

JCM WBA-13 General Information

Power Requirements:

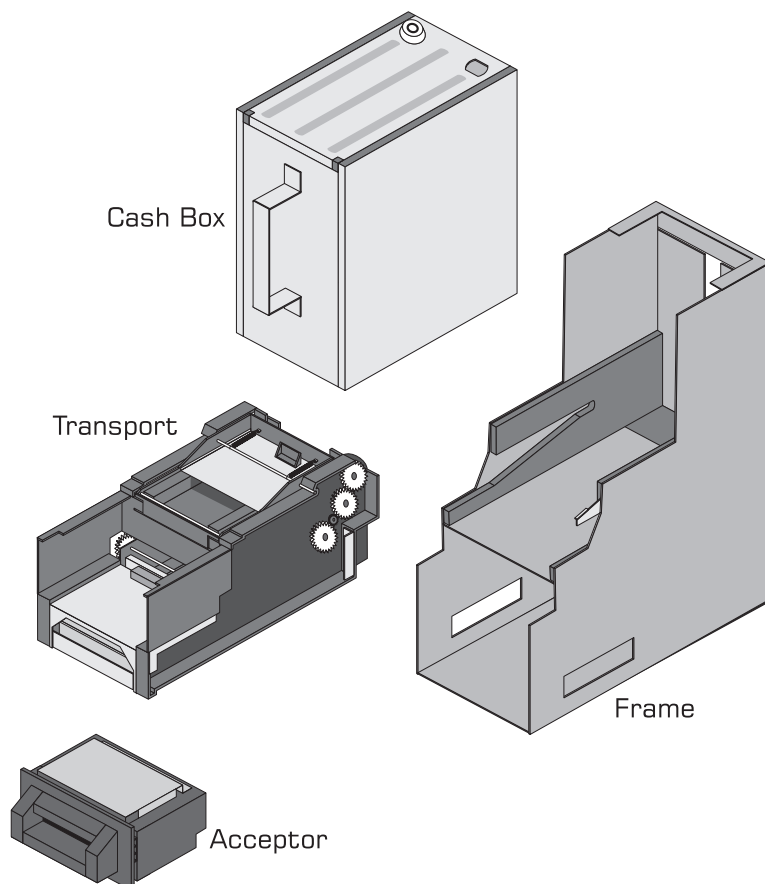
DC +12V (+/- 5%), capacity 2.5A or more

Power Consumption:

Standby status 2.8VA
Operation status 14VA (Max. 24VA)

Operating Environment:

Operating temperature 0°C to 45°C
Storage temperature 20°C to 60°C



Clearing Jams

Description

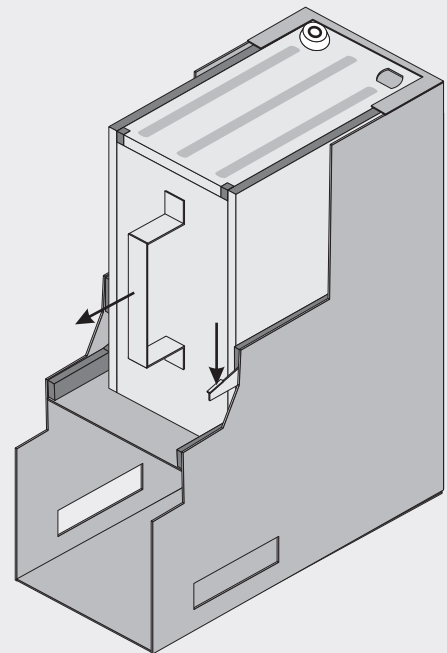
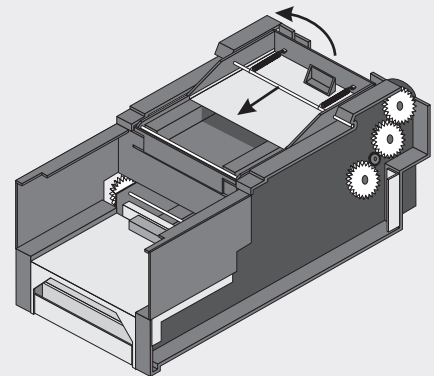
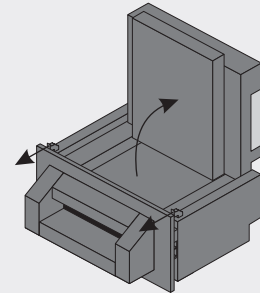
This procedure discusses how to clear jams in the acceptor and transport.

