



**Standard**

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**GENERAL  
MAINTENANCE  
SLIDE SHOW**

**GENERAL**

**MAINTENANCE**

**SLIDE SHOW**

System 600 & Modular Series Machines

# WELCOME

## Standard Change Makers, Inc.

### Changer Maintenance Overview

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## General Maintenance Guide for Standard Change-Makers Machines



# Service Maintenance School

- Reviewing:
  - The SC System Product Line.
  - The MC Product Line.
  - The Uninote Bill Dispenser.

# The SC System Components

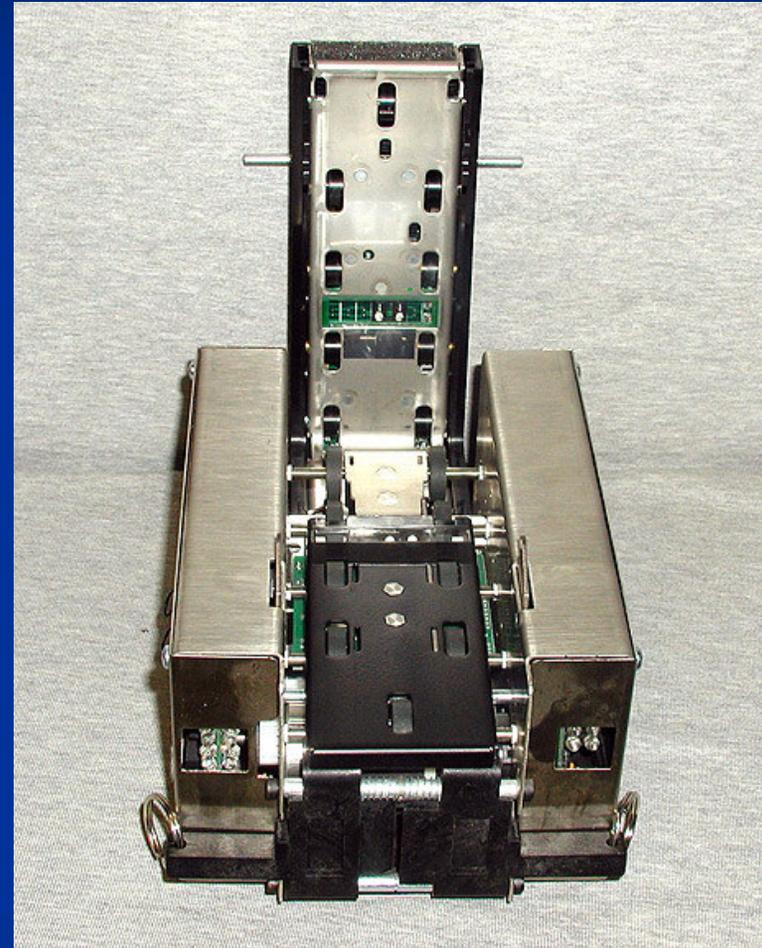
## Featuring the System 600 Note Acceptor



Applies to: System 500, 500-E, 600-FST & 600-EF

# Bill Acceptor Maintenance

1. Use canned air to remove dust and debris from the bill path.
2. Use a moist, clean cloth to wipe down track surfaces and optic windows.
3. Use denatured alcohol to remove ink from drive rollers.



# Auto Calibration Procedure

1. Initiate the “auto calibration mode” by pressing “F2” on the hand held Data Terminal.
2. Insert a balance card into the note acceptor in the direction indicated on the card. The auto calibration sequence will take approximately one second. When completed, the card will automatically be rejected.
3. Remove the rejected card from the acceptor. The display will read either “GOOD CAL” or “BAD CAL.”
4. Exit the auto calibration mode by pressing “F5” (RETURN) on the Data Terminal.

# SC Bill Stacker



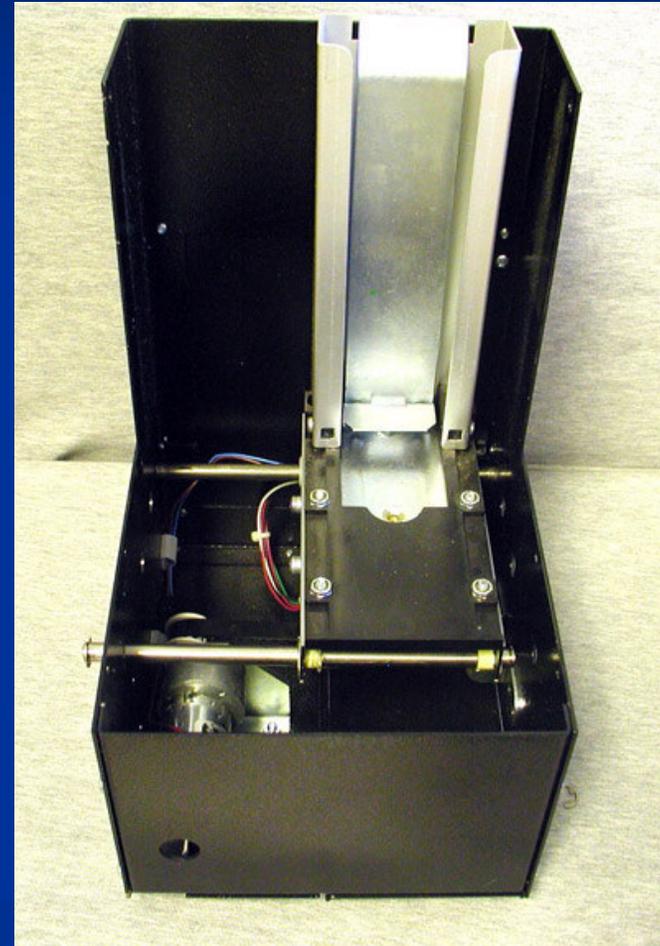
# SC Series Bill Stacker

- One, Two, and Three Box Configurations.
- LED Diagnostics.
- Simple Cleaning and Adjustment Procedures.



