PREFACE

Multihead weigher is automatic weighing equipment by using MCU control system to achieve high speed, accuracy and stable performance. Different function could be expanded according to customer’s requirements.

To ensure proper use and safe operation, please refer this operation manual carefully before using. This manual contains most of the instruction that how to start machine and setup parameters.

If any problem arises while using Multihead weigher machine, please feel free to contact our service department. We will try our best to provide you a professional service.

NOTICE

Working Environment:
- Temperature: 0° - 45°C.
- Humidity: 35% - 85% none condensing.
- Keep away from the disturb source.
- Installation place should on rigid, horizontal and no vibration surface.
- Leave enough space around machine for maintenance.

DO’s and DON’Ts

- Only professional engineer is allowed to repair the machine when failure happens.
- Turn off the main power while cleaning, moving or repairing the machine.
- Avoid bumping or strong pressure on weigh hoppers.
- The machine should be treated carefully while transporting, installation and disassembling. Prevent from strong vibration.
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CHAPTER 1 INTRODUCTION

This Chapter gives brief introduction of Multihead weigher machine.

MAIN COMPONENTS

**Main Vibrator:**
Main vibrator is the vibrating source for the top cone, from top cone; product will be distributed to linear vibrator pan.

**Linear Vibrator:**
Linear vibrator is the vibrating source for the linear vibrator pan; product will be distributed to intermediate hopper (feed hopper).
**Intermediate (Feed) Hopper:**
Intermediate (feed) hopper receives products from linear vibrator. It will discharge product to weigh hopper which is below it, when weigh hopper is empty.

**Weigh Hopper:**
Each weigh bucket is connecting to load cells and it will read weight of product inside the weigher, and controller will use the weighted data to make combination. Selected weigh hopper will discharge products to the collecting hopper or machine.
The product is fed to main vibrator pan than it is distributed to feed hopper by linear vibrator pan of each head. Each feed hopper will drop the product into weigh hopper as soon as it becomes empty.

The weigher computes the product weight in individual weigh hopper and identifies which combination contains weight closest to target weight. The Multihead weigher will open all the hopper of this combination and product falls to the packaging machine. The working principle of Multihead weigher is as shown in chart.
CHAPTER 2 CONNECTION

SYNCRONIZING WITH PACKAGING MACHINE

**Master Mode**: When Multihead weigher servers as master.

**Operation Sequence**:

1. Machine will set continuous signal to dump request input.

2. When combination of weigher is ready, machine sends ready signal and drop material to machine.

3. On receiving ready signal slave machine will run single packing cycle.
**Slave Mode**: When packaging machine serves as master.

**Operation Sequence:**

1. When combination of weigher is ready, Multihead weigher sends the ‘ready’ signal to the packaging machine.

2. After packaging machine receives the ‘ready’ signal, it sends ‘dump request signal’ to weigher to dump the weight.

3. After receiving the dump request signal, Multihead weigher dumps the weight into packaging machine.
CHAPTER 3 OPERATION

This Chapter Explains The Daily Procedure.

### STARTUP PROCEDURE

**Main Power On:**
Turn on the main power switch, installed in system.
After the main power is switch on, LED lights on HMI will be on.

As shown in above figure, after system initialization “Please Press Zero” alert will display to remind you to press zero before starting machine.

During this process all weigh hopper will open and close in sequence to empty the residual, then the zero function will be performed. Unless zeroing the whole machine run command will remain locked.
Once zero function is activated, machine will display all weigh hopper readings. It should be steady in between -0.2 to +0.2g after this function.

**Note:** Initial zero is compulsory. Only after zeroing is completed "RUN" button will be unlocked.
Page Name:

Page name identifies the content of each page.

Time & Date Display:

Local time and date will display on each page.
After initial zero is completed, “Automatic Run Mode page” will be displayed as shown in figure.
Main Navigation Menu:
By pressing home button, the main navigation menu will be activated. From this menu user can access “Automatic Run”, “Program Setup”, “System Setup”, “Manual Test”, “Calibration”, “Program Copy”, “Summary”, “Password” and “About”.

Automatic Run:
Use this menu to start, stop, other operation and to observe live statistics of the system like actual weight, target weight, overweight, under weight, and average combination hopper.

