10 Set. chg. during driving

This item is used to select whether or not to change the preset setting in the Standby menu.
The preset setting can be changed in the Standby menu.
(Refer to "6.4.26.2 Preset Setting Change in the Standby Menu", "6.4.23 Set. chg. during driving")
To set the Setting change during the driving, follow the procedure below.

Table 6-13 Function of the Each Item

No.	Item	Function
0	Inhibit Overwrite	Changes the preset setting only during stoppage.
1	Accept Overwrite	Changes all the preset setting during stoppage or product.
2	Set by Preset	Changes all the preset setting during stoppage or product, and inhibits overwrite for each individual preset.

< Setting procedure >

1. Display the System Configuration menu.
2. Select and enter the "Set. chg. during driving".

   ▶The Setting change during driving screen is displayed.

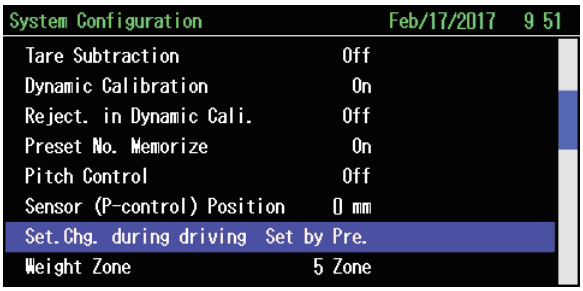


Fig. 6-228

3. Select and enter the item.
   (Refer to "Table 6-13 Function of the Each Item")

   ▶The setting is reflected on the System Configuration menu.

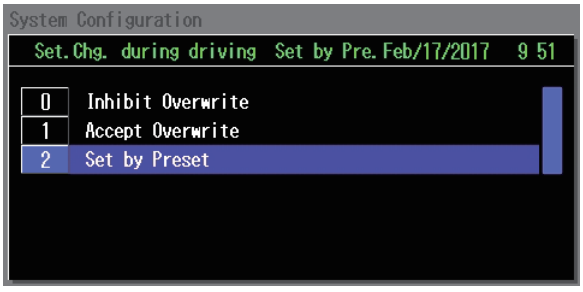


Fig. 6-229

6.5.7.11 Weight Zone (Switching the 3 Zone/5 Zone)

This chapter describes the calculation of 5 Zone (Proper is divided in to three zones).

6.5.7.11.1 Weight Zone Overview

3 Zone consists of 3 ranks such as Proper, Over, Under to judge the weight. 5 zone is used to judge the weight in 5 ranks such as Under, Over as well as Ok-Over, Proper, and OK-Under that are divided from the Proper area.

The Proper area has a wide range in 5 Zone. This classification is effective to understand the product is relatively heavier proper or lighter proper. This also useful when reviewing a production process by classifying the product into the weight zone.
The boundaries of the zones are shown below.

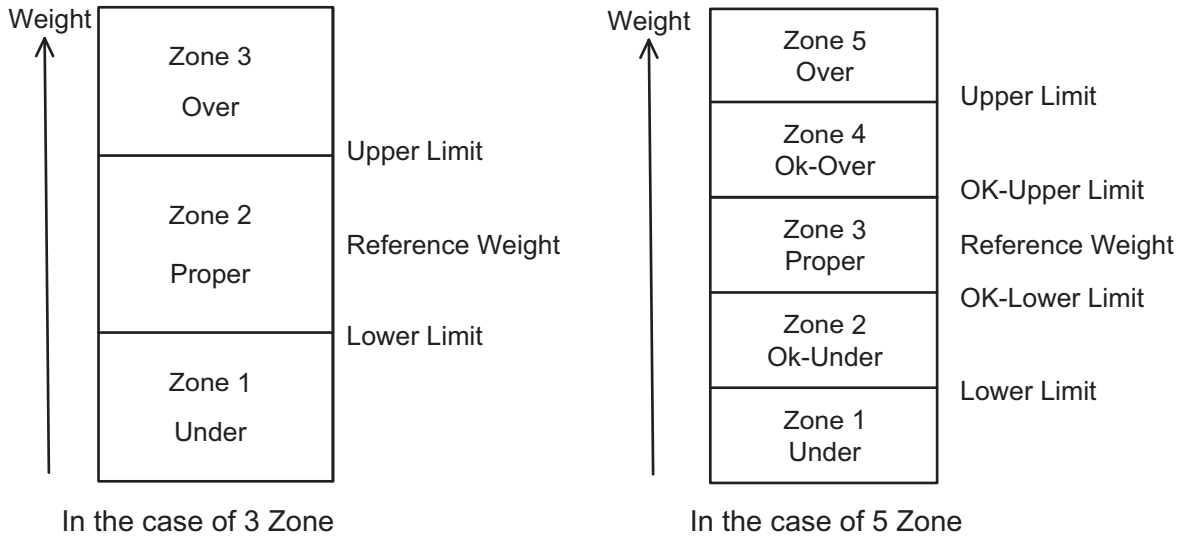


Fig. 6-230

6.5.7.11.2 Weight Zone settin procedure

Follow the procedure below to set the Weight Zone.

1. Display the System Configuration menu.
2. Select and enter the "Weight Zone".

   ▶The Weight Zone screen is displayed.

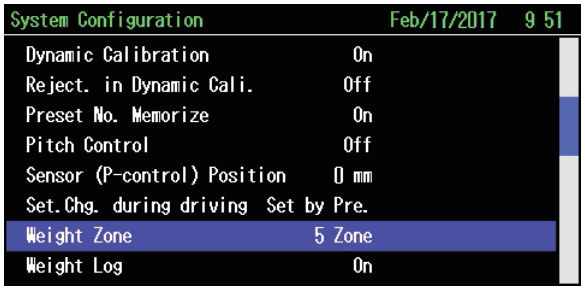


Fig. 6-231

3. To set the "3 Zone" for weight zone, Select and enter the "0".
   To set the "5 Zone" for weight zone, Select and enter the "0".

   ▶The setting is reflected on the System Configuration menu.

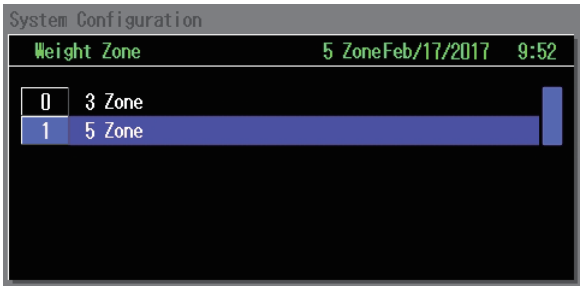


Fig. 6-232

6.5.7.12 Weight Log

This item sets whether to record the weight log data (each weighing data). Follow the procedure below to set the Weight Log.

1. Display the System Configuration menu.
2. Select and enter the "Weight Log".

   ▶The Weight Log is displayed.

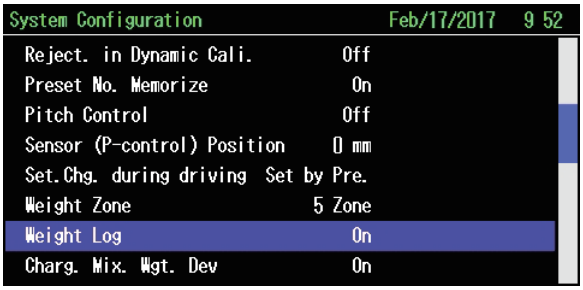


Fig. 6-233

3. Select and enter the "0" to deactivate the function.
   Select and enter the "1" to activate the function.

   ▶The setting is reflected on the System Configuration menu.

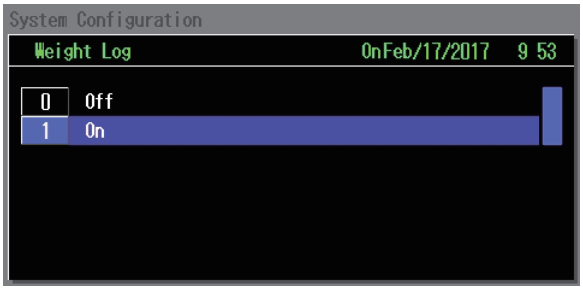


Fig. 6-234

6.5.7.13 Charge Mixing Weight Deviation

This item sets whether to judge an error by weight deviation for the adjacent weighing. Follow the procedure below to set the Charge Mixing Weight Deviation.

1. Display the System Configuration menu.
2. Select and enter the "Charg.Mix.Wgt.Dev".

   ▶The Charge Mixing Weight Deviation menu is displayed.

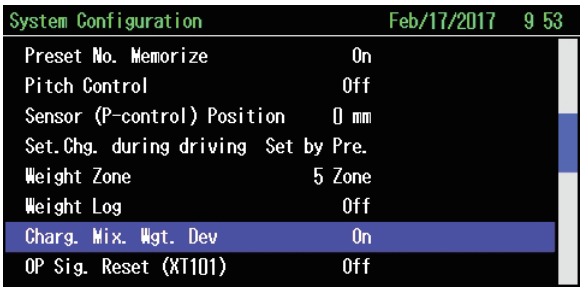


Fig. 6-235

3. Select and enter the "0" to deactivate the function,
   Select and enter the "1" to activate the function.

   ▶The setting is reflected on the System Configuration menu.

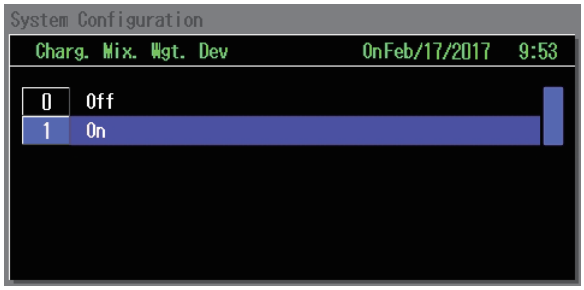


Fig. 6-236

TIP

- For the setting of Charge Mixing Weight Deviation, refer to "6.4.12 Charge Mixing Weight Deviation±"

6.5.7.14 Input Signal Port Setting

Input Signal Port Setting defines the port to which various types of input signals are inputted. Follow the procedure below to set the each input signal.

⚠ CAUTION

- **To input a signal, optional external signal terminal is required.**

1. Display the System Configuration menu.
2. Select and enter the "Input Signal Port Setting".

   ▶The Input Signal Port Setting screen is displayed.

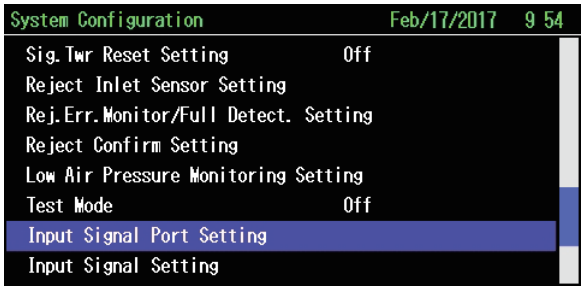


Fig. 6-237

3. Select and enter the desired input signal.

   ▶The each input signal Setting screen is displayed.

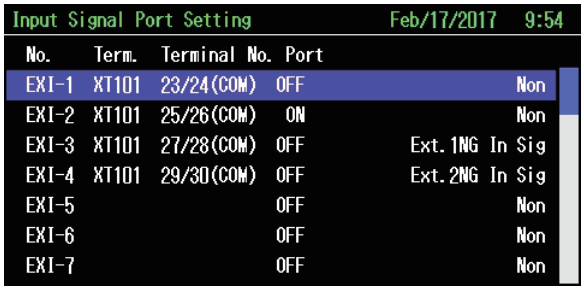


Fig. 6-238

4. Select and enter the desired input signal types.

   ▶The setting is reflected on the System Configuration menu.

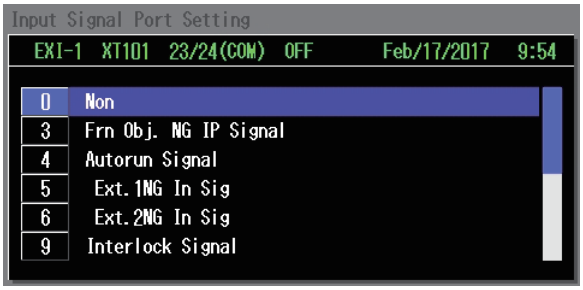


Fig. 6-239

TIP

- Each port indicates the current input signal state:
  -ON: The signal is input.
  -OFF: The signal is not input.

6.5.7.15 Input Signal Setting

Input Signal Setting defines the polarity (logic) for various types of input signals.
Follow the procedure below to set the each input signal.

CAUTION

- **To input a signal, optional external signal terminal is required.**

1. Display the System Configuration menu.
2. Select and enter the "Input Signal Setting".

   ▶The Input Signal Setting screen is displayed.

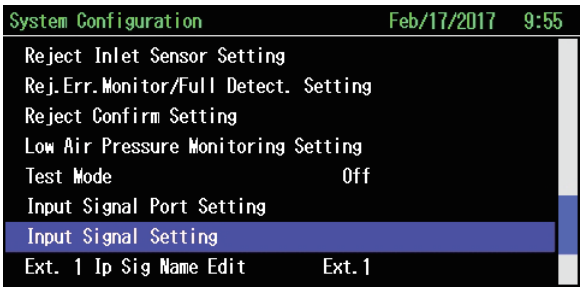


Fig. 6-240

3. Select and enter the desired input signal.

   ▶The each input signal Setting screen is displayed.

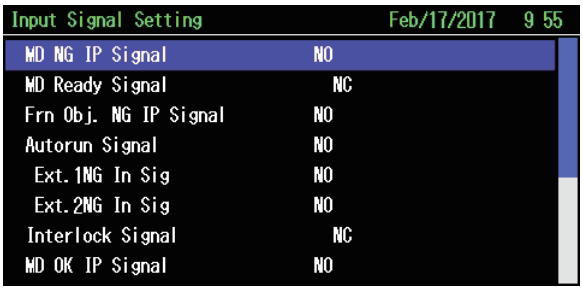


Fig. 6-241

4. Select and enter the input signalof polarity (logic).

   ▶The setting is reflected on the System Configuration menu.

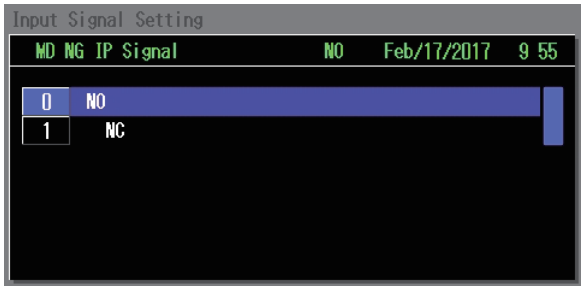


Fig. 6-242

TIP

- NO (normally open) : Contact pair is closed when energized.
- NC (normally closed) : Contact pair is open when energized.

6.5.7.16 Test Mode

Test Mode defines whether to enable or disable the test mode.

1. Display the System Configuration menu.
2. Select and enter the "Test Mode".

   ▶The Test Mode screen is displayed.

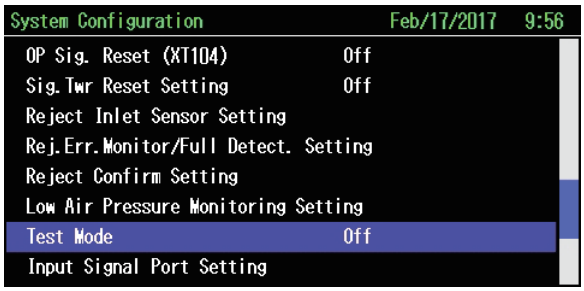


Fig. 6-243

3. To set the "OFF", Select and enter the "0". To set the "ON", Select and enter the "1".

   ▶The setting is reflected on the System Configuration menu.

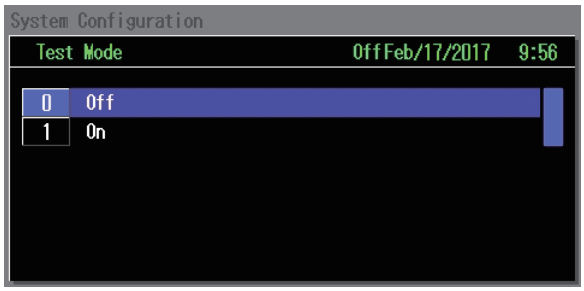


Fig. 6-244

6.5.7.17 Startup Check

Startup Check selects whether or not to perform a check in a check mode every time after the power is turned on at the first startup.

1. Display the System Configuration menu.
2. Select and enter the "Startup Check".

   ▶The Startup Check screen is displayed.

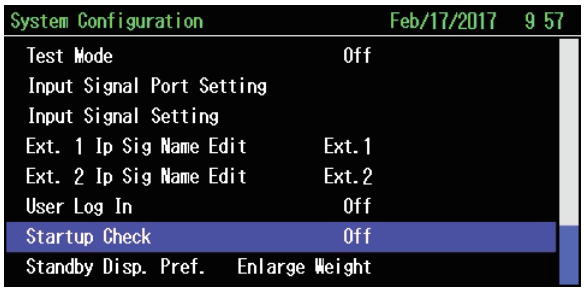


Fig. 6-245

3. To set the "OFF", Select and enter the "0".
   To set the "ON", Select and enter the "1".
4. Press the [Exit] key.

   ▶The setting is reflected on the System Configuration menu.

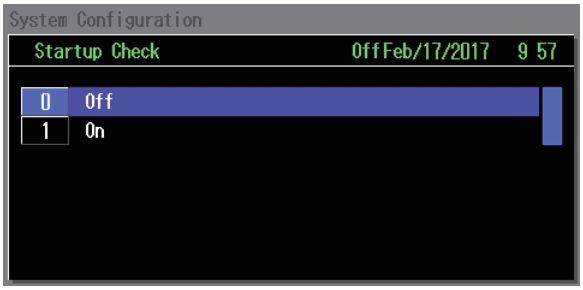


Fig. 6-246

6.5.7.18 Standby Display Preference

This item is used to select the layout for weights or other values in the Standby menu.

1. Display the System Configuration menu.
2. Select and enter the "Standby Disp. Pref.".

   ▶The Standby Display Preference screen is displayed.

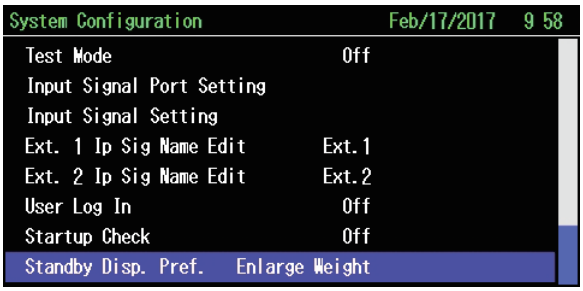


Fig. 6-247

3. To set the "Enlarge Weight", Select and enter the "0".
   To set the "Enlarge Quantity", Select and enter the "1".
   To set the "Enlarge Speed", Select and enter the "2".

   ▶The setting is reflected on the System Configuration menu.

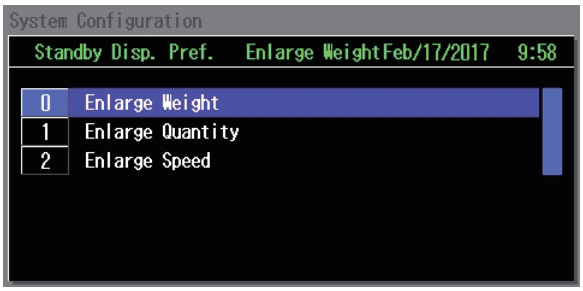


Fig. 6-248

<Display example>

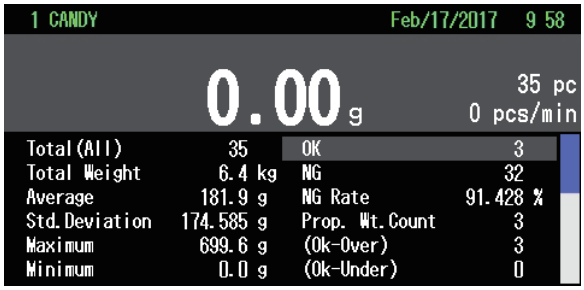


Fig. 6-249 Enlarge Weight

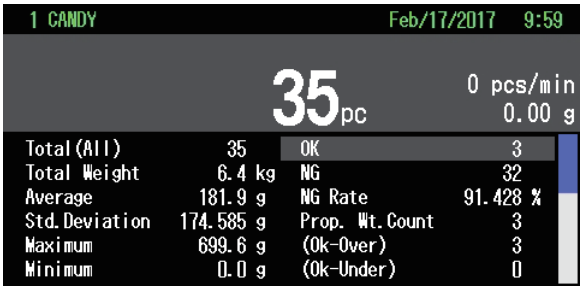


Fig. 6-250 Enlarge Quantity

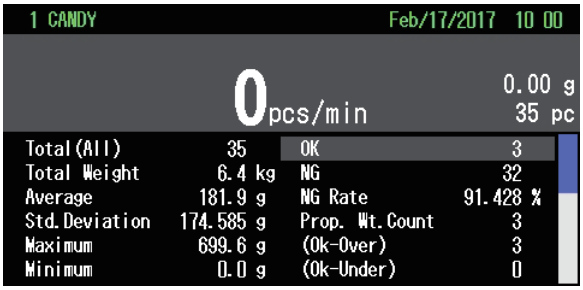


Fig. 6-251 Enlarge Speed

6.5.8 Preset Copy

This item is used to copy the preset data for one preset number to another.
Follow the procedure below to execute the Preset Copy.

NOTE

- Preset copy should be set by the Installation level personnel.

1. Display the Setup menu.
2. Select and enter the "Preset Copy".

   ▶The Preset Copy menu is displayed.

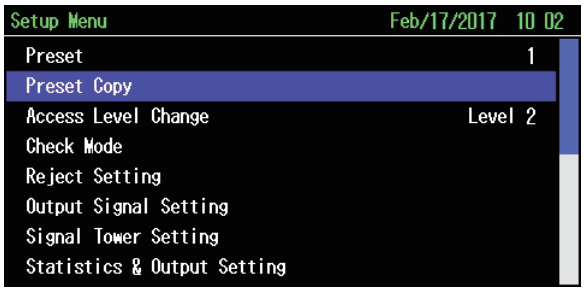


Fig. 6-252

3. Select and enter the source preset number.

   ▶The Preset Copy Confirmation screen is displayed.

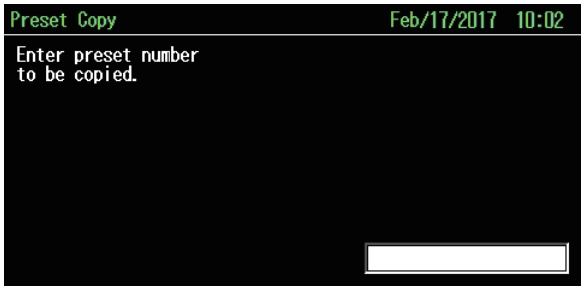


Fig. 6-253

4. Select and enter the destination preset number.

   ▶The Preset Copy in Progress screen is displayed.

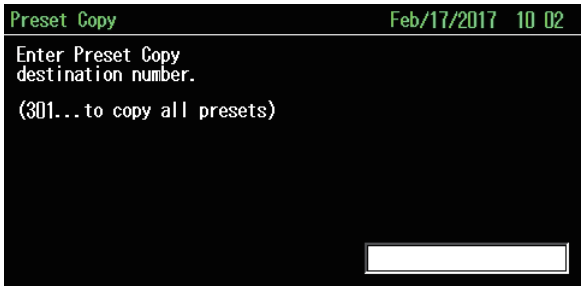


Fig. 6-254

▶When the preset copy is completed, the display returns to the Setup menu.

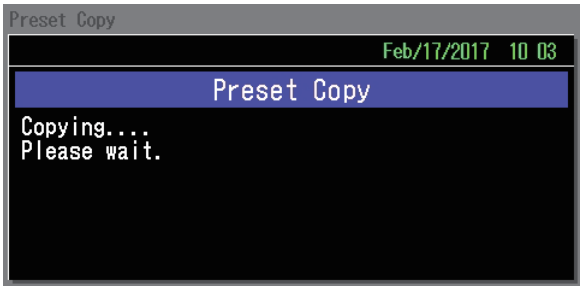


Fig. 6-255

6.5.9 Date/Time setting

This item sets current date and time.

NOTE

- Date and Time setting should be set by the Installation level personnel.

6.5.9.1 Date Setting

Follow the procedure below to set the date.

1. Display the Setup menu in the Installation level.
2. Select and enter the "Date/Time Setting"

   ▶The Date /Time Setting menu is displayed.

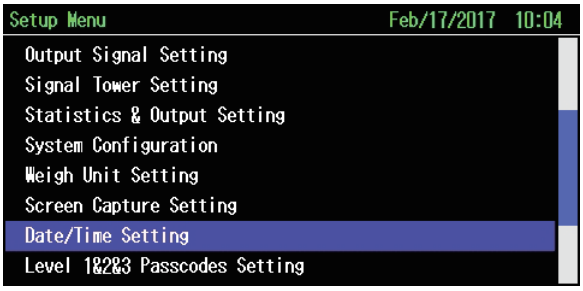


Fig. 6-256

3. Select and enter the "Date Setting"

   ▶The Date Setting screen is displayed.

Fig. 6-257

4. Enter the date in year(4 digits)-month (2 digits) -day (2 digits) order with the [numeric] keys.
(Example: For February 1, 2009, enter 20090201)
5. Press the [Enter] key

▶The setting is reflected on the Date/Time setting screen.

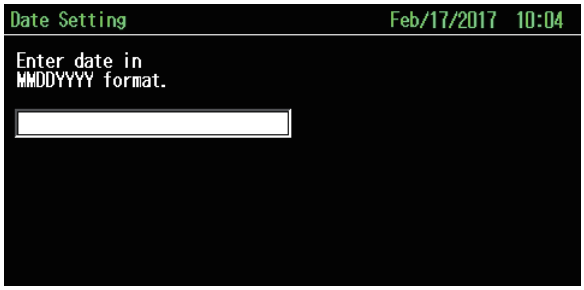


Fig. 6-258

6.5.9.2 Time Setting

Follow the procedure below to set the time.

1. Display the Setup menu.
2. Select and enter "Date/Time Setting"

▶The Date/Time Setting menu is displayed.

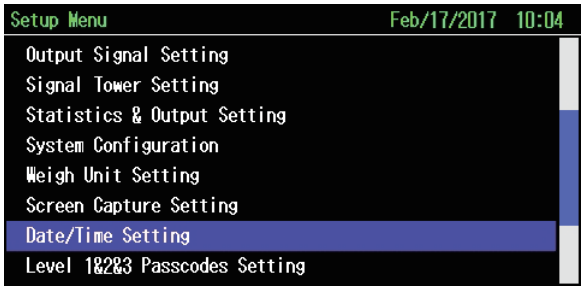


Fig. 6-259

3. Select and enter the "Time Setting".

▶The Date Setting screen is displayed.

Fig. 6-260

4. Enter the Time in time (2 digits)-minute (2 digits) -second (2 digits) order with the [numeric] keys.
(Example: For 1:08:30 pm, enter 130830)
5. Press the [Enter] key.

▶The setting is reflected on the Date/Time setting screen.

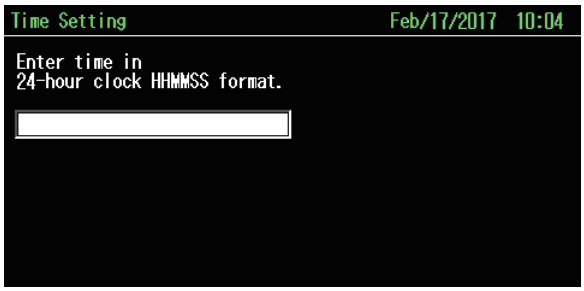


Fig. 6-261

6.5.10 Level 1&2&3 Passcodes Setting

This item is used to set the passcode for the Site Engineer Level and Installation Level. The default passcode for the Site Engineer level (Level1) is "1", and "2" for the Installation level (Level 2).

CAUTION

- **Passcodes for the Site Engineer and higher operation levels are set in order to limit operations to the authorized users for each operation. Passcodes need to be managed to avoid operation by unauthorized users.**

NOTE

- When changing the passcode, make a note of the new passcode in case you forget it.
- Level 1 & 2 passcodes Setting should be set by the Installation level personnel.

Follow the procedure below to set the passcodes for operation levels.

1. Display the Setup menu.
2. Select and enter the "Level 1&2&3 Passcodes Setting".

   ▶The Level 1&2&3 Passcodes Setting menu is displayed.

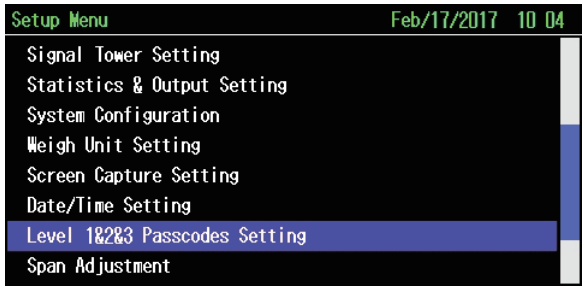


Fig. 6-262

3. Select and enter the desired operation level.

   ▶The Passcode Setting screen for the desired operation level is displayed.

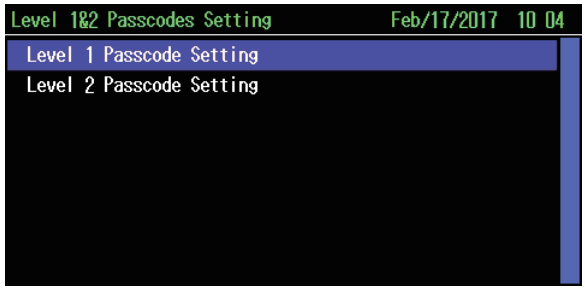


Fig. 6-263

4. Set a new passcode with the [numeric] keys (up to 12 characters).

   ▶The new passcodes is set and the display returns to the Level 1&2&3 Passcodes Setting menu.

5. Press the [Exit] key.

   ▶The Setup menu is displayed.

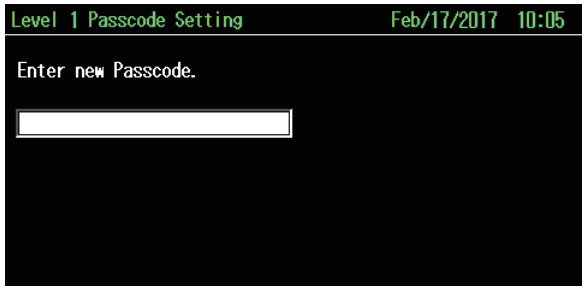


Fig. 6-264

6.5.11 Weigh Unit Setting

NOTE

- Weigh Unit Setting should be set by the Installation level personnel.

1. Display the Setup menu.
2. Select and enter the "Weigh Unit Setting".

   ▶The Weigh Unit Setting screen is displayed:

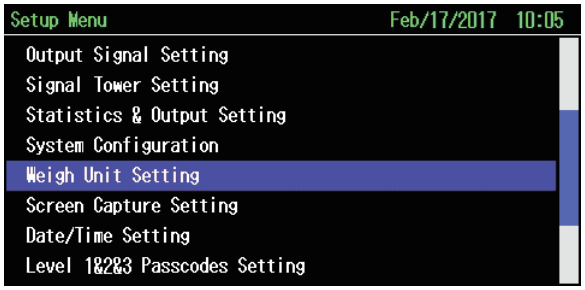


Fig. 6-265

- Weigher: Confirm the weigher name.
- Applicable country: Confirm the applicable county.
- Maximum: Confirm the capacity of the device.

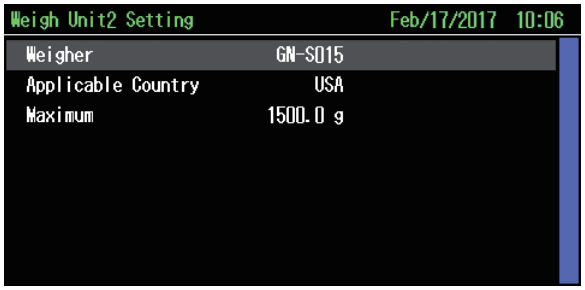


Fig. 6-266

6.5.12 Screen Capture

Screen Capture saves (captures) any screen into USB flash drive as an image file.
Follow the procedure below to set the Screen Capture.

NOTE

- Screen Capture should be set by the Installation level personnel.
- The Filter Simulation screen can not be captured.

1. Display the Setup menu.
2. Select and enter the "Screen Capture".

   ▶The Screen Capture screen is displayed.

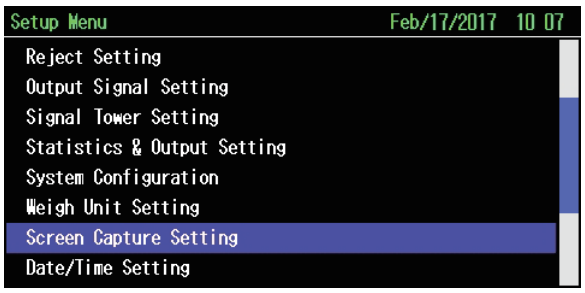


Fig. 6-267

3. Select and enter the "Screen Capture By F3 key".

   ▶The Screen Capture screen is displayed.

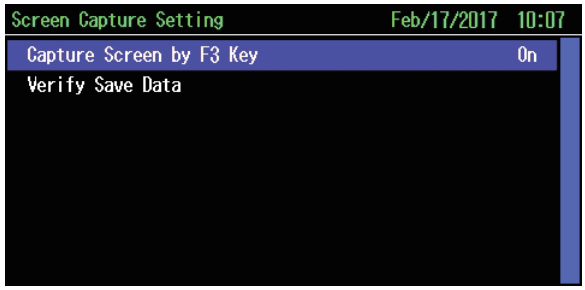


Fig. 6-268

4. To set the "OFF", Select and enter the "0".
   To set the "ON", Select and enter the "1".

   ▶The setting is reflected on the System Configuration menu.