Procedure for Acceptor

- Open the acceptor by pulling on the notches on both sides of the component.
- Remove the jammed bill.
If jammed bill can't be removed through the above method, go to the next step
- Open the top of the transfer unit by pulling on the open/close lever.
- Remove the jammed bill.

Procedure for Transport

- Check to see if a bill is jammed near the inlet of the cash box.
- Pull the release lever of the cash box to pull out the cash box.
- Remove the jammed bill.
- Insert the cash box back into the frame.



Inspecting and Cleaning Bill Path

When to Inspect and Clean

Inspecting and cleaning the bill path are tasks you should perform during routine preventive maintenance on the WBA bill acceptors. We recommend that you do this procedure at least once every six months.

Procedure to Inspect

- Access the bill path by opening the acceptor and transport components.
- Make a visual check to see if any debris or liquid has collected in the bill path.
- Check the belts to see if they are frayed or worn.
If so, replace them.
- Check the sensor lenses to see if they have become dirty, clouded, or scratched.
- Replace scratched or clouded lenses.

Procedure to Clean

- Use a lint-free cloth.
- Use a mild detergent mixed with water, such as dish detergent.
- Ensure the cloth is not liquid-saturated.
- Wipe the bill path with the above.
- Allow to dry before closing the acceptor and transport assembly.

Inspecting and Cleaning Timing Belts

When to Inspect and Clean

Inspect and clean the timing belts during routine preventive maintenance. We recommend that you do this procedure at least once every six months.

Tools needed for cleaning

- Lint-free cloth
- Mild detergent mixed with water, such as dish detergent

General Information

The belts are made of petroleum products. It is important to use the appropriate cleaning materials to ensure long life. We suggest you use a lint-free cloth and a mild detergent mixed with water, such as dish detergent. Ensure that you do not use the items listed below:

- Cleaning cards
- Alcohol
- Any kind of solvent. Solvents can cause the belts to dry out and break down.

Procedure to Inspect

- Check the belts to see if they are frayed or worn. *If so, change the belts by using procedures listed in section 2 of this book.*

Procedure to Clean

- Use a lint-free cloth.
- Use a mild detergent mixed with water, such as dish detergent.
- Wipe the belts lightly as you rotate them by hand, or use the Transfer Motor Test (Test-1) for forward rotation that is described on page 3-3 and 3-5.
- Ensure the belts are dry before closing the acceptor and transport.

Inspecting and Cleaning Sensor Lenses

When to Inspect and Clean

Inspect and clean the sensor lenses during routine preventive maintenance. We recommend that you do this procedure at least once every six months.

Tools needed for cleaning

- Lint-free cloth
- Mild detergent mixed with water, such as dish detergent

General Information

The sensor lenses are transparent and made of polymer materials. To clean them, we suggest that you use a lint-free cloth and a mild detergent mixed with water, such as dish detergent. Ensure that you do not use the items listed below:

- Alcohol
- Any kind of solvent.

These chemicals can cloud the lenses and degrade their ability to read properly.

Procedure to Inspect

- Access the sensor lenses by opening the acceptor.
- Examine the lenses to see if they are dirty, clouded, or scratched.
- Replace lenses that are clouded or scratched.

Procedure to Clean

- Use a lint-free cloth.
- Use a mild detergent mixed with water, such as dish detergent.
- Wipe the sensor lenses lightly.
- Ensure that the lenses are dry before closing the acceptor.

Auto-Calibrate Optical Sensors

Description

Calibration sets a starting reference point for all the optical sensors within the unit. This task can be done at the host unit or at your workbench.

When to Calibrate

- After the acceptor component has been disassembled for repair
- After a sensor board has been replaced
- Whenever bill acceptance is degraded
- Once a year

Tools needed

You can calibrate at the host unit or at your workbench. The tools you need depend on where you will do the auto-calibration.

