MBM CORPORATION

Model HDP-0103 Degausser

Operation Manual

www.MBMCorp.com

800-223-2508

MBM Corporation
3134 Industry Drive
North Charleston, SC 29418

Manufactured in the U.S.A

PN 4075-432A

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GENERAL INFORMATION

INSPECTION

Inspect the degausser for shipping damage as soon as it is unpacked. If the degausser or any accessories are damaged or fail to operate correctly, notify carrier and MBM Corporation immediately. For assistance from MBM Corporation call (800) 223-2508. For warranty information, please refer to the Warranty section inside this manual.

INTRODUCTION

The MBM Corporation Model ***HDP-0103*** is a continuous duty capacitive discharge degausser. The HDP-0103 is designed to erase hard drives and tape cartridges that fit inside the drawer. The convenient drawer loading design accommodates many different types and sizes of media, without the need for adapters.

MAGNETIC FIELDS

Magnetic fields measured around perimeter

The ***HDP-0103*** produces a single focused magnetic pulse lasting less than 1/20 of a second. The focused intensity allows the HDP-0103 to erase today's highest coercivity media while also limiting the magnetic field exposure to 1 second for every 20 pieces of media degaussed.

Distance from degausser	Magnetic field(Front Panel)	Magnetic field(Side)	Duration of Field
0cm (0 inches)	620 gauss	328 gauss	< 0.05 Second
10cm (4 inches)	249 gauss	81 gauss	< 0.05 Second
20cm (8 inches)	85 gauss	26 gauss	< 0.05 Second
30cm (12 inches)	19 gauss	8 gauss	< 0.05 Second

Note: The testing room measured 0.4 gauss before degausser was plugged in.

Average Operational Distance (AOD) from user to the HDP-0103 is 12-18 inches (30-45cm). According to the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (2005) - Static Magnetic Fields, whole body exposure limits recommended for an 8 hour shift are 600 gauss. Because of the short duration of each pulse from an HDP-0103 (1/20^{th*} of a second) and the extremely small magnetic field outside of the unit (<19 gauss, AOD) the total 8 hour whole body exposure is 1/120th of the recommended limit.

*Pulse duration was rounded to ½ second per discharge for calculations to cover any build up of magnetic fields generated before or after discharge.

Pace Maker Users
Due to stray magnetic fields, consult your physician before operating.

SPECIFICATIONS

Power Supply (HDP-0103):	Selectable: 95~105, 105~115, 115~125, 215~225, 225~235 or 235~240, See "Input Voltage Configuration" section of this manual.
Power Consumption (HDP-0103):	100V: Under Standby 0.3A While charging 5.0A At the time of ERASE 0.6A 110V: Under Standby 0.25A While charging 4.5A At the time of ERASE 0.55A 120V: Under Standby 0.2A While charging 4.0A At the time of ERASE 0.5A 220V: Under Standby 0.17A While charging 2.5A At the time of ERASE 0.35A 230V: Under Standby 0.16A While charging 2.25A At the time of ERASE 0.325A 240V: Under Standby 0.15A While charging 2.0A At the time of ERASE 0.3A
Degausser System:	Capacitive Discharge
Operating Time Duty Cycle:	Continuous
Erasing time:	< 10 milliseconds
Cycle time:	60 seconds per cycle.
Magnetic Field:	8,500 Oe Peak ; 8,300 Oe measured in center.
Max. Media Size:	108mm (4.25 in.)(W) x 38mm (1.50 in.)(H) x 149mm (5.86 in.)(D)
Erasing Area Size:	108mm (4.25 in.)(W) x 38mm (1.50 in.)(H) x 149mm (5.86 in.)(D)
Media:	2.5 type HDD, 3.5 type HDD, DLT, LTO, 3490 and more
Temperature:	5°C - 40°C (41°F - 104°F)
Humidity:	10%H - 40%H (without condensation)
Weight:	**HDP-0103:** 32 lbs. (14.54 kg) **Shipping:** 39 lbs. (17.72 kg)
Dimensions:	**HDP-0103:** 13 in. x 17.5 in. 7.375 in. (34cm x 45cm x 19cm) **Shipping:** 23 in.x18 in.x11 in . (61cm x 46cm x 30.5cm)
Warranty:	1 Year Factory Warranty Standard, Optional 3 Year Factory Warranty available.