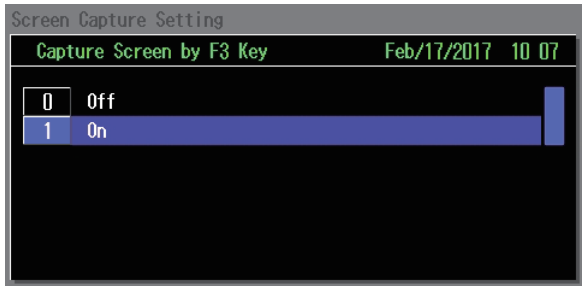


Fig. 6-269

< Screen Capture Procedure >

1. Press the [Function 3] key on any screen.
   ▶The screen is captured.

TIP

- If the text file named "cpmode" exists in USB flash drive, any screen (Filter Simulation excluded) can be captured by pressing the [Function 3] key, regardless of the setting of Screen Capture.
- Even a different function is allocated to the [Function 3] key, the screen can be captured. When a function that switches screens is allocated to the [Function 3] key, the screen before switching is captured.

< Verify Save Data >

This is used to check data stored into USB flash drive. Follow the procedure below to set the Verify Save Data.

NOTE

- The Verify Save Data cannot be selected if no USB flash drive is inserted.

1. Display the Setup menu.
2. Select and enter the "Screen Capture Setting".

   ▶The Screen Capture screen is displayed.

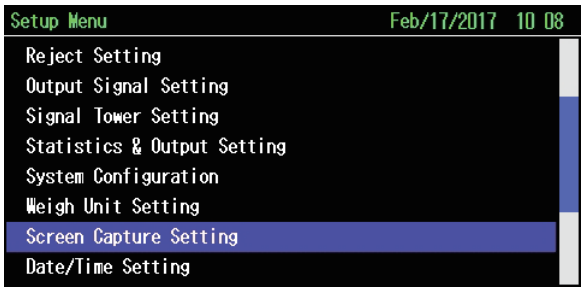


Fig. 6-270

3. Select and enter the "Verify Save Data".

   ▶The Verify Save Data screen is displayed.

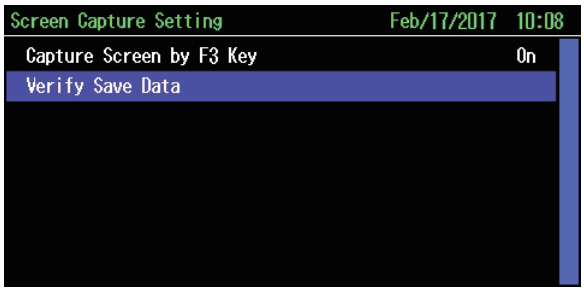


Fig. 6-271

4. Enlarge the data by pressing the [Enter] key or the [Function 4] key.

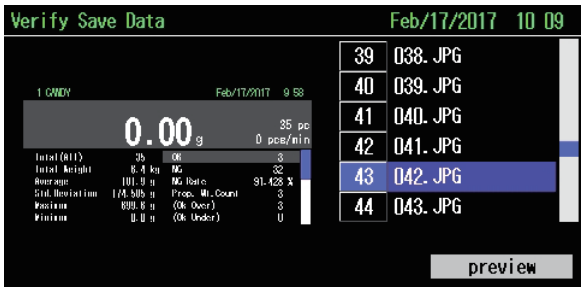


Fig. 6-272

5. To return, press any key.

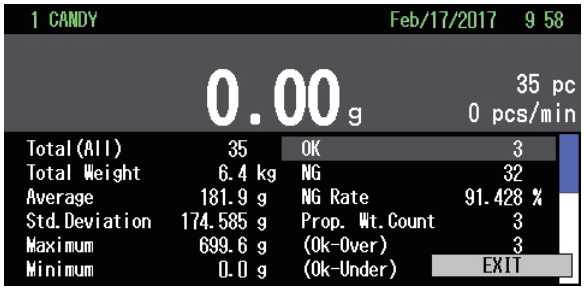


Fig. 6-273

6.6 User Log In

User Log In defines the operation level and login passcode for each operator of the machine. This function records who performed what operation.

NOTE

- An operator cannot access to multiple levels.

6.6.1 Overview of the User Login Setting Item

Table 6-14

Operation key	Item	Operation level			Ref.
		Operator	Site Engineer	Installation	
Setup	Log In	*	*	*	"6.6.3"
	Log Out	*	*	*	"6.6.4"
	Register ID		*	*	"6.6.5"
	Delete ID		*	*	"6.6.6"
	Passcode change	*	*	*	"6.6.7"
	passcode unlock		*	*	"6.6.3.1"
	Auto Logged-Out Time			*	"6.6.8"
	Passcode validity			*	"6.6.9"
System Configuration	User Log In			*	"6.6"
Output	User List Output		*	*	"6.6.11"

*: Indicates that the item can be operated.

6.6.2 Setting of User Log In

This item is used to select whether to enable or disable the user log in.
Follow the procedure below to set the user log in.

NOTE

- User log in should be set by the Installation level personnel.

1. Display the System Configuration menu.
2. Select and enter the "User Log In".

   ▶The User Log In screen is displayed.

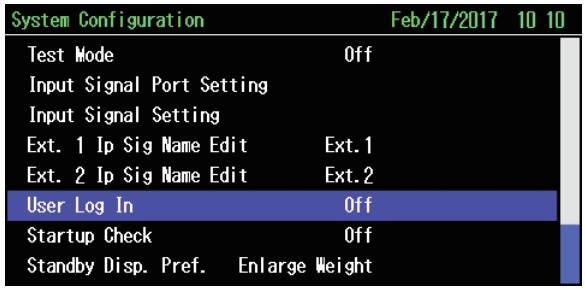


Fig. 6-274

3. To set the "OFF", Select and enter the "0".
   To set the "ON", Select and enter the "1".

   ▶The restart request screen is displayed

4. Turn OFF the power of machine and restart.

   ▶The setting of User Log In is reflected.

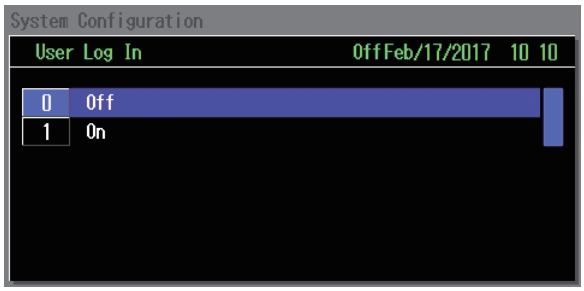


Fig. 6-275

6.6.3 Log In

There are two log in procedures for a first log in and standard log in.
Follow the procedure below to set the Log In.

CAUTION

- **Since a login is required to stop the machine, the machine must be turned OFF to stop in emergency.**

< First log in >

1. Display the Setup menu.
2. Select and enter the "Log In".

   ▶The ID list screen is displayed.

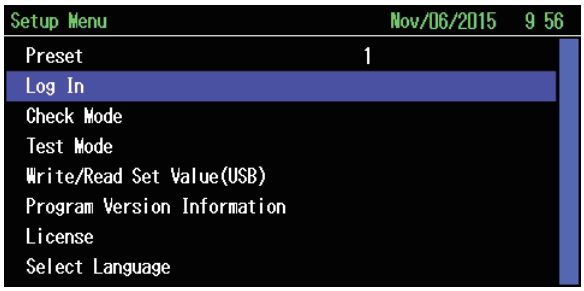


Fig. 6-276

3. Select and enter the "Login number".

   ▶The passcode input screen is displayed.

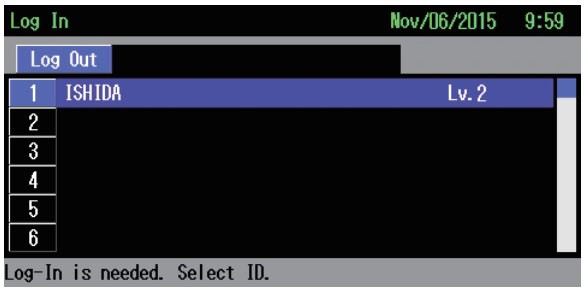


Fig. 6-277

4. Input and enter the passcode.

   ▶The Passcode confirmation screen is displayed.

CAUTION

- **If a wrong passcode is entered, an error screen is displayed. Press the [Enter] key and enter the correct passcode.**

Fig. 6-278

- **If entering the wrong passcode three times, logins are disabled. For the resetting method, refer to "6.6.3.1 Passcode Unlock".**

5. Press the [Enter] key.

Fig. 6-279

6. Input and enter the new passcode.

   ▶The Standby menu is displayed.

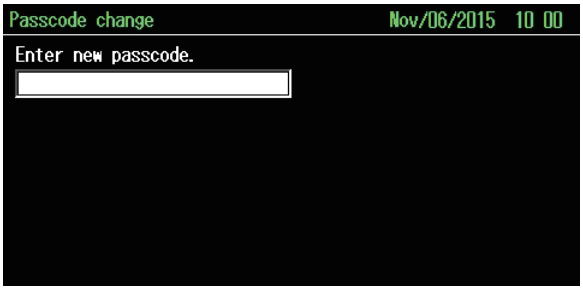


Fig. 6-280

TIP

- The log in user name is displayed on the top left corner of the screen In a logged-in state.

< Standard log in >

1. Display the Setup menu.
2. Select and enter the "Log In".

   ▶The ID list screen is displayed.

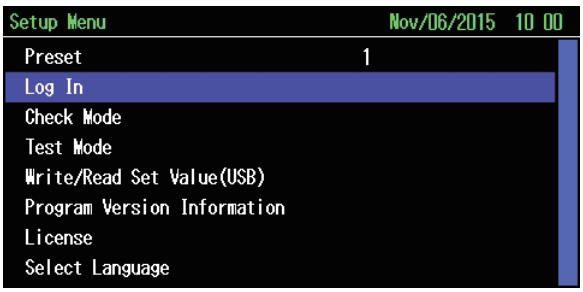


Fig. 6-281

3. Select and enter the "Login number".

   ▶The passcode input screen is displayed.

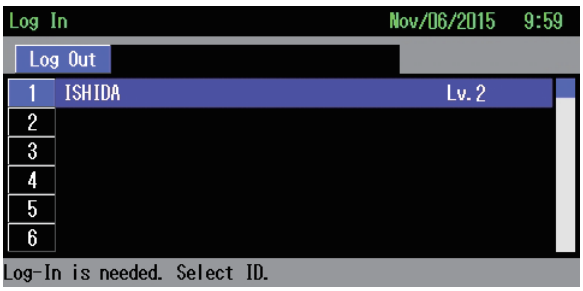


Fig. 6-282

4. Input and enter the passcode.

   ▶The Passcode confirmation screen is displayed.

Fig. 6-283

CAUTION

- **If a wrong passcode is entered, an error screen is displayed. Press the [Enter] key and enter the correct passcode.**
- **If entering the wrong passcode three times, logins are disabled. For the resetting method, refer to "6.6.3.1 Passcode Unlock".**

TIP

- The logging in user name is displayed on the top left corner of the screen in a logged-in state.

6.6.3.1 Passcode Unlock

The passcode Unlock releases the ID that is locked with the passcode.
Follow the procedure below to release the passcode lock.

TIP

- The locked ID No. is displayed in red.
- Log in at higher level than that of the locked ID is required.

1. Display the Setup menu.
2. Select and enter the "Log In".

   ▶The ID list screen is displayed.
3. Select and enter the locked ID.

   ▶The Passcoad lock screen is displayed.

Fig. 6-284

4. Press the [Enter] key.

   ▶The Passcode change input screen is displayed.

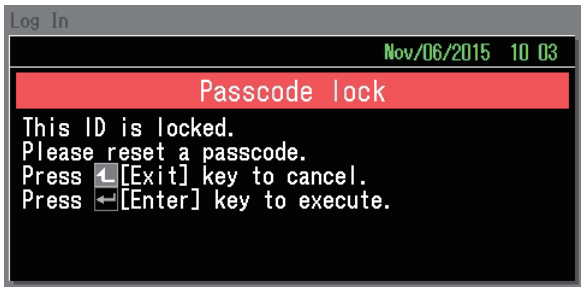


Fig. 6-285

5. Input and enter the new passcode.

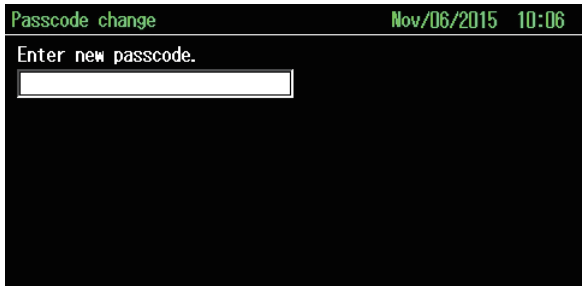


Fig. 6-286

▶The Passcoad change screen is displayed.

▶The lock is released.

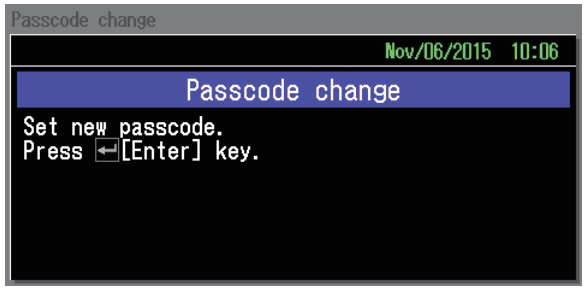


Fig. 6-287

6.6.4 Log Out

Follow the procedure below to set the Log Out.

1. Press the [Enter] key in the Standby menu.

   ▶A screen to select an operation is displayed.

2. Select and enter the "Log Out".

   ▶The Standby menu is displayed.

TIP

- "Log Out" is displayed on the top left corner of the screen in the log-out state.

Fig. 6-288

6.6.5 Register ID

Register ID registers new ID for log in. Follow the procedure below to set the Register ID.

1. Display the Setup menu.
2. Select and enter the "Register ID".

   ▶The Register ID screen is displayed.

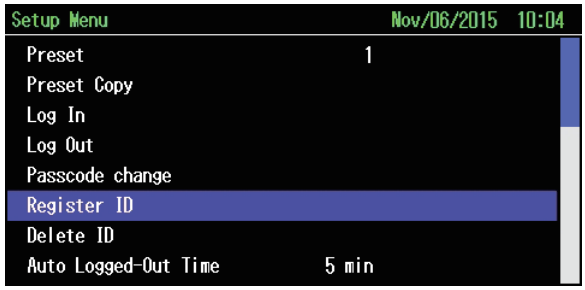


Fig. 6-289

3. Selects any number that has not been registered and press the [Enter] key.

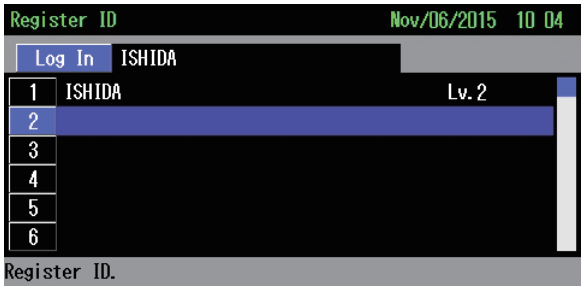


Fig. 6-290

4. Input and enter "User Name", "Passcord" and "Operation level".

▶The Register ID screen is displayed.

TIP

- As for operation level, equivalent or lower than those who sets the passcode can be selected.

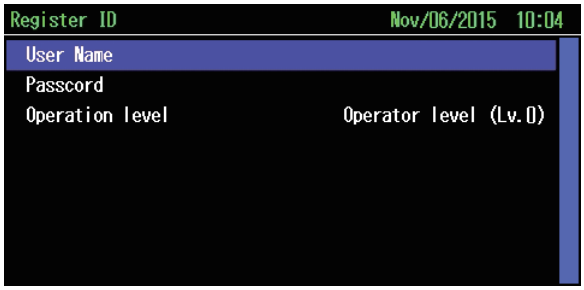


Fig. 6-291

6.6.6 Delete ID

NOTE

- Delete ID for the operator level should be set by the site engineer or higher level personnel.
- Delete ID for the site engineer level or Installation level (Level 2) should be set by the Installation level personnel.

Follow the procedure below to set the Delete ID.

1. Display the Setup menu.
2. Select and enter the "Delete ID".

▶The Delete ID screen is displayed.

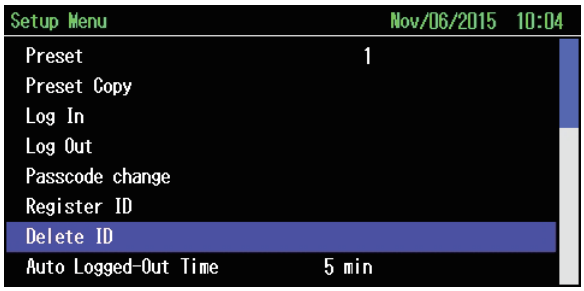


Fig. 6-292

3. Select the ID to delete by pressing the [Enter] key.

TIP

- Multiple IDs can be selected to delete.
- The ID during login or ID that can not be selected are displayed in gray. These IDs can not be deleted.

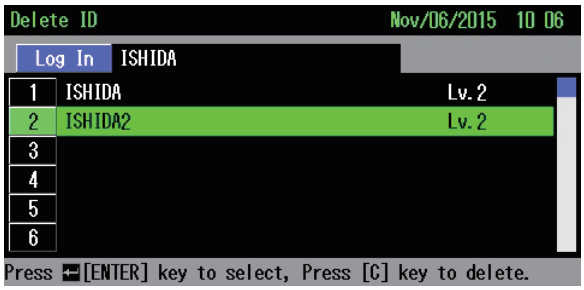


Fig. 6-293

4. Press the [Clear] key.

   ▶The ID clear confirmation screen is displayed.

5. Press the [Enter] key.

   ▶The ID list screen after deleting ID is displayed.

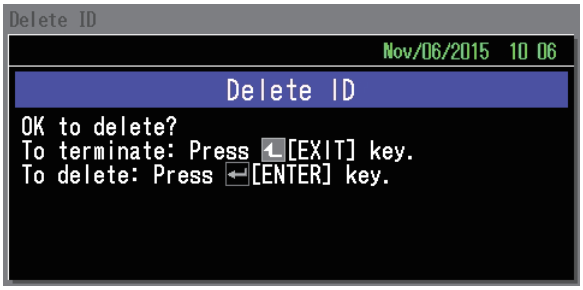


Fig. 6-294

6.6.7 Passcode Change

Follow the procedure below to set the Passcode Change.

1. Display the Setup menu.
2. Select and enter the "Passcode Change".

   ▶The passcode input screen is displayed.

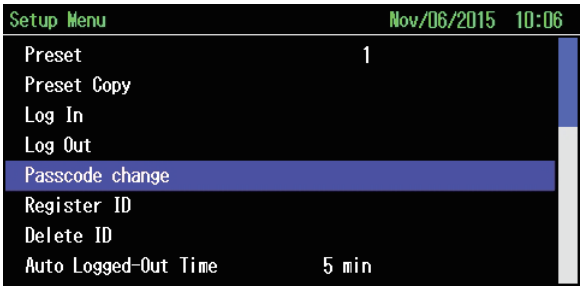


Fig. 6-295

3. Enter the set passcode and press the [Enter] key.

   ▶The new passcode input screen is displayed.

Fig. 6-296

4. Input and enter the new passcode.

   ▶The Passcode Change Confirmation screen is displayed.

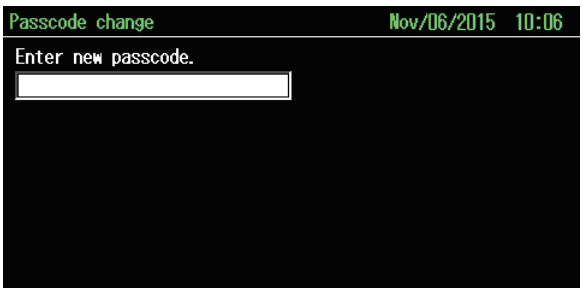


Fig. 6-297

5. Press the [Enter] key.

   ▶The Setup menu is displayed.

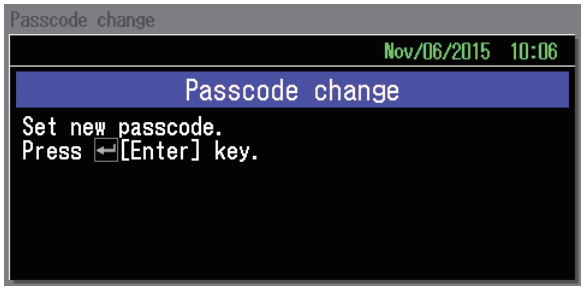


Fig. 6-298

6.6.8 Auto Logged-Out Time

This item is used to determine a standby time before logging out.
Follow the procedure below to set the Auto Logged-Out Time.

1. Display the Setup menu.
2. Select and enter the "Auto Logged-Out Time".

   ▶The Auto Logged-Out Time screen is displayed.

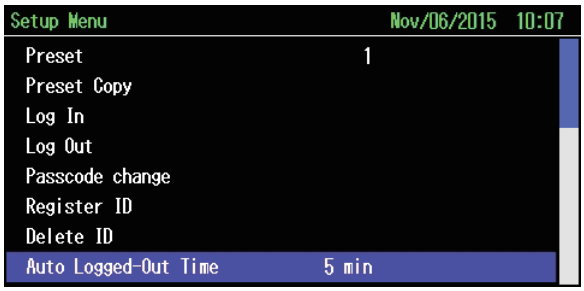


Fig. 6-299

3. Input and enter the time.

TIP

- The range between 1 minute and 60 minutes can be set.

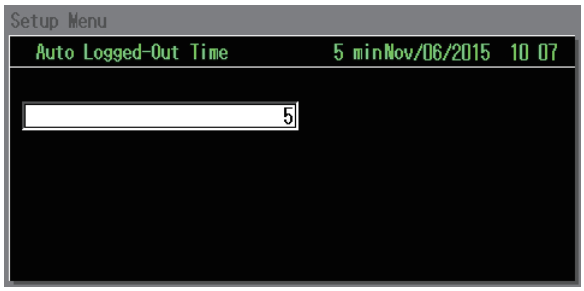


Fig. 6-300

4. Press the [Enter] key.

   ▶The Setup menu screen is displayed.

6.6.9 Passcode validity

This item is used to determine the validity period of the passcode.
Follow the procedure below to set the passcode validity.

1. Display the Setup menu.
2. Select and enter the "Passcode validity".

   ▶The Passcode validity screen is displayed.

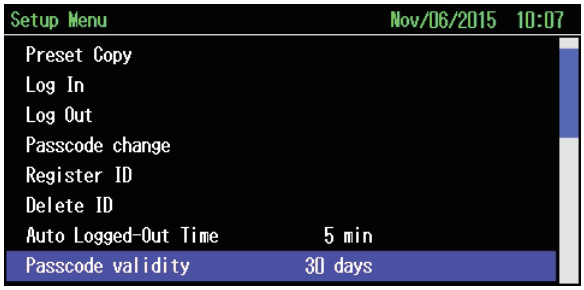


Fig. 6-301

3. Input and enter the time.

TIP

- The range between 1 minute and 180 days can be set.

4. Press the [Enter] key.

▶The Setup menu screen is displayed.

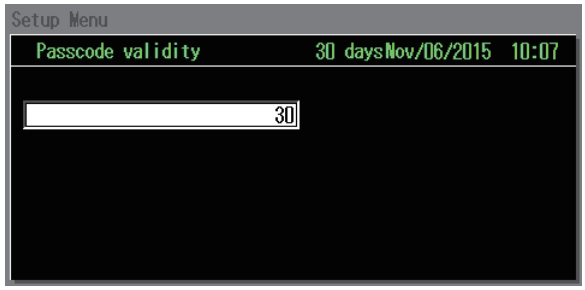


Fig. 6-302

6.6.10 ID52 "maintenance engineer"

ID52 "maintenance engineer" is an ID to be used when the Installation level (Lv.2) ID is not registered or is locked. Follow the procedure below to set the ID52 "maintenance engineer".

NOTE

- ID52 "maintenance engineer" cannot be deleted with Delete ID.

1. Display the Setup menu.
2. Select and enter the "Log In".

▶The ID list screen is displayed.

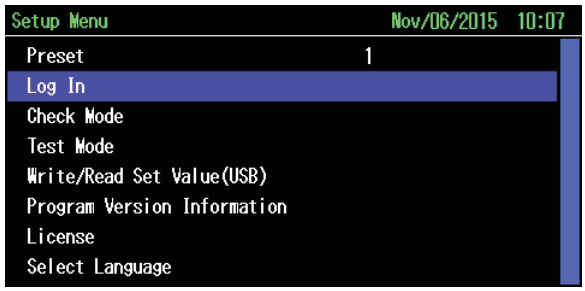


Fig. 6-303

3. Select and enter the "maintenance engineer" of ID52.

▶The passcode input screen is displayed.

Fig. 6-304

4. Input and enter the passcode.

▶The Standby menu is displayed.

TIP

- The default passcode is "2".

Fig. 6-305

- The passcode cannot be changed with Passcode change, however, it can be changed when user log in is set to "OFF" by setting the passcode for the Site Installation Level. (Refer to "6.5.10 Level 1&2&3 Passcodes Setting")

6.6.11 User List Output

User List Output outputs the registered user IDs.
Follow the procedure below to set the User List Output.

NOTE

- User List Output should be set by the site engineer or higher level personnel.

1. Display the Output menu.
2. Select and enter the "User List Output".

   ▶User List is Output

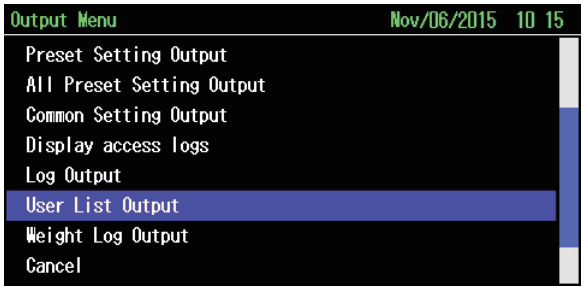


Fig. 6-306

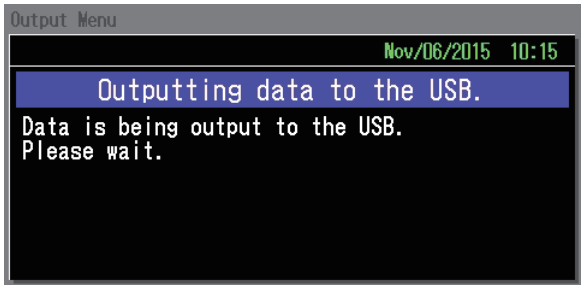


Fig. 6-307

```
------------------------
User list
------------------------
Date:        Nov-25-2015
Time:              9:26
Ope.  :    Nancy Ishida

 1:Michael Ishida Lv.0
 2:Nancy Ishida Lv.1
 3:Ken Ishida Lv.2
```

Fig. 6-308

7 CLEANUP PROCEDURES

This chapter explains cleaning procedures for each component. Clean the components properly according to the cleaning standard of the product line and dirt condition of the machine.

WARNING

- **When cleaning each component, the operator must turn OFF and lock the main power switch, and keep the key in his/her possession during the work. Injury or electrical shock may result if the device is turned on by another person while the device is being cleaned.**

CAUTION

- **When the cleaning procedures specified, wipe with a dry cloth. Failure to do so may cause malfunction or damage to the device.**
- **For unpacked food, the risk of an unhygienic condition may occur through the usage of the device. To prevent such risk, clean the device properly depending on product type and processing methods. For cleaning methods, read and thoroughly understand Chapter 8 and follow the instructions.**

7.1 Washing and Sterilization

The device allows only the components contacting products to be removed for washing or sterilizing. This checkweigher has removable and unremovable units or components. To clean and sterilize the removal components, be sure to remove them from the device beforehand. (Refer to "7.3 Removing and Attaching Each Parts")

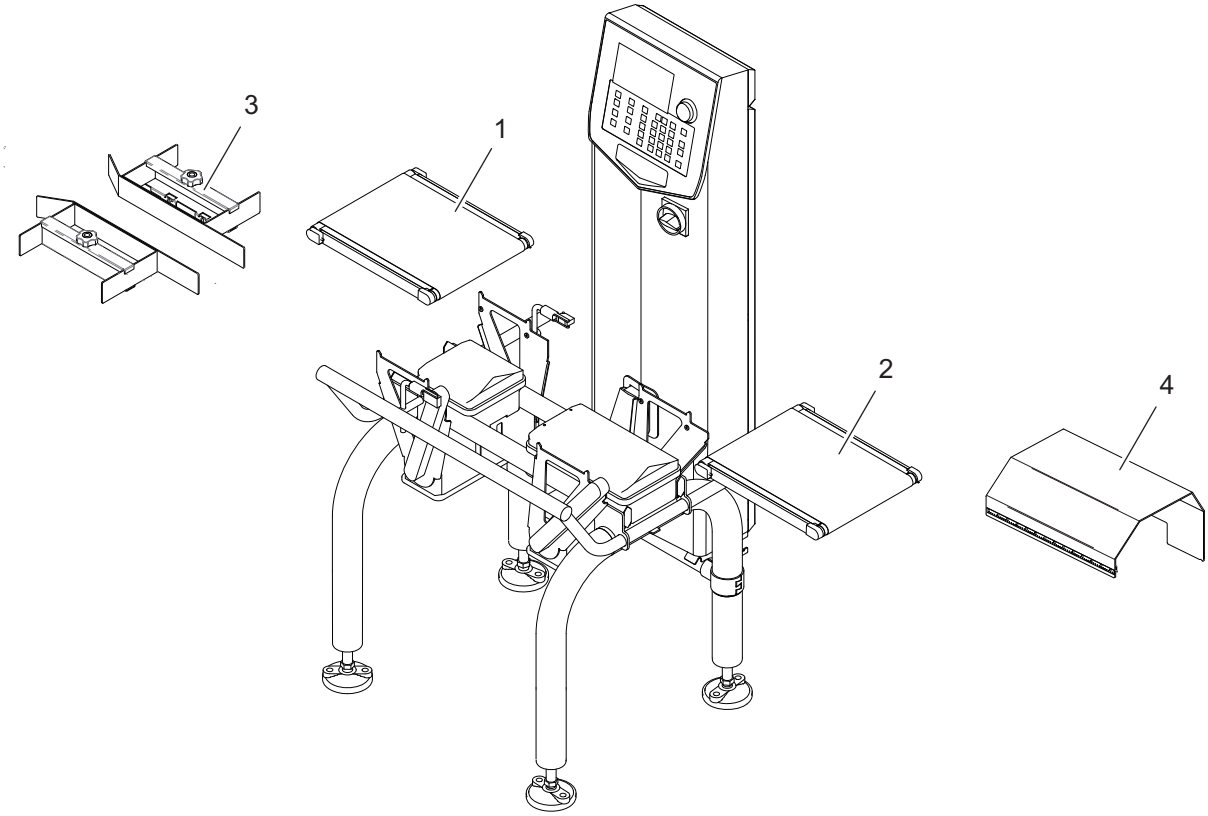


Fig. 7-1

Table 7-1

No.	Removable Unit
1	Infeed Conveyor
2	Weigh Conveyor
3	Infeed Conveyor Guide（Option）
4	Wind Cover（Option）

7.2 Washing and Sterilization Methods

"Table 7-2 ", "Table 7-3 " shows the recommended standard methods for washing and sterilizing. Create a washing and sterilization manual, and perform daily washing and sterilization work. For creating a manual, refer to "Table 7-2 ", "Table 7-3 ".
For the details of each component, refer to "7.3 Removing and Attaching Each Parts".

⚠ CAUTION

- **Washing and sterilizing methods differ depending on product types, processing methods, and bacterial conditions.**
  For details, contact the distributor or Ishida customer support.
- **For the removable units and parts, washing and sterilization methods differ depending on the machine specifications (mainly the specifications of waterproof)**
  The specification can be identified by determining whether the name of your device ends with “CR” or "SS".
  [Example]
  DACS-GN--**/SS-**: IP30(Non-waterproof)**
  DACS-GN--**/CR-**: IP69K(Waterproof, corrosive-resistant)**
  For details, contact the distributor or Ishida customer support.
- **Be sure to wipe with water-soaked cloth and dry after washing and sterilization, washing and sterilization.**
- **If spot welding cause the development of bacteria, contact the distributor or Ishida customer support.**

Table 7-2

SS Specification (IP30)	
Washing Method	**Sterilization Method**
<Wiping wash> 1.Wiping wash Wipe with a cloth with the specified detergent (neutral detergent) and then wipe with a damp cloth in water and dry. <Immersion cleaning> *Infeed conveyor guide only Soak the unit and parts in the specified detergent (neutral detergent) and after removing, brush and rinse with water and dry. **NOTE** • Avoid overload to the Weigh drive unit, as it is interlocked to the weight sensor. • Dry after washing.	<Wiping sterilization> 1. Wiping sterilization Wipe with a cloth with disinfectant and dry. * Disinfectant Alcohol: 80v/v% <Immersion sterilization> * Infeed conveyor guide only Soak the unit and parts in warm water or disinfectant for sterilization, then rinse with water and dry. 1. Warm Water Soak approximately 30 minutes in 80 to 90°C water. 2.Disinfectant Soak approximately 20 minutes in sodium hypochlorite (available chlorine concentration 250 ppm, 20 to 25°C.) **NOTE** • Avoid overload to the Weigh drive unit, as it is interlocked to the weight sensor. • Dry after washing.