- If you calibrate at your workbench, you need:
 - Black/White Calibration Paper, part number 057619
 - JCM's model PS15-006 Power Unit, part number 057117
- If you calibrate at the host machine, you need:
 - Black/White Calibration Paper, part number 057619
 - Test Harness, part numbers 057116 and 057121

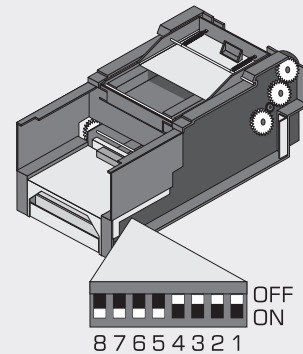
Procedure

- Remove the transport by:
 - Grasping the transport release lever.
 - Pressing down with your thumb.
 - Sliding out the transport.
- Tilt the transport to the side to access the DIP switches.
 - The switch numbers appear at the top.
 - Setting the switch towards the identifying number sets the switch to the OFF position.
- Set DIP switches 8, 7, 6, 5 to ON.
- Set DIP switches 4, 3, 2, 1 to OFF.
- Connect the power unit to the transport component.
- Listen for activation of the transport motor.
 - The motor will revolve in re-verse for about 2 seconds, and then forward for 0.5 seconds.
 - Motor revolution stops.
- Insert the black edge of the calibration paper into the acceptor head.
 - Notice that the paper automatically moves forward and backward, several times.
 - When the movement stops, the process is complete.
- Determine that the procedure was successful by using the guidelines below.
- Look at the indicator light connected to the test harness.

If the light blinks continuously at intervals of 1/10 second, without any pauses, **the procedure was successful.**

If the light blinks from 1 to 11 times at intervals of 1/2 second, **an error condition exists.**

Count the number of blinks and match with the list. If you miss the count, wait until the light stops blinking. After a 1-second pause, the blinking resumes.



Number of Blinks	Kind of Error found during Calibration
1	Entrance Lever Error
2	Solenoid Error
3	Entrance Sensor Error
4	Transport Jam
5	Gain Error
6	Digital/Analog Error
7	Bar Code Sensor Error
8	Acceptor Head Error
9	Magnetic Setting Error
10	Write-In Error
11	Black Level Error

Pin Assignments

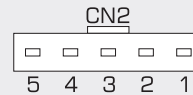
CN1

Pin No.	Signal Name	Function
1	+12V	DC +12V power supply
2	GND	DC 0V power supply



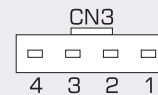
CN2

Pin No.	Signal Name	Function
1	M. RES	Acceptor reset signal line
2	TXD	Data transmission line
3	+12V	Power supply for interface (DC +12V)
4	RXD	Data reception line
5	GND	Power supply for interface (DC 0V)



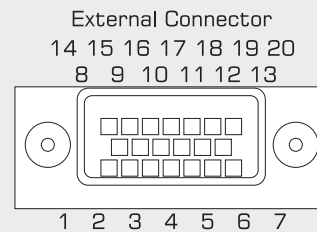
CN3

Pin No.	Signal Name	Function
1	LED+	LED drive line (anode)
2	LED-	LED drive line (cathode)
3	NC	
4	NC	

