



Rhino-Mat

ALL IN ONE AUTO MAT WASH & DRY SYSTEM

Leading the Way in Mat Cleaning Technology

Operations Manual



(RHM-CS, RHM-SS, RHM-SSBC)

Technical Specifications

- ▶ Weight: 500 lbs.
- ▶ Height: 50 inch
- ▶ Width: 40 inch
- ▶ Depth: 26 inch
- ▶ Power: 110V/60 (30 Amps Required)
- ▶ Watt: 3,000 watts
- ▶ Speed: 1.2 mat per minute
- ▶ Mat size: Up to 2.6 feet wide
- ▶ Available outer construction:

RHM-CS Carbon Steel w/powder coat recommended for enclosed locations

RHM-SS Stainless Steel recommended for all weather use

(Note: Both RHM-CS and RHM-SS are available in Full-Serve and Self-Serve)

Product Overview

Safe, Fast, and Easy to Use

- ▶ One simple 30-second step process is all it takes to clean and dry each vehicle mat.
- ▶ Just insert the dirty mat into the auto-flat feed opening, and watch the clean and dry mat exit the machine.
- ▶ Rhino-Mat automatically washes and dries Carpet & Rubber Mats removing ground-in dirt, oil, sand, pet hair and most stains.

Durable and Portable

- ▶ Heavy-duty construction: Carbon-Steel and Stainless Steel models are available for both indoor and outdoor use.
- ▶ Integrated auto-heating system designed for use year round.
- ▶ Large Roller wheels are included for easy movement and storage. (Adjustable steel mounts are available for stationary application.)

Versatile

- ▶ Full-Serve and Self-Serve models to adjust to the needs of your business.
- ▶ Full-Serve model utilizes start and stop buttons for operator ease of use.
- ▶ Self-Serve model utilizes payment-processing components from companies like IDX Inc, MEI Group, and Wash Card Systems to provide customers with more payment options increasing overall revenue.

Eco Friendly

- ▶ Auto-Shutoff timer and control box system combine to make Rhino-Mat energy efficient, utilizing only the power it needs to wash and dry mats.
- ▶ Uses only about two liters of water for every two minutes.

Congratulations on the purchase of your Rhino-Mat Wash & Dry System. The following operations manual has been created to assist you with the installation, maintenance, and operation of your new Rhino-Mat System.

Please read the following pages thoroughly as they contain important information about your new equipment.

Thank You. - Clean World Distribution, Inc.

Experience the Difference!

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Safety Instructions

IMPORTANT: TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS EQUIPMENT, PLEASE READ THE SAFETY AND OPERATIONAL INSTRUCTIONS THOROUGHLY. SAVE ALL DOCUMENTATION FOR FUTURE REFERENCE.

1. Always exercise extreme caution and apply common sense practices when working with electricity and electrical components.
2. Do not block the openings where mats are inserted and ejected.
3. Do not install near any apparatus that produces extremely high temperatures.
4. Use the machine as directed for vehicle mats only.
5. Ensure the power cord and drain hose is safely out of the way of traffic to avoid disconnections or accidents.
6. Disconnect from all electrical power sources prior to installing or removing components.
7. Only use attachments or accessories specified and approved by the manufacturer.
8. Utilize the provided hood stand pieces to ensure it remains open when working under the front hood for prolonged periods. Remove pieces and all other obstructions prior to closing the front hood.
9. ALWAYS utilize a 3-pronged plug which provides a grounding connection. If the provided plug does not fit into your outlet, consult a qualified electrician.
10. Disconnect the power cord from the outlet when storing the machine for long periods.
11. Avoid acid-based cleaning solutions that can wear or corrode the paint and metal finishes of the machine. Manufacturer is not responsible for any wear to paint & metal finish.
12. Always handle machine with caution to avoid personal injury and/or damage when transporting the machine.
13. Refer servicing inquiries to qualified service personnel. Servicing is required when the machine has suffered severe damage, which includes but is not limited to damage to the power cord or plug; or when the machine does not operate or function normally.

Getting Started

BEFORE OPERATING THE MACHINE, ALL END-USERS SHOULD KNOW HOW TO USE THE MACHINE AND ITS COMPONENTS PROPERLY. MISHANDLING AND NEGLECT CAN LEAD TO IRREVERSABLE DAMAGES TO THE MACHINE NOT COVERED UNDER MANUFACTURER'S WARRANTY.

Part Identification *(Included Stand Alone Parts)*



Hood Stands x2



Water House Clamp



Keys x6



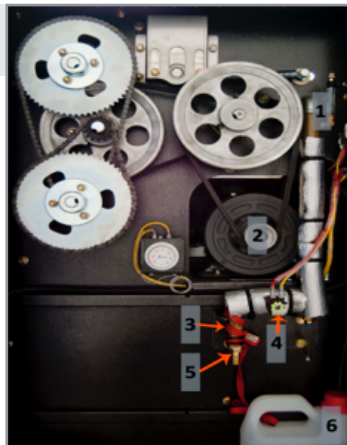
External Drainage Hose



Castor Wheels x4

Left Side Panel

1. Chemical Injector (Venturi System)
2. 1 Hp Main Motor
3. Interior Heat Trace Line
4. Solenoid Valve
5. Water Valve
6. Chemical Container

