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# PCB Inverting conveyor

## User's Manual



**Be sure to carefully read this manual before use \* to ensure proper use of the product.**

## **Preface**

Thanks to buy the company's products, the Company to express my sincere thanks. This manual hardware configuration, device operation, and maintenance of electrical diagrams have been described. Please fully understand this manual, the proper use.

Although the contents of this manual seeks to correct, but if there is such as when questions or errors are found, please contact with the company.

### **Warning:**

the device can only be maintained by professional and service personnel or the training of qualified personnel to operate

Before powered, make sure the external input power supply with the device rated voltage and power match

Please equipment of the reliable grounding

all of the mechanical of this equipment, the operation should attention to personal safety

### **Note:**

Please read this user manual carefully before operating this equipment, remember Caution

Do not install this equipment in the vicinity electromagnetic interference source

Do not modify the electric box of hardware and software programs, the transformation in

danger,

please keep this manual press the manual requires maintenance of equipment

Although the contents of this manual are correct, please contact us if you find any doubts or errors.

## packing list:

- Core machine
- User Manual
- as customers have special requirements, please refer to procurement contracts check

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# Chapter 1 Introduction

## 1.1 Overview

Used for turning over PCB or fixture in SMT industry

### This machine features:

- Adopt Panasonic PLC, stepping Lemire
- Can achieve flip the PCB board

## 1.2 Technical Parameters

Project	The main parameters
P C B transportation direction	Left → right
power supply	AC220 50 / 60Hz power 15 0 W.
control method	T o u c h s c r e e n p l u s Panasonic PLC control .
Type of transmission surface	Strip
PCB thickness	0.7 to 30 mm .
Conveying height	8 5 0 to 9 5 0 m m ( foot cup adjustable ).
Body number	
Touch screen password	no

## Preparation before use

- Please use 220V single-phase 50Hz capacity fixed power supply above 200W
- The machine must be safely grounded and must be connected to the ground bus
- The ground wire must be well fixed to the metal part of the fuselage
- To ensure safety, it is forbidden to bring your body close to the running equipment
- Do not install the machine in dust, oil mist, conductive dust, corrosive gases, flammable gases, moisture, shock, vibration, high temperature and outdoor environment.
- Avoid using corrosive solvents to wipe the machine, neutral detergent should be used
- Please keep this price manual for future maintenance and maintenance.

Notes:

There is no reliable grounding and there is a danger of electric shock.

# Chapter 2 Machine operation

## 2.1 Boot precautions

1. To ensure safety, physical contact with moving parts is prohibited.
2. Check for any debris in the machine.
3. Check for any debris or PCB on the track.

## 2.2 Instructions

### 2.2.1 Operation page



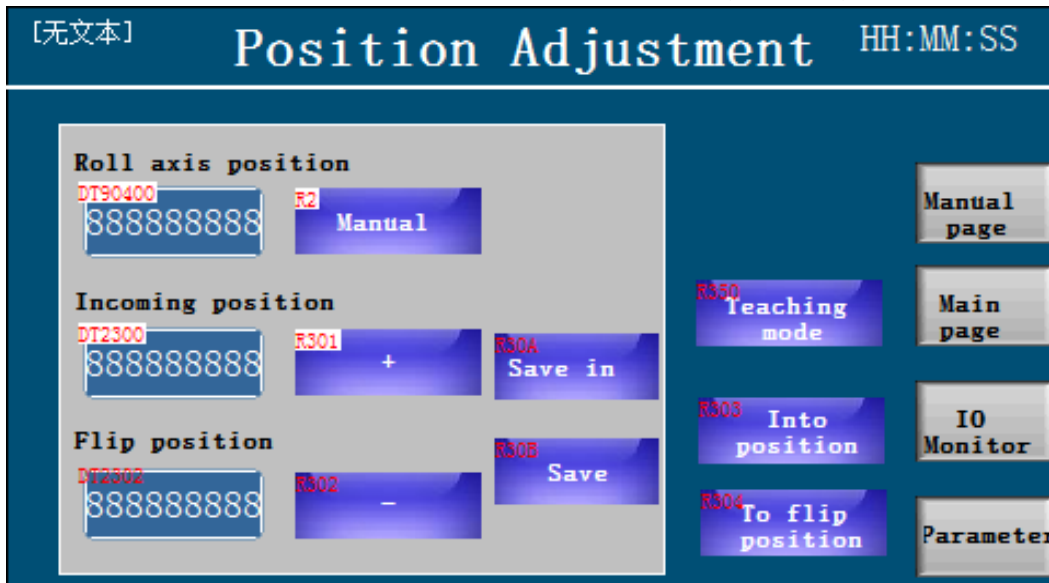
Figure 1

#### ■ Button description

- Automatic start --After the device resets to zero, the pass-through mode button is red, click the button, and the device enters the flap automatic running state.
- Reset - Click the button in the stop state, the device returns to zero; when the device automatically runs the fault alarm beep, the abnormality is processed, and the button device is used to cancel the alarm state and continue to run.
- Stop - click the button, the device stops all running
- Direct mode - before the automatic start, click the button, when the button turns purple, click auto start, the device enters the through mode
- Manual page - click to enter the manual run screen