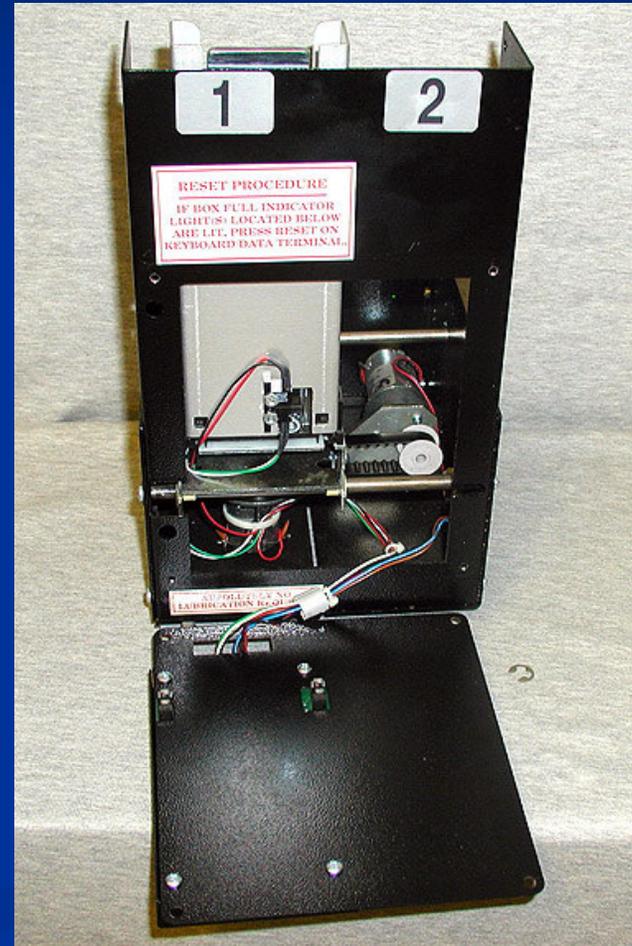
# Bill Stacker Maintenance

- Remove Bill Stacker from machine twice a year and clean thoroughly.
- Remove bill compartment and use canned air to blow the dust and debris from the bill compartment and stacker housing assemblies.
- Remove guide bars and wipe with clean, moistened cloth.