INSTALLATION

All trouble shooting and wiring checks must be performed by a qualified electrician or authorized plant personnel.

Power Requirements

It is important to ensure correct power is applied to the degausser. Unless otherwise specified and noted on the power specification label on the back of the HDP-0103, the HDP-0103 is factory configured for 120VAC. Check the power specifications label to ensure the factory configured HDP-0103 input voltage is configured to match the voltage from the power mains the HDP-0103 will plug into. Call MBM Corporation if the voltage listed is not compatible with your voltage or if you have any questions.

Line Voltage Selection Reference

The Line Voltage Selection Reference is a guide for configuring the voltage jumper to the correct tap of the transformer. This allows the HDP-0103 to be used worldwide under a variety of voltages. For detailed instruction please see the "Input Voltage Configuration" section of this manual.

Line Voltage Selection Reference

Line Voltage	Terminal
235 ~ 240 VAC	240 VAC
225 ~ 235 VAC	230 VAC
215 ~ 225 VAC	220 VAC
115 ~ 125 VAC	120 VAC
105 ~ 115 VAC	110 VAC
95 ~ 105 VAC	100 VAC

Line Voltage must be verified by a qualified electrician.

Disconnect ALL power from power mains before servicing or inspecting circuits.

All trouble shooting and wiring checks must be performed by a qualified electrician or authorized plant personnel.

Input Voltage Configuration WARNING

The HDP-0103 model is equipped with a voltage selection block allowing the HDP-0103 to be configured for use in any country.

To check or change the voltage configuration of the HDP-0103, follow the steps listed below:

All trouble shooting and wiring checks must be performed by a qualified electrician or authorized plant personnel.

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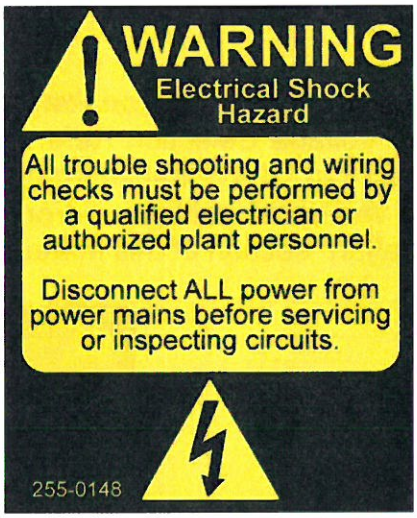
1) Read the Warning labels. **All trouble shooting and wiring checks must be performed by a qualified electrician or authorized plant personnel.**



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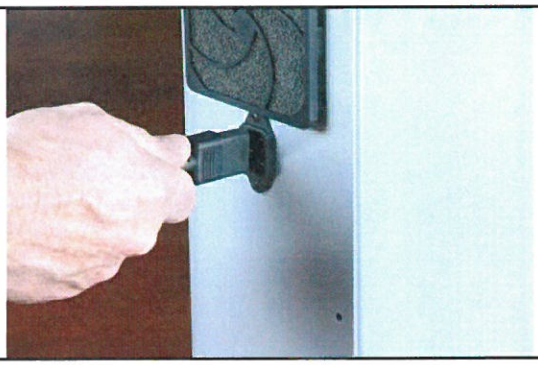
2) Remove the power cord from the back of the HDP-0103.



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3) Using a Torx T-20 driver, remove (3) screws from each side, and (6) screws from both the front and back in order to remove the top cover.