Program Setup:
Use this menu to change the program setting for operation.

System Setup:
Use this menu to change the system setting for the operation.

Manual Test:
Use this menu to perform the manual testing of all functions of vibrators, buckets and also to check input and output of the system.

Calibration:
Use this menu to perform calibration of all loadcells.

Program Copy:
Use this menu to backup the program in the memory or to select the saved program for the operation.

Summary:
Use this menu to check the production summary and error log generated during operation.
Password:
Use this menu to change the password of setups and calibration page.

About:
Use this menu to check the version of all cards.
After initial zero process is completed, touch ‘Program Copy’ from the main navigation menu to select program for system.

On the left corner of the screen list of all program number and respective name is given, accordingly selection of program can be done.
HMI>>Machine:

Press “>>” button to load preset program from HMI memory to the machine.

Popup screen will open when this button is pressed, specify program number, accordingly program name will display press “Copy” button to complete process.

If program is copied completely then “COPYING...” message will display as shown in above screen.
Machine>>HMI:

Press “>>” button to backup program from machine to HMI memory.

Popup screen will open when this button is pressed, specify program number and give program name to save the program in HMI memory.

If program is saved successfully then “COPYING...” message will display and if any error occurs during copy then “COPY ERROR” message will display.
Automatic Run

Touch “Automatic Run” from main navigation window to enter the page.

**RUN:**
Press “RUN” button to start the operation, weigher will start its function and “RUN” button will enable “STOP” button. And press “STOP” button to stop the working.

When machine is in running condition “HOME” button is invalid, user can’t switch to another window.

**EMPTY:**
Press “EMPTY” button to clean out all products on the weigher. During this operation all other buttons on the screen will be invalid except “STOP” button. Press “STOP” button to stop empty function.
ZERO:
When “ZERO” button is pressed, in sequence weigh hopper will open and dump the product, reading of each head will be zero. During this operation all other buttons on the screen are invalid.

STOP:
Press “STOP” button to stop the operation.

INFO DISPLAY:
Following data is displayed on this page.

Program No, & Name:
This tag will display current program number and name given to that program.

Drop Weight:
The last weight dropped on drop signal.

Actual Speed:
This will display the speed, at which weigher is running.

Target Wt:
The target weight is preset desired weight.

Over Wt:
The overweight is presettable maximum over weight limit of the weighed product.

Under Wt:
The underweight is presettable minimum under weight limit of the weighed product.

Average Comb Hopper:
The average combination hopper will display number of weigh hopper that are selected in a combination.
HELP:
Press “i” to activate the help menu, press again to deactivate.
Help menu explains the meaning of each colour that the image changes during operation.

**Colour Indication:**

- **HPR DISABLED**: Respective hopper is deactivated.
- **DEFAULT**: Respective hopper is in normal state.
- **FORCE DUMP**: Respective hopper should be dump forcibly.
- **COMBINATION**: Respective hoppers are in combination.
- **BEING FED**: Respective Hoppers products are being fed.
- **UNDER WT**: Respective Hoppers product weight is less than target weight.
- **AUTO ZERO**: Respective Hopper is currently under auto Zeroing process.
- **HEAD ERROR**: Respective Hopper has error.
- **OVER WT**: Respective Hoppers product weight is Greater than target weight.
- **RUN CHP**: Collecting hopper is in running state.
FUNCTION ERROR:
During functions error mentioned below can be generated, description of error are given.

Alert 1

Alert 2:
Alert 3:

**OVERWT COMBINATION**

- TARGET WT: 250.0 g
- OVER WT: 0.5 g
- UNDER WT: 0.5 g
- AVG COMB HPR: 0.0

Alert 4:

**NO HEAD FOUND**

- TARGET WT: 250.0 g
- OVER WT: 0.5 g
- UNDER WT: 0.5 g
- AVG COMB HPR: 0.0
Alert 5:

Alert 6:
To test system manually, touch “Manual Test” on main navigation menu that will open two selections “i/o check” and “Function check”.