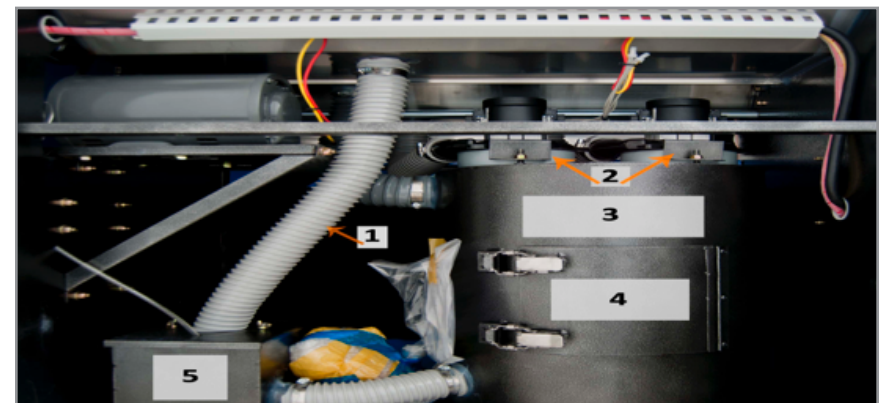


Top Hood



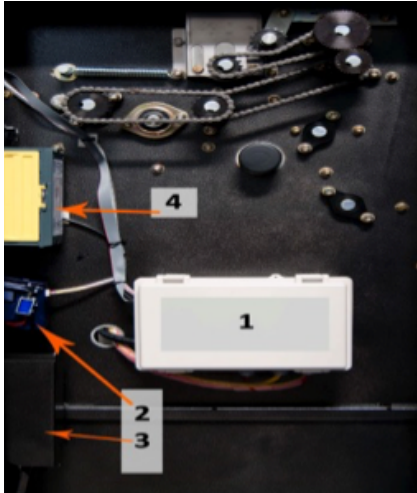
- | | |
|-----------------------------|---|
| 1. Stainless Steel Drum | 4. Feeder Roller (RHM-F800) |
| 2. Sponge Roller (RHM-R800) | 5. Spray Bar |
| 3. Brush Roller (RHM-BR800) | 6. RHM-SSR (The Roller under the sponge roller) |

Front Access Panels



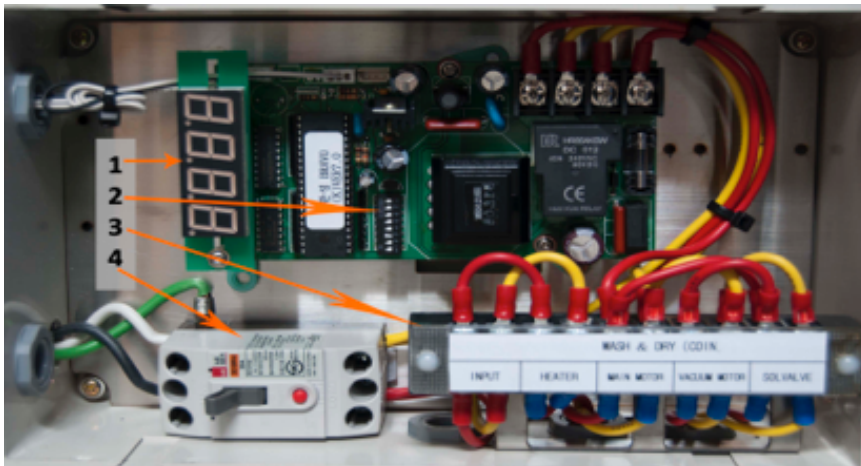
- | | |
|---------------------------|----------------------------|
| 1. Internal Drainage Hose | 4. Vacuum Drum access door |
| 2. 2x 110v Vacuum Motors | 5. Drainage Unit |
| 3. Vacuum Drum | |

Right Side Panel



1. Control Box
2. Coin Acceptor
3. Coin Collection Bin
4. Bill Acceptor

Front Access Panels



1. Digital Counter
2. Control Box Dip Switches
3. Electrical Connection Board
4. Circuit Breaker

Initial Setup

(Apply to both Full-Serve and Self-Serve models)

(NOTE: When opening doors or panels using the provided keys, always turn the keys together at the same time.)

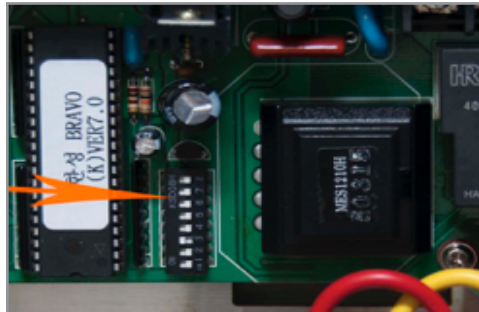
1. If the four included castor wheels are to be utilized for easy mobility, please ensure they are installed PRIOR to all other setup. REMEMBER to utilize built-in brakes when the machine is stationary.
2. Position the machine on a level surface, free from obstructions and out of the way of traffic.
3. Extend the rear mat catch rack and secure to the first or second notch on both arms.
4. Clamp and position exterior drainage hose pointing down at drain or connect extended drainage line as needed at your location.
5. Connect line from water source to the water valve inside of the Left Side Panel. REMEMBER to apply hose clamp tightly. A loose hose clamp will result in leakage.
6. Pull power cord through the cut out hole and connect the End-Plug (not included).
7. Plug in to a 110v, 30 amps power source to begin configuration. **CRITICAL INFORMATION:** Using a power source rated for less than 30 amps may result in irreversible damage to the machine and property. Please exercise extreme caution when working with electricity and electrical components.

Full-Serve Configuration

THE FOLLOWING PROCEDURES DO NOT APPLY TO THE SELF-SERVE MODEL CONFIGURED FOR PAYMENT. PLEASE REFER TO THE NEXT SECTION FOR INFORMATION ON SETTING UP THE PAYMENT COMPONENTS.

Once the machine has been setup and placed in its final operating location, configuration consists of two final steps.

1. Configure the automatic shutoff feature and the delay timer using the Dip Switches located inside of the control box. Manufacturer highly recommends a delay of 5-10 seconds between 3-4 minute cycles. See Page 11 for a chart with the Dip settings.



WARNING!: Running multiple cycles repeatedly without allowing the machine time to drain will result in damage to vacuum motor(s) not covered by the warranty.

2. Circuit breaker switch to "ON". Press the red reset button to ensure circuit is closed.



Automatic Shutoff Dip Switch Settings

Delay Time (MM:SS)	SW 7	SW 8
00:05	OFF	OFF
00:10	OFF	●

Automatic Shutoff Dip Switch Settings

Run Time (MM:SS)	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6
01:00	OFF	OFF	OFF	OFF	OFF	OFF
01:30	●	OFF	OFF	OFF	OFF	OFF
02:00	OFF	●	OFF	OFF	OFF	OFF
02:30	●	●	OFF	OFF	OFF	OFF
03:00	OFF	OFF	●	OFF	OFF	OFF
03:30	●	OFF	●	OFF	OFF	OFF
04:00	OFF	●	●	OFF	OFF	OFF
04:30	●	●	●	OFF	OFF	OFF
05:00	OFF	OFF	OFF	●	OFF	OFF
05:30	●	OFF	OFF	●	OFF	OFF
06:00	OFF	●	OFF	●	OFF	OFF
06:30	●	●	OFF	●	OFF	OFF
07:00	OFF	OFF	●	●	OFF	OFF
07:30	●	OFF	●	●	OFF	OFF
08:00	OFF	●	●	●	OFF	OFF
08:30	●	●	●	●	OFF	OFF
09:00	OFF	OFF	OFF	OFF	●	OFF
09:30	●	OFF	OFF	OFF	●	OFF
10:00	OFF	●	OFF	OFF	●	OFF
12:00	●	●	OFF	OFF	●	OFF
15:00	OFF	OFF	●	OFF	●	OFF
18:00	●	OFF	●	OFF	●	OFF
20:00	OFF	●	●	OFF	●	OFF
25:00	●	●	●	OFF	●	OFF
30:00	OFF	OFF	OFF	●	●	OFF
35:00	●	OFF	OFF	●	●	OFF
40:00	OFF	●	OFF	●	●	OFF
00:10	●	●	OFF	●	●	OFF
00:20	OFF	OFF	●	●	●	OFF
00:30	●	OFF	●	●	●	OFF
00:40	OFF	●	●	●	●	OFF
00:50	●	●	●	●	●	OFF