- Parameter page - click to enter the parameter settings page
  - I/O Monitoring - Click to enter the I/O Monitoring page
  - Location Settings - Click to enter the location settings page
- **Signal description**
- " XD into the board signal " - Board signal from the host computer
  - " YE requires board signal " - the board signal from the local machine
  - " X5 output signal " - the output signal sent by the lower computer to the machine
  - " YF has board signal " - the unit has a board signal from the machine
- **Text description**
- Production count - the number of production effluent plates

## 2. 2.3 Location settings page



### ■ Position adjustment step description

1. Click reset back to zero translational axes to be finished, click "position adjustment" button, to enter the position adjustment Click "Manual" button, the device enters the manual operation state, click on the "jog mode" button in the position adjustment page, turns into the green Jog mode
2. Click on "+" "-" The button is rotated to the corresponding position, long press the corresponding save button, hear the beep, position adjustment is completed

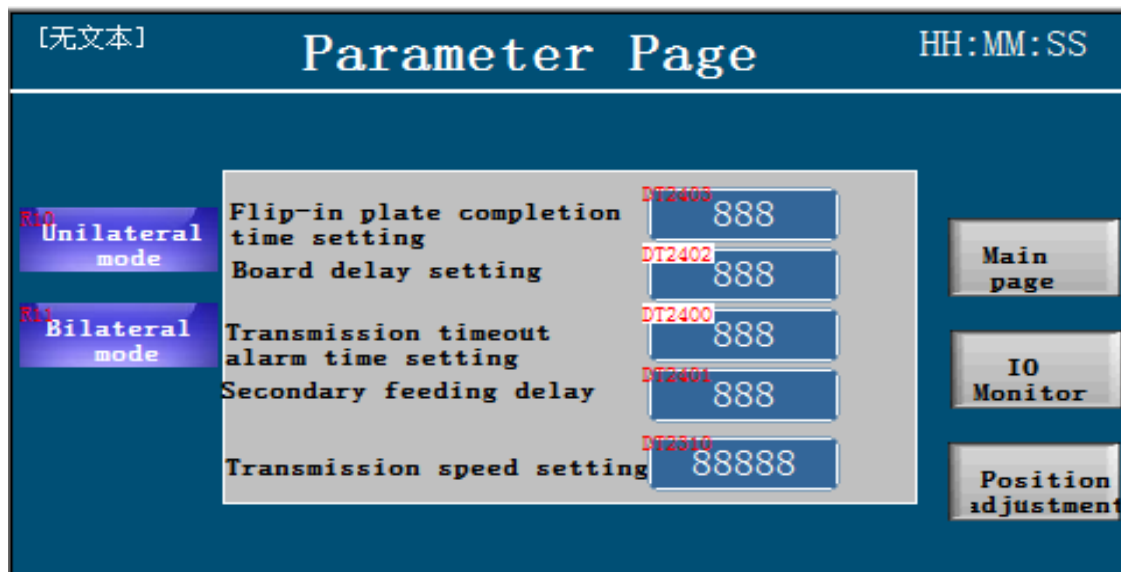
### ■ Button description

- Save into the board position - in the jog mode, long press the button, the board entry is saved, the value of the previous input box changes
- Save turn Slot - jog mode, press the button, turn the plate-save completion foregoing numerical value input box changed



- To the board position - manual operation, non-jog mode, click the button, rotate to the board position
- To the flip position - when running manually, non-jog mode, click the button, rotate to the flip position

## 2.24 Parameter setting description

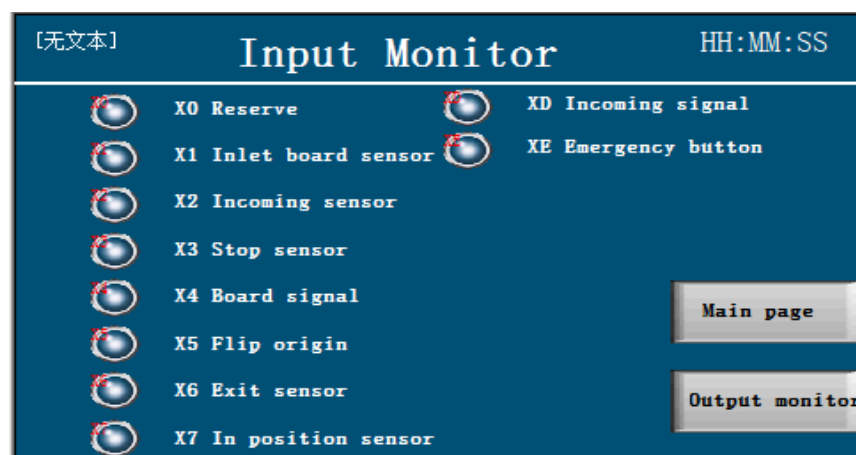


### ■ Input box description

- Exit delay setting - when the track is automatically run out, the **PCB** leaves the stop sensor and reaches the set time to stop the output.