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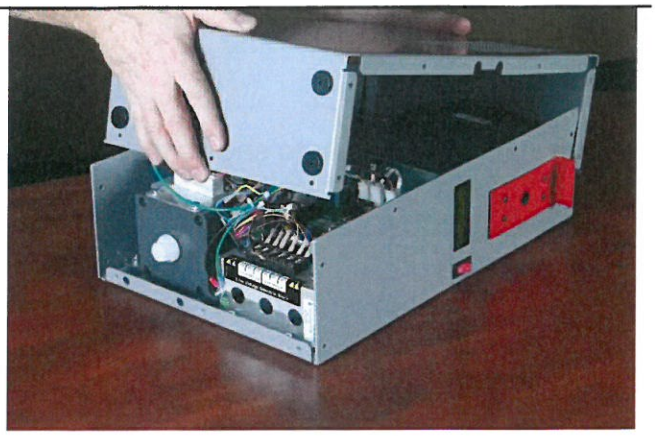
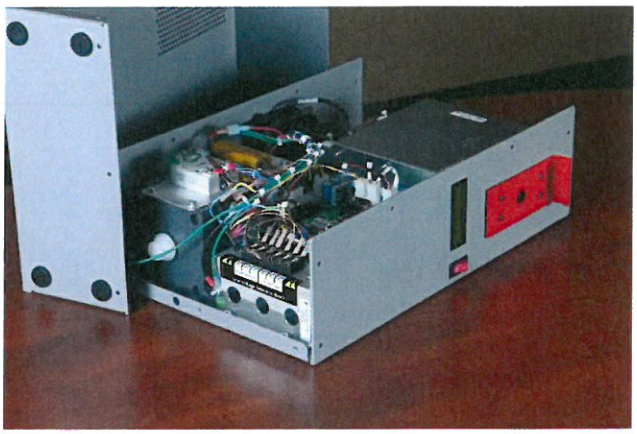
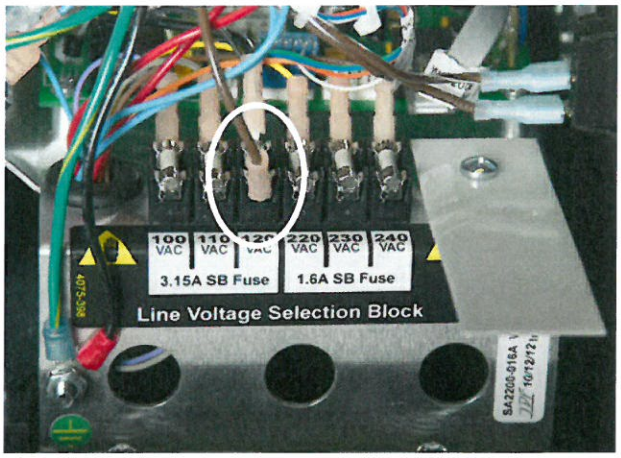
4) Lift the top cover as shown being careful as a ground wire is still internally attached to the cover. Carefully place the cover next to the HDP-0103 as shown..



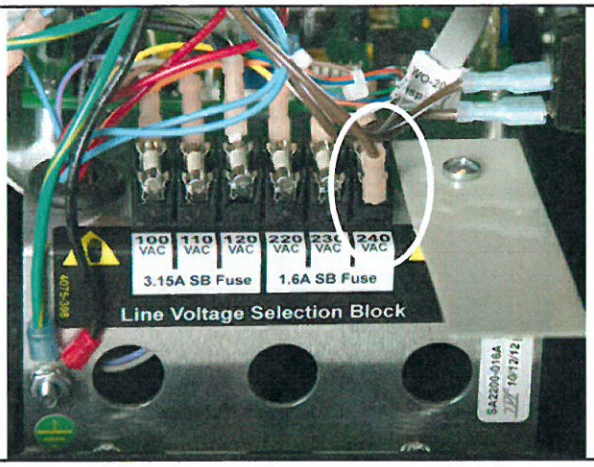


5) To change the jumper position, pull the brown jumper wire from the front side of the fuse block and move it to the corresponding terminal that matches the power mains outlet voltage.

Notice, this photo shows the correct jumper setting for 120 VAC.



6) Notice, this photo shows the correct jumper setting for 240 VAC.



7) Replace the Top Cover and the screws.

Power Plug

Plug the EIA connector attached to the power cord supplied into the receptacle on the back of the HDP-0103.

Fuse Block

Located behind the removable panel on the front side of the HDP-0103, there are six separate fuses, one each for 100, 110, 120, 220, 230 & 240 VAC power. Only one fuse is used at a time. Therefore, for any voltage range, the two unused fuses of the same value can be used as spares.