Table 7-3

CR Specification (IP69K)	
Washing Method	**Sterilization Method**
<Brushing wash or wiping wash> 1.Brushing wash Using a brush with the specified detergent (neutral detergent), brush the surface, and then wipe with a damp cloth in water and dry. 2.Wiping wash Wipe with a cloth with the specified detergent(neutral detergent) and then wipe with a damp cloth in water and dry. <Immersion cleaning> *Infeed conveyor guide only Soak the unit and parts in the specified detergent (neutral detergent) and after removing, brush and rinse with water and dry. **NOTE** • Use a soft brush. • Avoid overload to the Weigh drive unit, as it is interlocked to the weight sensor. • For the remote control unit and printer unit, wipe wash only. • For the wind cover, wipe wash only. • Dry after washing.	<Spray sterilization or wiping sterilization> 1.Spray sterilization Spray the disinfectant by a sprayer and dry. 2. Wiping sterilization Wipe with a cloth with disinfectant and dry. * Disinfectant Alcohol: 80v/v% <Immersion sterilization> *Infeed conveyor guide only Soak the unit and parts in warm water or disinfectant for sterilization, then rinse with water and dry. 1. Warm water Soak approximately 30 minutes in 80 to 90°C water. 2.Disinfectant Soak approximately 20 minutes in sodium hypochlorite (available chlorine concentration 250 ppm, 20 to 25°C). **NOTE** • Avoid overload to the Weigh drive unit, as it is interlocked to the weight sensor. • For the remote control unit and printer unit, wipe wash only. • After sterilizing, rinse with water and dry.

7.2.1 Rinsing with Water Method

Observe the following two conditions of rinsing with water after sterilizing.

CAUTION

- **Do not rinse the SS specification machine with water.**

1. Water pressure

   When using a hose, the inside diameter of hose should be 6.3 mm. The water pressure in use should be the level to allow the water to rise to 1.5 m when facing the hose at an upward angle. (As a reference, the water of 10.5 L will be pooled per minute at water pressure of 18kPa)

2. Water temperature

   Make sure to use water below 50°C from tap. Do not use boiling water and steam.

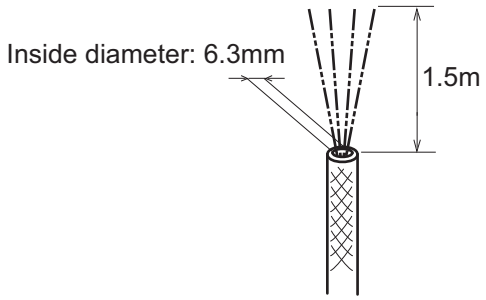


Fig. 7-2

CAUTION

- **Do not pour water in the following areas:**

  (1) Motor box diaphragm
  (2) Remote control cap
  (3) Printer (optional)

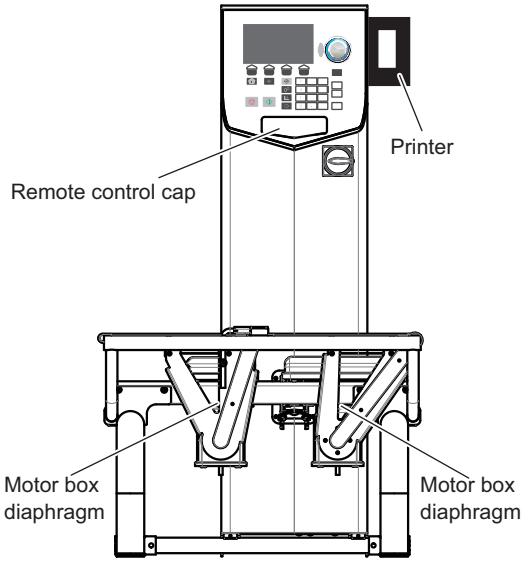


Fig. 7-3

7.3 Removing and Attaching Each Parts

7.3.1 Infeed and Weigh Conveyor Unit

< SS Specification (IP30) >

CAUTION

- **The conveyor is spring mounted.**
  Remember the following points when removing or replacing conveyor.

< How to Remove >

1. Release the lock by pushing down the spring plates under the both side edges of Infeed or Weigh conveyor.

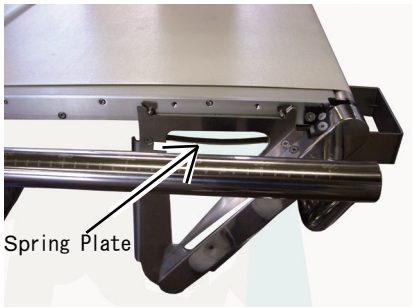


Fig. 7-4

CAUTION

- **When you release the lock, do not trap your fingers between the spring plate and conveyor. Failure to do so may result in injury.**

2. Lift up the infeed-edge of conveyor.
3. Take off the conveyor gear from timing belt of the main body by slanting the conveyor.

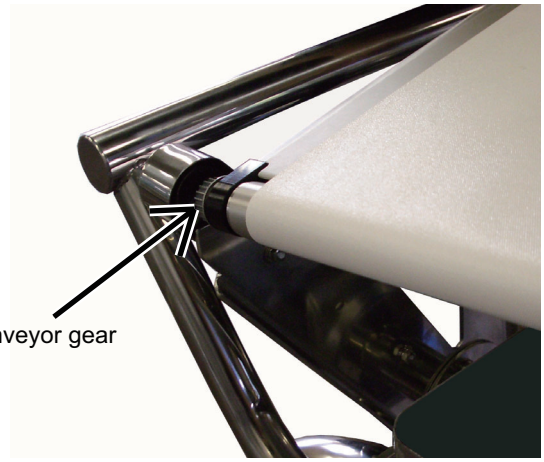


Fig. 7-5

< How to Attach >

1. Insert the conveyor gear into the socket of the timing belt of main body.
2. Pull down the conveyor so that the conveyor pin and the hook are in proper position.
3. Lock the conveyor by pulling down the spring plates under the both side edges of conveyor.

Fig. 7-6

CAUTION

- **Do not apply excessive load to the weigh conveyor, as the weigh conveyor is directly connected to the weigh sensor.**
- **Take care not to hit the conveyor to photo sensor when mounting and removing the conveyor. Failure to do so may result in damaging the photo sensor.**

CR Specification (IP69K)

CAUTION

- **The conveyor is spring mounted.**
  Remember the following points when removing or replacing conveyor.

< How to Remove >

1. Lift the inlet side of Infeed or Weigh conveyor and take off the shaft from the hook.

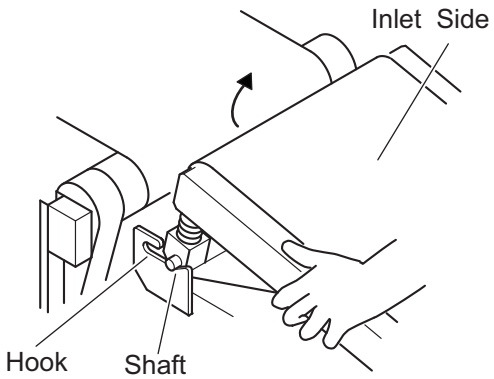


Fig. 7-7

2. Lift the discharge side of the conveyor in the direction of the arrow as shown on the right figure (1).
   (2)Slightly pull out the conveyor and lift in the direction of the arrow.

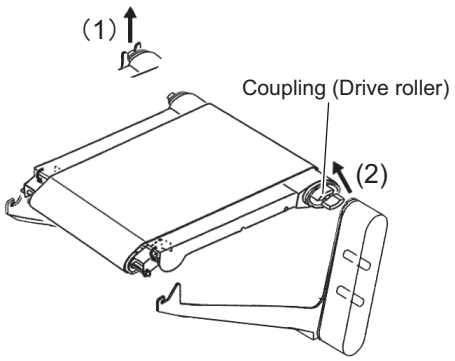


Fig. 7-8

CAUTION

- **If the shaft is released from the hook, the moving part at the conveyor end is loosened and your hand may be caught in the conveyor frame. Keep your hand or fingers clear to the moving parts.**

3. Take off the conveyor belt.

< How to Attach >

1. Check the arrow (running direction) on the back side of the belt.
2. Reattach the conveyor belt by aligning the belt meander preventing guide inside the belt with the groove on the roller.
3. Align the notch of the conveyor's coupling (drive roller side) with the coupling pin (Inboard bearing side).

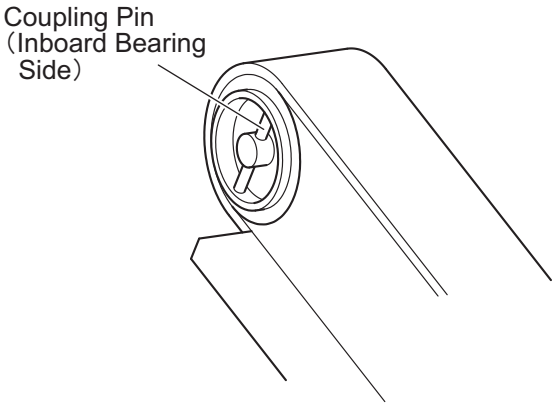


Fig. 7-9

4. (1) Insert the discharge side of the conveyor (drive roller) in the direction of the arrow as shown on the right figure.
   (2) Insert in the direction of the arrow.

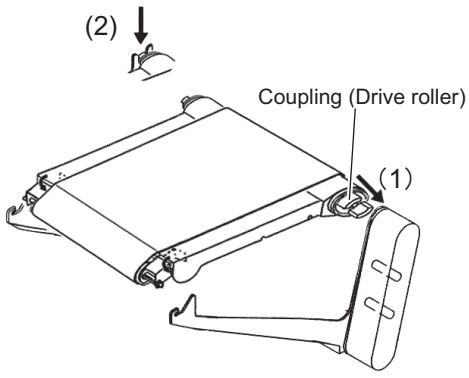


Fig. 7-10

5. Place your fingers on the conveyor base and push the inlet side of the conveyor into the position as shown on the right figure.

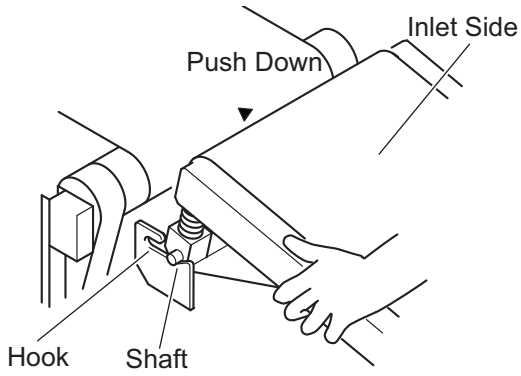


Fig. 7-11

CAUTION

- **When replacing the conveyor, ensure the pins are correctly seated into the hooks. Do not force the pins into the hooks.**
- **Be sure to push the shaft of infeed down until it is surely fixed.**
- **Do not apply excessive load to the weigh conveyor. The weigh conveyor is directly connected to the weigh sensor.**

7.3.2 Wind Cover (Option)

CAUTION

- **When cleaning the wind cover, do not drop it or apply excessive pressure on it. Doing so may damage the wind cover.**

< How to Remove >

1. Lift the cover not to hit the conveyor.

< How to Attach >

1. Hook the bracket onto the bumper and mount the window cover without hitting to the conveyor.

NOTE

- Mount the wind cover after installation of infeed and weigh conveyors.

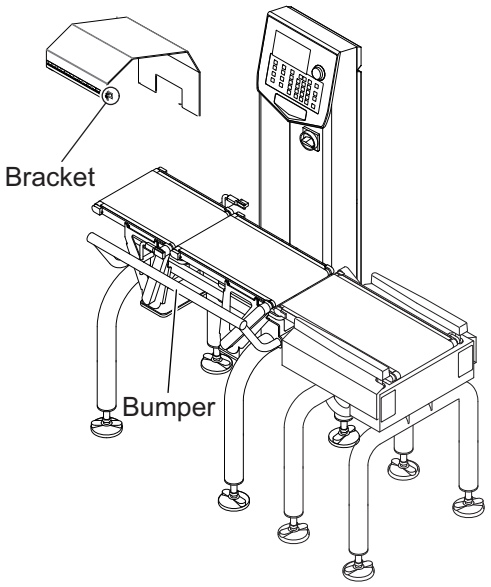


Fig. 7-12

8 MAINTENANCE AND INSPECTION

This chapter describes the maintenance and inspection procedures in order to maintain the weighing machine in good condition.

WARNING

- **When performing maintenance and inspections, clearly indicate to other operators that maintenance and inspections are in progress.**

8.1 Adjusting the Tension and Meandering of Infeed and Weigh Conveyor Belt

WARNING

- **Be sure to stop the conveyor when adjusting the belt tension.**
- **Adjust the belt tension and meandering after removing the wind cover (optional).**

8.1.1 Adjusting the Tension

< SS Specification>

1. Adjust both sides of the conveyor tension and loosen the lock nut for the bolt.
2. To increase the tension of the belt, turn the tension adjustment bolt clockwise.
   To decrease the tension of the belt, turn the bolt counterclockwise.
3. Operate the conveyor to make sure that the belt is not meandering.
4. If the belt is meandering, adjust the meandering. (Refer to "8.1.2 Adjusting the Meandering")
5. Stop the conveyor, tighten each lock nut of the tension adjustment bolt.

   ▶Adjusting the Tension for conveyor is completed.

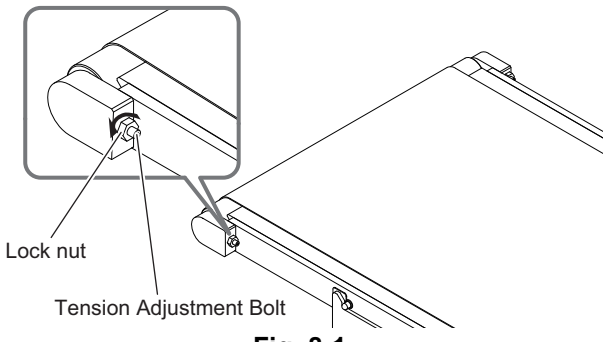


Fig. 8-1

< CR Specification >

CR specification defines the appropriate length of the spring used to adjust the tension.
To adjust the tension, operate the tension adjustment bolt, and adjust the spring to the appropriate length.

1. To shorten the spring length (increase the belt tension), turn the tension adjustment bolt of the driven roller side of the conveyor clockwise, and to lengthen the length (Increase the tension), turn the bolt counterclockwise.
2. Make sure that the spring is 36 mm long.

   ▶Adjusting the Tension for conveyor is completed.

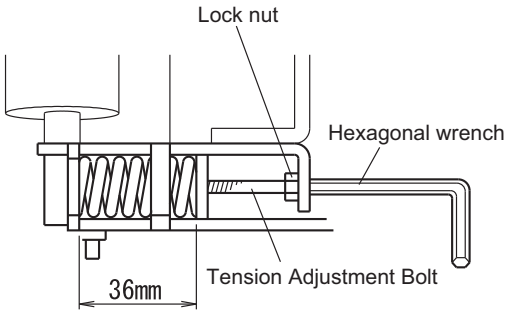


Fig. 8-2

CAUTION

- **Do not apply too much tension to the belt. It may damage the bearing.**

8.1.2 Adjusting the Meandering

< SS Specification >

1. Adjust both sides of the conveyor tension and loosen the lock nut for the bolt.
2. Operate the conveyor.
3. Check the status of meandering and stop the conveyor.
4. If the belt is located further to direction A, tighten the tension adjustment bolt A, or loosen the tension adjustment bolt B.
   If the belt is located further to direction B, tighten the tension adjustment bolt B, or loosen the tension adjustment bolt A.
5. Operate the conveyor to make sure that the belt is not meandering. Repeat the steps 2 to 4 until the belt is not meandering.
6. Stop the conveyor, tighten each lock nut of the tension adjustment bolt.

   ▶Adjusting the Tension for conveyor is completed.

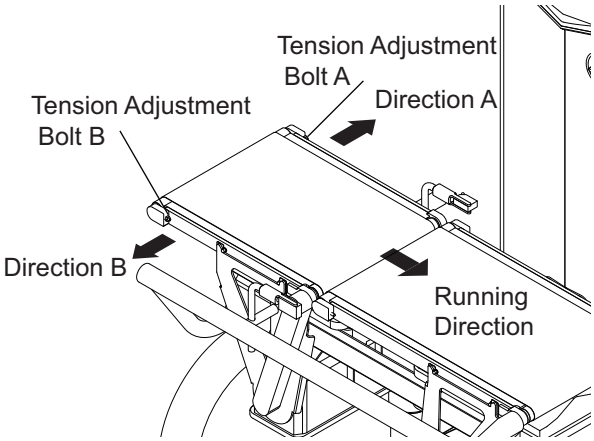


Fig. 8-3

CAUTION

- **Do not apply too much tension to the belt. It may damage the bearing.**
- **If the belt running direction cannot be corrected only by tightening the adjusting bolt, loosen the adjusting bolt on the other side so that the belt tension will not be increased excessively.**

< CR Specification >

There is no need to adjust meandering for CR specification, as the belt meander preventing guide is provided.

8.2 Regular Inspection

To maintain the machine in optimal condition and enhance the product efficiency, perform maintenance and inspections by following "Table 8-1 ".

Table 8-1

Inspection Item	Cycle	Reference Section
Span Adjustment	Monthly	Perform span adjustment. (Refer to "6.5.5 Span Adjustment")
Air supply pressure adjustment	Monthly	Use the pressure reducing valve.

8.3 Service Parts

The service parts used for this equipment are listed in "Table 8-2 ". These parts are consumable. After a certain service life, they will rapidly deteriorate i the performance and durability and may be finally broken. We recommend checking these parts regularly and replace them immediately if any problem is found.

CAUTION

- **Contact your distributor or Ishida customer support for replacement parts.**

NOTE

- The replacement interval depends on the actual conditions of use.

Table 8-2

Part	Replacement interval
Bearing	2 years
Timing belt	1 years
Conveyor belt	1 years
Timing belt cover gasket (CR specification)	2 years or when removed

Table 8-2

Part	Replacement interval
Oil seal (CR specification)	6 months or when removed
Drive roller resin coupling (CR specification)	1 years

8.4 Replacing Battery for Memory Backup

This machine uses a lithium primary battery as a a backup battery for saving preset settings. The battery should be replaced once for five years, which is the average battery life. Contact your nearest Ishida representative or the Ishida Service Center for replacing battery. (The battery life depends on the using environment.)

8.5 Replacing Printer Paper

NOTE

- Printer is optional.

When the printer paper is run out, the message appears on the RCU display indicating “Printer no paper”. To replace the paper roll, proceed as shown below.

1. Release the binding and open the printer cover.

Fig. 8-4

2. Press open the roll holder clips and remove the empty roll core.
3. Press the lever down.

Fig. 8-5

4. Load a new roll, making sure that it is properly inserted as shown to the right.
5. Insert the paper edge into the rear of printer head.
6. Remove the paper winding bar out of the printer unit.
7. Rotate the roller upward to pull out the paper edge, and insert it to the rear of the bar on the upper side.

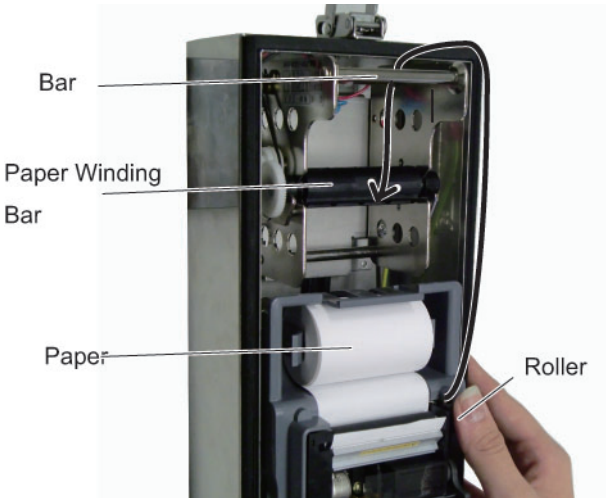


Fig. 8-6

8. Set the paper edge into the cut on the paper winding bar and wind the paper 30mm to 40mm.

NOTE

- Make sure that the winding direction is correct.

9. Set the paper winding bar to the unit.

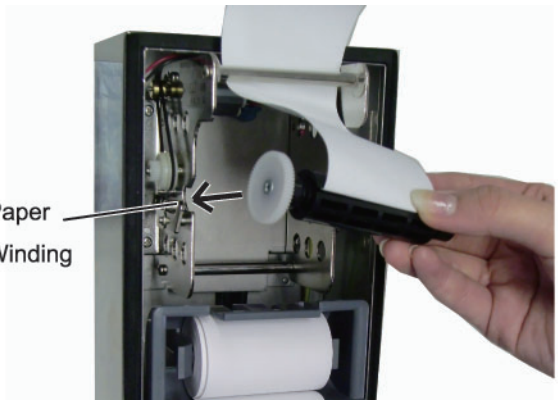


Fig. 8-7

10. Press the lever up.

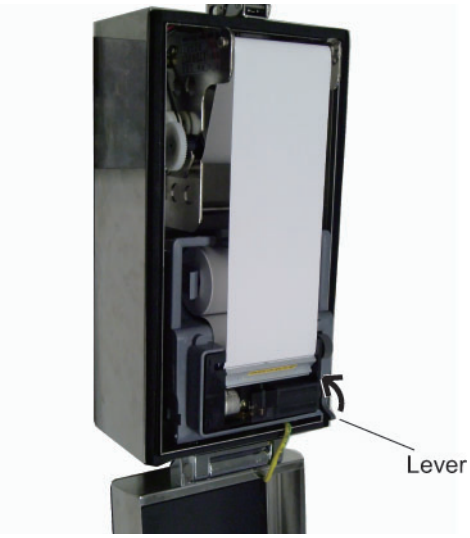


Fig. 8-8

11. Close the printer cover and fix the binding.
12. Press the [Output] key to display the Output menu on the RCU.
13. Select and enter the "Paper Pass".
    (Refer to "5.10.4 Printer Data Output")

    ▶Printer paper replacement is completed.

Fig. 8-9

9 TROUBLESHOOTING

This chapter describes how to resolve problems with the machine. If the recommended action fails to clear the problem contact your distributor or the Ishida Customer Service department.

⚠ WARNING

- **Do not touch or come into contact with any charged electrical components.**
- **Electrical work should only be performed by a qualified electrician.**
- **Before performing inspection or maintenance work, always switch off the main isolator unless otherwise instructed in this manual.**
- **After turning off the power switch, wait at least 3 minutes before servicing the weigher.**
- **Before starting inspection or maintenance post a clearly written sign indicating that such work is in progress to prevent other personnel from accidentally powering up the equipment.**
- **When performing maintenance and inspection work on equipment at height, a suitable and sufficient means of access to the place of work must be provided and used.**

9.1 Error Message Handling

When an error occurs, the message will appear on the display screen of the RCU.
If the message is displayed, follow this procedure.

1. Press the [Exit] key.
2. Take corrective actions, referring to "Table 9-1 ".
3. Press the [Start] key to restart operation.

Table 9-1

Error No.	Error Message	Causes	Action
101-00	[Auto Zero Error] Occurs when the weigh data during zero adjustment is outside the zero adjustment range.	Something is on or making contact with the weigh conveyor.	Remove products or remaining items on the conveyor if any, and perform the zero adjustment again. (Refer to "5.3.2 Zero Adjustment")
		Air from the air conditioner is exposed to the conveyor.	Change the wind direction or shield the wind with a wind shield, and perform the zero adjustment again. (Refer to "5.3.2 Zero Adjustment")
102-00	[Feed Conveyor overload error] Occurs when infeed conveyor does not rotate correctly.	Each conveyor is overloaded or the conveyor belt is tensioned too much.	Turn off the power switch. Make sure that no adherents, damaged areas, and jamming are found on each conveyor. Adjust the tension of each conveyor belt. Apply the power again after 30 seconds.
103-00	[Feed Con. OP Motor Error (Over Ld)] Occurs when the fore stage conveyor does not rotate correctly.		
104-00	[Weigh Conveyor overload error] Occurs when weigh conveyor does not rotate correctly.		
105-00	[Rejection Conveyor overload error] Occurs when the reject conveyor does not rotate correctly.		
106-00	[R. RE Error (Over Ld)]	Each rejection part is overloaded.	Turn off the power switch. Make sure that no adherents and damaged areas are found on each rejection part. Apply the power again after 30 seconds.
107-00	[L. RE Error (Over Ld)]		
108-00	[Feed Conveyor abnormal pulse error] Occurs when the conveyer does not operate at the set speed.	Each conveyor is overloaded. The conveyor belt is tensioned too much.	Turn off the power switch. Make sure that no adherents, damaged areas, and jamming are found on each conveyor. Adjust the tension of each conveyor belt. Apply the power again after 30 seconds.
109-00	[Weigh Conveyor abnormal pulse error] Occurs when the conveyer does not operate at the set speed.		
110-00	[Rej Conveyor abnormal pulse error] Occurs when the conveyer does not operate at the set speed.		

Table 9-1

Error No.	Error Message	Causes	Action
111-00	[OP Motor Error (Pls NG)] Occurs when the conveyer does not operate at the set motor speed.	The spare motor is overloaded or the conveyor belt is tensioned too much.	Turn off the power switch. Make sure that no adherents and damaged areas are found on the spare motor. Adjust the tension of the conveyor belt. Apply the power again after 30 seconds.
113-00	[Power Error (DRV)]	Power failure in each board. Power is momentary interrupted in the board.	Turn off the power switch and check the power supply line. Apply the power again after 30 seconds.
114-00	[Power Error (REJ)]		
115-00	[Power Error (ADC)]		
116-00	[Power Error (IO)]		
117-00	[R. RE Error (SU TimeOut)] Occurs when load is applied on the right side of the rejecter device.	The rejection part is overloaded. Product is caught in the rejection part.	Turn off the power switch to make sure that no adherents, damaged areas, and jamming are found. Apply the power again after 30 seconds.
118-00	[R. RE Error (Comp.TimeOut)] Occurs when load is applied on the right side of the rejecter device.		
120-00	[L. RE Error (SU TimeOut)] Occurs when the operation of the left side of the rejecter device failed to be completed within the time.	The rejection part is overloaded. Product is caught in the rejection part.	Turn off the power switch to make sure that no adherents, damaged areas, and jamming are found. Apply the power again after 30 seconds.
121-00	[L. RE Error (Comp.TimeOut)] Occurs when the operation of the left side of the rejecter device failed to be completed within the time.		
122-00	[L. RE Error (Noncomp.)] Occurs when the capacity may be exceeded in the rejection part.	The product infeeding pitch is narrow.	Check the pitch that product are infed.
		The setting of the reject ON time or reject speed is wrong.	Set the reject ON time shorter. (Refer to "6.4.13 Timing Setting")
132-00	[Photo Sensor Error (Infeed)] Occurs during production if the light interrupt interval of the photoelectric switch is longer than the prescribed time.	Sender and receptor photo elements are not properly aligned.	Adjust the alignment of the photo cells.
		An object is blocking the light between the sender and receptor photo elements.	Check for interference and remove any obstructions on the infeed conveyor. *For Twin-cell Specification

Table 9-1

Error No.	Error Message	Causes	Action
132-01	[Photo Sensor Error (Weigh)] Occurs during production if the light interrupt interval of the photoelectric switch is longer than the prescribed time.	Sender and receptor photo elements are not properly aligned.	Adjust the alignment of the photo cells.
		An object is blocking the light between the sender and receptor photo elements.	Check for interference and remove any obstructions on the weigh conveyor.
135-00	[Air Low stop] Occurs when air pressure of the rejecter device is lowering.	The air pressure setting is wrong.	Check the regulator setting.
		The amount of the air supplied is insufficient.	Check the air source.
136-00	[Metal Ready Off] Occurs when a ready signal for the metal detector is not input.	The power to the metal detector is not applied.	Check the power to the metal detector.
		The metal detector detected an error.	Check the metal detector.
145-00	[Auto Zero Error (Infeed)] *For Twin-cell Specification [Auto Zero Error (Weigh)] *For Twin-cell Specification	Something is on or making contact with the weigh conveyor.	Remove the cause if any and adjust the zero point again. (Refer to "5.3.2 Zero Adjustment")
149-00	[External E-Stop signal Error]	An interlock signal is input.	Clear the External E-Stop signal and release the interlock signal.
152-00	[Communication Error (DRV)]	A communication error occurs between the boards.	Turn off the power switch and check the communication line. Apply the power again after 30 seconds.
153-00	[Communication Error (REJ)]		
154-00	[Communication Error (ADC)]		
155-00	[Communication Error (IO)]		
301-01	[Zero Error] Occurs when the weight data is out of the zero adjustment range when adjusting the zero point.	Something is on or making contact with the weigh conveyor.	Remove the cause if any and adjust the zero point again. (Refer to "5.3.2 Zero Adjustment")

Table 9-1

Error No.	Error Message	Causes	Action
302-00	[Span Error] Occurs when the weight data is out of the span range when adjusting the span.	The zero point is far from the range.	After adjusting the zero, adjust the span. (Refer to "6.5.5 Span Adjustment")
		The span was adjusted with the wrong span weight.	Place the weights as displayed in the display part, and adjust the span again. (Refer to "6.5.5 Span Adjustment")
		The span weight is not placed correctly on the weigh conveyor.	Place the span weight in the middle of the weigh conveyor, perform the span adjustment again. (Refer to "6.5.5 Span Adjustment")
		Something is on or making contact with the weigh conveyor.	Remove the cause if any, and adjust the zero point again. (Refer to "5.3.2 Zero Adjustment")
303-01 to 303-12	[Preset Data Error]	The setting of total weight for the Reference Weight, Upper Limit, and Preset Tare exceeds the Capacity.	Check the setting value and reset. (Refer to "6.4 Preset Setting")
		The reference weight is set below the lower limit.	Check the setting value and reset. (Refer to "6.4.3 Reference Weight", "6.4.4 Upper Limit+", "6.4.5 Lower Limit-" and "6.4.7 Preset Tare")
		Reference Weight is outside of the upper and lower limits.	
		Product length is 0 mm.	Check the setting value and reset. (Refer to "6.4.9 Product Length")
		The upper limit exceeds 25% of the reference weight.	Check the setting value and reset. (Refer to "6.4.4 Upper Limit+")
	[Span Not Adjust.	The span has not been adjusted.	Perform the span adjustment. (Refer to "6.5.5 Span Adjustment")
	[Linear Not Adjust.]	The linear has not been corrected.	Perform the linear correction. (Refer to "6.5.6 Linear correction")

Table 9-1

Error No.	Error Message	Causes	Action
310-00	[Access Denied.]	Weight does not fall within ±10% of the reference weight range.	Perform the dynamic calibration again. (Refer to "6.4.21 Dynamic Calibration")
501-00	[USB memory diagnosis.] Occurs when the USB memory diagnosis fails.	USB memory is not inserted.	Insert USB memory.
		The USB memory is broken.	Format the USB memory.
		The USB memory is full of data.	Remove the data from the USB memory. Check the free space of the USB memory with a PC.
		The USB memory is other than specified by Ishida.	Check that the USB memory specified by Ishida is used.
901-00	[Printer Error] Occurs when printer is not functioning normally.	A printer is not connected.	Check the printer connection.
		Printer paper is run out.	Replace the printer paper. (Refer to "8.5 Replacing Printer Paper")
		Printer head remains opened.	Pull down the printer head.
		Printer mechanism malfunctions.	Check the printer.

9.2 Failure and Malfunction of DACS-GN

When an error occurs, the message will appear on the display screen of the RCU.
If the message is displayed, follow this procedure.

Table 9-2

Status	Cause	Countermeasure
The initial screen is not displayed when the power switch is turned ON.	The board malfunction or fault in wiring inside the remote control unit.	Contact the distributor or Ishida support center.
	The breaker has tripped. The fuse is blown.	Confirm the safety for the electric component and turn ON the breaker, or replace the fuse.
The screen is not switched after the initial screen is displayed.	The board malfunction or fault in wiring inside the main body.	Contact the distributor or Ishida support center.

10 OPTIONS FOR CHECKWEIGHER

This chapter describes the function of the options for checkweigher.

TIP

- The function described in this chapter is not equipped for standard model. To use these functions, Purchasing the software license key or adding/converting hardware is required.

10.1 Rollover Prevention Board

The resin board (Rollover prevention board) is mounted on a checker with arm rejecter to prevent products from exceeding beyond the arm or falling when rejecting products.
This board is effective in preventing the product that is relatively high and tends to fall easily.

NOTE

- To prevent the machine damage, the arm speed must be set below the medium speed.
- "Fig. 10-1 " shows the rejecter device of SS specification.

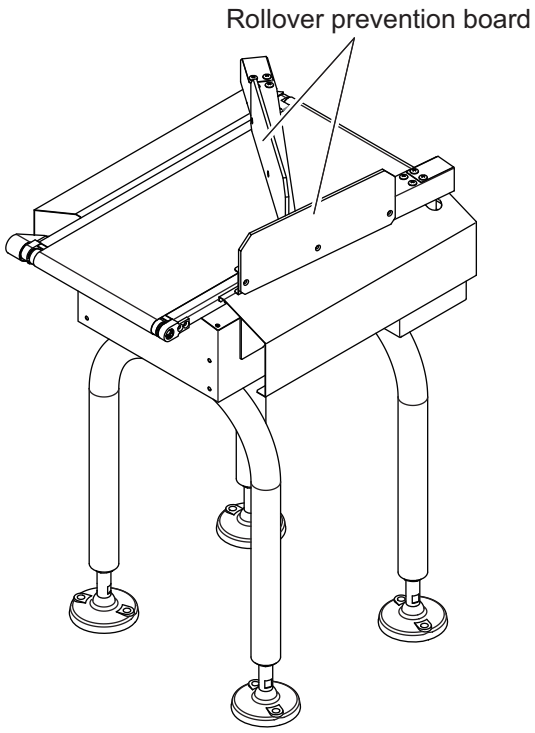


Fig. 10-1

10.2 Signal Tower Setting

< Overview of the Signal Tower Setting Item >

The items and function of Signal Tower Setting is as follows. Regarding the setting method, refer to the procedures in the chapter mentioned in the reference column below.