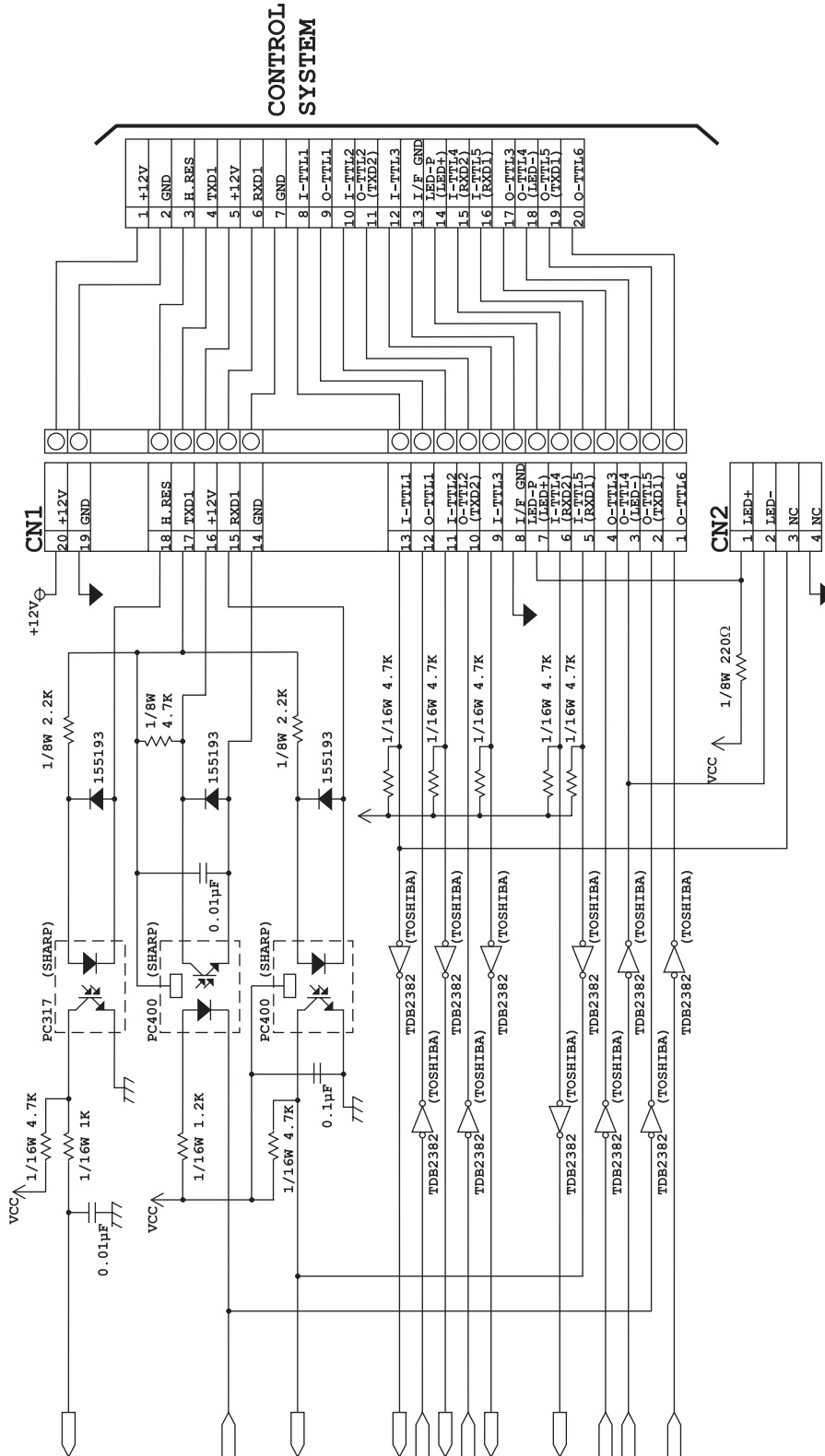


External Connector ID-004 Serial I/F

Pin	Signal Name	Function	I/O	Active
1	+12V	DC +12V Power	-	-
2	GND	Ground	-	-
8	Serial /Pulse Select	Interface select; Input "LOW" (GND); Serial I/F "OPEN" Pulse I/F	IN	-
9	Busy	Acceptor is operating	OUT	LOW
10	S. Res	Reset signal	IN	LOW
11	Data	Output Serial Code	OUT	-
12	CTS	Transmission authorization signal	IN	LOW
13	I/F GND	GND	-	-
14	DISP (+)	LED drive power source	-	-
16	Disable/Enable	DISABLE ENABLE	IN	HIGH LOW
17	RTS	Confirming commencement signal	OUT	LOW
18	DISP (-)	LED control signal	OUT	-
20	ABN	Acceptor is Abnormal condition	OUT	LOW



Input/Output Circuits



Operating Flowchart