**I/O CHECK:**

**I/O CHECK**

<table>
<thead>
<tr>
<th>RUN</th>
<th>OFF</th>
<th>CHECK</th>
<th>READY 1</th>
<th>OFF</th>
<th>CHECK</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPTY</td>
<td>OFF</td>
<td>CHECK</td>
<td>READY 2</td>
<td>OFF</td>
<td>CHECK</td>
</tr>
<tr>
<td>OVERWT</td>
<td>OFF</td>
<td>CHECK</td>
<td>DUMPED 1</td>
<td>OFF</td>
<td>CHECK</td>
</tr>
<tr>
<td>FEEDING</td>
<td>OFF</td>
<td>CHECK</td>
<td>DUMPED 2</td>
<td>OFF</td>
<td>CHECK</td>
</tr>
<tr>
<td>DUMP REQ. 1</td>
<td>ON</td>
<td></td>
<td>DUMP REQ. 2</td>
<td>OFF</td>
<td></td>
</tr>
</tbody>
</table>
I/O Check:
To check input and output of system manually, press this option.

To check output, press check button if output is working properly then it will be indicated green colour as shown in above screen.

To check input, give signal to the system, if it is working properly then indication of that input will be displayed on the screen.

Function Check:
Press on the indicated place to check the function. Once it is pressed respective symbol will turn to Yellow, which indicates that function is working. To enable and disable head, press that head. It will turn “RED”, which indicates head is disabled.

**Clean:**
To clean the machine, press “CLEAN” button which display on the screen, other buttons are become invalid when cleaning operation is running. To stop clean function, press “STOP” button.

**Once:**
To run whole cycle of selected head, press “ONCE” button.

**Help Info:**
Meaning of color displayed on 3D weigher image is known by pressing “i” on right top corner of the page.

This display of status can be deactivated by pressing “I” again.
CHAPTER 4 WEIGHER SETUP

This Chapter Explains all the parameters required to setup weigher.

PROGRAM SETUP

Touch “PROGRAM SETUP” on main navigation menu to enter the page. There will be a password window open. Input “1111” in password and press enter to go.

There are five setup screens in total.
Program Number:
Program No. indicates the current program that is in use for the operation.

Page Selection:
Press on the page number to go to different setup Pages. The selected page will be display in dark grey colour.

Any changes made within the current program, will be saved automatically.
List of parameters in setup 1 are explained below.

**Target Wt.**
This is the desired weight which is achieved by the combination. Use this parameter to set to change the target weight for current program. Its unit is in grams.

**Over Wt.**
Use this parameter to set up the overweight limit in the combination. Its unit is in grams.

**Under Wt.**
Use this parameter to set up the underweight limit in the combination. Its unit is in grams.

**Correct Wt.**
These function servers as the fast solution to correct the weight variation. When there is consistent weight variation caused by improper setting (delay time etc), use correction.
weight setting to bring the weight back closest to the target weight.

**I.e.** if improper hopper open time causes product leakage, thus result in consistent weight variation of 3 grams; correction weight can be set as – 3g.

**Zero Interval:**
The load cell performs zeroing automatically after set time of combination. This function aims to remove error to ensure weighing accuracy. In Zero status, the hopper is cleared up and will not be consider in combination. Its unit is in minute.

**Stagger Dump Time:**
Stagger dump is used when the products could cause blockage of the outlet funnel. When this function is used, weigh hoppers selected in combination will open in sequence.

Stagger dump interval is used to set the time interval between each bucket is opened. Its unit is ms. System will multiply the entered value by 10 to get time in millisecond.

**Over Wt. Comb alarm:**
Select the processing ways in case of there isn’t any combination.

- **NO:** Auto enforced dumping. If there is no any combination the weigher computer will recalculate all combination and identifies the overweight closest to the target weight, discharge this overweight products and output the "Overweight" signal.

- **YES:** Manual intervention. The weigher will stop and message will be displayed “OVERWT COMBINATION”, press “DUMP” to remove alert and system will start combination again.

Select the processing ways in case if there isn’t any combination.
Required Speed:
Set an expected speed for Multihead weigher. It can be set according to the working speed of the connected packaging machine. Its unit is combination/minute.