Self-Serve Configuration

The following procedures DO NOT apply to the Full-Serve, Push Button Start models.

Control Panel Dip Switch Configuration

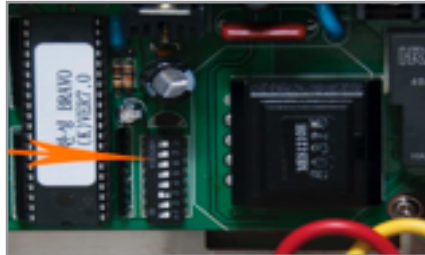
The first step to setting up the bill and coin system is to figure out these three factors:

The **Length of Time** (in seconds) you plan to give your customers per cycle:

1 minute = 60 Seconds

The **Dollar Amount** (in quarters) you plan to charge your customers per cycle:

1 dollar = 4 quarters



Also, it is important to note that 1 quarter = 1 pulse; so 4 quarters = 4 pulses. Locate Control Panel Dip Switches 1-8 in the Control Box located on the inside of the Right Side Door.

Configuring Control Panel Dip Switches 1-5 for Time

- Determine the length of time per cycle in seconds (i.e. 2 minutes=120 seconds).
- Next, determine the dollar amount to be charged per cycle in quarters (i.e. \$2= 8 quarters [each quarter= one pulse]).

Once you have these two numbers, plug them into the following equation:

$$\begin{array}{|c|} \hline \text{LENGTH OF TIME} \\ \hline \text{Per cycle} \\ \text{in seconds} \\ \hline \end{array} \div \begin{array}{|c|} \hline \text{DOLLAR AMOUNT} \\ \hline \text{to be charged per} \\ \text{cycle in quarters} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{DIP SWITCH} \\ \hline \text{Settings} \\ \text{for Time} \\ \hline \end{array}$$

- Finally, once you have the "DIP Switch Settings for Time", find the number under the Seconds column on the Control Box DIP SW Chart for Setting Time (Located on Page 12). These are the settings that DIP switches 1-5 should be set to.

NOTE: You will need to round the number up or down if you end up with a fraction (i.e. 24.5 can round up to 25 or down to 24).

Control Box DIP SW Chart for Setting Time

Seconds	DIP SW 1	DIP SW 2	DIP SW 3	DIP SW 4	DIP SW 5
1	OFF	OFF	OFF	OFF	OFF
2	●	OFF	OFF	OFF	OFF
3	OFF	●	OFF	OFF	OFF
4	●	●	OFF	OFF	OFF
5	OFF	OFF	●	OFF	OFF
6	●	OFF	●	OFF	OFF
7	OFF	●	●	OFF	OFF
8	●	●	●	OFF	OFF
9	OFF	OFF	OFF	●	OFF
10	●	OFF	OFF	●	OFF
11	OFF	●	OFF	●	OFF
12	●	●	OFF	●	OFF
13	OFF	OFF	●	●	OFF
14	●	OFF	●	●	OFF
15	OFF	●	●	●	OFF
16	●	●	●	●	OFF
17	OFF	OFF	OFF	OFF	●
18	●	OFF	OFF	OFF	●
19	OFF	●	OFF	OFF	●
20	●	●	OFF	OFF	●
21	OFF	OFF	●	OFF	●
22	●	OFF	●	OFF	●
23	OFF	●	●	OFF	●
24	●	●	●	OFF	●
25	OFF	OFF	OFF	●	●
30	●	OFF	OFF	●	●
35	OFF	●	OFF	●	●
40	●	●	OFF	●	●
45	OFF	OFF	●	●	●
50	●	OFF	●	●	●
55	OFF	●	●	●	●
60	●	●	●	●	●

Configuring Control Panel Dip Switches 6-8 for Price

Now take the 'Dollar Amount to be charged per cycle in quarters' and look at the Control Box DIP SW Chart for setting price below. Find the correct value under the Coin column and set the switches accordingly.

That completes the configuration of the Control Box Dip Switches.

Control Panel DIP SW Chart for Setting Price System

Price Pulses (Dollars)	DIP SW 6	DIP SW 7	DIP SW 8
1 (\$0.25)	OFF	OFF	OFF
4 (\$1.00)	●	OFF	OFF
5 (\$1.25)	OFF	●	OFF
8 (\$2.00)	●	●	OFF
12 (\$3.00)	OFF	OFF	●
16 (\$4.00)	●	OFF	●
20 (\$5.00)	OFF	●	●
25 (\$6.25)	●	●	●

Step by Step example:

The desired **length of time per cycle** is 3 minutes,
which equals 180 seconds.

The desired **dollar amount to be charged per cycle** is \$2.00,
which equals 8 quarters or 8 pulses.