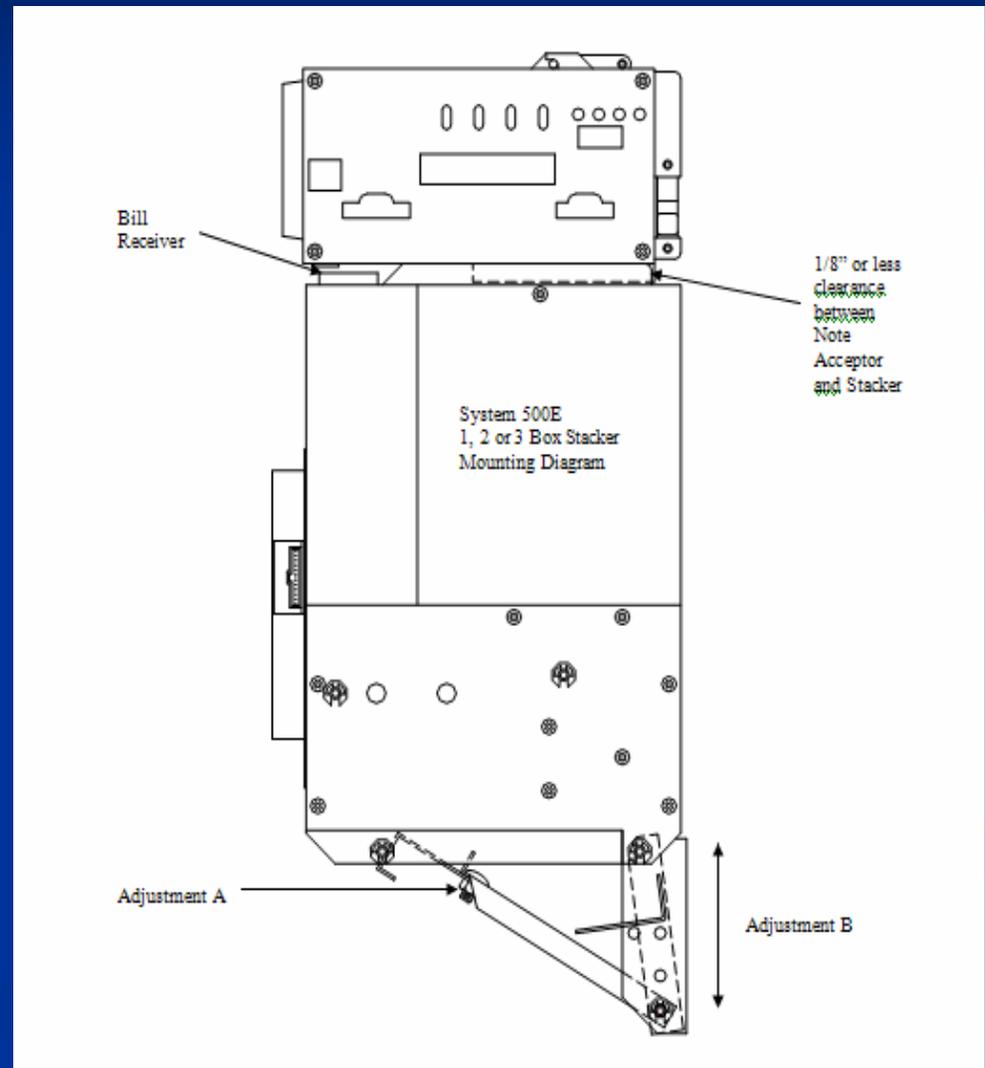
# Bill Stacker Maintenance

- Remove the front panel to expose the optic sensors.
- Use canned air or a clean cloth to clean the ram sensor and position sensors. The ram sensor is located on the back side of the bill “receiver”. The position sensors are located on the back of the front panel on two and three box stackers.

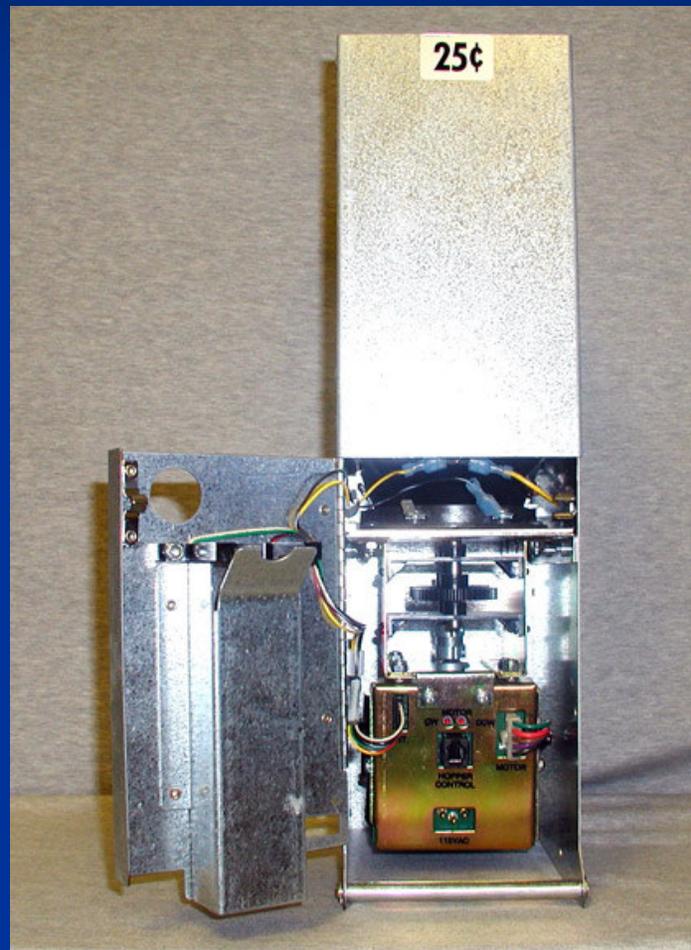


# Bill Stacker Adjustment

- **Adjustment A**  
Stacker should be level and centered to the Bill Acceptor. Stacker support latch can be extended or shortened until Bill Stacker sits level.
- **Adjustment B**  
Stacker should fit snug under the Bill Acceptor. Stacker mount can be raised or lowered until there is less than 1/8 inch clearance between the two components.

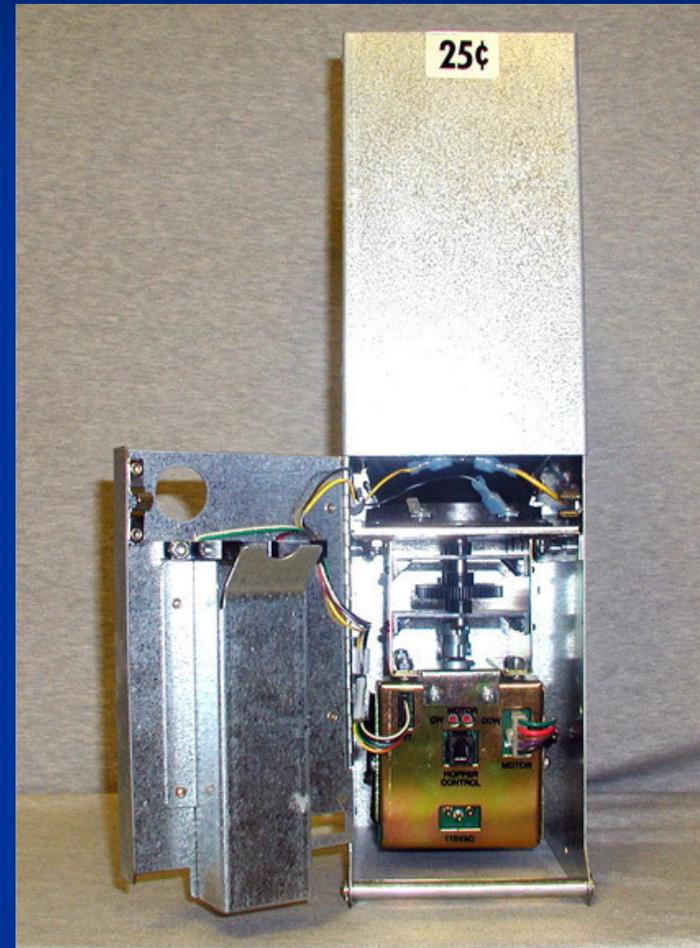


# SC Coin Hopper



# Coin Hopper Maintenance

- Remove Coin Hopper from machine once a year to clean thoroughly.
- Dump hopper and remove any bent coins or tokens.
- Use canned air and blow dust and debris from hopper shell and dispense mech.
- Use a damp, clean rag to clean hopper interrupter mounted on the hopper door.