Vibrator Setting:
Touch display button to open the vibrator setting page, where individually or all together the amplitude of linear vibrator can be set and main vibrator amplitude can be set.
List of parameters in setup 2 are explained below.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT FEED TIME</td>
<td>1 sec</td>
<td></td>
</tr>
<tr>
<td>NO PRODUCT PAUSE</td>
<td>1 sec</td>
<td></td>
</tr>
<tr>
<td>FORCE DUMP HOPPER</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>MIN SINGLE HPR WT</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>MULTI COMB TIME</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Product Feed Time:
It refers the lasting time of conveyor feeding to the weigher; conveyor will begin to feed material after weigher output feeding signal. After the product is fed up to the upper limit, the feeding signal will be last signal for "Product Feed Time" and then the weigher stop feeding output feeding signal. Its unit is in seconds.

No Product Pause:
Weigher will pause automatically when the products on the top cone is under the ‘signal start weight’. When the products are over the ‘signal start weight’, weigher will restart automatically.
Force Dump Hopper:
This value is used as judging criteria when no qualified combination is found. When actual underweight hoppers exceed this value, re-combination will take place. When actual underweight hoppers are below this value, weigher will dump the unqualified weights.

Min Single HPR Wt.:
It is a percentage to be set. If single hopper weight is less than certain percentages of target weight, the hopper is not allowed to join combination and it needs feed more material. And this hopper can attend the combination when reaching the certain percentage.

Multi Comb Time:
When target weight is large, it will be divided into several times to discharge. The collecting hopper will open to dump the products into packaging equipment after collecting all the products from the multi-combination times discharges.

CHP Mode:
1: Single timing hopper door open (the right door).
2: The two doors of timing hopper open at the same time.
3: The two doors of timing hopper open by 2input.
4: The timing hopper, one door discharge to packing machine, the other discharge to overweight rejecter.

No Comb Repeat:
This function is used when the any weigh hopper is not selected into combination over preset number of cycles, it will be forced into combination the next cycle.
WHP Move Pattern:
Set a move pattern of weigh hopper.
1: FWD-FWD
2: REV-REV
3: FWD-REV
4: REV-FWD

FHP Move Pattern:
Set a move pattern of feed hopper.
1: FWD-FWD
2: REV-REV
3: FWD-REV
4: REV-FWD

CHP Move Pattern:
Set a move pattern of weigh hopper.
1: FWD-FWD
2: REV-REV
3: FWD-REV
4: REV-FWD
List of parameters in setup 3 are explained below.

**Vibrator Start Delay:**
It refers the time delay that linear vibrator to feed product to feed hopper after the feed hopper open. If it is too short product may be blocked in feed hopper, if it is too long it will affect weighing speed. Its unit is millisecond.

**WHP Start Delay:**
It refers the time delay that weigh hopper to dump product into collecting hopper after the collecting hopper open. Its unit is millisecond.
FHP Start Delay:
It refers the time delay that feed hopper to dump product into weigh hopper after the weigh hopper open. Its unit is millisecond.

CHP Start Delay:
It refers the time delay that collecting hopper to discharge product into packaging machine after the weigh hopper dump product to ensure all the material in the collecting hopper and then allow next discharge. Its unit is millisecond.

Vibrator Run Time:
Vibrator on time. Value is to be entered as a number. System will multiply the entered value by 10 to get time in millisecond.

WHP Hold Time:
Time between opening and closing of weigh hopper to ensure all products are discharged. Its unit is in millisecond.

FHP Hold Time:
Time between opening and closing of feed hopper to ensure all products are discharged. Its unit is in millisecond.

CHP Hold Time:
Time between opening and closing of collecting hopper to ensure all products are discharged. Its unit is in millisecond.
List of parameters in setup 4 are explained below.

**Stable Time:**
Use this parameter to set the time after which weight reading is taken by the system and displayed on the HMI. Its unit is millisecond.

**Combination Mode:**
This setting is used to select the combination mode that is weigh or count. Weigh is standard mode of combination.

**Auto Adjust Amp Model:**
Auto Adjust Amplitude Model is used to automatically monitor and adjust the amplitude of linear vibrators. Automatic frequency control has three different modes: OFF, AFCT and AFCI.
- **OFF:** It means to close this function. The amplitude can only be adjusted by manual.
- AFCT: It adjusts the amplitude according to the combination hoppers and it will give an auto adjustment to all linear vibrator amplitudes.
- AFCI: It adjusts the amplitude according to the individual hopper weight and it will give an auto adjustment to the single linear amplitude, meanwhile, display the single amplitude.

When AFCT is selected following parameters are to be set.