Now the equation:

$$\frac{180 \text{ seconds}}{8 \text{ quarters}} = 22.5 = 23$$

LENGTH OF TIME Per cycle in seconds	DOLLAR AMOUNT to be charged per cycle in quarters	DIP SWITCH Settings for Time
--	--	---

The Configuration settings for length of time per cycle:

DIP SW Chart for Setting Time

Seconds	DIP SW 1	DIP SW 2	DIP SW 3	DIP SW 4	DIP SW 5
23	OFF	●	●	OFF	●

The Configuration settings for dollar amount to be charged per cycle:

DIP SW Chart for Setting Price System

Coin	DIP SW 6	DIP SW 7	DIP SW 8
23	●	●	OFF

Commonly Used Pricing and Time Combinations

Dollar Amount to be charged \$	Time in Min.	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 7	SW 8
\$1.00	1	OFF	●	●	●	OFF	OFF	OFF	OFF
\$1.00	2	OFF	●	●	OFF	OFF	OFF	OFF	OFF
\$2.00	2	OFF	●	●	●	OFF	●	●	OFF
\$2.00	3	●	OFF	●	OFF	●	●	●	OFF
\$3.00	3	OFF	●	●	●	OFF	OFF	OFF	●
\$3.00	4	●	●	OFF	OFF	●	OFF	OFF	●
\$4.00	4	OFF	●	●	●	OFF	●	OFF	●
\$4.00	5	OFF	●	OFF	OFF	●	●	OFF	●
\$5.00	4	●	●	OFF	●	OFF	OFF	●	●
\$5.00	5	OFF	●	●	●	OFF	OFF	●	●

CONFIGURING THE HAWK XEPTOR COIN ACCEPTOR

COIN LEARN PROCEDURE

1. Slide the front cover up and identify the three controls to be used in this procedure:
 - a.) The “test” push button near center bottom. (used to input the number of credit pulses)
 - b.) 16 position rotary switch to the right of the push-button. (#0 is normal RUN position, #1-#6 are for learning each of 6 possible coin types that can be accepted)
 - c.) LED indicator half way up on the right side. (Green in RUN mode, red in LEARN mode)
2. Turn the rotary switch to one of the LEARN positions #1-#6 (for example, pick #3 for learning the 3rd coin type) and observe the LED turns red to indicate it is now ready to learn.
3. Push the test button once for each credit pulse you wish to have issued for this coin. For example, a \$1 coin would require 4 credit pulses if you are also accepting \$0.25 coins for one credit pulse. Note: With V3.0-t or and V4.0 firmware, only a single credit and sense pulse will be produced no matter how many times you push the button. Contact the factory if you require multiple pulses for your application.
4. Slide the cover back on the unit to make sure outside light is does not interfere with the sensors.
5. Show the unit 6 samples of the coin by depositing them into the acceptor as usual. It is best to use 6 different coins since there are typically slight variations from coin-to-coin.
6. After the 6th sample coin is deposited, the LED will flash red-green a few times to indicate the LEARN procedure is complete and the coin parameters are stored in memory.

7. Slide the front cover open again and turn the rotary switch back to position #0 and observe the LED turning green. Check that you have not accidentally turned it too far to position #15 which is a field test function position, in which it will not accept coins.
8. Slide the front cover back down and you should now be able to accept the new coin.

COIN UN-LEARN PROCEDURE

1. Slide the front cover up and turn the rotary switch to the coin # position you wish to UN-LEARN.
2. Push the test button once to initiate the LEARN sequence.
3. Turn the rotary switch back to position #0 without depositing any coins to signal the unit that you wish it to erase the parameters for this coin. The LED will flash red-green to indicate completion.
4. Slide the front cover back down.



Hawk Xeptor coin acceptor is supported directly by IDX Inc, Clean World Distribution Inc can only provide basic support or replacement of the component in the event of a catastrophic failure. For trouble shooting and all other support please contact IDX Inc directly via their toll free number: 800-643-1109 or on the web at www.idxinc.com

Configuration of The MEI AE 2400 Series Bill Validator

The following instructions have been provided courtesy of MEI Group. Clean World Distribution holds no responsibility for claims made by MEI Group.

INSTALLATION INSTRUCTIONS

1. Set Bill Acceptor option switches. See Figure 2.

Note: When you receive the product, all switches are off. This will automatically enable the options as follows:

- Accept \$1,\$2, and \$5 dollar bills.
- Four way accept.
- High Security accept.
- 50ms on/50 ms off pulse (short pulse).
- Four pulses per dollar.
- Always enabled.

Important note: Placing any switch ON will override the above options, and the Bill Acceptor will operate according to the switch settings label! (See Figure 2)

NOTE: The unit may be configured with the attached coupon rather than using the option switches. **For coupon configuration, turn all option switches OFF and proceed to Coupon Configuration instructions on page 4.**

SWITCH DESCRIPTION	
1,2	Combination of these two switches selects number of enabled bill directions.
3	Position allows either acceptance or security to be maximized.
4,5,6	Individual switches enable or disable corresponding bill denomination.
7	Position allows for either one (1) or four (4) pulses per dollar. One pulse = 50ms on/50ms off
8	Position allows for either Always Enable , acceptance at all times or Harness Enable , acceptance by way of controller.

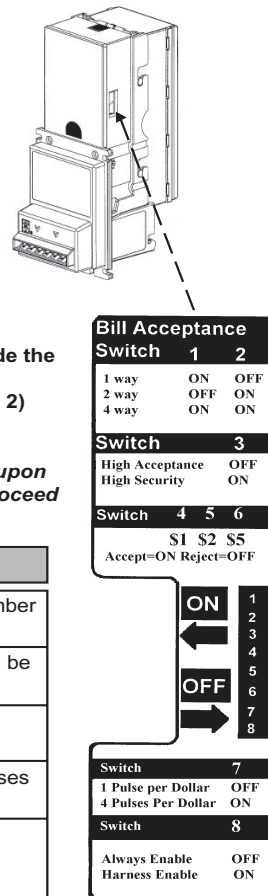


Figure 2

2. Remove power from the entire machine.

3. Install the AE2400 onto the Bill Acceptor mounting studs and through the mounting hole of the amusement machine. Secure using the appropriate hardware.

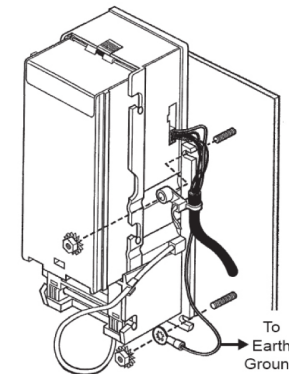
INSTALLATION INSTRUCTIONS (CONTINUED)

4. Connect the AE2400 to the appropriate interface harness.

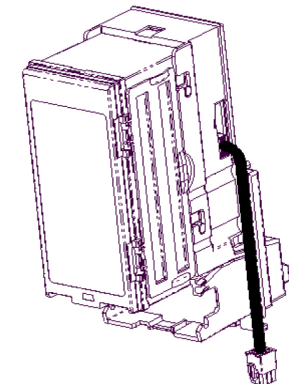
Install the (12) pin connector into the bottom of interface slot, matching connector keys to blank pin locations. See Figure 3.

Do not force the harness into bill acceptor!! This will cause pins to bend or break!