# Hopper Dispense Mech. and Funnel

- Check plastic funnel for cracks.
- Feed mechanism designed for specific range of coin or token.
- Replace or exchange feed mechanism by removing motor and drive board from old mech. and attaching it to the new feed mech.

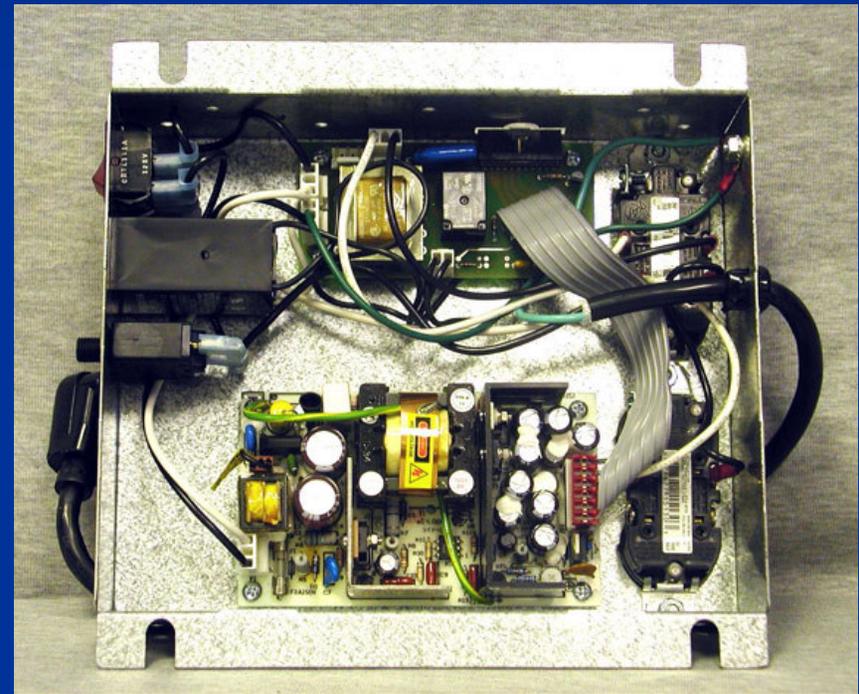


# System 600 Power Supply



# System 600 Power Supply

- Supplies system voltage regulation and noise filtering
- Produces +5, +15, and -15 volts (DC).
- Internal power board is field replaceable.  
Secured by 4 screws and connected by 2 cables.



# Power Board Voltage Measurements

- +5 volts – Measured between pins 3 and 4 (grd.) on the on-board six pin connector. Factory adjusted to 5.35 volts using the small adjustment potentiometer located below the six pin connector.
- +15 volts – Measured between pins 1 and 4 (grd.). None adjustable.
- -15 volts – Measured between pins 6 and 4 (grd.). None adjustable.

# System 600 Power Supply

- A defective internal power supply board can cause the following:
  1. Power fault and watchdog error codes.
  2. Complete system failure.
  3. Poor bill acceptance.

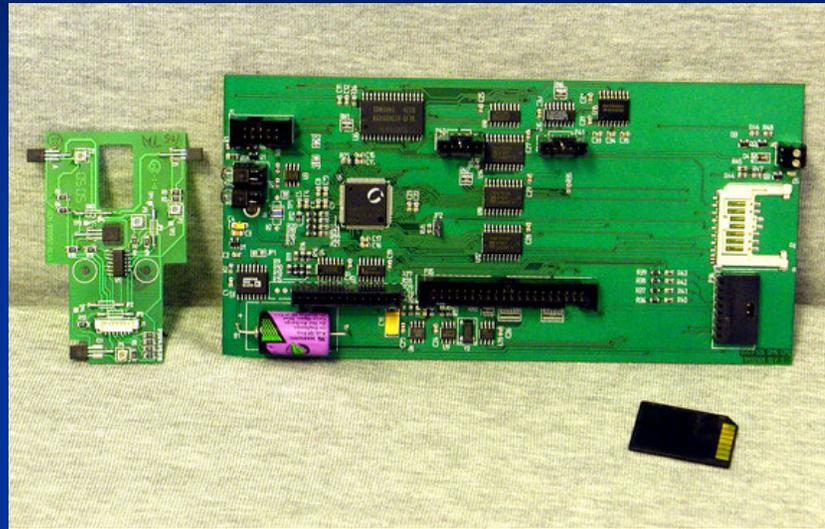
**TIP:** Unplugging the Bill Stacker will temporarily improve bill acceptance if the poor acceptance is being caused by a weak power board.

# Data Terminal

- Provides the user interface for system programming.
- Provides detailed auditing information.
- Provides for detailed error code diagnostics.



# What's New!



- “Track Cell” sensor board with adjustment potentiometers.
- New CPU board with future 1, 2, or 4 way bill acceptance.
- Flash memory stick for easy software upgrades.