![Program Setup](image.png)

**Comb HPR:**
- It refers the average weigh hoppers which are used in a successful combination weighing.

**Single Accept Comb Error Hoppers:**
- It refers to the acceptable deviation of average number of combination hoppers.
Track Interval AFCT:
After N times successful combination cycles, it will give an auto adjustment to all linear amplitudes.

When AFCI is selected following parameters are to be set.

**Single Hopper Average Wt:**
It refers to the ideal average weight of single hopper, and it was calculated as certain percentage of single combination weight.

**Single Hopper Accept Error Wt:**
It refers to the single acceptable hopper weight error during running.

**Track Interval AFCI:**
After N times successful combination counts, it will give an auto adjustment to all linear amplitudes.
PRODUCT IMAGE:

Touch the Page no.5 to activate the picture library. There are 8 pictures available from the manufacture setting. To select product touch the suitable picture.
Touch “CALIBRATION” on main navigation menu to enter the page. There will be a password window open. Input “3333” in password and press enter to go.
Actual Weight:
   On the right corner of the page, actual weight of all head will be displayed.

Head No.:
   Enter the head number of which calibration to be done.

Calibration Weight:
   Enter the calibration weight. Its unit is grams.

After selecting head and entering calibration weight, press “ZERO” during which weigh hopper will open and discharge products, actual weight should be stable at 0.0 – 0.2g.

Place load on the weigh hopper which is to be calibrated. Then press “SPAN” button, display weight should be stable.
SUMMARY

Touch “SUMMARY” to enter the production summary page.

Production Summary:

On this page detail of total pass bags, total over bags, average hopper and actual speed during process will be display. Enter the Date, Month and Year to review production detail. It can review the production data of only past 10 days.

To clear past production Record press Production reset button.

To enter the error log page press “ERROR LOG” button on right corner bottom of the production summary page.
Enter the Date, Month and Year of which Error log want to view

On this page detail of Error name and Error type will be display. Enter the Date, Month and Year to review production detail. It can review the production data of only past 10 days. When i logo pressed at right corner it will show the status of error type. 0 stands for error registered and 2 stands for error solved.

Touch “Summary” to again enter to production summary page.
CHAPTER 5 SYSTEM SETUP

This Chapter Explains all the parameters required to setup system.

SYSTEM SETUP

Touch “SYSTEM SETUP” on main navigation menu to enter the page. There will be a password window open. Input “2222” in password and press enter to go.

There are five setup screens in total.
List of all parameters of setup 1 are explained below briefly.

**Vibrator Frequency:**
Vibrator to be run in either half or full mode of frequency. Select half frequency for Harder Vibration and Full frequency Means Softer Vibration.

**Acceleration Time:**
Ramp up time of vibration from 0% to 100 %. Set value as small as possible Default value.

**Deceleration Time:**
Ramp Down time of vibration from 100% to 0 %. Set value as small as possible Default value.

**CHP Installed:**
Select YES or NO, on the basis of collecting hopper is installed or not in the machine.
ADC Setting:

Slave Send Wt. Time: This is that time at which slaves send weight continuously. Its unit is in millisecond.
List of all parameters of setup 2 are explained below briefly.

<table>
<thead>
<tr>
<th>SIGNAL TYPE</th>
<th>DUMP SGNL TIME</th>
<th>WT SGNL LENGTH</th>
<th>DUMP SGNL DELAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60 ms</td>
<td>10 ms</td>
<td>70 ms</td>
</tr>
</tbody>
</table>

**SIGNAL TYPES:**

0: LEVEL TRIGGER WITH MEMORY

If Multihead weigher receives a request signal when it is not ready, it will remember the request signal and dump the weigher when it is ready.

1: LEVEL TRIGGER WITHOUT MEMORY

If Multihead weigher receives a request signal when it is not ready, it will discard until both arrive at same time.

2: EDGE TRIGGER WITH MEMORY

If Multihead weigher receives a request signal when it is not ready, it will remember the request signal and dump the
weigher when it is ready.

3: EDGE TRIGGER WITHOUT MEMORY

If Multihead weigher receives a request signal when it is not ready, it will discard until both arrive at same time.

Wt. Signal length:
The length of Weight signal. It is primarily used when weight signal is connected to the alarms.