Table 10-1

Item	Function	Reference
Operation*	Sets the signal to be output during operation.	"10.2.1 Output Condition Setting (Signal Tower)"
Conveyor-running*	Sets the signal to be output while the conveyor is running.	
Stop*	Sets the signal to be output during stoppage.	
Error Stop*	Sets the signal to be output during error stoppage.	
Proper Wt.	Sets the signal to be output when a proper item passes.	
Over Wt.	Sets the signal to be output when an over weight signal passes.	
Under Wt.	Sets the signal to be output when an under weight signal passes.	
OK-over Wt.	Sets the signal to be output when the "OK-over" item passes.	
OK-under Wt.	Sets the signal to be output when the "OK-under" item passes.	
Metal Detection	Sets the signal to be output when a metal-containing item passes.	
Ext. 1-2	Sets the signal to be output for the item to be rejected in the set direction when a signal is input from External unit 1.	
Pitch Error	Sets the signal to be output for the item to be rejected in the set direction when an pitch error occurs.	
Frn Obj.	Sets the signal to be output for the item to be rejected in the set direction when a foreign object error occurs.	
Product Length Error	Sets the signal to be output for the item to be rejected in the set direction when an product length error occurs.	

10.2.1 Output Condition Setting (Signal Tower)

Output Condition Setting (Signal Tower) menu defines which signal tower should be lit corresponding to each condition such as overweight and under operation.
Output Condition Setting menu (Signal Tower) is as follows.

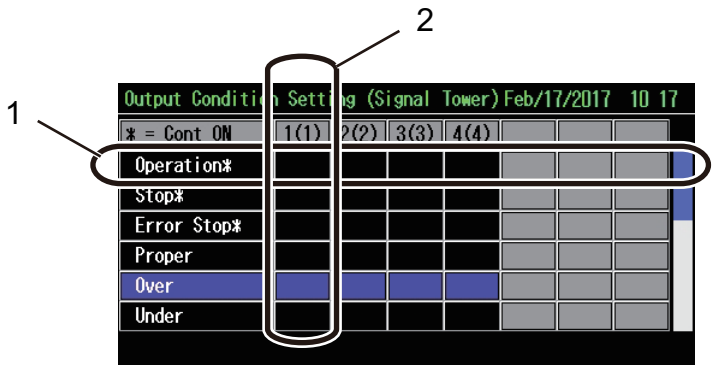


Fig. 10-2

Table 10-2

No.	Description
1	The signal tower setting status for each condition is displayed. -V mark: Set -Blank: Not set - - mark: Setting impossible (Conveyor synchronization, Under operation, and others have been set.)
2	Each setting state of the signal tower is displayed.

To set the Output Condition Setting (Signal Tower), follow the procedure below.

1. Display the Setup menu screen.
2. Select and enter the Signal Tower Setting.

   ▶The Signal Tower Setting menu is displayed.

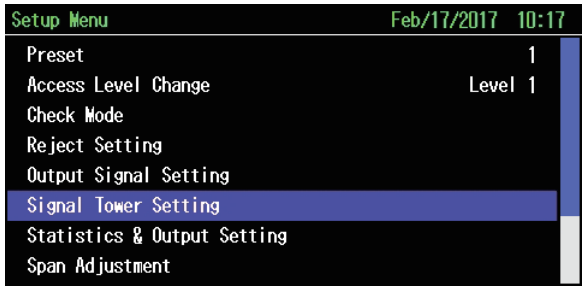


Fig. 10-3

3. Select and enter the output condition setting.

   ▶The warning screen is displayed.

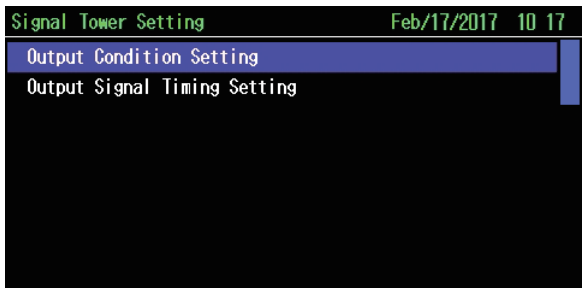


Fig. 10-4

4. Press the [Enter] key.

   ▶Output Condition Setting menu (signal tower) screen is displayed. All signals currently output are turned off.

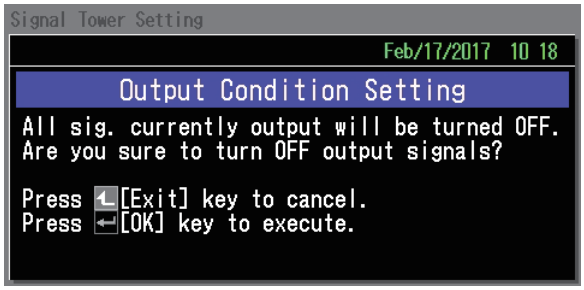


Fig. 10-5

5. Select and enter the preferred conditions with the [Up] or [Down] key.

   ▶Output Condition Setting menu (signal tower) screen is displayed.

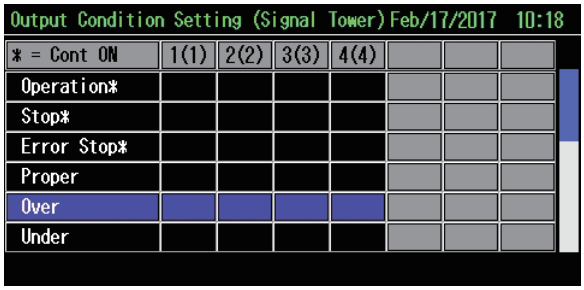


Fig. 10-6

6. Press the [Enter] key when the warning screen is displayed.

NOTE

- The warning screen is displayed when under operation or conveyor synchronization.

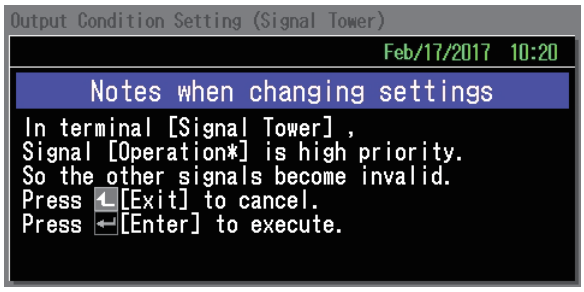


Fig. 10-7

7. Set "ON" or "OFF", then press the [Exit] key.
8. Press the [Exit] key after completing the setting.

   ▶Stopped signal is output.

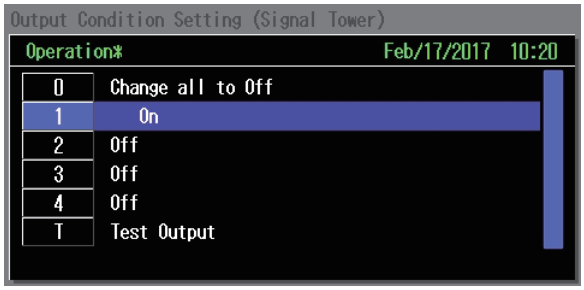


Fig. 10-8

9. When selecting "Test Output", signals are output to all signal towers.
10. Press any key to cancel the output.

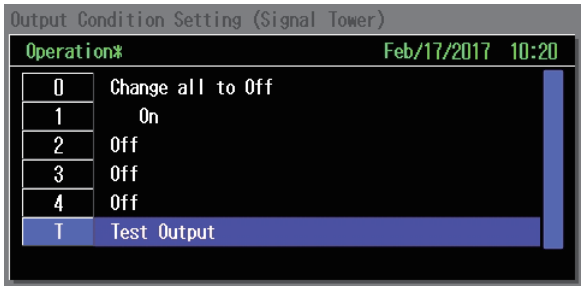


Fig. 10-9

TIP

- Short cut keys are follows.

[1] key: "ON/OFF" of the selected line 1
[2] key: "ON/OFF" of the selected line 2
[3] key: "ON/OFF" of the selected line 3
[4] key: "ON/OFF" of the selected line 4
[C] key: Sets "ON/OFF" to all signal tower of the selected line.

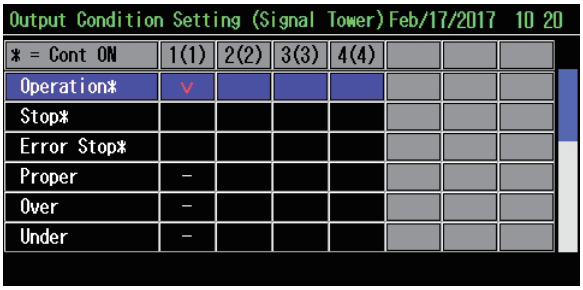


Fig. 10-10

10.2.2 Output Timing Setting (Signal Tower)

In Output Timing Setting (Signal Tower), the output delay time, ON Time, and flashing interval can be set for each signal tower. Output Timing Setting menu screen (Signal Tower) is as follows.

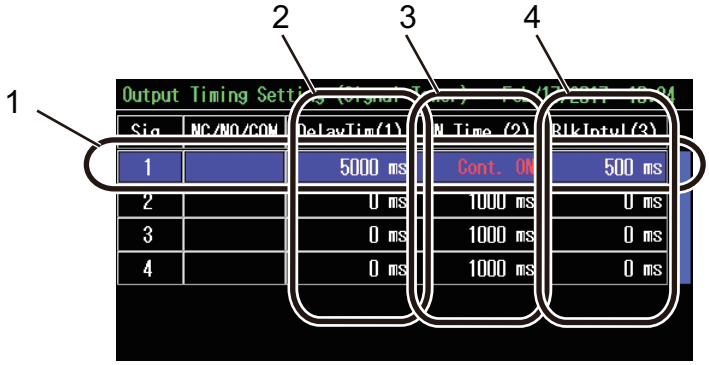


Fig. 10-11

Table 10-3

No.	Description
1	Displays the timing setting state for each signal tower. Select the preferred signal tower with the [Up] or [Down] key.
2	Displays the delay time for each signal tower.
3	Displays the ON Time for each signal tower.
4	Displays the flashing interval for each signal tower.

NOTE

- When the ON Time is displayed as "Continuous ON" in red, the signal tower has been set as a signal of "under operation" or "conveyor synchronization". They can be set only "Continuous ON" so that signals will not be overlapped.
- When "Continuous ON" displayed at the Output Signal ON Time is alternately flashing in red and white, the port has been set as a signal of "Stopped*" or "Error Stop*". Although "Stopped*" or "Error Stop*" is output as "Continuous ON", they can be overlapped with other signals. Other signals are output in Output Signal ON Time displayed in white.

For the output timing setting, follow the procedures below.

1. Display the Setup menu screen.
2. Select and enter the signal tower setting.

   ▶The Signal Tower Setting screen is displayed.

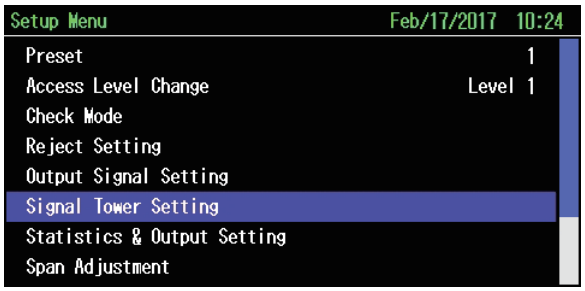


Fig. 10-12

3. Select and enter the output signal timing setting.

   ▶The Output Timing Setting (Signal Tower) menu is displayed.

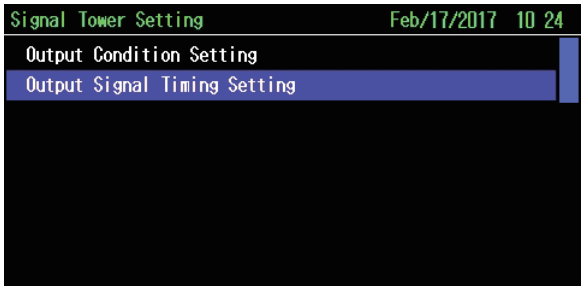


Fig. 10-13

4. Select and enter the signal tower.

   ▶The signal menu screen is displayed.

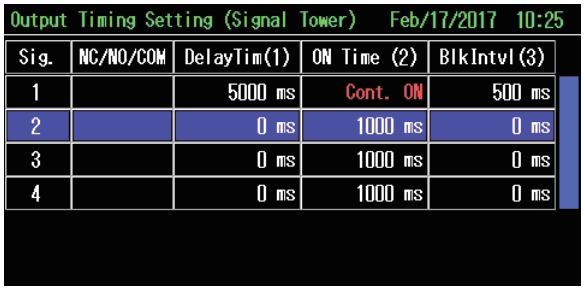


Fig. 10-14

5. Select the item.

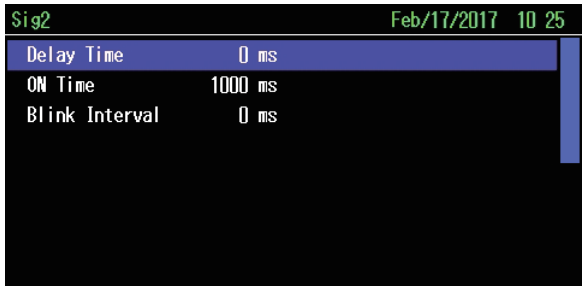


Fig. 10-15

6. Input and enter numerical value.
7. Press the [Exit] key after completing the setting.

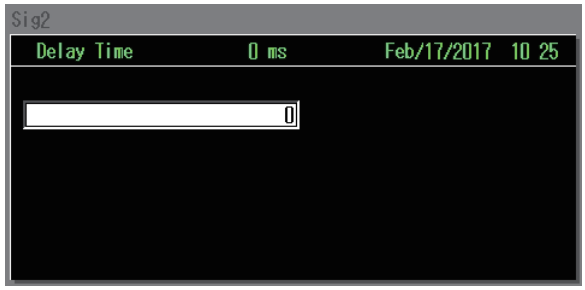


Fig. 10-16

TIP

- Short cut keys are follows.

[1] key: "Delay time" of the selected line.
[2] key: "Output Signal ON Time" of the selected line.
[3] key: "Flashing interval" of the selected line.

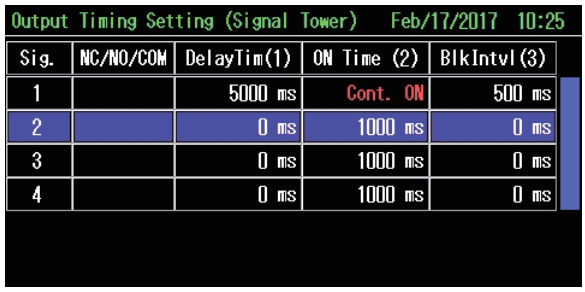


Fig. 10-17

10.3 Proper Weight Count

Proper Weight Count counts the number of "proper product" and rejects the status of the proper product into up to 3 patterns such as "proper product 1", "proper product 2", and "proper product 3" based on the Proper Weight Count.
This item can also change the Proper Wt. Rej. Dir. and output a contact signal based on the number of the proper product.

NOTE

- To use the Proper Weight Count, "License key" is required.
- When the weight zone is set to "5 zone" in the system configuration at the installation level, the "Proper Weight Count" menu is not displayed.

10.3.1 Total Count Zoom Display

10.3.1.1 Overview

Total Count Zoom display (Standby menu) shows the "Prop1.LotCount", "Prop2.LotCount", "Prop3.LotCount", "Prop.Ttl LotCnt", "Prop1. Wt. Count", 2Prop2. Wt. Count", and "Prop3. Wt. Count", and counts when a proper product passes.

The lot number is the value divided proper product by proper weight count. For example, "Prop1.LotCount" is divided "Prop1. Wt. Count" by "Proper Weight Count".

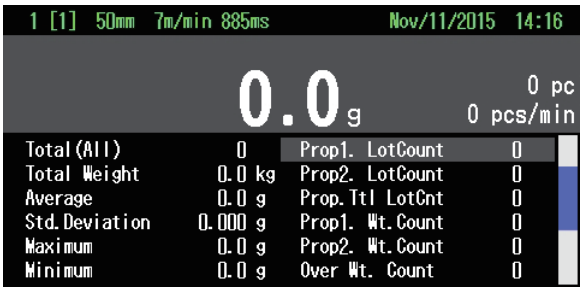


Fig. 10-18

NOTE

- In addition to standard clear operation, the total count result will also be cleared in Total Count Zoom in the following cases.

a. When changing the proper weight count and pressing the [Start] key.

b. When changing the Proper Reject Setting and pressing the [Start] key.

10.3.1.2 Proper Count Clear

Proper Count Clear clears the current proper weight count including the proper weights 1,2, and 3. After clearing them, it starts from "Proper weight 1".

NOTE

- Proper Count Clear should be set by the site engineer or higher level personnel.
- The count number is not cleared only when the operation stops. The count number is migrated when starting the operation next time.

To clear the Proper Weight count, follow the procedure below.

1. Press the [Setup] key in the Standby menu.

   ▶The Setup menu is displayed.

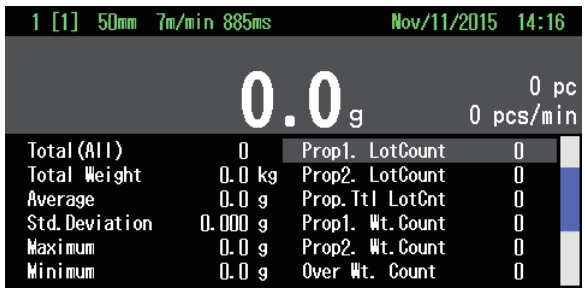


Fig. 10-19

2. Select and enter the "Proper Count Clear".

   ▶The Confirm screen is displayed.

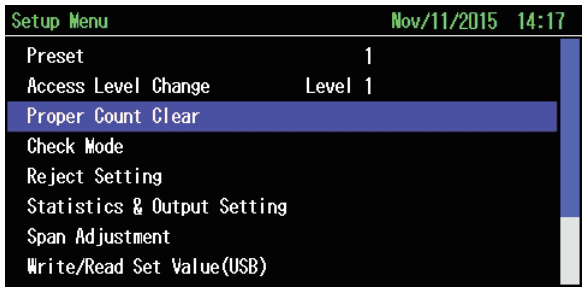


Fig. 10-20

3. Press the [Enter] key.

   ▶The Setup menu is displayed.

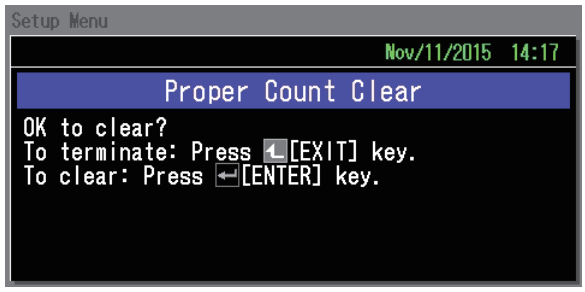


Fig. 10-21

NOTE

- In addition to the Proper Count Clear, the Proper Weight Count will also be cleared in the following cases.

a. When power is turned on.

b. When the proper weight count is reached.

c. When changing the preset setting and press the [Start] key.

d. When changing the proper weight count and press the [Start] key.

10.3.2 Basic Setting

NOTE

- Basic Setting should be set by the site engineer or higher level personnel.

10.3.2.1 Proper Count

Proper Count sets the proper product count. When the number of the proper product reaches the set count number, the reject direction will be switched, for example, from "proper product 1" to "proper product 2". To set the Proper Count, follow the procedure below.

1. Press the [Preset] key in the Standby menu.

   ▶The Preset Number Select Screen is displayed.

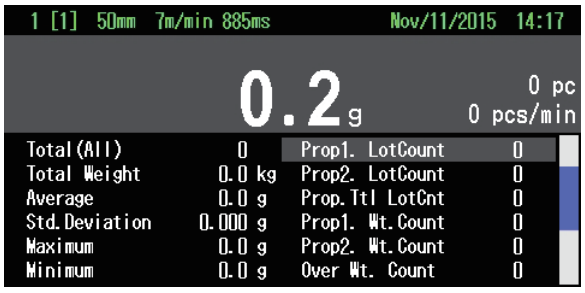


Fig. 10-22

2. Select and enter the desired preset number.

   ▶The Preset menu (Basic) screen is displayed.

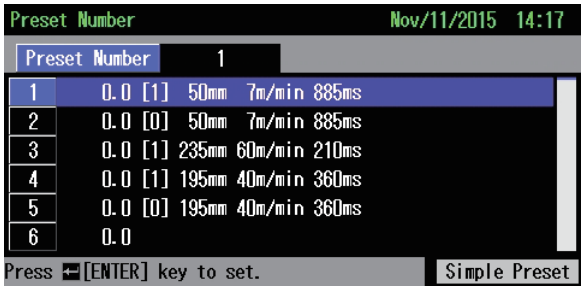


Fig. 10-23

3. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.

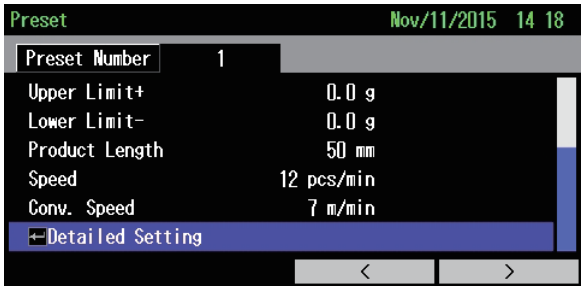


Fig. 10-24

4. Select and enter the "Proper Count".

   ▶The Proper Count screen is displayed.

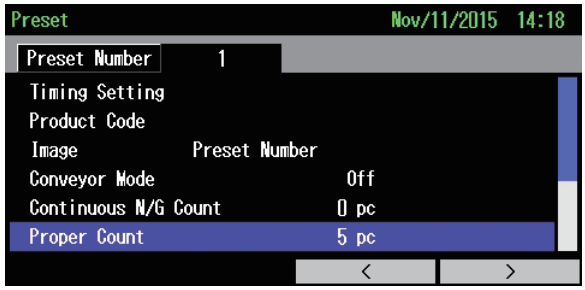


Fig. 10-25

5. Input and enter the numeric value.

   ▶The Preset menu (Detailed) screen for the Proper Count setting will be displayed.

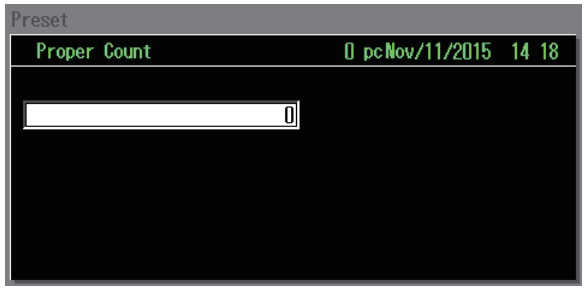


Fig. 10-26

10.3.2.2 Proper Reject Setting

Proper Reject Setting sets the direction number to reject the proper product. "1 direction" is for "Proper weight" (standard specification) only, "2 directions" is for "Proper weight 1" and "Proper weight 2" directions. Up to 3 directions can be set.
To set the Proper Reject Setting, follow the procedure below.

1. Display the Preset menu (Basic) screen.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.

3. Select and enter the "Proper Reject Setting".

   ▶The Proper Reject Setting Setting screen is displayed.

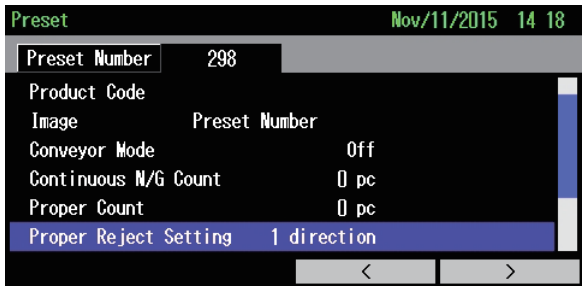


Fig. 10-27

4. Select and enter the directions of proper reject setting.

   ▶The Preset menu (Detailed) screen for the Proper Reject setting will be displayed.

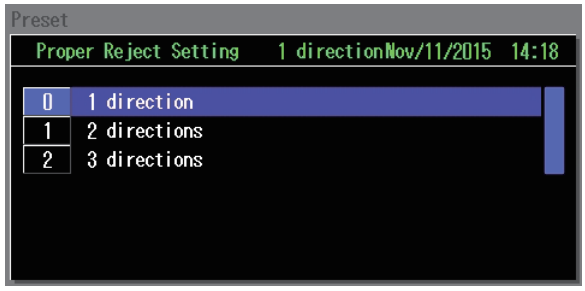


Fig. 10-28

10.3.2.3 Reject target time in proper weight switchover

In this time (Reject target time in proper weight switchover) the machine forcibly rejects the product as "Uninspected" during the set time after switching the "Proper Wt. Rej. Dir.", for example, from "Proper weight 1" to "Proper weight 2". The necessity for this item depends on the switching time of the rejector.

NOTE

- The default Forced Rejection Time is 0 ms.

To set the reject target time in proper weight switchover, follow the procedure below.

1. Display the Preset menu (Basic) screen.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Timing Setting".

   ▶The Timing Setting screen is displayed.

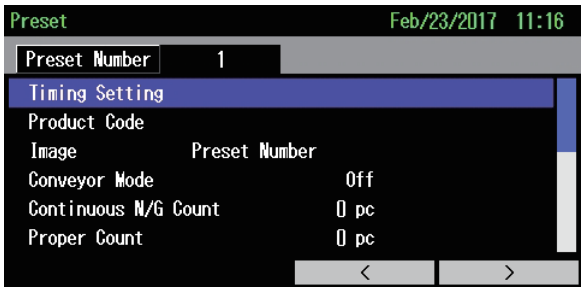


Fig. 10-29

4. Select and enter the "In P-wt Sw Rj Target Time".

   ▶The In P-wt Sw Rj Target Time screen is displayed.

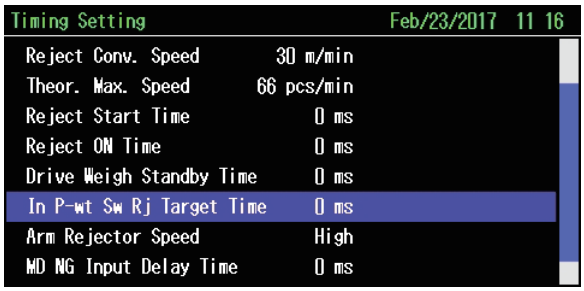


Fig. 10-30

5. Input and enter the numeric value.

   ▶The Timing Setting screen for the In P-wt Sw Rj Target Time setting will be displayed.

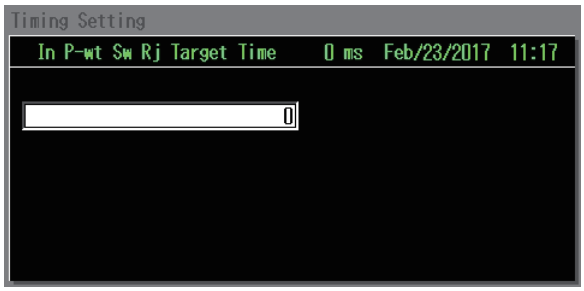


Fig. 10-31

10.3.3 Output Signal or Signal Tower Setting

This section explains the output signal setting or the signal tower setting with the specification of proper weight count.

<Overview of the Output Signal Condition Setting Item>

Table 10-4

Item	Function
Proper 1	Sets the signal to be output when the Proper 1 product passes through.
Proper 2	Sets the signal to be output when the Proper 2 product passes through.
Proper 3	Sets the signal to be output when the Proper 3 product passes through.
Proper 1 switching	Sets the signal to be output when starting the Proper 1 lot.
Proper 2 switching	Sets the signal to be output when starting the Proper 2 lot.
Proper 3 switching	Sets the signal to be output when starting the Proper 3 lot.
In proper weight switchover	Sets the signal to be output when the product passes through between the end of the current lot and the start of the next lot. (Refer to "10.3.2.3 Reject target time in proper weight switchover")

<Transition Diagram of Output Signal Status>

The figure below shows an example of signal status transition when setting the Output Condition, Output Signal on time, and Output Signal Delay time.

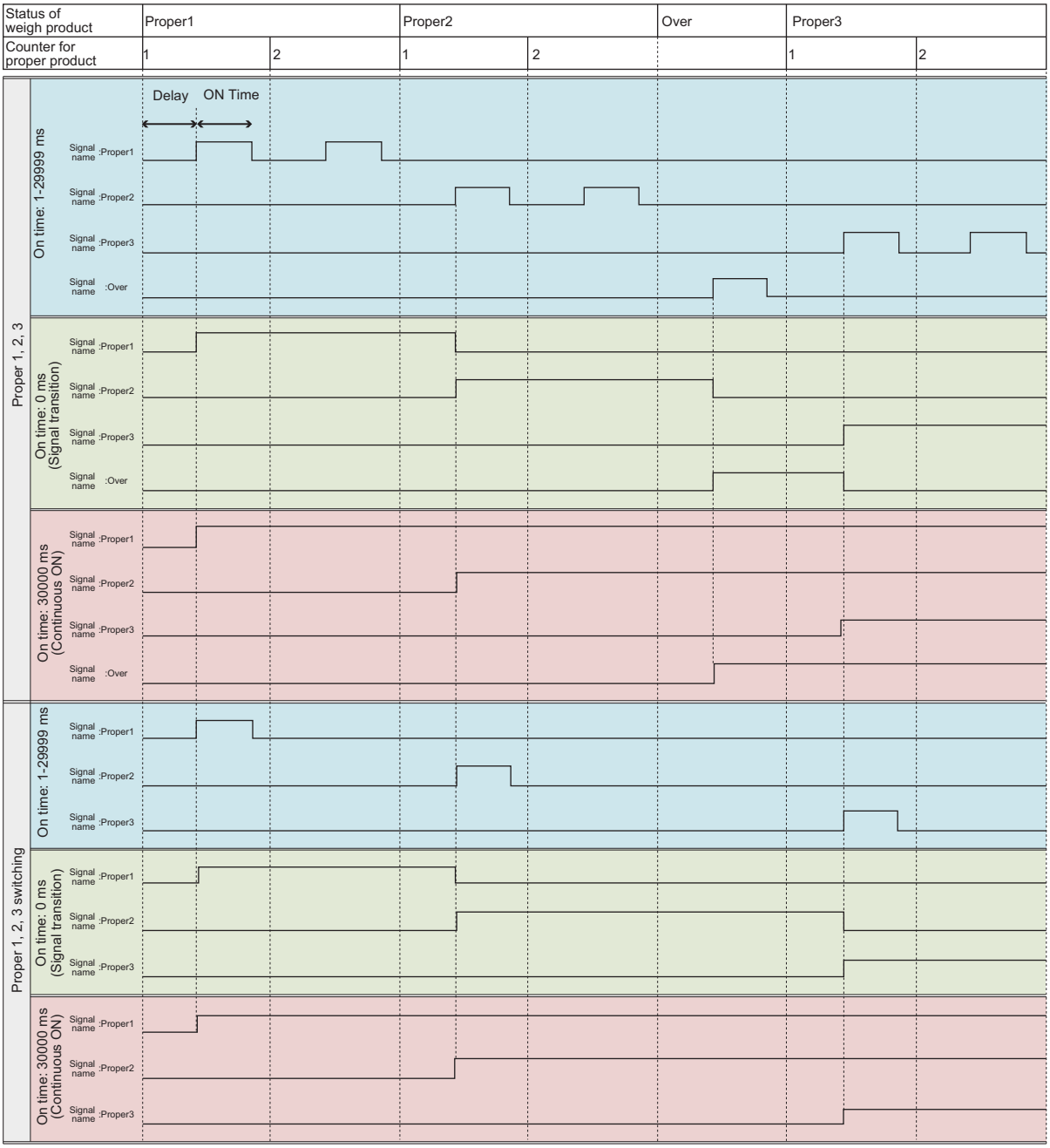


Fig. 10-32

< Example of setting output signal > When Interlocking to external rejection.

As a setting example, setting when interlocking to the rejecter of the following specification is described.

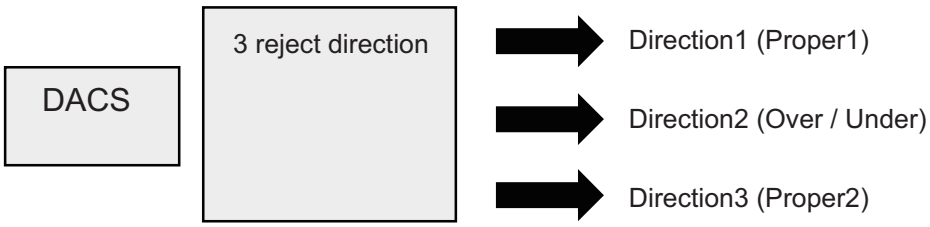


Fig. 10-33

The contact signal output of DACS and rejecter are wired as shown in "Table 10-5 ". The rejecter keep rejecting the product in the direction of inputting signal while inputted.

Table 10-5

Wiring for signal	reject direction
XT102-30, 32 (Contact a)	Direction 1 (Proper 1)
XT102-33, 35 (Contact a)	Direction 2 (Under / Over)
XT102-36, 38 (Contact a)	Direction 3 (Proper 2)

The setting value is as shown in "Table 10-6 ". See the "Reference chapter" for the setting procedure.

Table 10-6

Item	Setting value	Reference chapter
Proper Count	5 count	"10.3.2.1 Proper Count"
Proper Reject Setting	2 direction	"10.3.2.2 Proper Reject Setting"
Proper1 Wt. Sig. (XT101)	32	"10.2.1 Output Condition Setting (Signal Tower)"
Proper2 Wt. Sig. (XT101)	38	
Over Wt. Sig. (XT101)	35	
Output Sig. 32 ON Time	0 ms	"10.2.2 Output Timing Setting (Signal Tower)"
Output Sig. 35 ON Time	0 ms	
Output Sig. 38 ON Time	0 ms	
Output Sig. 32 Delay (XT101)	0 ms	
Output Sig. 35 Delay (XT101)	0 ms	
Output Sig. 38 Delay (XT101)	0 ms	

< Example of setting signal tower > For Proper Weight Count

The setting when lighting the signal tower using the following specification is described.