# MC System Components

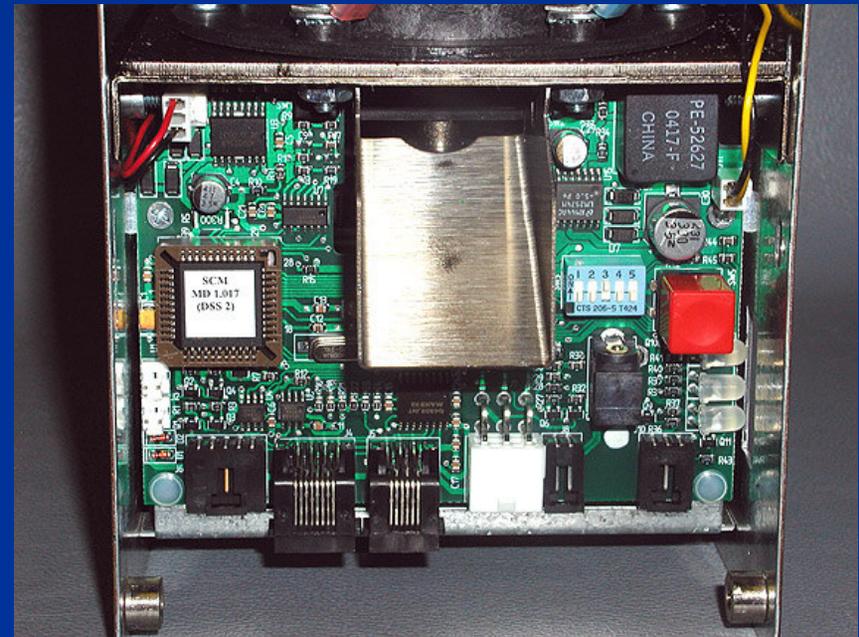


# MC Hopper



# MC Hopper Control Board

- Control board provides the user programming interface.
- The red button provides the system reset function.
- LED indicators for status, power, and coin interrupter.
- Status LED indicator provides diagnostic “flash” codes when in error mode.



# MC Hopper Maintenance

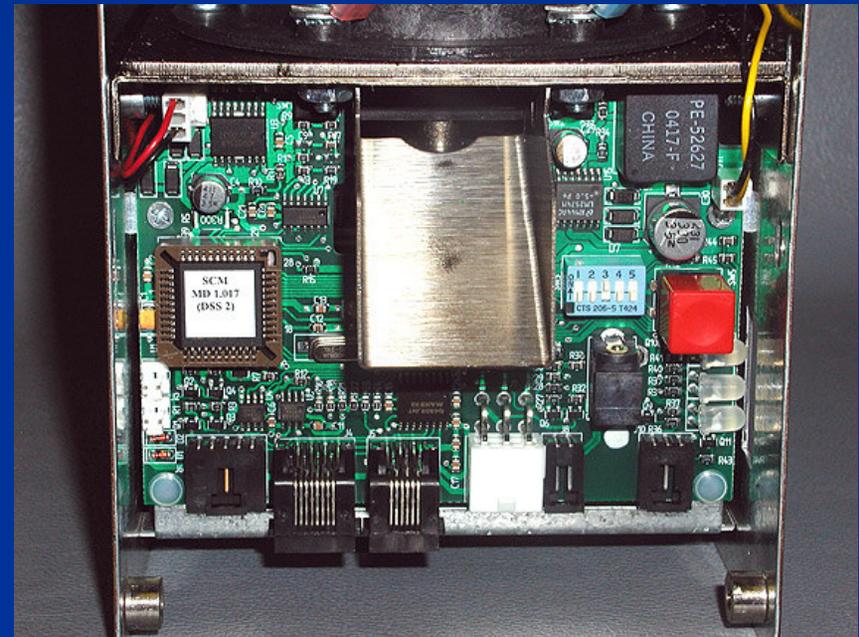
- Remove Coin Hopper from machine once a year to clean thoroughly.
- Dump hopper and remove bent coins or tokens.
- Use canned air and blow dust and debris from hopper shell and dispense mech.



# MC Hopper Maintenance

Use canned air or a clean Q-tip to clean the hopper optical sensors located on either side of the coin chute interrupter openings.

It is recommended to clean these sensors three or four times a year in outdoor locations.