Dump Signal Time:
Time at which Multihead weigher will send dump signal to Packaging machine.

Dump Signal Delay:
After the system dump material, there will be delay time after which weigher will send dump signal to the packaging machine.
In setup 3 there is weigh hopper move pattern setting, there are four modes. And each mode has five steps of initial and return move. This parameter setting will affect the speed of machine.

Modes can be selected by subpage selection.
In setup 4 there is feed hopper move pattern setting, there are four modes. And each mode has five steps of initial and return move. This parameter setting will affect the speed of machine.

Modes can be selected by subpage selection.
In setup 5 there is collecting hopper move pattern setting, there are four modes. And each mode has five steps of initial and return move. This parameter setting will affect the speed of machine.

Modes can be selected by subpage selection.
Touch “ABOUT” on main navigation menu to enter this page.

On this page version of all cards will be displayed, main card version, auxiliary card version and version of all 10 heads slave cards and ADC card.
Touch “Password” on main navigation menu, to enter the page.

Password to access “Program Setup” page, “System Setup” page and “Calibration” page can be modified over here.

Press “Enter” button near the page name of which password to be modified.

Here password of program setup page is modified. Press “Enter”, popup page will open where enter the old password of Program Setup page; till correct password is not entered “Enter” button below it will be invalid. If correct password is entered the new popup page will open.
Enter new password of for program setup. And press enter button below it, again confirmation will be asked to save new password.

Enter “Yes” to continue and Password to access Program Setup page is modified.
CHAPTER 6 ERRORS

This Chapter Explains all type of errors indicated on HMI.

In the system error are tracked in two ways,
- Firstly if any error generated during any operation, immediately will be popped up on page.
- Secondly on ZERO page and FUNCTION CHECK page errors can be identified by color change on 3D image of weigher.

## ERROR DESCRIPTION

If any internal error is triggered during operation of the system it will be popup on page.

List of Errors are described below.

<table>
<thead>
<tr>
<th>Description</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Intrnal Error</td>
<td>this means that error is generated due to ADC card of given head number.</td>
</tr>
<tr>
<td>Head Comm. Error</td>
<td>this means that error is generated of communication of head with slave card of that head.</td>
</tr>
<tr>
<td>Vib. Supply Error</td>
<td>this means error is generated in vibrator section of mentioned head.</td>
</tr>
<tr>
<td>Card Comm. Error</td>
<td>this means communication error between mentioned slave and main card.</td>
</tr>
<tr>
<td>Head WHP Error</td>
<td>this means overrun error in weigh hopper of mentioned head.</td>
</tr>
<tr>
<td>Head FHP Error</td>
<td>this means overrun error in feed hopper of mentioned head.</td>
</tr>
<tr>
<td>Aux Vib. Supply Err</td>
<td>this means error is generated in vibrator section of auxiliary.</td>
</tr>
<tr>
<td>Aux Crd Comm. Err</td>
<td>this means communication error between mentioned slave and main card.</td>
</tr>
<tr>
<td>AUX RHP Error</td>
<td>this means overrun error in right hopper of auxiliary.</td>
</tr>
<tr>
<td>Error Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>AUX LHP Error</td>
<td>this means overrun error in left hopper of auxiliary.</td>
</tr>
<tr>
<td>System Error</td>
<td>if slaves are not boot properly and there is communication error then this error is generated.</td>
</tr>
<tr>
<td>Init Error</td>
<td>if there is any error during initialization then this error is triggered.</td>
</tr>
<tr>
<td>Memory Sync Error</td>
<td>if memory sync is not proper than this error is generated.</td>
</tr>
<tr>
<td>PARAMETER NAME</td>
<td>PARAMETER GROUP</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>EMPTY</td>
<td>Automatic Run</td>
</tr>
<tr>
<td>RUN</td>
<td>Automatic Run</td>
</tr>
<tr>
<td>ZERO</td>
<td>Automatic Run</td>
</tr>
<tr>
<td>STOP</td>
<td>Automatic Run</td>
</tr>
<tr>
<td>Program No, &amp; Name</td>
<td>Automatic Run</td>
</tr>
<tr>
<td>Drop Weight</td>
<td>Automatic Run</td>
</tr>
<tr>
<td>Actual Speed</td>
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