The operator wants to check the status either "Proper1" or "Proper2" with the signal tower during production. Even a non-proper weight product (e.g. Over) comes in, not to light the signal tower to allow the status of proper weight to be checked all the time.
In addition, the buzzer (signal tower 1) sounds for one second to let the operator know the Proper weight is switched from Proper weight 1 to Proper weight 2.
The setting value is as shown in "Table 10-7 ". See the "Reference chapter" for the setting procedure.

Table 10-7

Item	Setting value	Reference chapter
Proper Count	5 count	"10.3.2.1 Proper Count"
Proper Reject Setting	2 direction	"10.3.2.2 Proper Reject Setting"
Proper1 Wt. Sig. (XT101)	1, 4	"10.3.3 Output Signal or Signal Tower Setting"
Proper2 Wt. Sig. (XT101)	1, 3	
Sig. Tower1 ON Time	1000 ms	
Sig. Tower3 ON Time	0 ms	
Sig. Tower4 ON Time	0 ms	

10.4 FBC INDIRECT FEEDBACK CONTROL (TREND OUTPUT)

This section provides information on the case DACS provides TREND OUTPUT with the auger filler and the auger filler control part controls the auger filler in conjunction with the work of the auger filler and DACS.

NOTE

- To use the FBC Indirect feedback control (Trend output), "License key" is required.

10.4.1 Overview of the auger filler feedback control

This equipment controls the auger filler so that filler output achieves the Target Weight with the following structure.
DACS-GN checks the weight of the filled packs and judges whether the quantity is excessive or insufficient using the average value of the weight. Based on this, the prescribed pulse count is increased or decreased to regulate auger filler output. Also this equipment outputs object sensing signal every time the filled packs go through.
The auger filler is controlled by the control part of the auger filler.

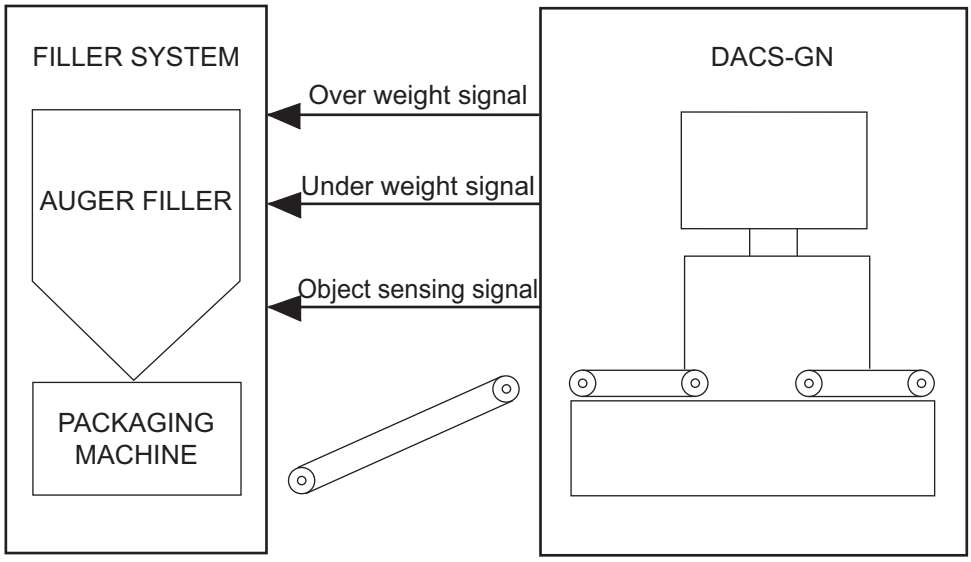


Fig. 10-34

10.4.2 Status Display

A display showing FBC status is added during the operation and standby. Pressing the [Display] key until the FBS status appears. Pressing the [Display] key each time switches the display.
Follow the following procedure to display the FBC Status Display.

1. Press [Display] key during operation/ standby.

   ▶Pressing [Display] key each time switches the display in the following order:
   "Weight Value Zoom Display"
   (Fig. 10-35)
   ↓
   "Preset Information Display"
   (Fig. 10-36)
   ↓
   "Histogram Display"
   (Fig. 10-37)
   ↓
   "X-Bar Chart Display"
   (Fig. 10-38)
   ↓
   "Last 20 Weight Data Display"
   (Fig. 10-39)
   ↓
   "FBC READY STATUS SCREEN"
   (Fig. 10-40)
   ↓
   "Pitch Adjustment Display"
   (Fig. 10-41)
   ↓
   "Total Count Zoom Display"
   (Fig. 10-42)

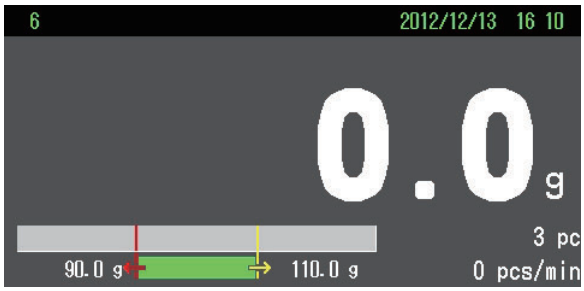


Fig. 10-35

Fig. 10-36

Fig. 10-37

Fig. 10-38

NOTE

- On "FBC READY STATUS SCREEN" ("Fig. 10-40 "), items are indicated below.

  for Sample Count A/B
  B: The setting value of Sample Count
  A: The remaining value of Sample Count for FBC

  for Sample Interval C/D
  D: The setting value of Sample Interval for FBC
  C: The remaining value of Sample Interval before sampling start for FBC

- On "FBC READY STATUS SCREEN" ("Fig. 10-40 "), select "ON"/"OFF" by [Up/Down] key to turn the FBC ON/OFF.

Fig. 10-39

Fig. 10-40

Fig. 10-41

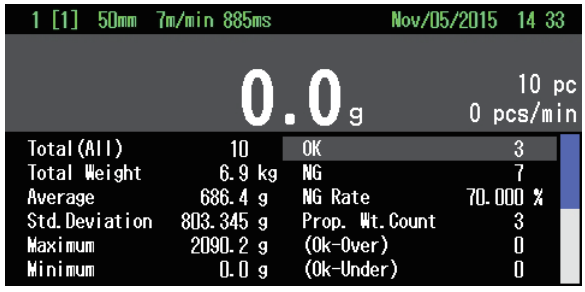


Fig. 10-42

10.4.3 Preset Parameters

An item for setting FBC is added to the Preset Setting. To access FBC Setting follow the procedures listed below.

NOTE

- Preset Setting is conducted with above level 1.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "FBC Setting".

   ▶The FBC Setting screen is displayed.

Fig. 10-43

10.4.3.1 FBC

This defines whether or not the equipment provides TREND OUTPUT based on weighing results.
Setting "0" (OFF) does not provide TREND OUTPUT.
Setting "1" (ON) provides TREND OUTPUT.
To set FBC follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC".

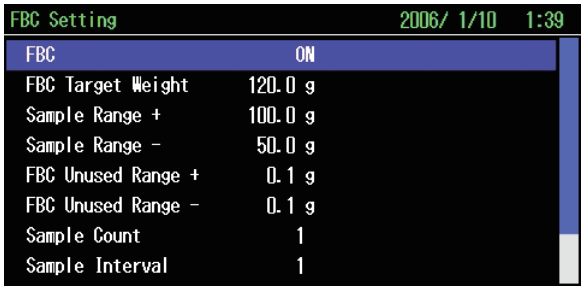


Fig. 10-44

3. Select and enter the "0" to deactivate Feedback Control.
   Select and enter the "1" to activate Feedback Control.

   ▶The FBC Setting screen is displayed.

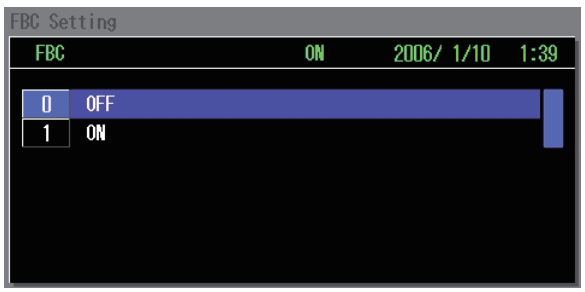


Fig. 10-45

10.4.3.2 FBC Target Weight

This defines the target net weight for packs filled by the auger filler.
To set FBC Target Weight follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Target Weight".

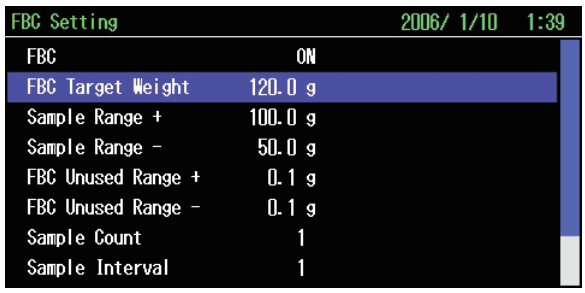


Fig. 10-46

3. Input and enter the numeric value.

   ▶FBC Target Weight appears.

   ▶The setting for Target Weight is complete.

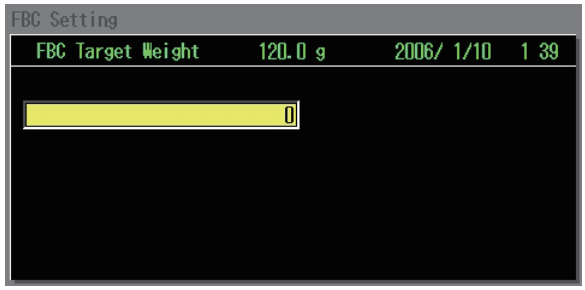


Fig. 10-47

10.4.3.3 Sample Range +

This defines the maximum pack weight above which the pack will not be included in the sampling.
To set Sampling Range + follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sampling Range +".

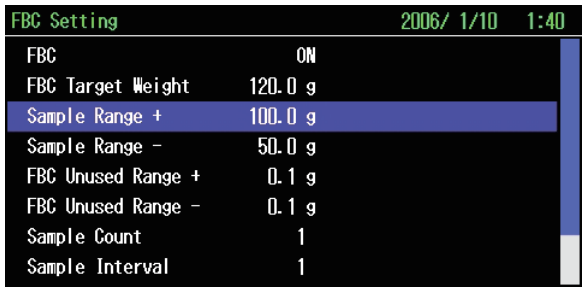


Fig. 10-48

3. Input and enter the numeric value.

   ▶Sampling Range + appears.

   ▶The setting for Sampling Range + is complete.

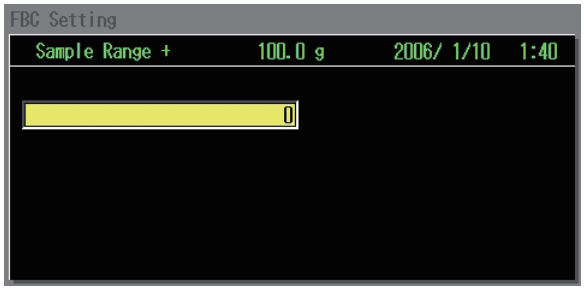


Fig. 10-49

10.4.3.4 Sample Range -

This defines the minimum pack weight below which the pack will not be included in the sampling.
To set Sampling Range - follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sampling Range -".

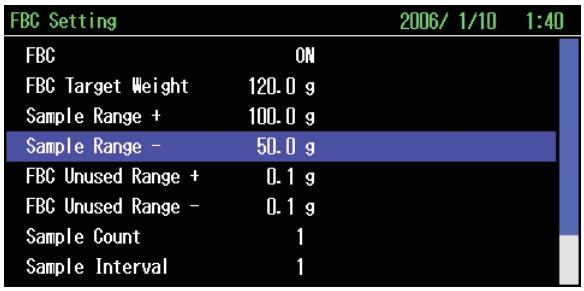


Fig. 10-50

3. Input and enter the numeric value.

   ▶Sampling Range - appears.

   ▶The setting for Sampling Range - is complete.

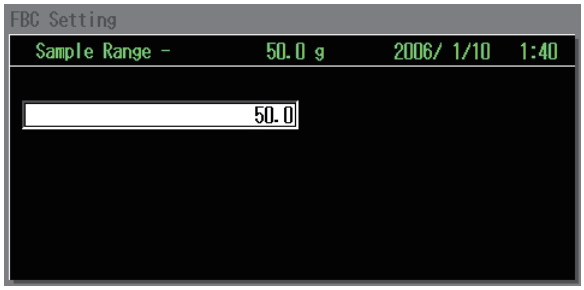


Fig. 10-51

10.4.3.5 FBC Unused Range +

This defines the average weight value which activates FBC and updates the control pulse when this weight is exceeded.
To set FBC Unused Range + follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Unused Range +".

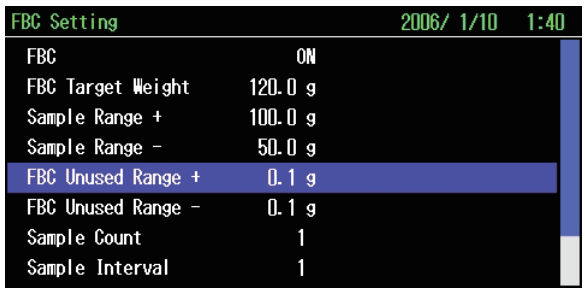


Fig. 10-52

3. Input and enter the numeric value.

   ▶FBC Unused Range + appears.

   ▶The setting for FBC Unused Range + is complete.

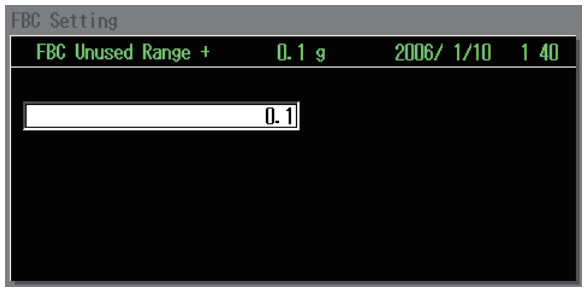


Fig. 10-53

10.4.3.6 FBC Unused Range -

This defines the average weight value which activates FBC and updates the control pulse when this weight is not reached.
To set FBC Unused Range - follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Unused Range -".

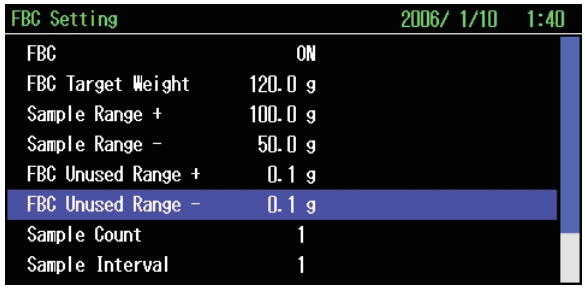


Fig. 10-54

3. Input and enter the numeric value.

   ▶FBC Unused Range - appears.

   ▶The setting for FBC Unused Range - is complete.

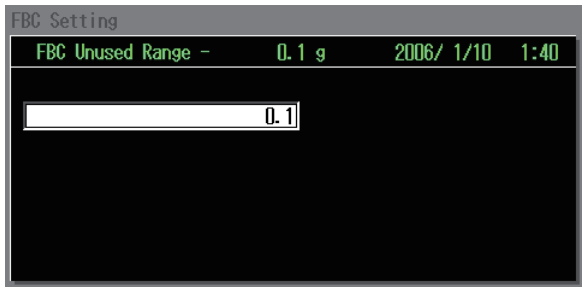


Fig. 10-55

10.4.3.7 Sample Count

This defines the number of packs from which to derive the average value.
To set Sample Count follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sample Count".

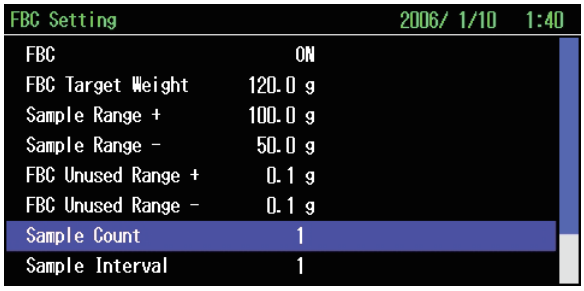


Fig. 10-56

3. Input and enter the numeric value.

   ▶Sample Count appears.

   ▶The setting for Sample Count is complete.

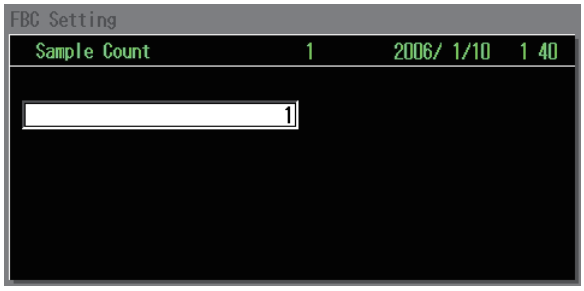


Fig. 10-57

NOTE

- Set the value 1 or above.

10.4.3.8 Sample Interval

This defines the interval from when the first pack using a new pulse count is sent until it is check weighted by DACS. Sampling is not taken during this interval.
To set Sample Interval follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sample Interval".

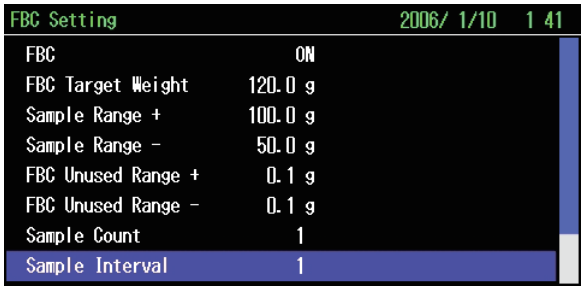


Fig. 10-58

3. Input and enter the numeric value.

   ▶Sample Interval appears.

   ▶The setting for Sample Interval is complete.

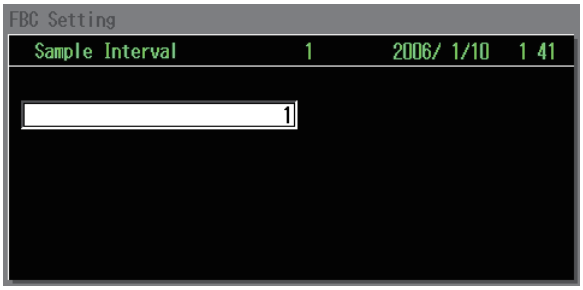


Fig. 10-59

10.4.4 System Configuration

An item is added to the System Configuration menu displaying FBC specifications.
To set Gap Control follow the procedures listed below.

NOTE

- System Configuration is conducted with above level 2.

1. Display the System Configuration menu.
2. Select and enter the "Feedback Control".

   ▶Feedback Control display appears.

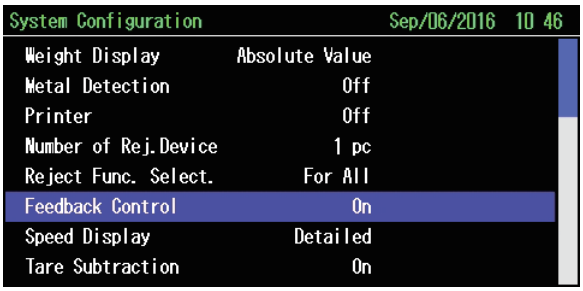


Fig. 10-60

3. Select and enter the "Off (0)" to deactivate Feedback Control.
   Select and enter the "On (1)" to activate Feedback Control.

   ▶System Configuration display in which Feedback Control is set appears.

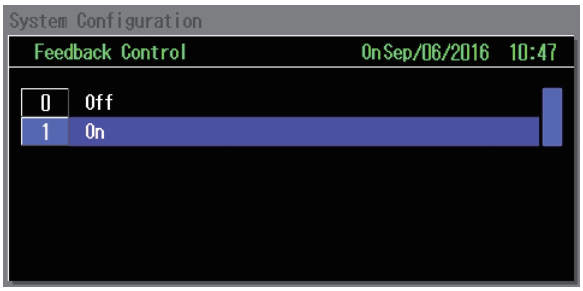


Fig. 10-61

10.5 FBC INDIRECT FEEDBACK CONTROL (PULSE OUTPUT)

This section provides information on the case DACS provides PULSE SIGNAL with the auger filler and the auger filler control part controls the auger filler in conjunction with the work of the auger filler and DACS.

NOTE

- To use the FBC Indirect feedback control (Pulse output), "License key" is required.

10.5.1 Overview of the auger filler feedback control

This equipment controls the auger filler so that filler output achieves the Target Weight with the following structure.
DACS-GN checks the weight of the filled packs and judges whether the quantity is excessive or insufficient using the average value of the weight. Based on this, deviation volume against the Target Weight is converted into the pulse count or signal pulse width, which will be signal-output to the auger filler.
The auger filler is controlled by the control part of the auger filler.

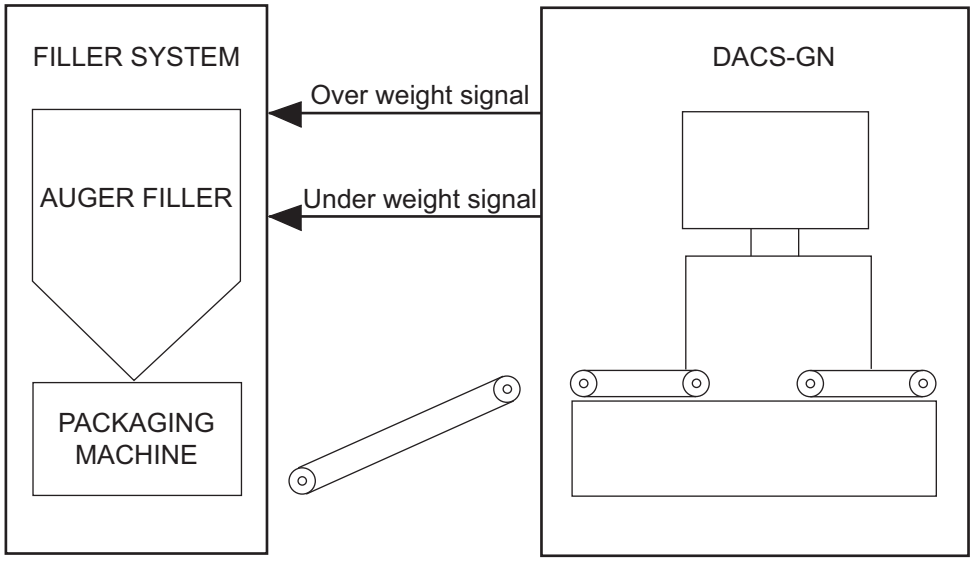


Fig. 10-62

10.5.2 Status Display

A display showing FBC status is added during the operation and standby. Pressing the [Display] key until the FBS status appears. Pressing the [Display] key each time switches the display.
Follow the following procedure to display the FBC Status Display.

1. Press [Display] key during operation/ standby.

▶Pressing [Display] key each time switches the display in the following order:
"Weight Value Zoom Display"(Fig. 10-63)
↓
"Preset Information Display"(Fig. 10-64)
↓
"Histogram Display"(Fig. 10-65)
↓
"X-Bar Chart Display"(Fig. 10-66)
↓
"Last 20 Weight Data Display"(Fig. 10-67)
↓
"FBC READY STATUS SCREEN" (Fig. 10-68)
↓
"Pitch Adjustment Display"(Fig. 10-69)
↓
"Total Count Zoom Display"(Fig. 10-70)

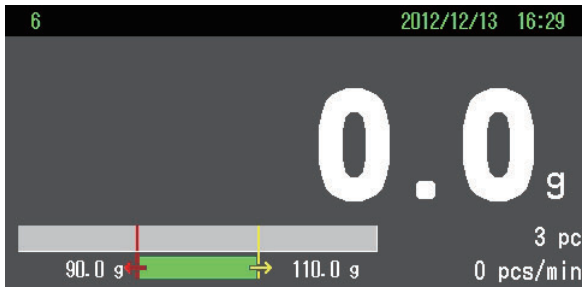


Fig. 10-63

Fig. 10-64

Fig. 10-65

Fig. 10-66

Fig. 10-67

NOTE

- On "FBC READY STATUS SCREEN" ("Fig. 10-68 "), items are indicated below.

  for Sample Count A/B
  B: The setting value of Sample Count

  A: The remaining value of Sample Count for FBC

  for Sample Interval C/D
  D: The setting value of Sample Interval for FBC
  C: The remaining value of Sample Interval before sampling start for FBC

- On "FBC READY STATUS SCREEN" ("Fig. 10-68 "), select "ON"/"OFF" by [Up/Down] key to turn the FBC ON/OFF.

Fig. 10-68

Fig. 10-69

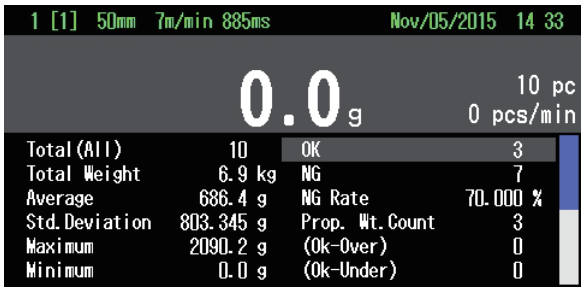


Fig. 10-70

10.5.3 Preset Parameters

An item for setting FBC is added to the Preset Setting. To access FBC Setting follow the procedures listed below.

NOTE

- Preset Setting is conducted with above level 1.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "FBC Setting".

   ▶The FBC Setting screen appears.

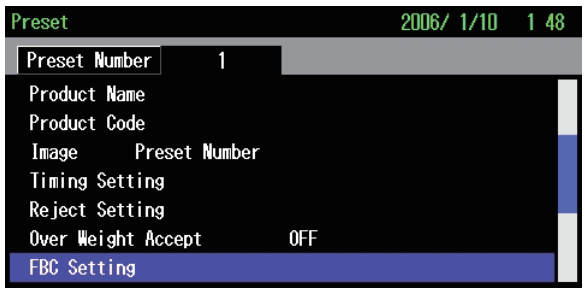


Fig. 10-71

10.5.3.1 FBC

This defines whether or not the equipment outputs the signal based on weighing results.

Setting "0" (OFF) does not output the signal.
Setting "1" (ON) outputs the signal.

To set FBC follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC".

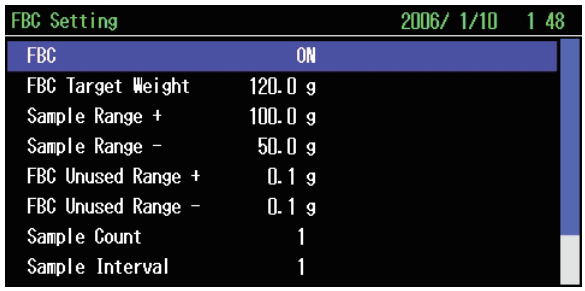


Fig. 10-72

3. Select and enter the "0" to deactivate Feedback Control.
   Select and enter the "1" to activate Feedback Control.

   ▶The FBC Setting screen is displayed.

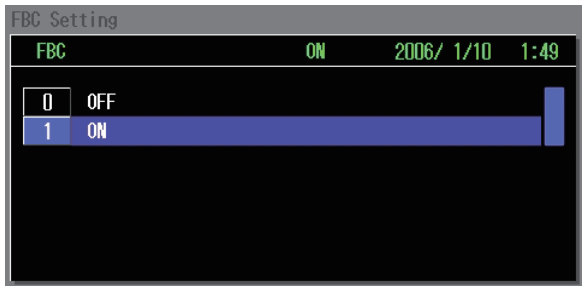


Fig. 10-73

10.5.3.2 FBC Target Weight

This defines the target net weight for packs filled by the auger filler.
To set FBC Target Weight follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Target Weight".

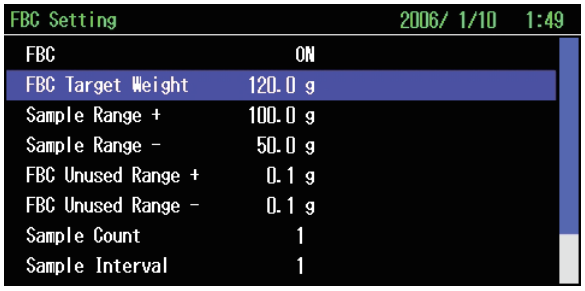


Fig. 10-74

3. Input and enter the numeric value.

   ▶FBC Target Weight appears.

   ▶The setting for Target Weight is complete.

Fig. 10-75

10.5.3.3 Sample Range +

This defines the maximum pack weight above which the pack will not be included in the sampling.
To set Sampling Range + follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sampling Range +".

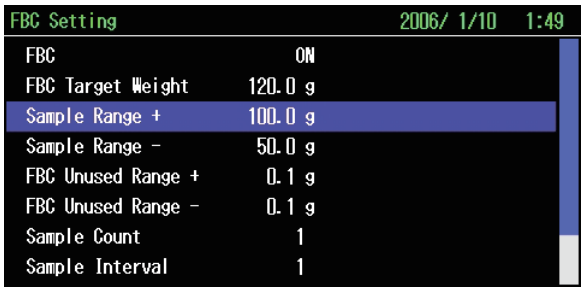


Fig. 10-76

3. Input and enter the numeric value.

   ▶Sampling Range + appears.

   ▶The setting for Sampling Range + is complete.

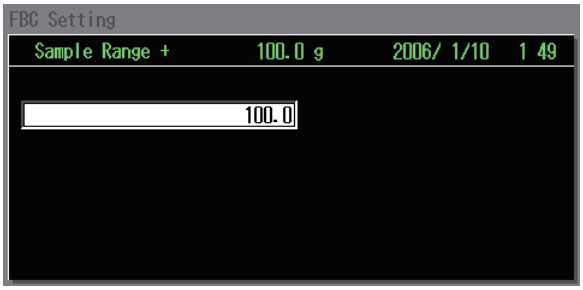


Fig. 10-77

10.5.3.4 Sample Range -

This defines the minimum pack weight below which the pack will not be included in the sampling.
To set Sampling Range - follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sampling Range -".

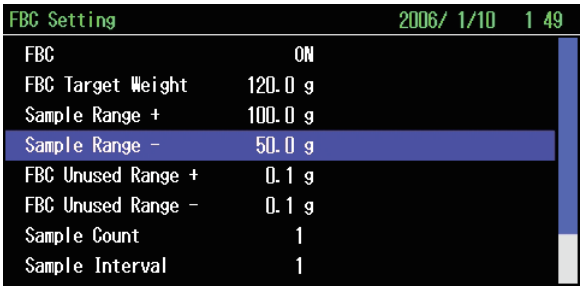


Fig. 10-78

3. Input and enter the numeric value.

   ▶Sampling Range - appears.

   ▶The setting for Sampling Range - is complete.

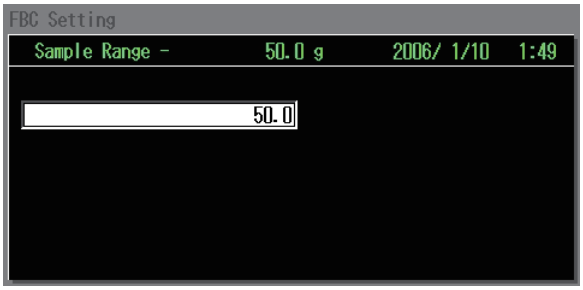


Fig. 10-79

10.5.3.5 FBC Unused Range +

This defines the average weight value which activates FBC when this weight is exceeded.
To set FBC Unused Range + follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Unused Range +".

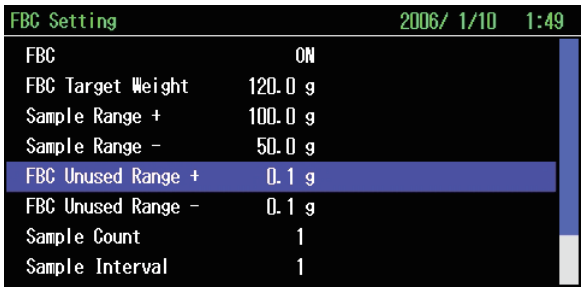


Fig. 10-80

3. Input and enter the numeric value.

   ▶FBC Unused Range + appears.

   ▶The setting for FBC Unused Range + is complete.

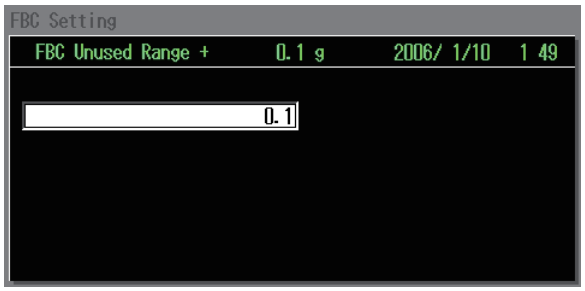


Fig. 10-81

10.5.3.6 FBC Unused Range -

This defines the average weight value below which activates FBC when this weight is not reached. To set FBC Unused Range - follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Unused Range -".

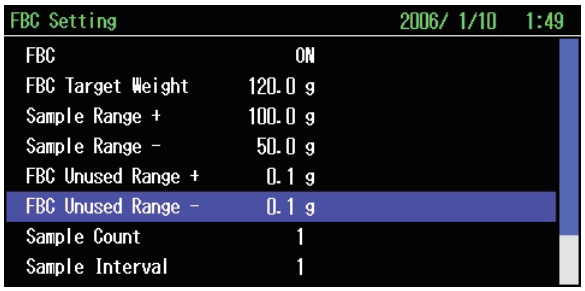


Fig. 10-82

3. Input and enter the numeric value.

   ▶FBC Unused Range - appears.

   ▶The setting for FBC Unused Range - is complete.