Location

The degausser must be placed on a flat, hard surface. Keep at least a 6 inch (15cm) distance from any object that may interfere with the cooling fan exhaust located on the backside of the degausser. As a general rule, media not intending to be erased should be kept about 60cm (2 feet) away.

Cooling

Forced air-cooling is used to maintain safe operating temperatures within the degausser. The air intake is located on the back panel and the exhaust is through the holes in the top panel. To ensure proper cooling, do not block the air-intake or exhaust and maintain at least a 15cm (6 inches) distance from the back of the degausser to any obstacle.

OPERATION

Degaussing Instructions

Automatic Degaussing

Step 1	Press Power button ON.
Step 2	Lift up on the drawer to unlock it and slide the drawer out until it stops 
Step 3	Place the media into the drawer and push the drawer to the closed position. **Note:** Closing of the drawer automatically starts the degauss cycle. After approximately 60 seconds, the LCD will read "Remove Media" indicating that the media has been degaussed and is ready for removal from the media drawer. 
Step 4	Remove media by lifting up and sliding out the drawer.
Step 5	Insert another hard drive or turn the power off and close the drawer.

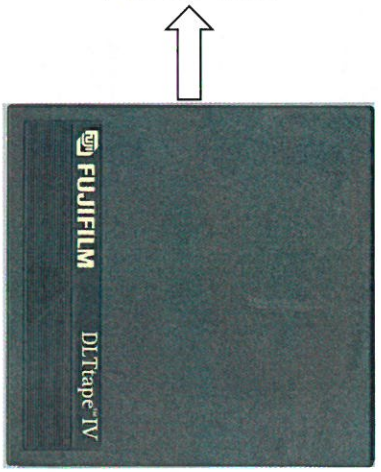
Degaussing Instructions for DLT Media.

Remove the plastic protective cases. Simply follow the degaussing instructions above for complete erasure.

Note: For DLT media that is to be re-used.
Although the data is completely degaussed in one operation, a second pass rotated at 90 degrees is required to smooth out any magnetic fluctuation. **Note**: If the second pass is not completed, the tape drive may eject the tape from the tape drive and indicate that the tape needs cleaning. The second pass at 90 degrees will correct this condition.

If you have any questions, please call MBM Corporation at (800) 223-2508

First Pass



Second Pass

Degaussing Overview:

The LCD display gives status, automatic count, total count, software version, field strength, user instructions and fault messages.

The following information appears on the LCD Display from power-up through one automatic degaussing cycle:

Action	LCD Display	Description
Step 1: Press POWER button ON	MBM Corporation	Displays Manufacturer.
	HDP-0103 Degausser	Displays Degausser Model.
	FIRMWARE VER ##	Displays current firmware version.
	TOTAL # -- ##	Displays total erasing cycles. Number on left indicates number of times the counter reached 50,000.
	Insert Media Session = 0	Ready for media to be placed in the Media Drawer. Counter for erase cycles from power up.
Step 2: Insert media	Drawer Open	Indicates media drawer is open – this is normal when inserting media to be erased.
	Erase Cycle Initiated	Drawer has closed and the erase cycle has started.
	Charging >>>>>>>>>>>>>>>>	Displays capacitor charging status.
	----------===|==	Visual indicator of erasing field strength.
	Data Eliminated	Indicates power and erasing field strength was verified good and data has been eliminated.
Step 3:	Remove Media Session = 0	Erase cycle has completed. Open drawer and remove media.

Controls and Indicators:

POWER Button (RED)
The power button switches the power on and off.

LCD Display
The LCD display gives status, automatic count, total count, software version, field strength, user instructions and fault messages.

Media Drawer
The media drawer holds the media to be degaussed and activates and deactivates the degaussing cycle when in the closed and open positions.