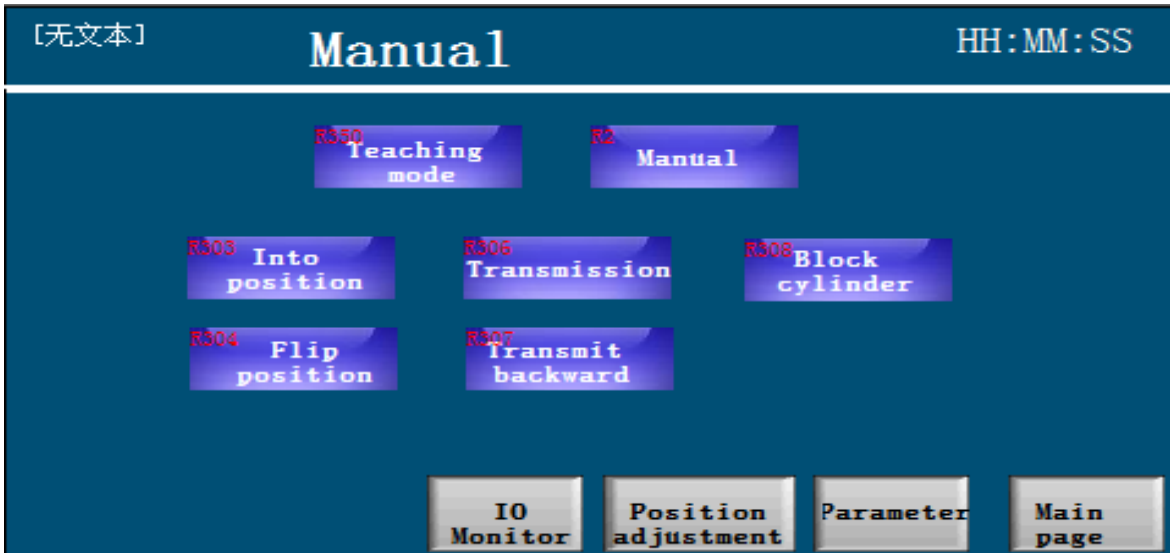
- Transmission timeout alarm setting - during automatic operation, the board transfer time is up to the set time, and the device alarms buzzer
- Rotating part conveying speed setting - setting of conveying speed of rotating mechanism, the larger the setting value, the larger the conveying speed, it is recommended to be less than **15000**
- Rear extension speed setting - the setting of the conveying speed of the cleaning docking station. The larger the setting value, the larger the transmission speed. It is recommended to be less than **15000**.
- Brush speed setting - cleaning the rotation speed setting of the brush of the docking station mechanism, the larger the setting value, the larger the transmission speed, it is recommended to be less than **15000**

#### 1.2.4 Input and output screen description



It can monitor the working status of each electrical component of the device, red is not working, green is working

## 2.25 manual operation page description



### ■ Button description

- Manual - After resetting to zero, click the button to enter the manual running state.
- To the board position - when running manually, in the non-jog mode, click the button to rotate to the board position
- To the flip position - when running manually, in the non-jog mode, click the button to rotate to the flip position
- Rotating part into the board transfer - when running manually, when the rotating part is in the board position, click the button, and the rotating mechanism will transmit in the board conveying direction.
- Rotating part out of the board transfer - when running manually, when the rotating part is in the flipping

position, click the button, the rotating mechanism will send the board in the conveying direction

- Clamping cylinder - when operating manually, click the button to clamp the cylinder
- Blocking the cylinder - when running manually, click the button to block the cylinder from rising

## Chapter 3 description of the problem

### 3.3.1 Fault handling and maintenance equipment must do the following points:

1. The principles familiar with the equipment and electrical schematics.
2. Familiar with the installation position of each mechanical device and electrical equipment in the equipment, and understand its performance and role.
3. Correctly analyze the cause of the fault.
4. Find the faulty part and the failed component
5. Targeted maintenance.

### 3.3.2 Frequently fault causes and troubleshooting

Fault content	cause of issue	Approach
Jam into the board	The height of the left side is different from the height of the upper computer.	Use a spanner wrench to adjust the threaded rod to make the height consistent
Belt does not turn	Motor is damaged or the belt is too loose	Replace the motor or adjust the tension to tighten the belt

The main power switch indicator is off.	The switch is broken, the wire is loose, the power cord Open circuit	Unplug the plug and open it to make the panel. Check if the thread is loose. If it is loose and re-crimped, if it is not loose, please replace the button
Alarm when flipping	Check whether the front and rear sensors are sensed when flipping	Adjust the position of the sensor and remove the PCB at the front and rear plate gold positions

Notes:

Repair or replacement of electrical components disconnect the power, the charging operation is prohibited.

## Chapter 4 maintenance

### Weekly

- Check the transport of steel strap is too loose, keep the conveyor belt clean.
- Wipe off the dirty oil with a cloth or paper and then lubricate the ball screw.
- Test whether the delivery of the product is smooth.
- Check the belt track for wear.
- Oil the lead screw for at least 2 weeks .