A power cord (available separately - MEI Part# 01-12-139C, 115V only) may be used for supplying power to the bill acceptor and for routing pulse credits to a coin switch.



115V AE2400



12VDC & 24VAC AE2400

Figure 3

5. On 115V units, attach the ring terminal of the grounding wire to an earth ground location within the machine. Secure with appropriate hardware. See figure 3.

To provide strain relief, wrap the enclosed tie-wrap around the closest mounting stud, harness wires, and ground wire, then pull tie-wrap tightly.

IMPORTANT NOTE TO OEMs: Step 5 must be performed prior to Machine Dielectric Voltage - Withstand (Hi-Pot) Testing.

6. Apply power to the machine.

On Line powered 12V, 24V and 115V models: Observe that the LED status indicator on the back of the AE2400 is ON and NOT flashing. This condition indicates that the unit is ready to accept bills.

- If the light is OFF, check to ensure that power has been applied.
- If the light is flashing, refer to the label located on the back of the magazine for a description of diagnostic codes.

On Battery powered 12V models: Observe that the LED status indicator on the back of the AE2400 is always OFF. This condition indicates that the unit is ready to accept bills.

- If the light is flashing, refer to the label located on the back of the magazine for a description of diagnostic codes.
- Quick flashes indicate coupon set-up/teach mode
- 7 flashes indicate that either no interface was detected or all denominations are disabled

Easy Operation Guide: Self-Serve

INSTALLATION INSTRUCTIONS (CONTINUED)

7. Check operation

- Insert a \$1 bill and observe that it is accepted and stacked.
- Repeat for other enabled bills.
- Insert a \$5 bill and verify that proper credits have been established.
- If the machine display indicates that a credit was missed; reconfigure the AE2400, using coupon, for **LONG PULSE** (60ms on/300ms off).

8. Remove bills and check status

- Instructions for bill removal are located on a label at the back of magazine.
- Verify that the LED status indicator remains steady ON.



Select water switch to "On" or "Off" position



Insert payment to begin the cycle



Insert first mat face down



Collect the finished mat from the catch rack to the rear of the machine



AE2400 Bill Validator is supported directly by MEI Group, Clean World Distribution, Inc. can only provide basic support or replacement of the component in the event of a catastrophic failure. For all other support please contact MEI Technical directly via their toll free number: 800-345-8172 or on the web at www.meitechnical.com

Easy Operation Guide: Full Serve



Select water switch to "On" or "Off" position



Press the green Start Button to begin the cycle



Insert first mat face down



Collect the finished mat from the catch rack to the rear of the machine

Frequently Asked Questions

Q: What do I do if the machine does not start?

A: Ensure the power cord is plugged into an outlet rated for a 110v tri-plug, 30 amp connection. Check to see that circuit breaker switch inside of the control box is set to the “ON” position.

Q: What if water is not being released through the Spray Bar?

A: Check to see that the water hose is tightly secured to the input valve. Make sure that the line-in valve lever is in the open position (lever should be pointing downward). Ensure a proper flow from the primary water source to the machine. The “Water ON-OFF” knob on the front of the machine should be set to “Water-On”. Check the water pipe to make sure that pipe holes are clear and not clogged by dirt particles or build up.

Q: What do I do if water is leaking from the hose connection?

A: Ensure that the hose is tightly connected at both ends. Check that the hose connector fits properly and that the hose is clamped properly. If the hose disconnects from the machine as water flows, it could be due to pressure built up by the water source. Adjust water flow to less than maximum flow from the source.

Q: Why does the mat still feel wet coming out of the machine?

A: Depending on the mat material, dryness of mats may vary from one mat type to another. After cleaning cycle is finished, there may be slight moisture left on the surface of the mat. The moisture still left on the surface is normal and will dry up quickly by air. This does not mean that the machine is not functioning properly.

Q: Why is water not flowing properly from the drain hose?

A: The drain hose may be clogged due to an excess of waste. Make sure the drain hose clamp is tightly secured. Be sure drain hose is pointing in a downward position. Drain hose must not be bent or in an upright position.

WARNING! In select models, the Drain Hose must be completely pulled out from inside machine to allow continuous flow of waste and liquid to avoid over-flow.

Q: Is there any maintenance required or parts that need to be replaced?

A: It is recommended to check the machine for proper installation if the machine does not function normally or does not start. Parts or components that may need to be replaced due to wear and tear from normal use or damage must be changed out immediately for normal function and prolonged use of the system. Occasional cleaning is recommended. Exterior should be cleaned off if there has been any contact of chemicals or detergents onto the surface coating of the machine to prevent paint deterioration and/or rusting.

Frequently check for excess waste left behind in drain hose and system waste compartment, to prevent clogging and malfunction and/or damage to system.

Q: Why do I see smoke coming out of the machine?

A: When the vacuum drum is subjected to constant use, without time to drain, water will eventually reach the top of the vacuum drum and damage the vacuum motor(s).

When a motor is burned out by water damage, it will create billowing smoke. The machine will not be able to operate properly without functional vacuum motors.

PRECAUTION: To avoid damage or malfunction of machine, please follow all installation and safety instructions carefully and completely. Not following these instructions may lead to injury to personnel, damage, and malfunction to machine and its properties.

Maintenance

DISCONNECT FROM POWER SOURCES BEFORE PERFORMING MAINTENANCE PROCEDURES.

Brush Roller Maintenance

Period Between Maintenance: Every 6 months after purchase

Date of last maintenance: _____

Maintenance consists of removing tangled hair, threads and other foreign objects from brush roller using pliers or fingers.

Access Point: Top Hood; always utilize the included hood stands any time you are doing maintenance on interior components.

Extraction Drum Maintenance

Period Between Maintenance: Every 6 months after purchase

Date of last maintenance: _____

Maintenance consists of opening the hatch and cleaning the extraction drum of any built up debris and particulates over a period of time.

Access Point: Bottom front panel; turn both keys simultaneously and the panel aside during maintenance.

Drainage Hose System Maintenance

Period Between Maintenance: Every 12 months after purchase

Date of last maintenance: _____

Maintenance consists of disconnecting drainage hoses and clearing them of any debris and particulates that may components. Build up over a period of time. A clogged drainage hose may lead to damage to interior.

Access Point: Front access panels; turn both keys simultaneously to open bottom panel. Utilize a Philips head screwdriver to remove two screws and open the upper front panel.