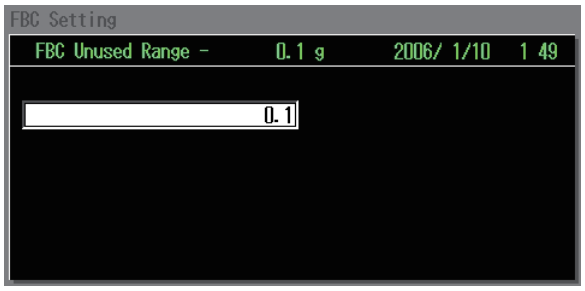


Fig. 10-83

10.5.3.7 Sample Count

This defines the number of packs from which to derive the average value.
To set Sample Count follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sample Count".

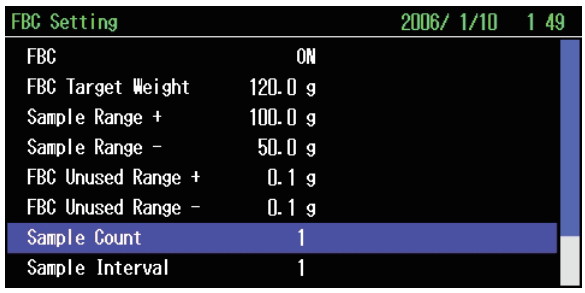


Fig. 10-84

3. Input and enter the numeric value.

   ▶Sample Count appears.

   ▶The setting for Sample Count is complete.

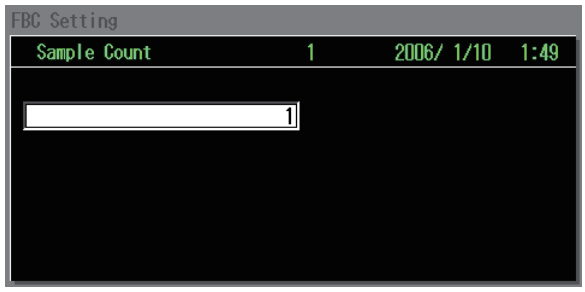


Fig. 10-85

NOTE

- Set the value 1 or above.

10.5.3.8 Sample Interval

This defines the interval from when the first pack using a new pulse count is sent until it is check weighted by DACS. Sampling is not taken during this interval.
To set Sample Interval follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sample Interval".

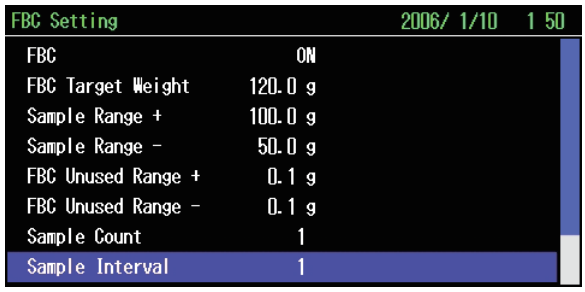


Fig. 10-86

3. Input and enter the numeric value.

   ▶Sample Interval appears.

   ▶The setting for Sample Interval is complete.

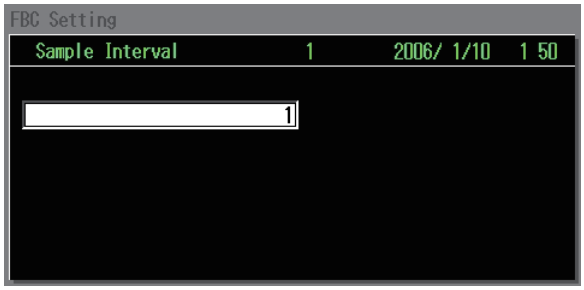


Fig. 10-87

10.5.3.9 FB Rate

This defines the ratio for converting the amount of FBC target weight and average sampled deviation into pulse signal output (count or width).

NOTE

- This value is different according to FB output type.
- For pulse count output:
  Sets weight for one pulse.
  Setting: [65.535 g/p] or less.
- For pulse width output:
  Sets weight for one second.
  Setting: [65.535 g/s] or less.

To set FB Rate follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FB Rate".

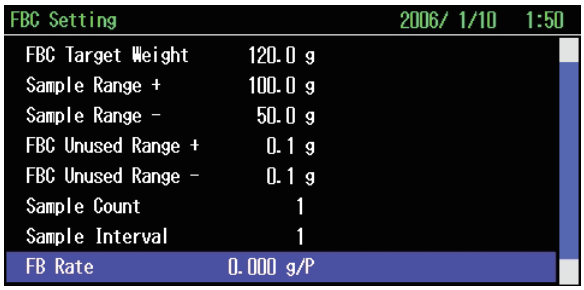


Fig. 10-88

3. Input and enter the numeric value.

   ▶FB Rate appears.

   ▶The setting for FB Rate is complete

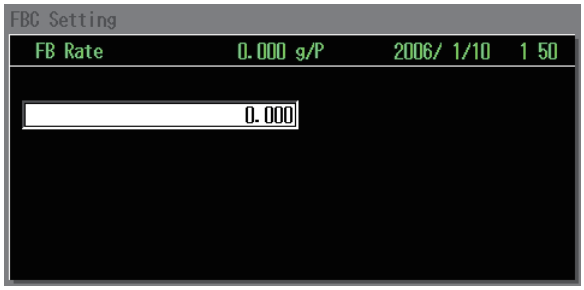


Fig. 10-89

10.5.3.10 Control Pulse Frequency

This item sets the frequency of output signal.
This item is only used when FB Output Mode is set to Pulse Count Output.
To set Control Pulse Frequency follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Control Pulse Frequency".

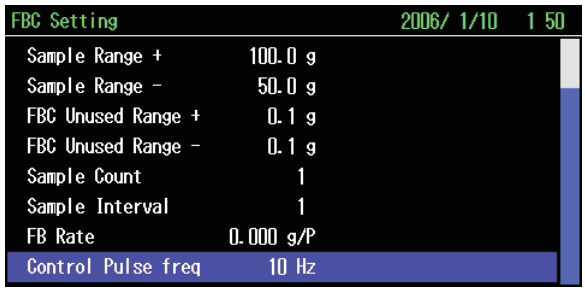


Fig. 10-90

3. Input and enter the numeric value.

   ▶Control Pulse Frequency appears.

   ▶The setting for Control Pulse freq is complete.

Fig. 10-91

NOTE

- Setting: 500 Hz or less.
- The control cycle of output signal is 10 ms. Accordingly, the frequency that is actually outputted will be rounded to the units of 10 ms.

10.5.4 System Configuration

An item is added to the System Configuration menu displaying FBC specifications.
Sets whether or not to control auger filler output with this equipment in conjunction with the auger filler. Also, if to control, this sets whether the amount of target weight and average sampled deviation is output by pulse count or pulse width.
To set FB Output Mode follow the procedures listed below.

NOTE

- System Configuration is conducted with above level 2.

1. Display the System Configuration menu.
2. Select and enter the "FB Output Mode".

   ▶The FB Output Mode display appears.

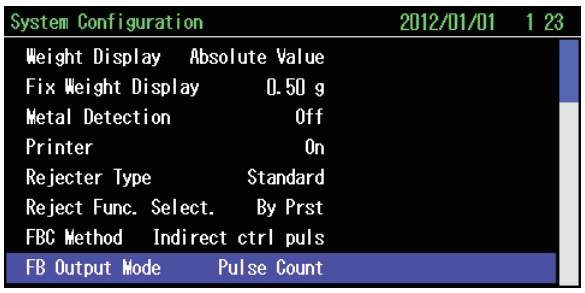


Fig. 10-92

3. Select and enter the "0" not to control auger filler output.
   Select and enter the "1" to control auger filler output by outputting the deviation with pulse count,
   Select and enter the "2" to control auger filler output by outputting the deviation with pulse width.

   ▶System Configuration display in which FB Output Mode is set appears.

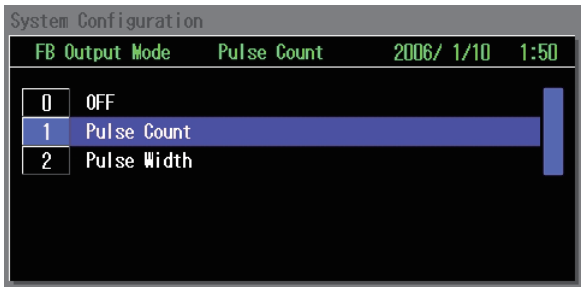


Fig. 10-93

10.6 FBC INDIRECT FEEDBACK CONTROL (AMOUNT OUTPUT)

This section provides information on the case DACS provides CONTROL AMOUNT with the auger filler and the auger filler control part controls the auger filler in conjunction with the work of the auger filler and DACS.

NOTE

- To use the FBC Indirect feedback control (Amount output), "License key" is required.

10.6.1 Overview of the auger filler feedback control

This equipment controls the auger filler so that filler output achieves the Target Weight with the following structure.
DACS-GN checks the weight of the filled packs and judges whether the quantity is excessive or insufficient using the average value of the weight. Based on this, deviation volume against the Target Weight is converted into the Control Amount, which will be signal-output to the auger filler.
The auger filler is controlled by the control part of the auger filler.

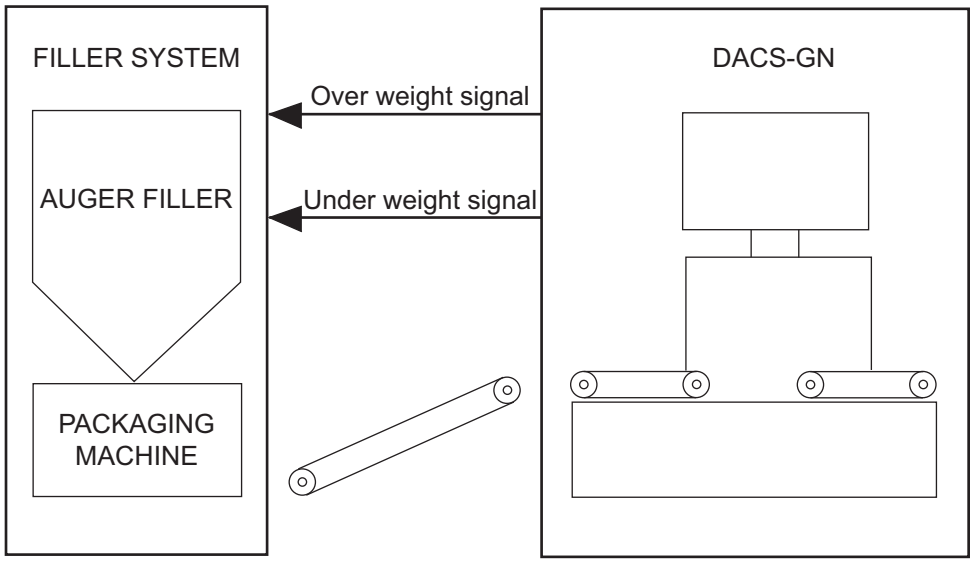


Fig. 10-94

10.6.2 Status Display

A display showing FBC status is added during the operation and standby. Pressing the [Display] key until the FBS status appears. Pressing the [Display] key each time switches the display.
Follow the following procedure to display the FBC Status Display.

1. Press [Display] key during operation/ standby.

   ▶Pressing [Display] key each time switches the display in the following order:
   "Weight Value Zoom Display"(Fig. 10-95)
   ↓
   "Preset Information Display"(Fig. 10-96)
   ↓
   "Histogram Display"(Fig. 10-96)
   ↓
   "X-Bar Chart Display"(Fig. 10-98)
   ↓
   "Last 20 Weight Data Display"(Fig. 10-99)
   ↓
   "FBC READY STATUS SCREEN"(Fig. 10-100)
   ↓
   "Pitch Adjustment Display"(Fig. 10-100)
   ↓
   "Total Count Zoom Display"(Fig. 10-102)

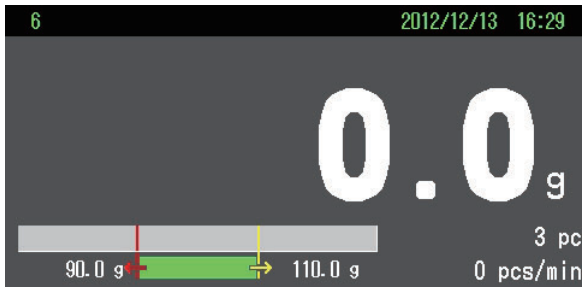


Fig. 10-95

Fig. 10-96

Fig. 10-97

Fig. 10-98

TIP

- On "FBC READY STATUS SCREEN" ("Fig. 10-100 "), items are indicated below.

  for Sample Count A/B
  B: The setting value of Sample Count
  A: The remaining value of Sample Count for FBC for Sample Interval C/D

  D: The setting value of Sample Interval for FBC
  C: The remaining value of Sample Interval before sampling start for FBC

- On "FBC READY STATUS SCREEN" ("Fig. 10-100 "), select "ON"/"OFF" by [Up/Down] key to turn the FBC ON/OFF.

Fig. 10-99

Fig. 10-100

Fig. 10-101

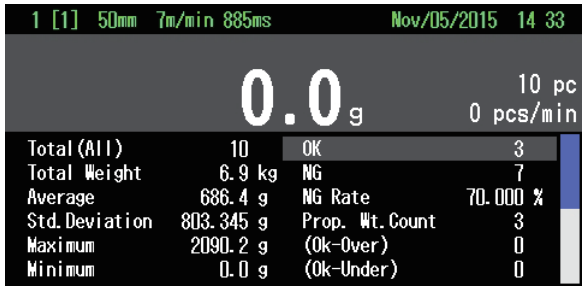


Fig. 10-102

10.6.3 Preset Parameters

An item for setting FBC is added to the Preset Setting. To access FBC Setting follow the procedures listed below.

NOTE

- Preset Setting is conducted with above level 1.

1. Display the Preset Setting screen.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "FBC Setting".

   ▶The FBC Setting screen is displayed.

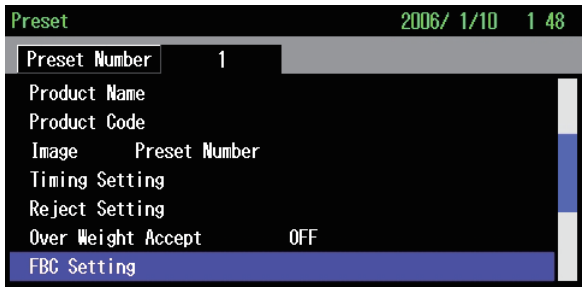


Fig. 10-103

10.6.3.1 FBC

This defines whether or not the equipment outputs the signal based on weighing results.
Setting "0" (OFF) does not output the signal.
Setting "1" (ON) outputs the signal.
To set FBC follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC".

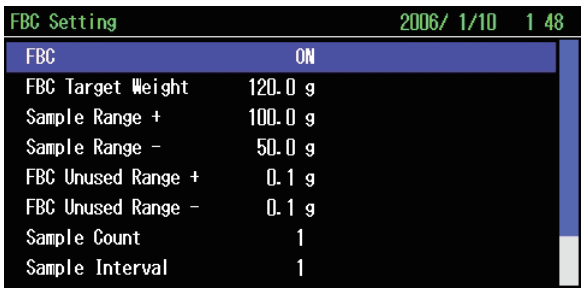


Fig. 10-104

3. Select and enter the "0" to deactivate Feedback Control.
   Select and enter the "1" to activate Feedback Control.

   ▶The FBC Setting screen appears.

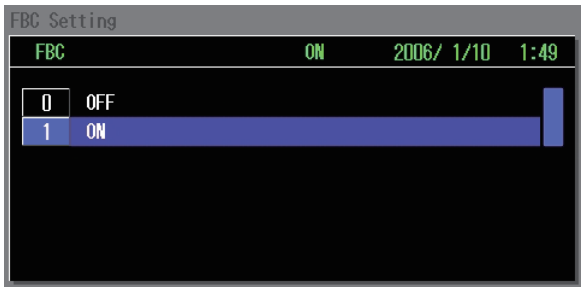


Fig. 10-105

10.6.3.2 FBC Target Weight

This defines the target net weight for packs filled by the auger filler.
To set FBC Target Weight follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Target Weight".

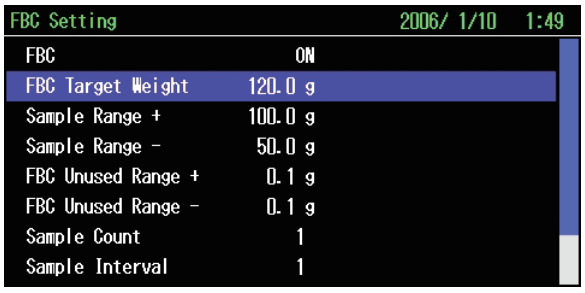


Fig. 10-106

3. Input and enter the numeric value.

   ▶FBC Target Weight appears.

   ▶The setting for Target Weight is complete.

Fig. 10-107

10.6.3.3 Sample Range +

This defines the maximum pack weight above which the pack will not be included in the sampling.
To set Sampling Range + follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sampling Range +".

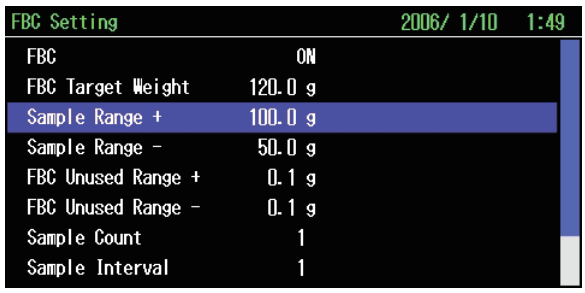


Fig. 10-108

3. Input and enter the numeric value.

   ▶Sampling Range + appears.

   ▶The setting for Sampling Range + is complete.

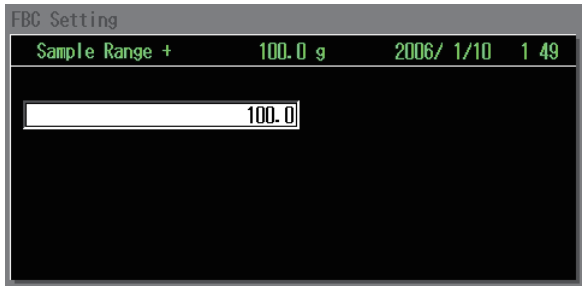


Fig. 10-109

10.6.3.4 Sample Range -

This defines the minimum pack weight below which the pack will not be included in the sampling.
To set Sampling Range - follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sampling Range -".

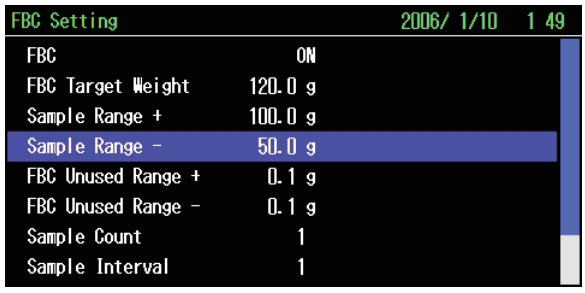


Fig. 10-110

3. Input and enter the numeric value.

   ▶Sampling Range - appears.

   ▶The setting for Sampling Range - is complete.

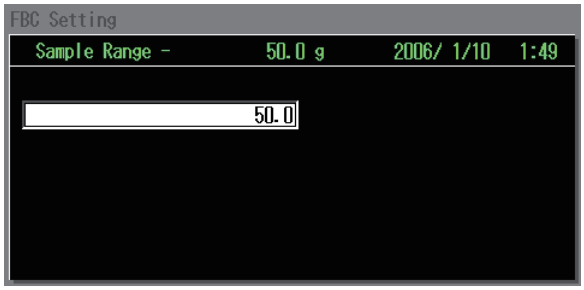


Fig. 10-111

10.6.3.5 FBC Unused Range +

This defines the average weight value which activates FBC when this weight is exceeded.
To set FBC Unused Range + follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Unused Range +".

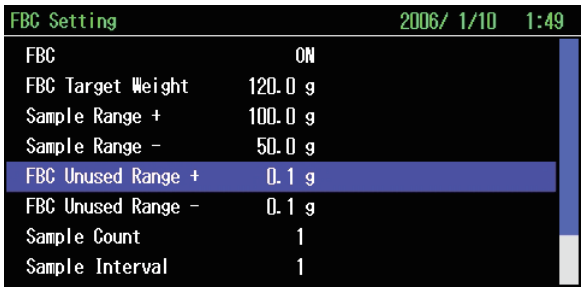


Fig. 10-112

3. Input and enter the numeric value.

   ▶FBC Unused Range + appears.

   ▶The setting for FBC Unused Range + is complete.

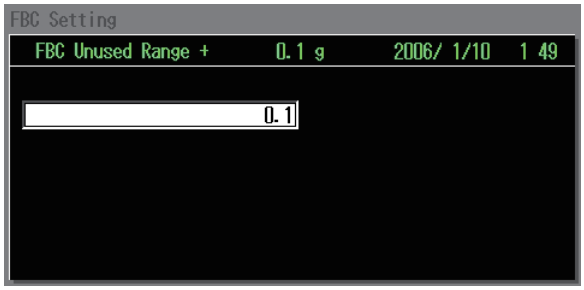


Fig. 10-113

10.6.3.6 FBC Unused Range -

This defines the average weight value below which activates FBC when this weight is not reached.
To set FBC Unused Range - follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "FBC Unused Range -".

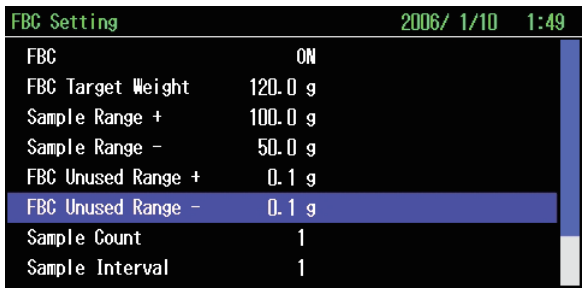


Fig. 10-114

3. Input and enter the numeric value.

   ▶FBC Unused Range - appears.

   ▶The setting for FBC Unused Range - is complete.

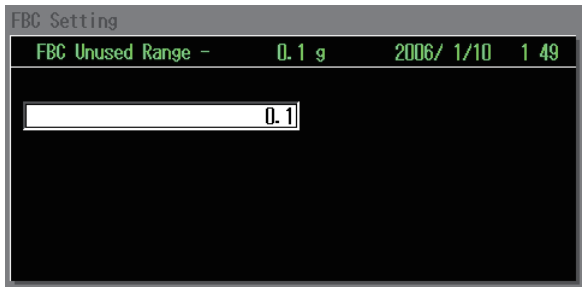


Fig. 10-115

10.6.3.7 Sample Count

This defines the number of packs from which to derive the average value.
To set Sample Count follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sample Count".

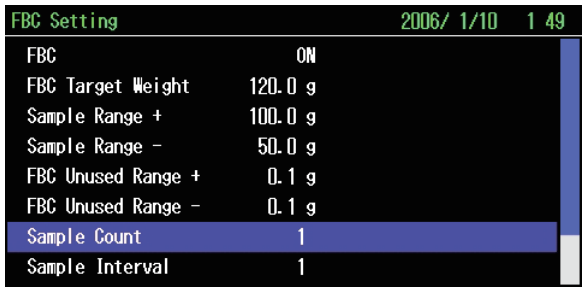


Fig. 10-116

3. Input and enter the numeric value.

   ▶Sample Count appears.

   ▶The setting for Sample Count is complete.

NOTE

- Set the value 1 or above.

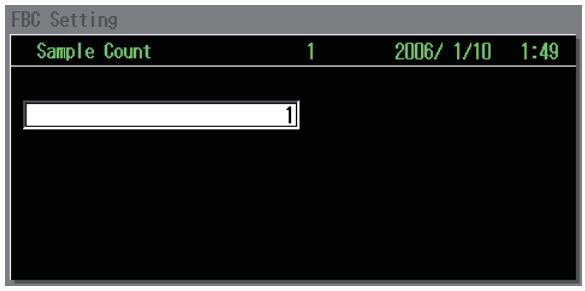


Fig. 10-117

10.6.3.8 Sample Interval

This defines the interval from when the first pack using a new pulse count is sent until it is check weighted by DACS. Sampling is not taken during this interval.
To set Sample Interval follow the procedures listed below.

1. Display the FBC Setting screen.
2. Select and enter the "Sample Interval".

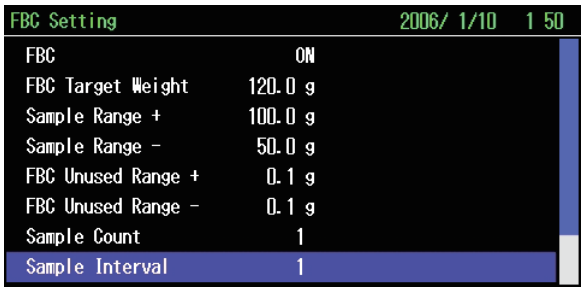


Fig. 10-118

3. Input and enter the numeric value.

   ▶Sample Interval appears.

   ▶The setting for Sample Interval is complete.

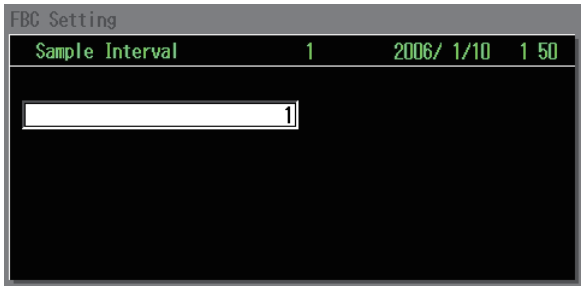


Fig. 10-119

10.6.4 System Configuration

An item is added to the System Configuration menu displaying FBC specifications.
Sets whether or not to control auger filler output with this equipment in conjunction with the auger filler. Also, if to control, this sets whether or not the amount of target weight and average sampled deviation is output.
To activate Feedback Control follow the procedures listed below.

NOTE

- System Configuration is conducted with above level 2.

1. Display the System Configuration menu.
2. Select and enter the "Feedback Control".

   ▶The Feedback Control display appears.

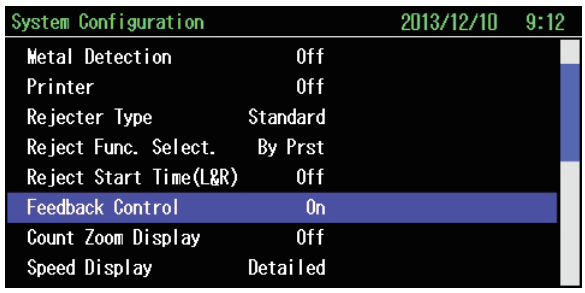


Fig. 10-120

3. Select and enter the "0" to deactivate Feedback Control.
   Select and enter the "1" to activate Feedback Control.

   ▶System Configuration display in which Feedback Control is set appears.

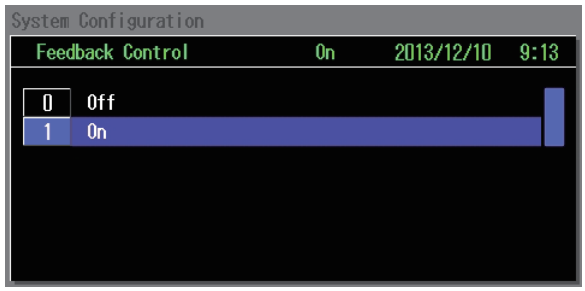


Fig. 10-121

10.7 FLOATING REF. WT. REVISION

This section provides information on the Ref. Wt. update specification.

NOTE

- If the weight zone is set to"5 Zone", FLOATING REF. WT. REVISION cannot be used.
- To use the Floating reference weight revision, "License key" is required.

10.7.1 Overview

Floating Reference Weight Revision functions as follows. When fluctuations in the average weight of product are relatively large, the reference weight is revised to equal the average weight of each pack as it is weighed. In this way, weight variations do not adversely affect the weighing operation. This is especially effective in checking for missing pieces.

EXAMPLE: If the Reference Weight Revision Piece Count is 3, the Reference Weight value will be revised in the following manner:

1. PROPER WT. PACK NUMBERS
(Pack Number 1 is the 1st proper weight product to be checkweighed for descriptive purpose.)

2. Average weight of proper weight Pack Numbers 1, 2 and 3 will be used as the Reference Weight in the next weighing.

3. Average weight of proper weight Pack Numbers 2, 3, and 4 will be used as the Reference Weight in next weighing.

4. Average weight of proper weight Pack Numbers 3, 4, and 5 will be used as the Reference Weight in the next weighing.

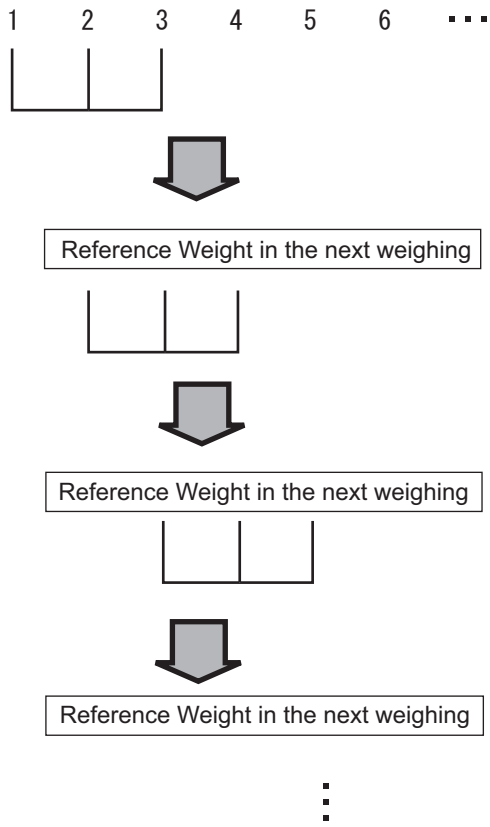


Fig. 10-122

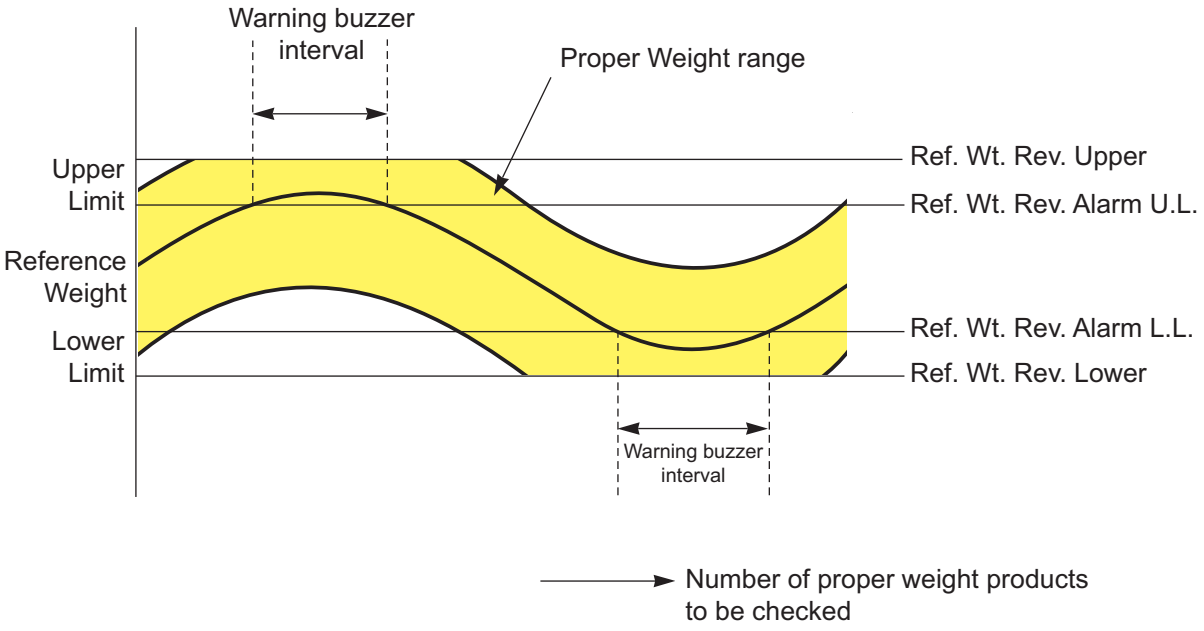


Fig. 10-123

As the reference weight value is revised, the upper and lower limits are revised accordingly. However, the upper limit value never exceeds the reference weight revision lower limit value. In other words, any product pack which exceeds the reference weight revision upper limit is judged as over weight, and any product pack which weighs less than the reference weight revision lower limit is judged as under weight.
If the reference weight exceeds the reference weight alarm upper limit, "Upper limit alarm" appears and a buzzer sounds.
If the reference weight is less than the reference weight alarm lower limit, “Lower limit alarm” and a buzzer sounds.

10.7.2 Preset Parameters

Five Preset Parameter settings concerning FLOATING REF. WT. REVISION are added.

NOTE

- Preset Setting is conducted with above level 1.
- Displayed when Setting "ON" for the FLOATING REF. WT. REVISION in the System Configuration. (Refer to "10.7.3 System Configuration")

10.7.2.1 Ref. Wt. Rev. Upper

When [Ref. Wt. + UPPER LIMIT] exceeds this value, this value becomes the upper limit, and packs exceeding this value are judged over weight.
To set Ref. Wt. Rev. Upper follow the procedures listed below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Ref. Wt. Rev. Upper".

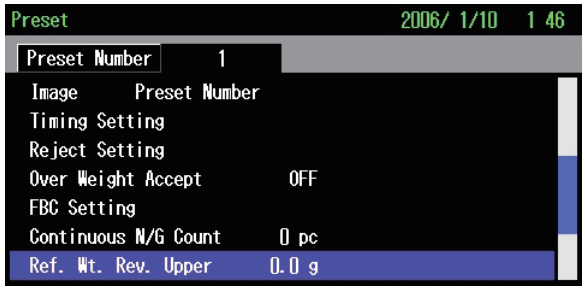


Fig. 10-124

4. Input and enter the numeric value.

   ▶Ref. Wt. Rev. Upper appears.