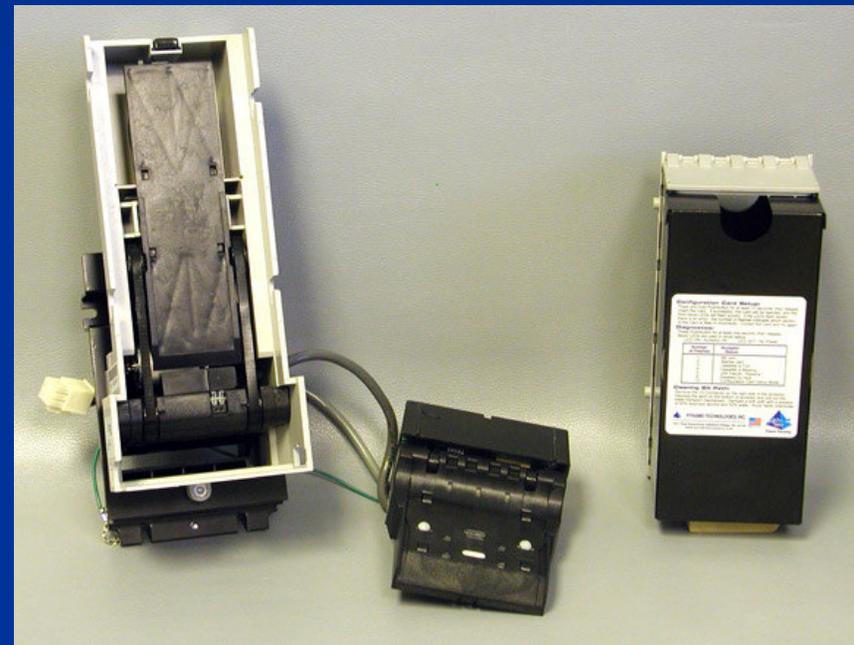


# MC Bill Acceptors



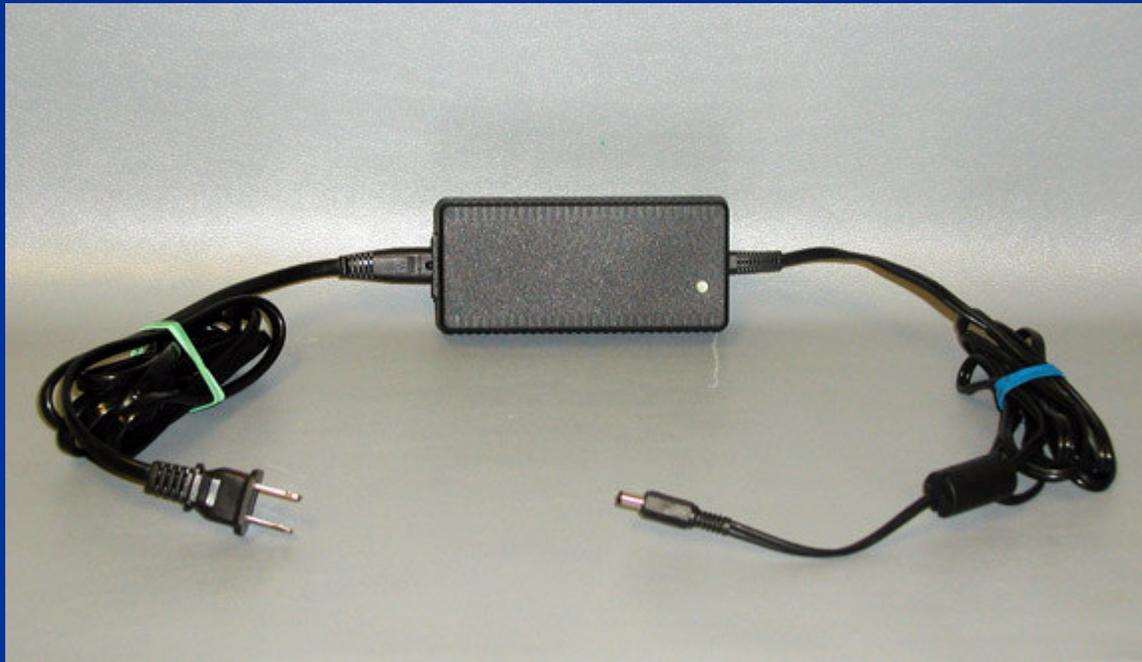
# OEM Bill Acceptors

- Use canned air regularly to remove dust and debris from bill path.
- Use a clean damp rag to wipe off optic sensors on the upper and lower tracks.
- Use a clean damp rag to wipe off bill “rails” on acceptor and stacker.

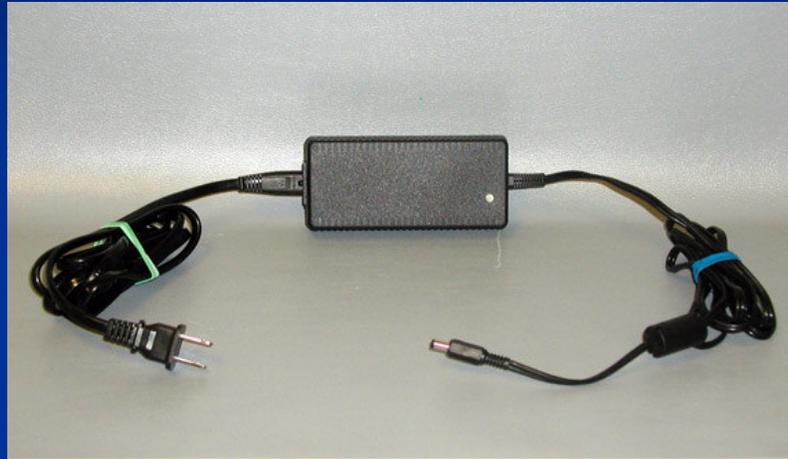


Pyramid Bill Acceptor

# MC Power Supply



# MC Power Supply



- Provides system power requirement.
- Surge suppressor is highly recommended.
- Low cost, and easily replaceable.