Water Drainage Tray Maintenance

Period Between Maintenance: Every 12 months after purchase

Date of last maintenance: _____

Maintenance consists of cleaning out the water drainage tray of any dirt and debris left behind from the washing process which can eventually lead to a clog in the interior drainage hose.

Access Point: Remove the bottom front access panel first using the two keys provided and then remove the top front access panel using a Philips head screwdriver.

Extraction Tray Slit Maintenance

Period Between Maintenance: Every 12 to 18 months after purchase, or with replacement of Sponge Roller.

Date of last maintenance: _____

Maintenance consists of clearing any clogged slits on the extraction tray. Manufacturer highly recommends this maintenance to be performed with the replacement of the Sponge Roller.

Access Point: Top Hood; always utilize the included hood stands any time you are doing maintenance on interior components. Removal of Sponge Roller may be required in order to access the full Extraction Tray.

Gear and Chain Maintenance

Period Between Maintenance: Every 12 to 18 months after purchase.

Date of last maintenance: _____

Maintenance consists of wiping away old lubricant and applying new lubricant to all gears and chains.

Access Point: Left and Right Side Access Doors; turn both keys at the same time when opening each door.

FLIP CIRCUIT BREAKER SWITCH TO OFF AND DISCONNECT FROM POWER SOURCES BEFORE REPLACING ANY ELECTRICAL COMPONENTS.

Vacuum Motor(s)

Effective life expectancy: 1 to 2 years depending on usage

Date of last replacement: _____

Maintenance consists of an inspection to ensure the vacuum motors are still in working condition after long periods of use. Users should not continue to use the machine upon discovery of any damages until replacement motors are installed.

Access Point: Back access panels; turn both keys simultaneously to open bottom panel.

Warning: DO NOT insert fingers into any part of the vacuum motor where moving parts are exposed!

Sponge Roller

Effective life expectancy: 1 to 2 years depending on usage

Date of last replacement: _____

Maintenance consists of an inspection to ensure the surface of the Sponge Roller is intact. A worn out Sponge Roller will result in mats not being pressed down tightly enough against the extraction tray to ensure proper drying of mats. It is highly recommended that the Sponge Roller be replaced at the first signs of wear and a low quality of drying.

(NOTE: Residual moisture is acceptable as it is only on the top layer and will dry in the open air.)

Access Point: Top Hood; always utilize the included hood stands any time you are doing maintenance on interior components.

Brush Roller

Effective life expectancy: 3 to 4 years depending on usage

Date of last replacement: _____

Maintenance consists of an inspection and thorough cleaning to ensure the Brush Roller is free from tangled hairs and fibers. Also, check to make sure that there are no large patches of missing or broken bristles. Large patches of missing or broken bristles indicate that the effective life expectancy has been exceeded and the Brush Roller needs to be replaced soon.

Access Point: Top Hood; always utilize the included hood stands any time you are doing maintenance on interior components.

Feeder Roller

Effective life expectancy: 4 to 5 years depending on usage

Date of last replacement: _____

Maintenance consists of an inspection to ensure that the rubber brackets are intact and not worn down too far. If the brackets are worn and look to be in bad condition, the feeder roller will need to be replaced.

Access Point: Top Hood; always utilize the included hood stands any time you are doing maintenance on interior components.

This maintenance and part replacement schedule is a rough estimation.

Life expectancy for replaceable parts will vary depending on the volume of usage and operating environment.

Replacing the Brush Roller

In order to replace the Brush Roller you will need access to the left side door panel, the top hood, and the right side door panel. Unlock the left and right side door panels using the keys provided.

Before opening the top hood, disconnect the machine from the primary power source.

Open the top hood by sliding fingers into the mat-feeding slot with palms facing up. Curl your fingers up to hook them onto the hood release bar. Gently pull back on the bar and lift the hood open.

ALWAYS utilize the hood stands to prop the top hood open when replacing rollers. Remove when work or maintenance is complete.



When removing bolts for bearing housings, always hold the bolt or the nut on the opposite side in place. Otherwise, the bolt will spin freely.

From the left side door panel

1. Remove Main Motor Belt



2. Remove Main Motor Pulley by loosening the two black locking bolts. A lot of force may be needed to pull the pulley off.



3. Remove Secondary inner Pulley by loosening the two black locking bolts.



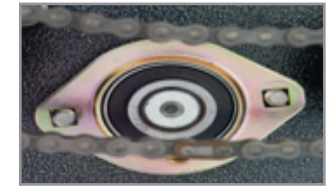
4. Remove the Bearing and lock ring.



(NOTE: The lock rings have bolts that must be removed with an allen wrench before the bearing assembly can be removed.)

From the right side door panel

5. Remove the bearing assembly and lock ring.



From the top hood

6. Slowly push the Brush Roller to the far left and lift the roller out of the machine.



Installing the New Brush Roller

Once the old Brush Roller has been removed, installing the new one is as simple as following the previous steps in reverse order.

1. Insert the new Brush Roller by sliding the shorter side (less rod is exposed) into the right side hole. Push as far as needed to get the left side into its respective hole.
2. Reattach and lock the bearing assembly and lock ring into place in the Right Side Door panel.
3. Move over to the Left Side Door Panel, reattach the bearing assembly, and lock ring into place.
4. Next, slide the smaller secondary pulley into place ensuring that it lines up correctly with a corresponding pulley located to the left side. Once it is in place, lock it down and reattach the belt between it and the corresponding pulley.
5. Slide the Main Motor Pulley on, ensuring that it is perfectly aligned with the pulley on the main motor. When the two pulleys are aligned, lock it into place.
6. Finally reattach the Main Motor belt to complete the installation.

(NOTE: When re-attaching pulleys, some filing of the rod may be necessary in order for the pulleys to slide on smoothly.)

Replacing The Sponge Roller

In order to replace the Sponge Roller you will need access to the top hood, and the right side door panel. Unlock the right side door panel using the keys provided.

Before opening the top hood, disconnect the machine from the primary power source.

Open the top hood by sliding fingers into the mat-feeding slot with palms facing up. Curl your fingers up to hook them onto the hood release bar. Gently pull back on the bar and lift the hood open.

ALWAYS utilize the hood stands to prop the top hood open when replacing rollers. Remove when work or maintenance is complete.



When removing bolts for bearing housings, always hold the bolt or the nut on the opposite side in place. Otherwise, the bolt will spin freely.

1. Unlink the chain connected to the Sponge Roller gear by carefully removing the chain clip holding the removable link in place.