   ▶The setting for Ref. Wt. Rev. Upper is complete.

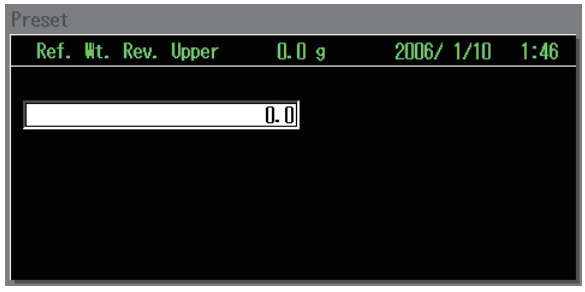


Fig. 10-125

NOTE

- This parameter is entered as an absolute value.

10.7.2.2 Ref. Wt. Rev. Lower

When Ref. Wt. Rev. Lower is less than this value, this value becomes the lower limit, and packs weighing less than this value are judged under weight.
To set Ref. Wt. Rev. Lower follow the procedures listed below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Ref. Wt. Rev. Lower".

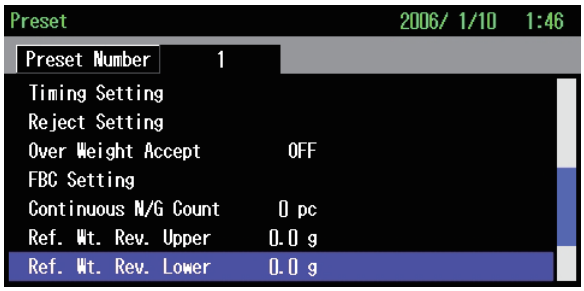


Fig. 10-126

4. Input and enter the numeric value.

   ▶Ref. Wt. Rev. Lower appears.

   ▶The setting for Ref. Wt. Rev. Lower is complete.

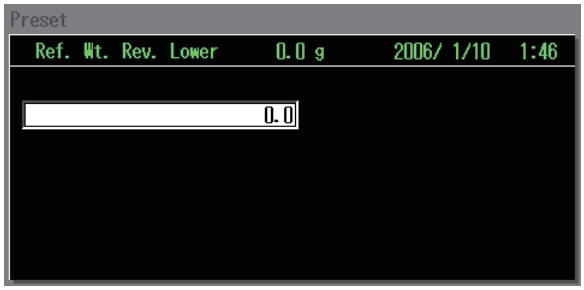


Fig. 10-127

NOTE

- This parameter is entered as an absolute value.

10.7.2.3 Ref. Wt. Rev. Count

When Ref. Wt. Rev. is ON, proper weight data is sampled and reference weight is revised based on the average weight of one product. This item sets the count which is used to calculate the average weight.
To set Ref. Wt. Rev. Count follow the procedures listed below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Ref. Wt. Rev. Count".

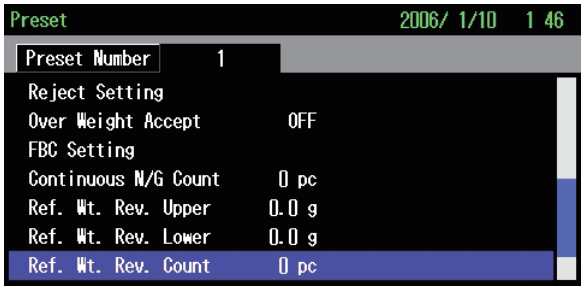


Fig. 10-128

4. Input and enter the numeric value.

   ▶Ref. Wt. Rev. Count appears.

   ▶The setting for Ref. Wt. Rev. Count is complete.

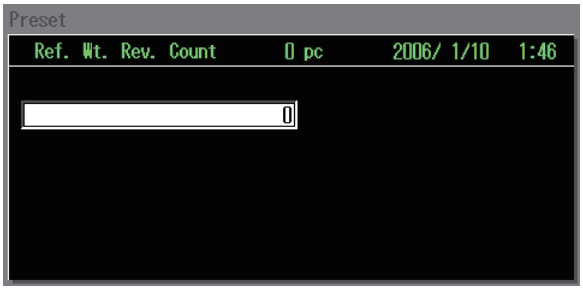


Fig. 10-129

NOTE

- Setting Range: 1 to 99.
- If "0" is set, reference weight revision is not performed. However, the Ref. Wt. Rev. Upper and Lower Limit values will still be in effect.

10.7.2.4 Ref. Wt. Rev. Alarm U.L.

If Ref. Wt. Rev. is ON and when the reference weight value is exceeded, the Upper Limit Alarm message will be displayed and a warning buzzer will sound.
To set Ref. Wt. Rev. Alarm U.L. follow the procedures listed below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Ref. Wt. Rev. Alarm U.L.".

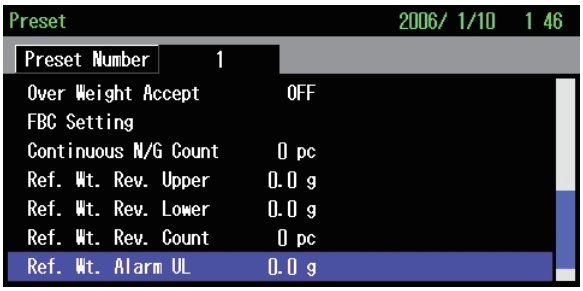


Fig. 10-130

4. Input and enter the numeric value.

   ▶Ref. Wt. Rev. Alarm U.L. appears.

   ▶The setting for Ref. Wt. Rev. Alarm U.L. is complete.

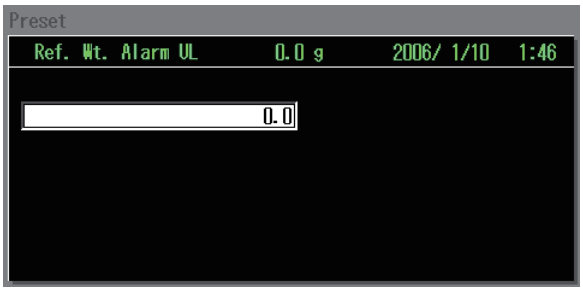


Fig. 10-131

NOTE

- This parameter is entered as an absolute value.

10.7.2.5 Ref. Wt. Rev. Alarm L.L.

If Ref. Wt. Rev. is ON and when the reference weight is less than this value, the Lower Limit Alarm message will be displayed and a warning buzzer will sound.
To set Ref. Wt. Rev. Alarm L.L. follow the procedures listed below.

1. Display the Preset menu.
2. Select and enter the "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter the "Ref. Wt. Rev. Alarm L.L.".

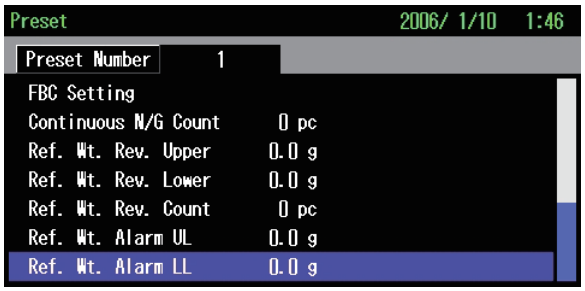


Fig. 10-132

4. Input and enter the numeric value.

   ▶Ref. Wt. Rev. Lower appears.

   ▶The setting for Ref. Wt. Rev. Lower is complete.

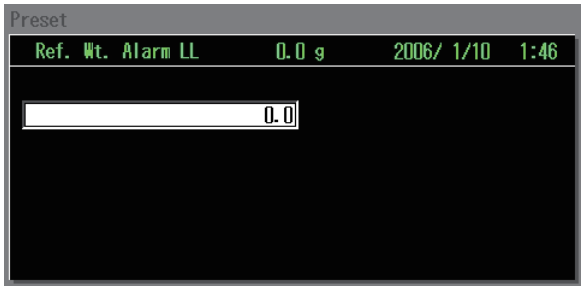


Fig. 10-133

NOTE

- This parameter is entered as an absolute value.

10.7.3 System Configuration

An item is added to the System Configuration menu displaying Ref. Wt. Rev.
To initiate Ref. Wt. Rev. follow the procedures listed below:

NOTE

- System Configuration is conducted with above level 2.

1. Display the System Configuration menu.
2. Select and enter the "Reference Value Update Setting".

   ▶Reference Value Update Setting display appears.

Fig. 10-134

3. Select and enter the "Floating Ref. Weight".

   ▶Floating Ref. Weight display appears

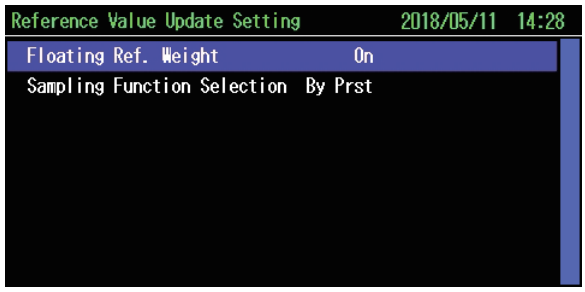


Fig. 10-135

4. Select and enter the "0" to deactivate Floating Ref. Weight.
   Select and enter the "1" to activate Floating Ref. Weight.

   ▶System Configuration display in which Floating Ref. Weight is set appears.

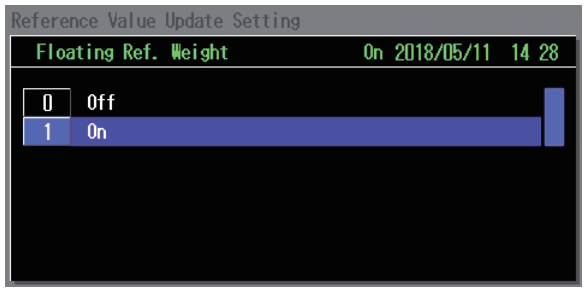


Fig. 10-136

10.8 Weight Data Output

This section describes the specifications of weight output when weighing.

NOTE

- To use the Weight data output, "License key" is required.

1. The communications standards below are supported.
   - RS-232C
   - Ethernet
2. The output formats of weight data (standard) are as follows:

Weigh Data Output

0)	Control Code	LF (0Ah)
1)	Command	'G' (47h)
2)	Weight Status	
	Proper	'1' (31h)
	Under	'2' (32h)
	Over	'3' (33h)
	Metal	'4' (34h)
	Ext.1	'5' (35h)
	Ext.2	'6' (36h)
	Pitch Error	'7' (37h)
	0-error	'8' (38h)
	Cont.NG	'9' (39h)
	No Metal	' :' (3Ah)
	OK-under	' ;' (3Bh)
	OK-over	'<' (3Ch)
	Under-NG	'=' (3Dh)
	Over-NG	'>' (3Eh)
	Foreign Obj	'@' (40h)
	Shorter Item	'A' (41h)
	Product Length Error	'B' (42h)
	Ext.3	'C' (43h)
	Ext.4	'D' (44h)
3)	Weight Data	'0'(30h) - '9'(39h) OR '-' (2Dh)
4)	Weight Data	'0'(30h) - '9'(39h)
5)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
6)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
7)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
8)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
9)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
10)	Weight Data	'0'(30h) - '9'(39h)
11)	Weight Unit	'g'(67h: gram) OR 'o'(6Fh: ounce)
12)	Checksum	'0'(30h) - '?'(3Fh)
13)	Checksum	'0'(30h) - '?'(3Fh)
14)	Control Code	CR (0Dh)

Fig. 10-137

The weigh data is output only once after weighing.
If the weighing result is went off the scale, 3) to 10) above display "-"(2Dh).
Output target of weighing result is all the status, and the result is output every time after weighing.
The output weight is absolute value or deviation value in conjunction with the display of DACS-GN.

3. The output formats of weight data (special) are as follows:

Weigh Data Output

0)	Control Code	LF (0Ah)
1)	Command	‘G’ (47h)
2)	Machine No.	'0'(30h) - '9'(39h)
3)	Machine No.	'0'(30h) - '9'(39h)
4)	Machine No.	'0'(30h) - '9'(39h)
5)	Machine No.	'0'(30h) - '9'(39h)
6)	Machine No.	'0'(30h) - '9'(39h)
7)	Preset No.	'0'(30h) - '9'(39h)
8)	Preset No.	'0'(30h) - '9'(39h)
9)	Preset No.	'0'(30h) - '9'(39h)
10)	Weight Status	
	Proper	‘1’ (31h)
	Under	‘2’ (32h)
	Over	‘3’ (33h)
	Metal	‘4’ (34h)
	Ext.1	‘5’ (35h)
	Ext.2	‘6’ (36h)
	Pitch Error	‘7’ (37h)
	0-error	‘8’ (38h)
	Cont.NG	‘9’ (39h)
	No Metal	‘ :’ (3Ah)
	OK-under	‘ ;’ (3Bh)
	OK-over	‘<’ (3Ch)
	Under-NG	‘=’ (3Dh)
	Over-NG	‘>’ (3Eh)
	Foreign Obj	‘@’ (40h)
	Shorter Item	‘A’ (41h)
	Product Length Error	‘B’ (42h)
	Ext.3	‘C’ (43h)
	Ext.4	‘D’ (44h)
11)	Weight Data	'0'(30h) - '9'(39h) OR '-' (2Dh)
12)	Weight Data	'0'(30h) - '9'(39h)
13)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
14)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
15)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
16)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
17)	Weight Data	'0'(30h) - '9'(39h) OR '.' (2Eh)
18)	Weight Data	'0'(30h) - '9'(39h)
19)	Weight Unit	'g'(67h: gram) OR 'o'(6Fh: ounce)
20)	Checksum	'0'(30h) - '?'(3Fh)
21)	Checksum	'0'(30h) - '?'(3Fh)
22)	Control Code	CR (0Dh)

Fig. 10-138

The weigh data is output only once after weighing.
If the weighing result is went off the scale, 3) to 10) above display "-"(2Dh).
Output target of weighing result is all the status, and the result is output every time after weighing.
The output weight is absolute value or deviation value in conjunction with the display of DACS-G.N

10.9 Rank Select/Multi-direction Reject

This chapter describes the Rank Select/Multi-Direction Reject specification.

10.9.1 Overview of Rank Select/Multi-Direction Reject

This specification allows for rejection based on rank, assigned based on weighing results.

NOTE

- Up to 100 presets can be stored for Rank Select/Multi-Direction Reject Specification.
- A license key is required to use Rank Select/Mlt-Direction Reject Specification.

10.9.2 Status Display

The status display changes to the content of Rank Select during operation and standby. Pressing the [Display] key switched to the display screen. Each time the [Display] key is pressed, the display switches sequentially.

Using Rank Select specification switches the Weight Value Zoom Display bar chart and Histogram Display to Rank Select specification. Follow the procedure below to display each screen.

1. Press [Display] key during operation/ standby.

   ▶Pressing [Display] key each time switches the display in the following order:
   "Weight Value Zoom Display"(Fig. 10-139)
   ↓
   "Preset Information Display"(Fig. 10-140)
   ↓
   "Rank Select Display"(Fig. 10-141)
   ↓
   "Last 20 Weight Data Display"(Fig. 10-142)
   ↓
   "Pitch Adjustment Display"(Fig. 10-143)
   ↓
   "Total Count Zoom Display"(Fig. 10-144)

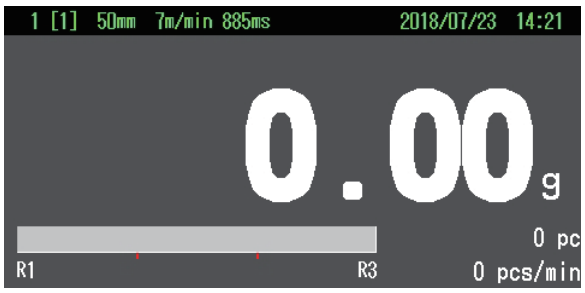


Fig. 10-139

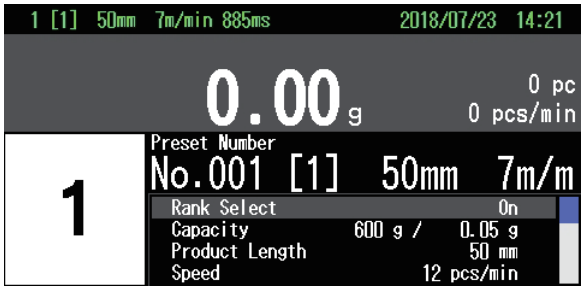


Fig. 10-140

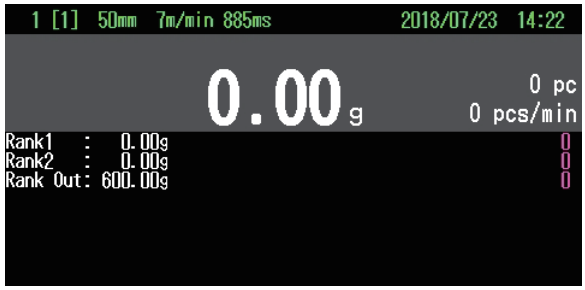


Fig. 10-141

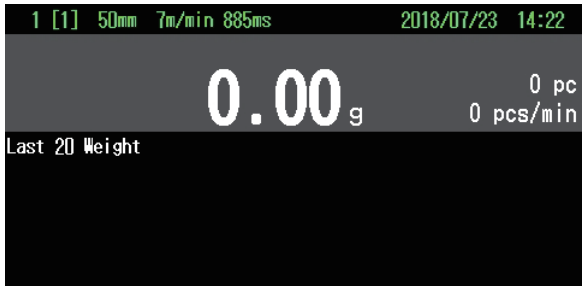


Fig. 10-142

Fig. 10-143

Fig. 10-144

10.9.3 Preset Setting

NOTE

- Preset setting is conducted with level 1 and above.

10.9.3.1 Rank Select

Set whether or not Rank Select is performed based on weighing results. When "Off" is selected, regular inspection (proper, under, over inspection) is carried out. When "On" is selected, Rank Select inspection is carried out.
To set Rank Select, follow the procedure below:

1. Display the Preset Setting screen.
2. Select and enter "Rank Select".

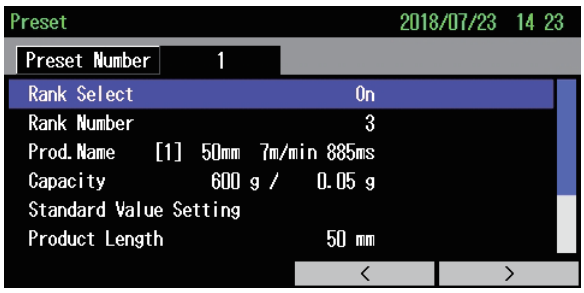


Fig. 10-145

3. Select and enter the "0" to deactivate Rank select inspection.
   Select and enter the "1" to activate Rank select inspection.

   ▶The setting of Rank Select is reflected on the preset menu.

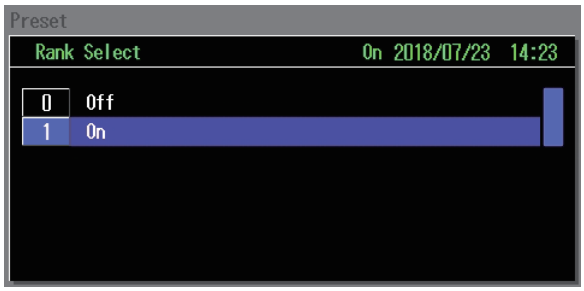


Fig. 10-146

10.9.3.2 Rank number

Set the rank number to be allocated.
To set the rank number, follow the procedure below:

1. Display the Preset Setting screen.
2. Select and enter the "Rank Number".

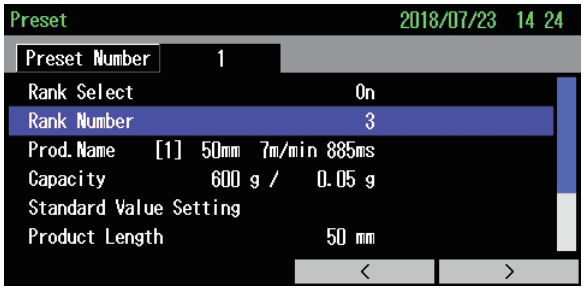


Fig. 10-147

3. Input and enter a numeric value.

   ▶The set rank number is displayed.

   ▶Setting of the rank number is completed.

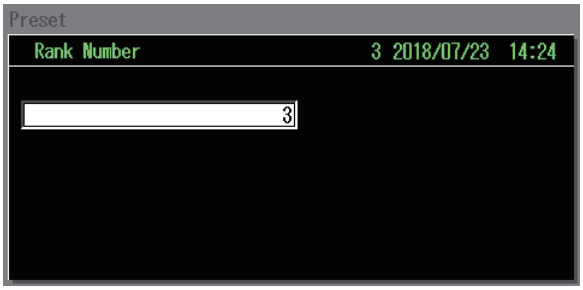


Fig. 10-148

NOTE

- Enter within the range 3 to 33.
- The value includes "Out of Rank" as a rank.
  Example) There are three ranks when rank number is three: 1) Rank 1; 2) Rank 2; and 3) Out of Rank.

10.9.3.3 Standard Value Setting

Set the weight range for each rank. Ranks are numbered in increasing order of weight (i.e. Rank 1 < Rank 2 < Rank 3 <...) The weight range can be defined by setting an upper limit for each rank. Those that exceed the value set for the largest rank become Out of Rank.
To configure the Standard Value Setting, follow the procedure below:

1. Display the Preset Setting screen.
2. Select and enter the "Standard Value Setting".

   ▶The Standard Value Setting screen is displayed.

Fig. 10-149

3. Select and enter the desired rank.

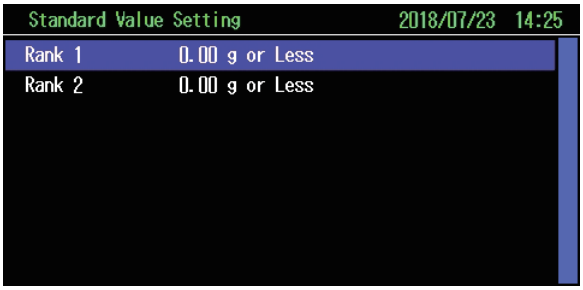


Fig. 10-150

4. Input and enter a numeric value.

   ▶The set standard value is displayed.

   ▶Configuration of the Standard Value Setting is completed.

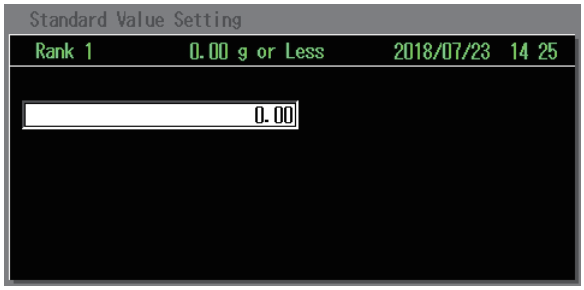


Fig. 10-151

10.9.3.4 Reject Direction

Set the Reject Direction for each rank. Select from Center/Dir.1/Dir.2/... For example, if the interlocking Reject Device is an arm type, the left side of the first Reject Device is assigned to "Dir.1", the right side to "Dir.2", the left side of the second Reject Device to "Dir.3", the right side to "Dir.4" and so on.

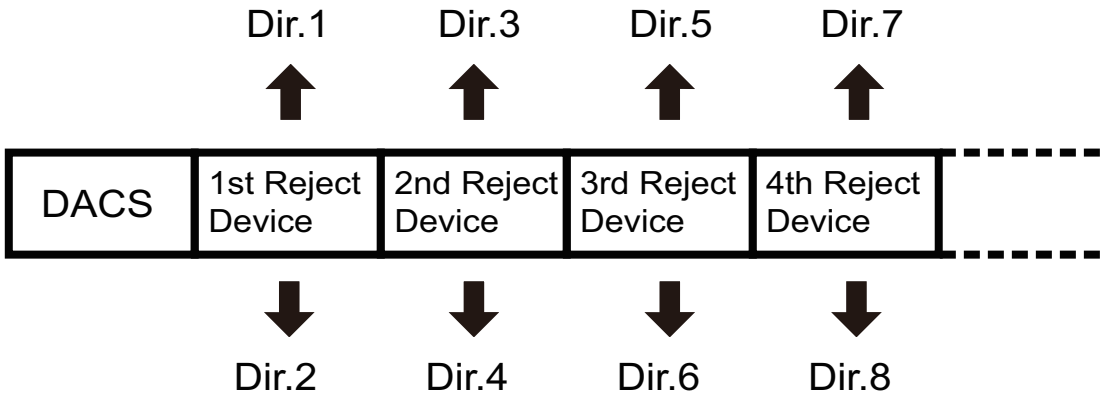


Fig. 10-152

To set the Reject Direction, follow the procedure below:

NOTE

- When the "Reject Setting" is set to "by Preset" in the System Configuration in Installation level (Level 2), "Rejector Setting" is displayed in the Preset menu. When set to "For All", it is displayed on the Setup Menu. (Refer to "6.5.7.4 Reject Func. Select.")

1. Display the Preset menu (Basic) screen.
2. Select and enter "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter "Reject Setting".

   ▶The Reject Setting screen is displayed.

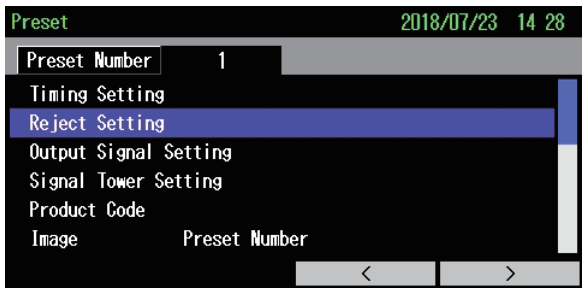


Fig. 10-153

4. Select and enter "Rank X Reject Direction".

   ▶The Rank X Reject Direction screen is displayed.

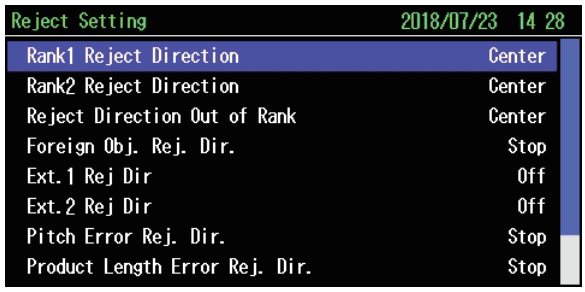


Fig. 10-154

5. Select and enter the reject direction.

   ▶The set Reject Direction is displayed.

   ▶Setting of the Reject Direction is completed.

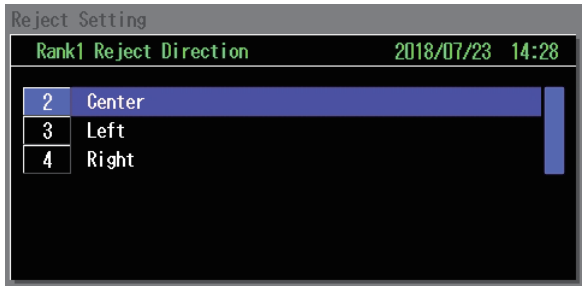


Fig. 10-155

10.9.3.5 Output Condition Setting

Select the port that outputs signals when each rank is allocated.
To configure the Output Condition Setting, follow the procedure below:

NOTE

- When the "Reject Setting" is set to "by Preset" in the System Configuration in Installation level (Level 2), "Output Condition Setting" is displayed in the Preset menu. When set to "For All", it is displayed on the Setup Menu. (Refer to "6.5.7.4 Reject Func. Select.")

1. Display the Preset menu (Basic) screen.
2. Select and enter "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter "Output Signal Setting".

   ▶The Output Signal Setting screen is displayed.
4. Select and enter "Output Condition Setting".

   ▶The Output Condition Setting screen is displayed.

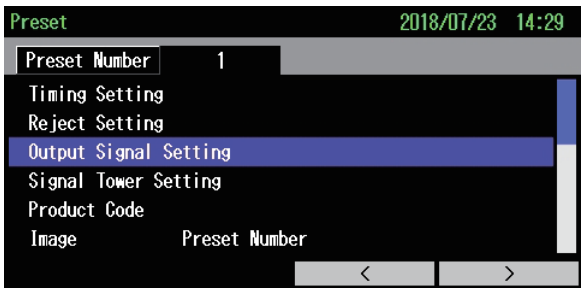


Fig. 10-156

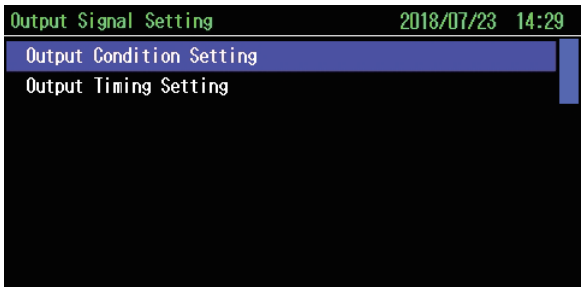


Fig. 10-157

5. Select and enter "Rank X".

   ▶The Rank X screen is displayed.

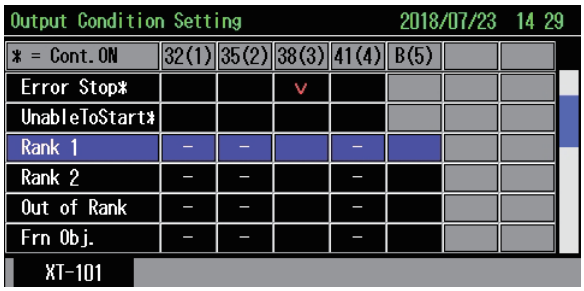


Fig. 10-158

6. Select and enter the port to output.

   ▶This switches between "Off" and "On".
7. Press the [Exit] key.

   ▶The Output Condition Setting is completed.

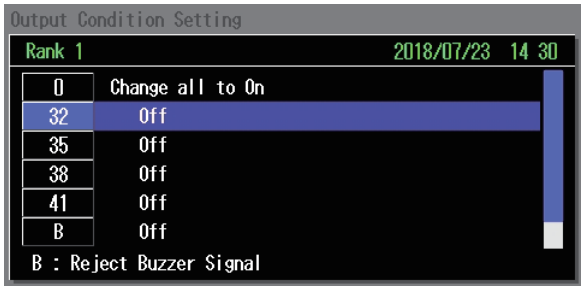


Fig. 10-159

10.9.3.6 Signal Tower Setting

Select output to signal tower when each rank is allocated.
To configure the Output Condition Setting, follow the procedure below:

NOTE

- When the "Reject Setting" is set to "by Preset" in the System Configuration in Installation level (Level 2), "Signal Tower Setting" is displayed in the Preset menu. When set to "For All", it is displayed on the Setup Menu. (Refer to "6.5.7.4 Reject Func. Select.")

1. Display the Preset menu (Basic) screen.
2. Select and enter "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter "Signal Tower Setting".

   ▶The Signal Tower Setting screen is displayed.
4. Select and enter "Output Condition Setting".

   ▶The Output Condition Setting screen is displayed.

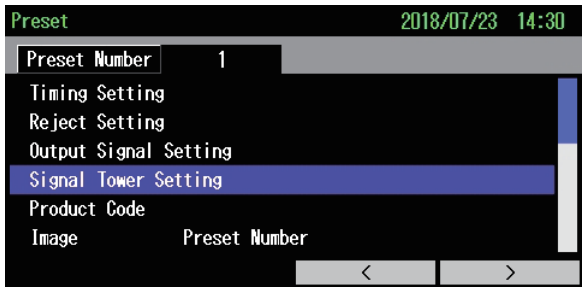


Fig. 10-160

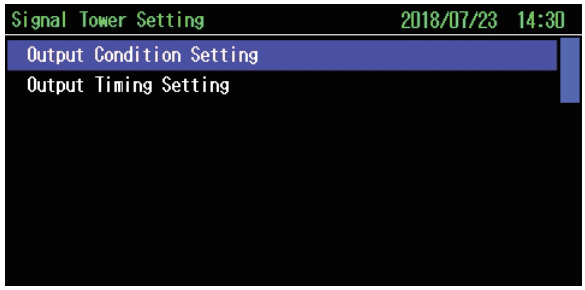


Fig. 10-161

5. Select and enter "Rank X".

   ▶The Rank X screen is displayed.

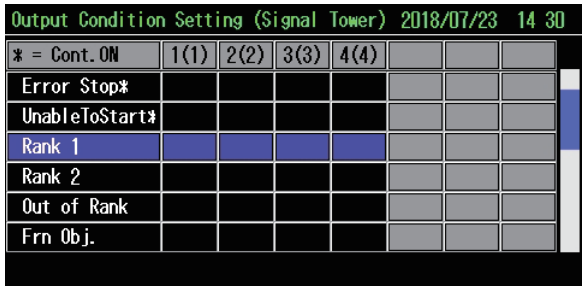


Fig. 10-162

6. Select and enter the port to output.

   ▶This switches between "Off" and "On".
7. Press the [Exit] key.

   ▶The Output Condition Setting is completed.

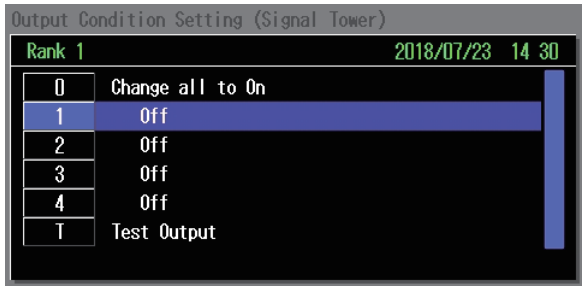


Fig. 10-163

10.9.3.7 Detect Time Automatic Measurement

Each Reject Device operates using the light shielding timing of its inlet photoelectric sensor as the starting point.

NOTE

- When Reject Inlet Sensor Used is set to "With Sensor" in System Configuration, the display will appear.

To automatically measure the timing at which the inspected item passes the inlet photoelectric sensor of each Reject Device after completion of weighing in Detect Time Automatic Measurement, follow the procedure below:

1. Display the Preset menu (Basic) screen.
2. Select and enter "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter "Timing Setting".