# EF Module

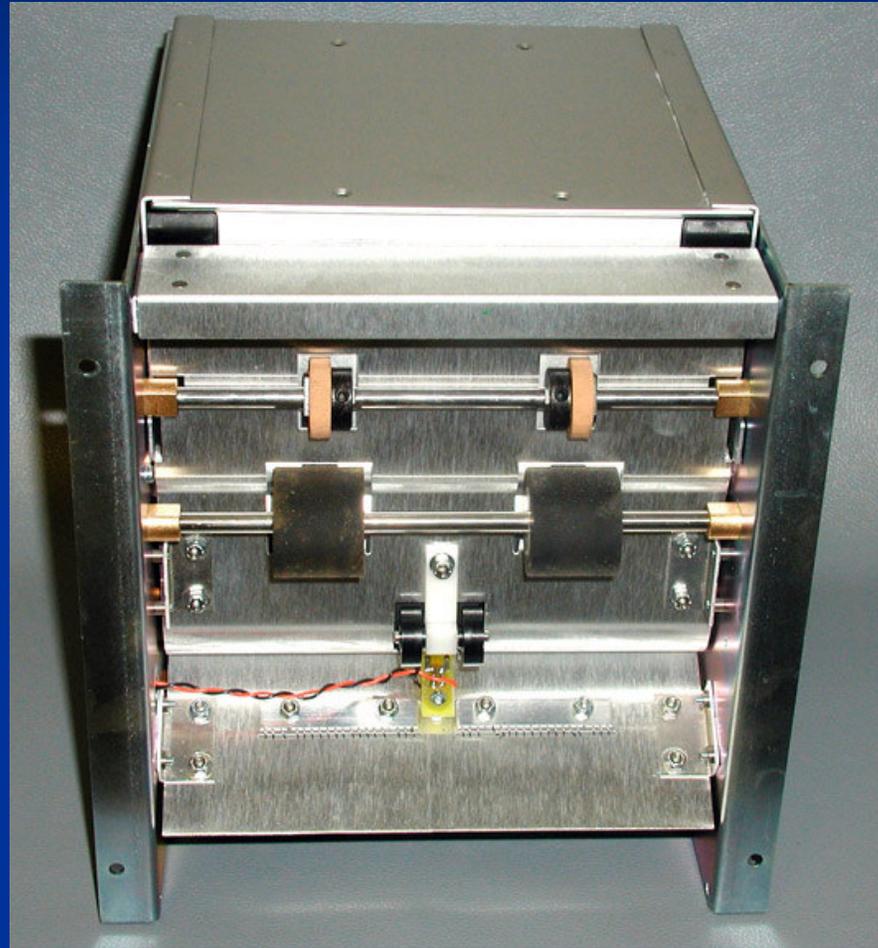


# EF Module

- Provides a user friendly interface for system programming.
- Provides detailed auditing information.
- Provides for detailed error code diagnostics.



# Uninote Bill Dispenser



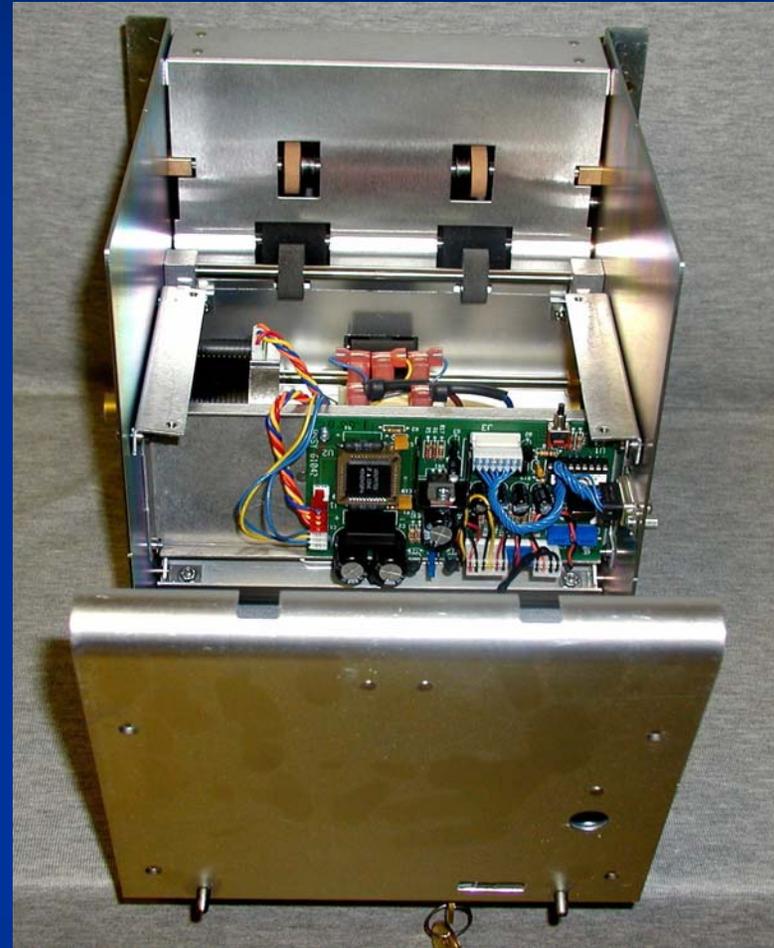
# Uninote Bill Reserve Adjustment

- Works off of a magnetic switch.
- Loosen the two screws securing the black sensor to the bill cassette.
- Moving black sensor towards the back of the cassette will decrease the amount of bills held in reserve.