2. Remove the Gear connected to the Sponge Roller.



3. Disconnect the Top Hood retaining bar spring by removing the bolt.



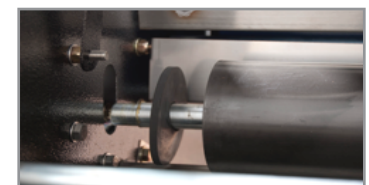
4. Take off the outer bearing housing by removing the four bolts. The two bolts directly to either side of the roller DO NOT need to be loosened.



5. Carefully slide the bearing, inner housing, and spring off of the Sponge Roller rod. The two bolts DO NOT need to be removed as they are there to hold the bearing to the inner housing.

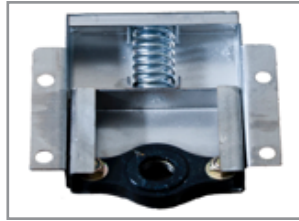


6. From the top hood pull the Sponge Roller to the far right and lift out of the machine.



Installing the New Sponge Roller

1. Insert the new Sponge Roller from left to right, ensuring that the rod end with the notch goes through the right side hole. Double checking this will make sure that the gear that goes back on will have something to bite into.



2. When re-placing the bearing, inner housing, outer housing and spring, it will be easier to assemble the parts BEFORE trying to attach them individually to the Sponge Roller rod. The spring has a tendency to make things difficult as it pushes the bearing slightly off center from where the Sponge Roller comes through.

3. Insert and tighten the four bolts for the outer bearing housing , keeping in mind to hold the nuts and bolts from the opposite side to prevent them from spinning freely.

4. Now hang the spring for the Top Hood retaining bar and apply the outer washer and nut.



5. Slide the gear back into place with one of the locking bolts in place over the notch in the Sponge Roller rod. (Note: It may be necessary to file down any bumps or scars on the Sponge Roller rod in order for the gear to slide on smoothly. Any resistance felt may indicate a spot that needs to be filed down.)



6. Once the Sponge Roller gear is aligned and in place, lock it down using an Allen wrench.



7. When re-connecting the chain, be sure to run the chain UNDER the swinging arm gear, not over it before reattaching the locking links.

Replacing the Feeder Roller

In order to replace the Feeder Roller you will need access to the top hood, and the right side door panel. Unlock the right side door panel using the keys provided.

Before opening the top hood, disconnect the machine from the primary power source.

Open the top hood by sliding fingers into the mat-feeding slot with palms facing up. Curl your fingers up to hook them onto the hood release bar. Gently pull back on the bar and lift the hood open.

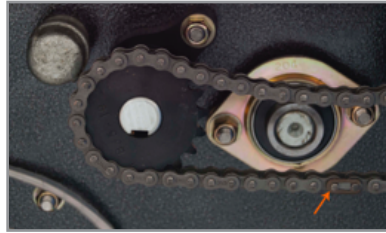
ALWAYS utilize the hood stands to prop the top hood open when replacing rollers. Remove when work or maintenance is complete.



When removing bolts for bearing housings, always hold the bolt or the nut on the opposite side in place. Otherwise, the bolt will spin freely.

Replacing the Feeder Roller

1. Unlink the chain by carefully pulling off the locking clip.



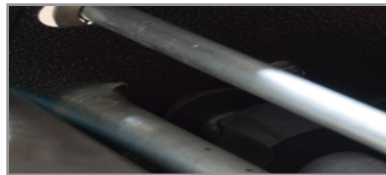
2. Use an Allen wrench to loosen the two locking bolts on the gear to remove it.



3. Remove the bearing to release the Feeder Roller.



4. Carefully pull the Feeder Roller to the far right side and lift out.



Installing the new Feeder Roller

Once the old Feeder Roller has been removed, installing the new one is as simple as following the previous steps in reverse order.

1. Slide the new Feeder Roller into the left side first, ensuring that the Feeder Roller rod end with the indentation goes into the right side. This is to make sure that the gear has a place to bite into the rod and turn the roller.
2. Reattach the bearing and fasten the two bolts in their respective holes.
3. When attaching the gear, ensure that it is perfectly aligned so that chain will not experience resistance when turning at high speeds.
4. Lock the chain back into place, apply lubricant as needed to complete the installation.

Replacing the Vacuum Motor(s)

To replace the vacuum motors unlock the bottom front panel using the two keys provided. Use a Philips head screwdriver to remove two screws to open the top front panel.

DISCONNECT THE MACHINE FROM THE PRIMARY POWER SOURCE PRIOR TO COMPLETING ANY OF THE FOLLOWING PROCEDURES. FAILURE TO DO SO WILL LEAD TO SEVERE INJURY.

1. Open the bottom front panel using the two keys provided.
2. Open the top front panel by removing two screws with a Philips head screw driver.
3. Disconnect the two power cables for each motor where they are joined to the two coming from the machine.
4. Disconnect the vacuum hoses by loosening the attached hose clamps.
5. Free the vacuum motors from the top of the extraction drum by removing the mounting brackets.
6. Place new vacuum motors in their proper position and secure them tightly to the extraction drum using the mounting brackets.
7. Reconnect vacuum hoses and secure with hose clamps.
8. Each motor has two cables on left and right (+ and -) sides. Twist the left side cables (+ and +) from both motors together and do the same for the right side cables (- and -) so that you are left with only two cables coming from the motors.
9. Then connect the two lines from the motors to the two lines coming from the machine to complete the process. Usually the two lines from the machine are different colors, it does not matter which go to which as long as they never touch.

Guide to Maximizing Rhino-Mat's Washing and Drying

The following list of tips has been created to provide operators of Rhino-Mat effective ways to work out the older more soiled in stains. By employing the techniques and information provided below, operators will be able to maximize on Rhino-Mat's full potential to provide a completed product matched by no other machine on the market.