   ▶The Timing Setting screen is displayed.

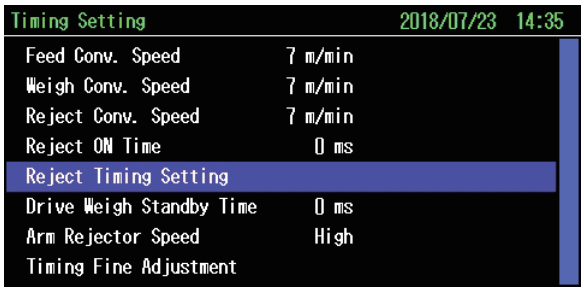


Fig. 10-164

4. Select and enter "Reject Timing Setting".

   ▶The Reject Timing Setting screen is displayed.
5. Select and enter "Detect Time Automatic Measurement",

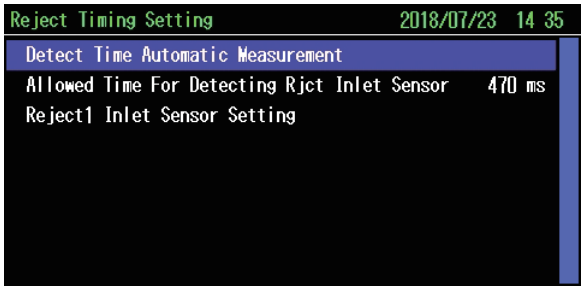


Fig. 10-165

6. Follow the on-screen instructions to conduct measurements.

   ▶The Measurement Completed Setting screen is displayed.

   ▶Detect Time Automatic Measurement is completed.

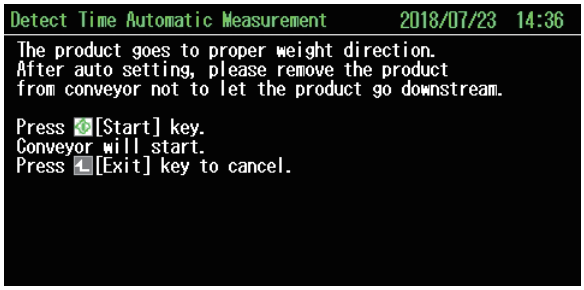


Fig. 10-166

10.9.3.8 Allowed Time For Detecting Reject Inlet Sensor

This is the time to allow detection of an object passing the reject inlet photoelectric sensor. The default is Re-detect Down Time.
To set the Allowed Time For Detecting Reject Inlet Sensor, follow the procedure below:

NOTE

- If the Auto Calculation is set to "OFF" in the timing setting of Installation level (Level 2), the set value is in effect. When it is set to "On", Auto Calculation takes place at the start of operation and the setting returns to the default value.

1. Display the Preset menu (Basic) screen.
2. Select and enter "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter "Timing Setting".

   ▶The Timing Setting screen is displayed.
4. Select and enter "Reject Timing Setting".

   ▶The Reject Timing Setting screen is displayed.
5. Select and enter "Allowed Time For Detecting Rjct Inlet Sensor".

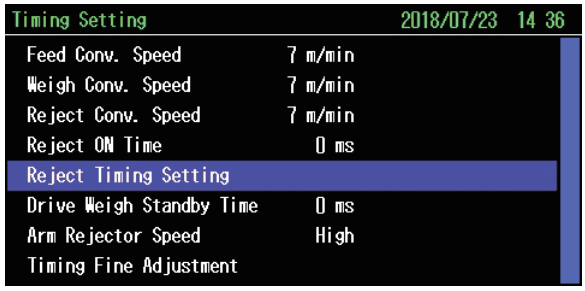


Fig. 10-167

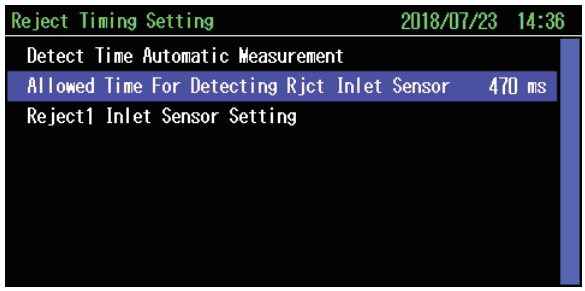


Fig. 10-168

6. Input and enter a numeric value.

   ▶The set Allowed Time For Detecting Reject Inlet Sensor is displayed.

   ▶Setting of the Allowed Time For Detecting Reject Inlet Sensor is completed.

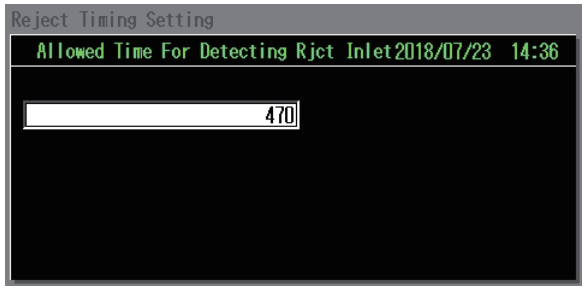


Fig. 10-169

10.9.3.9 Time To Reach Inlet Sensor

Time from completion of weighing to shielding of the reject inlet photoelectric sensor. The measured value is entered in Detect Time Automatic Measurement.
To set the Time To Reach Inlet Sensor, follow the procedure below:

1. Display the Preset menu (Basic) screen.
2. Select and enter "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter "Timing Setting".

   ▶The Timing Setting screen is displayed.
4. Select and enter "Reject Timing Setting".

   ▶The Reject Timing Setting screen is displayed.
5. Select and enter "Reject X Inlet Sensor Setting".

   ▶The Reject X Inlet Sensor Setting screen is displayed.

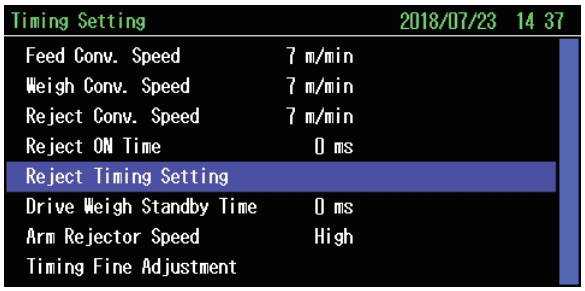


Fig. 10-170

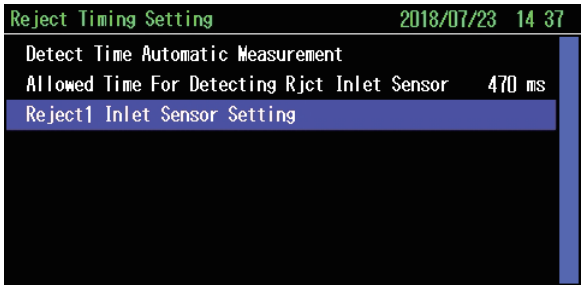


Fig. 10-171

6. Select and enter "Time To Reach Inlet Sensor".

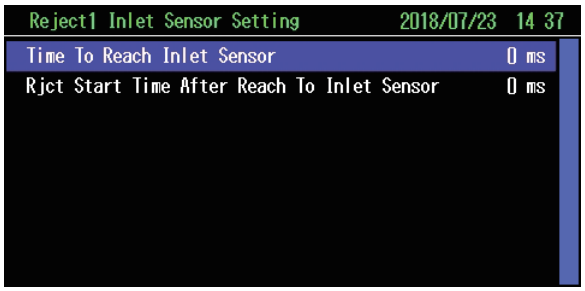


Fig. 10-172

7. Input and enter a numeric value.

   ▶The set Time To Reach Inlet Sensor is displayed.

   ▶Setting of the Time To Reach Inlet Sensor is completed.

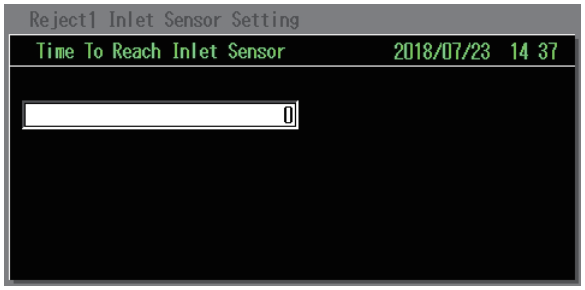


Fig. 10-173

10.9.3.10 Reject Start Time After Reach To Inlet Sensor

Time from shielding of the reject inlet photoelectric sensor to the start of reject operation.
To set the Reject Start Time After Reach To Inlet Sensor, follow the procedure below:

1. Display the Preset menu (Basic) screen.
2. Select and enter "Detailed Setting".

   ▶The Preset menu (Detailed) screen is displayed.
3. Select and enter "Timing Setting".

   ▶The Timing Setting screen is displayed.
4. Select and enter "Reject Timing Setting".

   ▶The Reject Timing Setting screen is displayed.
5. Select and enter "Reject X Inlet Sensor".

   ▶The Reject X Inlet Sensor Setting screen is displayed.

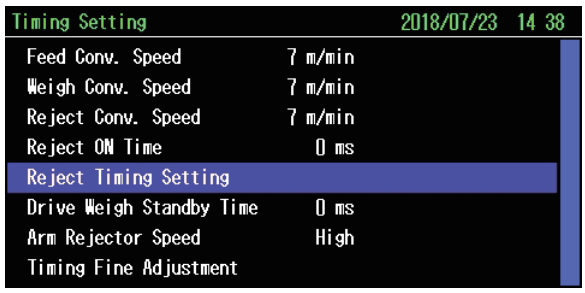


Fig. 10-174

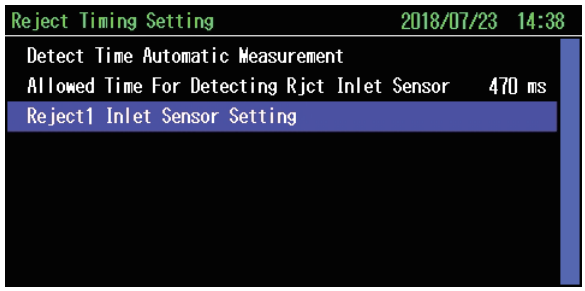


Fig. 10-175

6. Select and enter "Rjct Start Time After Reach To Inlet Sensor".

   ▶The set Reject Start Time After Reach To Inlet Sensor is displayed.

Fig. 10-176

7. Input and enter a numeric value.

   ▶Setting of Reject Start Time After Reach To Inlet Sensor is completed.

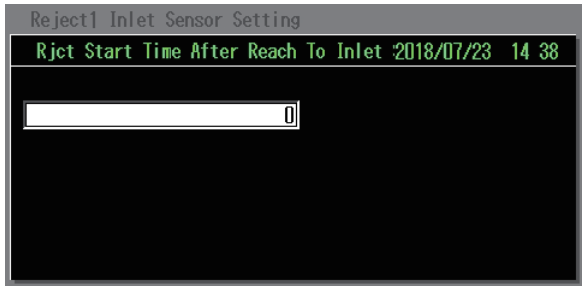


Fig. 10-177

10.9.4 System Configuration

An item is added to the System Configuration menu displaying Rank Select specifications.

NOTE

- System Configuration can be conducted using operation Level 2.

10.9.4.1 Tail Stage Product Reject Operation

Only the Reject Conveyor can be set to stop after completion of the reject operation when the Stop key is pressed during reject operation. Even if there are two or more Reject Devices, the conveyor that has rejected products stops first. This is used to avoid accumulation of products on a Reject Conveyor when stopped if there are two or more Reject Devices.
Setting "0" (Off) stops instantaneously.
Setting "1" (On) stops after completion of reject operation.
To set Tail Stage Product Reject Ope, follow the procedure below:

1. Display the System Configuration screen.
2. Select and enter "Rejection Operation on Stop".

   ▶The Rejection Operation on Stop screen is displayed.

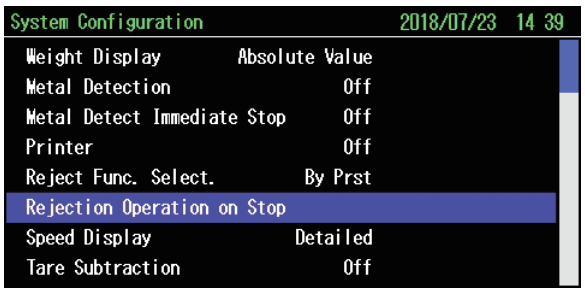


Fig. 10-178

3. Select and enter the "0" to deactivate Tail Stage Product Reject Operation.
   Select and enter the "1" to activate Tail Stage Product Reject Operation.

   ▶Rejection Operation on Stop screen in which Tail Stage Product Reject Operation is set appears.

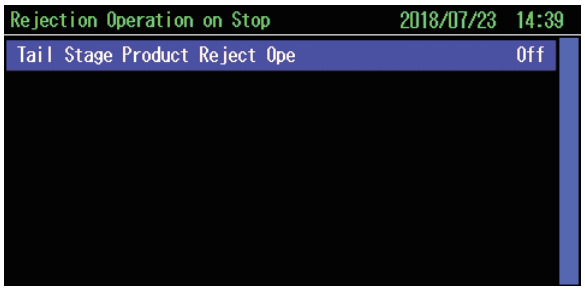


Fig. 10-179

10.9.4.2 Operation Time after Tail Stage Product Reject

Set how many seconds it takes for the Reject Conveyor to stop after the reject operation has been completed. To stop immediately after reject, set to 1 ms. This is used when it takes a long time for products to be rejected completely after the reject operation.

NOTE

- When Tail Stage Product Reject Ope is set to "On" in System Configuration, the display will appear.

To set the Operation Time after Tail Stage Product Reject, follow the procedure below:

1. Display the System Configuration screen.
2. Select and enter "Rejection Operation on Stop".

   ▶The Rejection Operation on Stop screen is displayed.

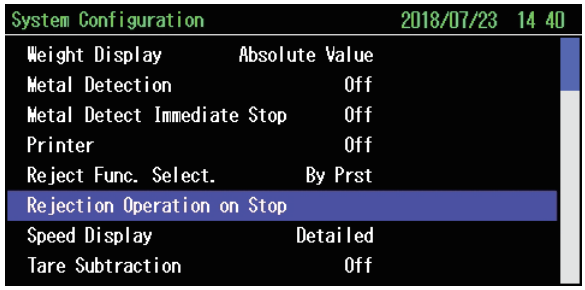


Fig. 10-180

3. Select and enter "Ope Time aft Tail Stage ProdRej".

Fig. 10-181

4. Input and enter a numeric value.

   ▶ The set Operation Time after Tail Stage Product Reject is displayed.

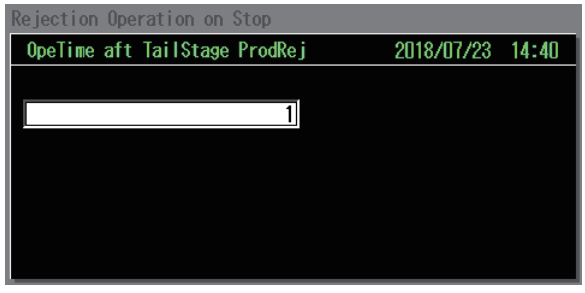


Fig. 10-182

10.9.4.3 Reject Inlet Sensor Used

Set whether the photoelectric sensor for detecting objects is used at the inlet (upstream) of the Reject Device. When the sensor is not installed at the inlet of each Reject Device, set to "Off". When the sensor is installed at the inlet of each Reject Device, set to "On".
To set Reject Inlet Sensor Using, follow the procedure below:

1. Display the System Configuration screen.
2. Select and enter "Reject Inlet Sensor Setting".

   ▶The Reject Inlet Sensor Setting screen is displayed.

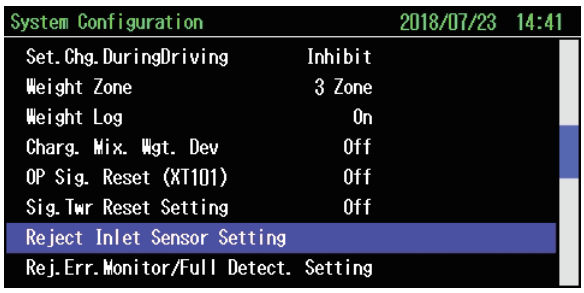


Fig. 10-183

3. Select and enter "Reject Inlet Sensor Using".

   ▶The Reject Inlet Sensor Used screen is displayed.

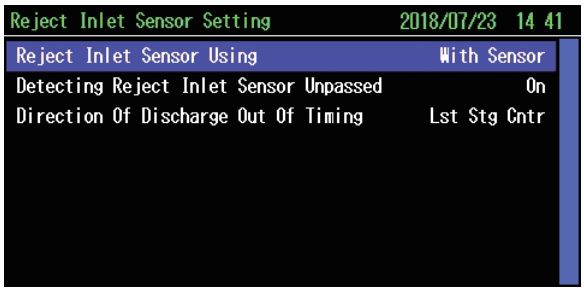


Fig. 10-184

4. Select and enter "Use Reject X Inlet Sensor".

   ▶This switches between "On" and "Off".

   ▶Setting of Reject Inlet Sensor Using is completed.

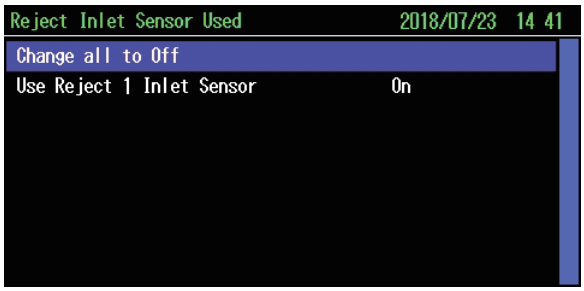


Fig. 10-185

10.9.4.4 Detecting Reject Inlet Sensor Unpassed

Set whether errors are detected if the reject inlet photoelectric sensor is not blocked when removing products deliberately after completion of weighing.
Setting "0" (On) detects errors.
Setting "1" (Off) does not detect errors.

NOTE

- When Reject Inlet Sensor Used is set to "With Sensor" in System Configuration, the display will appear.

To set Detecting Reject Inlet Sensor Unpassed, follow the procedure below:

1. Display the System Configuration screen.
2. Select and enter "Reject Inlet Sensor Setting".

   ▶The Reject Inlet Sensor Setting screen is displayed.

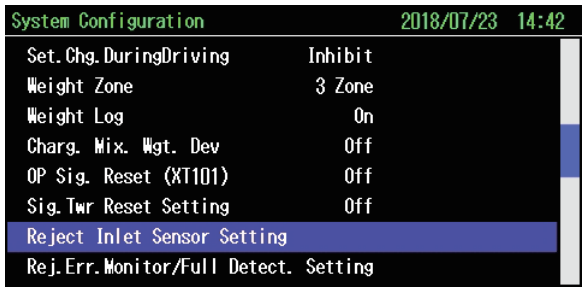


Fig. 10-186

3. Select and enter "Detecting Reject Inlet Sensor Unpassed".

   ▶Detecting Reject Inlet Sensor Unpassed is displayed.

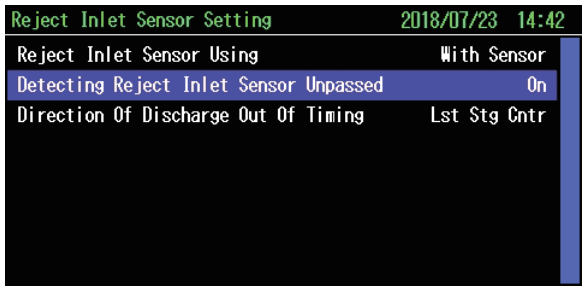


Fig. 10-187

4. Select and enter "0" to perform error detection.
   Select and enter "1" to not perform error detection.

   ▶Reject Inlet Sensor Setting screen in which Detecting Reject Inlet Sensor Unpassed is set appears.

   ▶Setting of Detecting Reject Inlet Sensor Unpassed is completed.

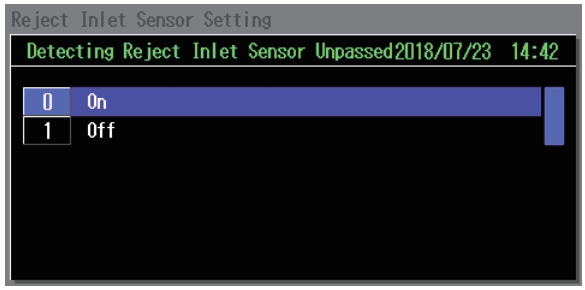


Fig. 10-188

10.9.4.5 Direction Of Discharge Out Of Timing

Set the discharge direction when the reject inlet photoelectric sensor is blocked at the times other than the appropriate timing, because items that have not been weighed were put on the line deliberately or pitch was altered.

NOTE

- When Reject Inlet Sensor Used is set to "With Sensor" in System Configuration, the display will appear.

Setting "0" (Stop) stops.
Setting "1" (Lst Stg Cntr) rejects to Last Stage Center.
Setting "2" (Lst Stg Left) rejects to Last Stage Left.
Setting "3" (Lst Stg Rigt) rejects to Last Stage Right.
To set Direction Of Discharge Out Of Timing, follow the procedure below:

1. Display the System Configuration screen.
2. Select and enter "Reject Inlet Sensor Setting".

   ▶The Reject Inlet Sensor Setting screen is displayed.

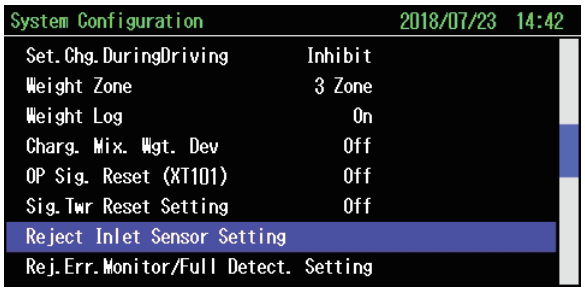


Fig. 10-189

3. Select and enter "Direction Of Discharge Out Of Timing".

   ▶The Direction Of Discharge Out Of Timing is displayed.

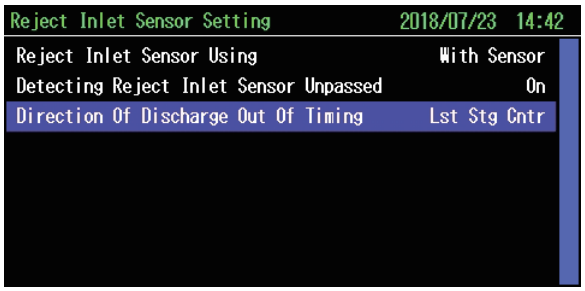


Fig. 10-190

4. Select and enter the "0" (Stop) to stop the conveyor.
   Select and enter the "1" (Lst Stg Cntr) to reject to Last Stage Center.
   Select and enter the "2" (Lst Stg Left) to reject to Last Stage Left.
   Select and enter the "3" (Lst Stg Rigt) to reject to Last Stage Right.

   ▶Reject Inlet Sensor Setting screen in which Direction Of Discharge Out Of Timing is set appears.

   ▶Setting of Direction Of Discharge Out Of Timing is completed.

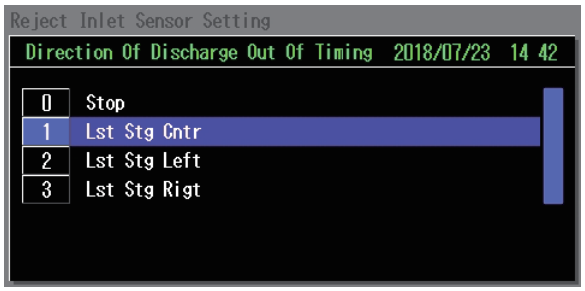


Fig. 10-191

10.9.5 Statistics & Output Setting

10.9.5.1 Total Items (Rank Select)

Which ranks are included in Total (Std.Deviation, Maximum, etc. at the lower left of the Total Count Zoom Display) can be set.
Setting "2" (All Ranks) includes ranks 1 to 32 and Out of Rank in Total.
Setting "3" (Mid Rank) includes ranks 2 to 32 (Rank 1 and Out of Rank are excluded from All Ranks) in Total.
To set Total Items (Rank Select), follow the procedure below:

1. Display the Statistics & Output Setting screen.
2. Select and enter "Total Items (Rank Select)".

   ▶The Total Items (Rank Select) screen is displayed.

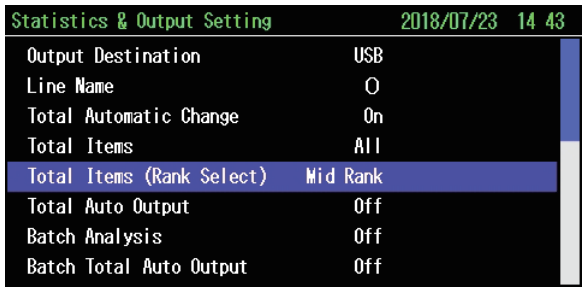


Fig. 10-192

3. Select and enter the "2" to include All Ranks in Total.
   Select and enter the "3" to include Mid Rank in Total.

   ▶ Statistics & Output Setting screen in which Total Items (Rank Select) is set appears.

   ▶Setting of Total Items (Rank Select) is completed.

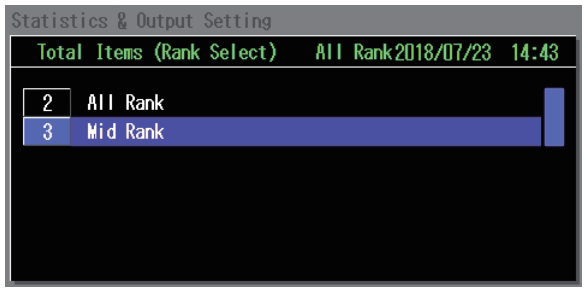


Fig. 10-193

11 APPENDIX

11.1 Model Specifications

Specifications by model are shown in the "Table 11-1 ", "Table 11-2 "

Table 11-1

Item		Specifications			
Model		DACS-GN-S015-**/**-I-S		DACS-GN-S060-**/**-I-S	
Capacity		1500 g (600<=>1500 multirange convert) Span adjustment weight: 1 kg		6000 g (3000<=>6000 multirange convert) Span adjustment weight: 5 kg	
Weighing range		6 to 600 g	15 to 1500 g	30 to 3000 g	60 to 6000 g
Minimum graduation		0.05 g	0.1 g	0.2 g	0.5 g
Speed *1		Max. 440 times/min.			Max. 240 times/min.
Accuracy (3σ) *2		± 0.1 g or more	± 0.2 g or more	± 0.4 g or more	± 1 g or more
Product condition	length	46 to 400 mm		58 to 500 mm	
	Width	20 to 320 mm		20 to 400 mm	
	Height	10 to 180 mm (10 to 150 mm with windshield cover equipped) *3			
Weighing conveyor		W: 100 mm × L: 150 mm (SS only) (W: 670 mm × L: 605 mm) W: 160 mm × L: 250 mm (*6) (W: 670 mm × L: 605 mm) (*6) W: 160 mm × L: 350 mm (*6) (W: 670 mm × L: 705 mm) (*6) W: 160 mm × L: 450 mm (*6) (W: 670 mm × L: 805 mm) (*6) W: 240 mm × L: 250 mm (*6) (W: 670 mm × L: 605 mm) (*6) W: 240 mm × L: 350 mm (*6) (W: 670 mm × L: 705 mm) (*6) W: 240 mm × L: 450 mm (*6) (W: 670 mm × L: 805 mm) (*6) W: 320 mm × L: 350 mm (*6) (W: 800 mm × L: 705 mm) (*6) W: 320 mm × L: 450 mm (*6) (W: 800 mm × L: 805 mm) (*6)		W: 240 mm × L: 250 mm (*6) (W: 670 mm × L: 605 mm) (*6) W: 240 mm × L: 350 mm (*6) (W: 670 mm × L: 705 mm) (*6) W: 240 mm × L: 450 mm (*6) (W: 670 mm × L: 805 mm) (*6) W: 320 mm × L: 350 mm (*6) (W: 800 mm × L: 705 mm) (*6) W: 320 mm × L: 450 mm (*6) (W: 800 mm × L: 905 mm) (*6) W: 320 mm × L: 550 mm (*6) (W: 800 mm × L:1005 mm) (*6) W: 320 mm × L: 650 mm (*6) (W: 800 mm × L:1205 mm) (*6) W: 400 mm × L:445 mm (W: 800 mm × L:900 mm) W: 400 mm × L:545 mm (W: 800 mm × L:1000 mm) W: 400 mm × L:645 mm (W: 800 mm × L:1200 mm)	
Material of conveyor belt		Plain belt (urethane)			
Weighing sensor		Strain gage type load cell (high output type)			
Display and interface		Standard type RCU: 7-inch color LCD Tact key switch, command dial			

Table 11-1

Item	Specifications	
Model	DACS-GN-S015-**/**-I-S	DACS-GN-S060-**/**-I-S
Language	Japanese・English	
Preset setting	Up to 300 items can be registered.	
Protection grade	SS (Non-waterproof): IP30 (International standard) CR (Waterproof): IP69K (International standard)	
Belt speed	SS (Non-waterproof): Max.120m/min. CR (Waterproof・Corrosion resistance): Max.95m/min.	SS (Non-waterproof): Max.120m/min. CR (Waterproof・Corrosion resistance): Max.95m/min. Over 3000g, Max.60m/min. for SS and CR.
Use environment *4	Temperature: 0 to 40°C Humidity: 30 to 85% (no condensation)	
Power	Single-phase 100 to 120 VAC (standard) Single-phase 200 to 240 VAC (standard) Single-phase 120 to 240 VAC (UL)	
Power consumption	155 W	255 W
Main body weight	Approx. 80 kg	Approx. 90 kg
Height of belt surface (Jack adjustment)	750 to 900 mm (Adjustment width ± 50)	
Main body material and surface processing	Power source and main body Weigher Conveyor frame Legs	Stainless (SUS304) Stainless (SUS304) SS (non-waterproof): aluminum (alumite) CR (waterproof): Stainless (SUS304) Stainless (SUS304)
Standard equipment	USB slot (for data output) *5	

*1 Capacity varies depending on the conveyor size, shape and condition of the product, as well as the supplied status.

- When zero adjustment is necessary for each weighing, the speed is the half of the described.

*2 Depends on the shape and condition of the product, and environment condition such as vibration of the floor.

*3 Windshield cover is an option.

*4 To keep the weighing accuracy, use the device within the temperature range of ±5°C/h.

*5 Only the device specified by Ishida can be connected to the USB connector. As USB memory is not attached, purchase an USB memory specified by Ishida.

- Data output is available with the optional printer as well.

*6 CR is 5 mm shorter than the listed dimensions.

Table 11-2

Item		Specifications		
Model		DACS-GN-F006-**/SS-I-S	DACS-GN-F030-**/SS-I-S	
Capacity		600 g Span adjustment weight: 600 g	3000 g Span adjustment weight: 3 kg	
Weighing range		1.5 to 600 g	3 to 500 g	7.5 to 3000 g
Minimum graduation		0.01 g	0.02 g	0.05 g
Speed *1		Max. 600 times/min.	Max. 440 times/min.	
Accuracy (3σ)*2		± 0.02 g or more	± 0.1 g or more	
Product condition	length	46 to 320 mm	58 to 500 mm	
	Width	20 to 160 mm	20 to 320 mm	
	Height	10 to 180 mm (10 to 150 mm with wind cover equipped) *3		
Weighing conveyor		L: 100 mm × W: 150 mm L: 160 mm × W: 250 mm L: 160 mm × W: 350 mm	L: 240 mm × W: 250 mm L: 240 mm × W: 350 mm L: 240 mm × W: 450 mm L: 320 mm × W: 350 mm L: 320 mm × W: 450 mm L: 320 mm × W: 550 mm	
Material of conveyor belt		Plain belt (urethane)		
Weighing sensor		Electromagnetic sensor load cell		
Display and interface		Standard type RCU: 7-inch color LCD Tact key switch, command dial		
Language		Japanese・English		
Preset setting		Up to 300 items can be registered.		
Protection grade		IP30 (International standard)		
Belt speed		Max. 120 m/min.		
Use environment *4		Temperature: 0°C to 40°C Humidity: 30 to 85% (no condensation)		
Power		Single-phase 100 to 120 VAC (standard) Single-phase 200 to 240 VAC (standard) Single-phase 120 to 240 VAC (UL)		
Power consumption		155 W	255 W	
Main body weight		Approx. 80 kg		
Height of belt surface (Jack adjustment)		750 to 900 mm (Adjustment width ± 50)		

Table 11-2

Item	Specifications	
Model	DACS-GN-F006-**/SS-I-S	DACS-GN-F030-**/SS-I-S
Main body material and surface processing	Power source and main body Weigher Conveyor frame Legs	Stainless (SUS304) Stainless (SUS304) Aluminum(alumite) Stainless (SUS304)
Standard equipment	USB slot (for data output) *5	

*1 Capacity varies depending on the conveyor size, shape and condition of the product, as well as the supplied status.

- When zero adjustment is necessary for each weighing, the speed is the half of the described.

*2 Depends on the shape and condition of the product, and environment condition such as vibration of the floor.

*3 Wind cover is an option.

*4 To keep the weighing accuracy, use the device within the temperature range of ± 5°C/h.

*5 Only the device specified by Ishida can be connected to the USB connector. As USB memory is not attached, purchase an USB memory specified by Ishida.

- Data output is available with the optional printer as well.

INDEX

I

L

M

N

O

P

R

S

T

U

W

X

Z

MODIFICATION HISTORY

Version	Date	Part Number	Changes
1	2017 - 03		
2	2018 - 10	100-017-7281-01	Add 10.9 Rank select/multi-direction reject. Renew front section. Change Table 6-1.
3	2019 - 02	100-017-7281-02	Change Table 2-2. Addition of wording of twin cell specification to chapter 5. Add Table 9-1 Error code.
4	2020 - 07	100-017-7281-03	Change Fig 5-41,Fig 5-42.

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