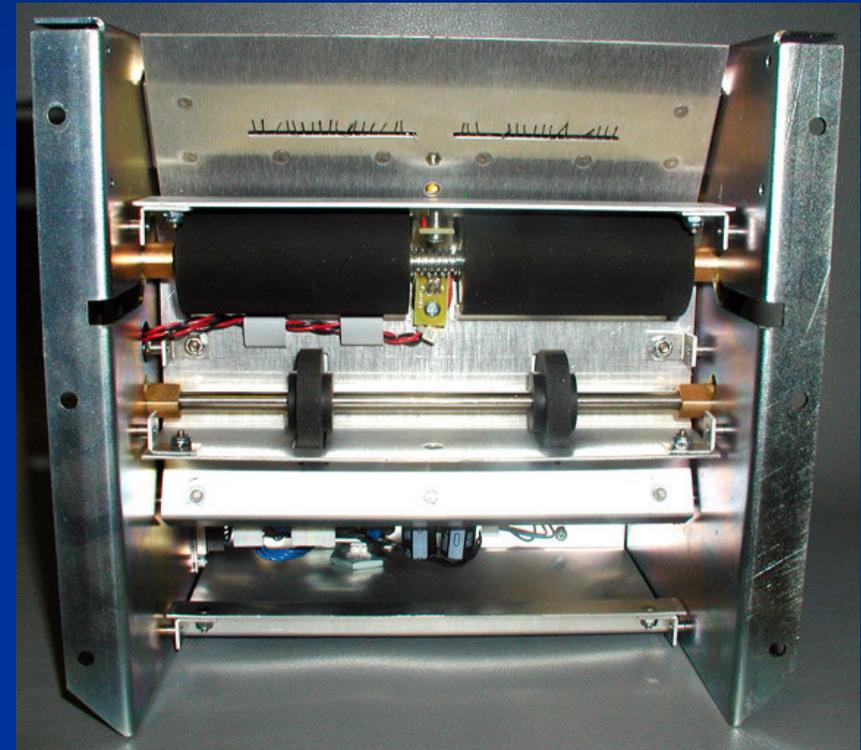
# Bill Dispenser Cleaning

- Remove the four screws and tilt back the bill cassette shelf.
- Use canned air to remove dust and debris.
- Use “run” button located on dispenser board to activate the motor.
- Use isopropyl alcohol and a clean cloth to clean all rubber rollers.



# Bill Dispenser Cleaning

- Use canned air to remove dust and debris. Pay particular attention to the optic sensor located between the lower conveyer rollers.
- Front conveyer rollers (wide set of rollers) cause multiple bill rejection when dirty. Clean with a clean cloth and isopropyl alcohol.



Bottom View

# Bill Dispenser Adjustment

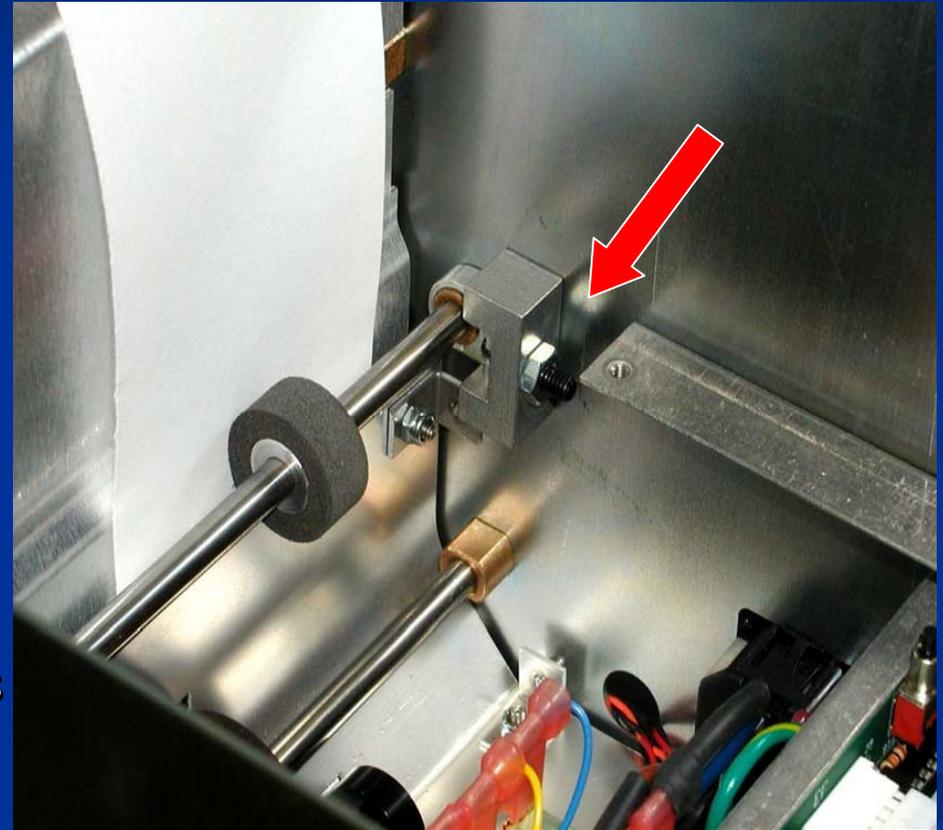
- To be performed only if a thorough cleaning doesn't provide a significant reduction in bill jams.
- Use 20lb bond paper and feed paper into the first set of rollers.
- Use a good quality scale and lift straight up on the scale until the paper moves. The amount of force required to lift the paper should be approximately 8 ounces.

TIP -An electronic fish scale from a sporting store would work well.



# Bill Dispenser Adjustment

- To make adjustments if necessary, use a  $11/32$  wrench to loosen the lock nut on the stripper adjustment screw.
- Use a 2mm Allen wrench to tighten (or loosen) the screw until the proper tension is measured.
- Tighten lock nut and measure and adjust the other side.
- Once both sides have 8 ounces of pull, reassemble the Bill Dispenser.



# The Wrap Up

- Routine maintenance will increase the reliability of your equipment.
- Most devices contain their own error diagnostics. Review the guides provided in the owners manuals to help identify problems.
- Outdoor environmental factors such as cold and rain impact your machines. Use awnings to protect the machines from rain. Use heating devices in cold weather climates to keep machines from mechanical jams and poor bill acceptance.
- Use high quality surge suppressors to protect your investment.



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