- Due to the brush only being able to spin in one direction, mats of certain materials or those that are stained very heavily, may not always come out as clean as is possible on the first run. The different grades of the fibers will sometimes lead to only one side being cleaned.
 - ▶ It is highly recommended that these particular mats be turned 180 degrees so that the brush is able to spin against the opposite side of the fibers thus enabling a more thorough cleaning. Even for those mats that come out looking clean, can get cleaner by utilizing this method.
- Using the chemical injection system may not always be the most effective choice depending on the recommended dilution of the cleaning solution being used. Tougher stains may require a more concentrated application of solution in order to be lifted out.
 - ▶ In some cases, pre-treatment may be required in order to thoroughly remove the more stubborn stains. (Please note: it is highly recommended that a low foam or a non-foaming upholstery cleaner be used.)
- Depending on the materials that some mats consist of, they may not always come out as dry as is possible.
 - ▶ All Rhino-Mat systems come equipped with "Water On-Off" toggle switches. In the event that mats come out feeling moist or wet to the touch, switch the water off and run the mat through again to dry completely.
- Hot water will always help. While the effectiveness of Rhino-Mat System lies primarily in patented technology, the application of hot water will always boost the quality of the end product that Rhino-Mat is able to provide. If a warm water line is available, capitalize on Rhino-Mat's effective technology coupled with the cleaning power of hot water.
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Marketing

Upon the purchase of your new Rhino-Mat System, it is extremely important to have a marketing plan in place to promote the new service within the first month.

The promotional ideas listed below are just a few suggestions for maximizing your potential revenue with the Rhino-Mat system as well as beginning the process of building a loyalty base of customers. To further assist operators with marketing, we do offer digital copies of logos and decals. Please inquire for details.

Quality mat cleaning for a penny.

With this program, the marketing strategy would be to provide customers with an opportunity to experience the quality and convenience of Rhino-Mat. This allow the word to get out that your location now provides a service that no other competitors in the area do. Run this promotion periodically to draw new customers in. NOTE: Rhino-Mat models that come equipped with coin acceptors can be programmed to accept pennies or tokens.

Free mat cleaning with the purchase of any wash, one day of the month.

With this program, operators would pick one random day out of the month and provide free mat cleaning throughout the course of the day. Providing the service for free for customers who purchase any wash periodically will help to increase over all traffic to your location.

Free mat cleaning with the purchase of any premium wash package.

With this program, the quality mat cleaning service provided by the Rhino-Mat would be used as an incentive to upgrade any wash package to a more expensive premium package.

Reward program.

Provide your customers with a reward for purchasing services. By utilizing this program, it gives your customers a goal to attain by coming back to your location repeatedly. In order for this program to be successful, a couple key points must be address:

- ▶ A reward card on which identifying marks can be made, must be printed in quantity to be handed out to customers.
- ▶ A unique code or stamp must be created so that customers cannot exploit the program. (For example, a regular round hole punch can be purchased at any office supplies store. Thus using a regular round hole punch would allow customer to pre-punch their own cards and bring them to your location.)

Please NOTE: These suggested marketing strategies have been provided as examples and will require various preparations such as training employees to up sell the services. CWD does not make claims of guarantees that all of these examples will work exactly as is at every location. Please take the time to examine your customer base to tailor specifics to their needs.



Manufacturer's Warranty

RHINO-MAT WAS TESTED AND MEETS OUR STRINGENT QUALITY STANDARDS. THIS PRODUCT IS GUARANTEED TO BE FREE FROM MANUFACTURING DEFECTS IN ORIGINAL MATERIALS AND ORIGINAL PARTS FROM DATE OF DELIVERY UP TO 1 YEAR; HOWEVER, IT DOES NOT EXTEND TO DAMAGE CAUSED BY SUBSEQUENT OWNERS OF THE EQUIPMENT AFTER THE MACHINE HAS BEEN PUT INTO PLACE. THEREFORE, ANY DAMAGE OR PROBLEMS NOT THOUGHT TO BE CAUSED BY ACCIDENTAL DAMAGE, MISUSE, ABUSE, NEGLIGENCE, IMPROPER REPAIR, REPLACEMENT, OR ALTERATION BY UNAUTHORIZED PERSONS OR FAILURE TO FOLLOW OPERATIONAL INSTRUCTIONS PROVIDED WITH THE EQUIPMENT MUST BE REPORTED WITHIN 3-5 BUSINESS DAYS IN ORDER FOR THIS WARRANTY TO BE VALID. THE WARRANTY IS VOID IF THE DEFECT IS DUE TO NORMAL WEAR AND TEAR IS NOT COVERED BY THIS WARRANTY. UPON NOTIFICATION OF A DEFECT, A TECHNICIAN WILL BE OUT TO DIAGNOSE THE PROBLEM. IN THE EVENT THAT A PROBLEM IS CAUSED BY ACCIDENTAL DAMAGE, MISUSE, ABUSE, NEGLIGENCE, IMPROPER REPAIR, REPLACEMENT, OR ALTERATION BY UNAUTHORIZED PERSONS OR FAILURE TO FOLLOW OPERATIONAL INSTRUCTIONS PROVIDED WITH THE EQUIPMENT, PLEASE CONTACT AUTHORIZED PERSONS FOR PARTS REPLACEMENT AND CURRENT PRICE LIST. UNDER NO CIRCUMSTANCES, SHALL THERE BE LIABILITY FOR ANY LOSS, DIRECT, INDIRECT, INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGE ARISING OUT OF IN CONNECTION WITH USE OF THIS PRODUCT. THIS WARRANTY IS VALID ONLY IN THE UNITED STATES OF AMERICA AND CANADA.



WARRANTY CARD

Clean World Distribution, Inc.
P. O. Box 55192, Valencia, CA 91385 USA

Your Name: _____

Company Name: _____

Street: _____

City: _____ State: _____ Zip Code: _____

Purchase Date: _____ (MONTH) _____ (DAY) _____ (YEAR)

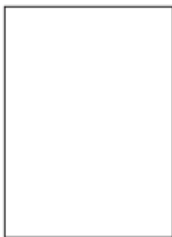
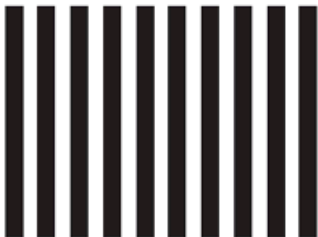
Serial #: _____

- Product Description (Check all that apply):
- ___ Rhino-Mat Standard Operation Model (RHM-CS)
 - ___ Rhino-Mat Stainless Steel Standard Operation Model (RHM-SS)
 - ___ Rhino-Mat Stainless Steel Coin Operation Model (RHM-SSBC, RHM-SSC)

TO: CLEAN WORLD DISTRIBUTION, INC.

P.O. Box 55192

Valencia, CA 91385



CLEAN WORLD DISTRIBUTION, INC.

www.cleanwd.com

T. 213.480.8899 | F. 213.291.7696 | E. info@cleanwd.com

Call us today or visit our website for
customer testimonials and video demonstration



866.644.5177