Automatic Degaussing Technical Detail

1) The LCD displays "Insert Media Session = #".
2) The media to be degaussed is inserted into the media drawer. While the drawer is open, the LCD will display "**Drawer Open**".
3) Sensors in the HDP-0103 detect the open / closed status of the drawer and automatically initiate the degaussing process when the drawer is fully closed. The LCD will display **"Erase Cycle Initiated"** followed by "**CHARGING >>>>>**"
4) When the capacitors are fully charged, the capacitors energy will be released into the degaussing coil to create the erasing field.
5) To ensure complete erasure, each erase cycle is measured to ensure the strength of the erase field is sufficient for complete erasure of data. In addition, the LCD will display a Field Strength Graph "**--------==I===**" of the actual erase field giving the operator real time status of the HDP-0103. The "**I**" in the graph represents the strength of the erase field. The "**=====**" portion of the graph represents the normal range for field strength level. The "**I**" within the "**-------- =====**" indicates the erase field strength. The position of the "**I**" can vary from cycle to cycle as it is based on the actual field strength.
6) If the field is in the normal range, the LCD will display "**DATA ELIMINATED**".
7) If the field is not in the normal range, the LCD will display "**ERASE FAILURE**". In this case, the media should be erased again. To clear the "**ERASE FAILURE**" message, power cycle the HDP-0103 by pushing the power button off, wait one minute and then press the power back on. If another erase failure happens, call Garner Products Customer Support for assistance.
8) When the LCD displays "**REMOVE MEDIA**". Follow the steps to open the media drawer and remove the degaussed media.
9) The HDP-0103's internal counter will advance one count and display the total number of media degaussed for the current session.

Error Codes

Charge Error

"CHARGE ERROR" is displayed on the LCD screen. This error indicates that the HDP-0103 failed to charge to the determined power level necessary to successfully erase the media in the degaussing chamber.

Action: Turn off the HDP-0103 for one minute and restart. (Turning off the power to the HDP-0103 will clear the error.) If the error repeats, have the power mains checked and also check the HDP-0103 to make sure the power setting is set to match the power mains. If error persists, call Garner Products customer support.

Drawer Open Error

The LCD displays "DRAWER OPEN". This error indicates that the Media Drawer is not completely closed. The HDP-0103 continuously checks to see if the Media Drawer is closed. If the drawer is not closed, the "DRAWER OPEN" will persist on the LCD. Once the drawer is closed, the HDP-0103 will automatically continue the erase function.

Action: Check to see that drawer is seated in detent.

Gauss Error

The LCD displays "GAUSS ERROR". This error indicates the erasing field may not have been adequate to effectively erase the media in the degaussing chamber.

Action: Turn off the HDP-0103 for approximately one minute. Turning off the power to the HDP-0103 will clear the error. Turn the HDP-0103 back on. To initiate the degauss cycle with media already in the media drawer, open the media drawer and close it. The media in the degaussing chamber will be erased if the field is sufficient otherwise the "Gauss Error" will persist on the LCD screen. If error persists, call Garner Products customer support.

Overheat Error

LCD displays "OVERHEAT". This error indicates the internal temperature has risen to a level that may be harmful to the HDP-0103.

Action: When the HDP-0103 indicates an overheat error, it will inhibit any further operation until the HDP-0103 returns to an acceptable temperature. Leave the HDP-0103 powered on as the chassis fan will help reduce the heat inside the HDP-0103. When the temperature is low enough, the HDP-0103 will return to normal operation. If this error persists, call Garner Products customer support.

PARTS LIST MODEL HDP-0103

Part Number	Description
1500-045	Capacitor, 6800uf 550VDC
2600-016	Fan, 115V 50/60Hz 3.625" sq x 1"
2600-017	Filter Assy, HDP-0103
2600-018	Finger guard
2825-029	Feet, Rubber
320-0007	Rectifier, bridge 35A
356-0001	SS Relay, 240VAC 40A
3700-002	Sensor, reflective
3700-006	Display, 2x16 LCD
375-0049	Thermostat, OP 210F
398-0073	Power cord set, 10A 120V
4075-289	Manual, operation
4300-033	Fuse, 3.15A 250V
4300-036	Fuse, 2A 250V 5x20mm slow blow
4300-025	Fuse holder, 5 x 20mm
4800-009	Thyristor Module
4800-017	Diode module, 100A 1200V
5100-034	Switch, power rocker
5600-025	Transformer, HDP-0103 series
SA1400-347B	Assy, Chassis Base
SA1400-349	Assy, Coil Clamp
SA1700-204G	PCB Assy, SS Controller
SA1800-103	Coil Assy, 160W
SA1400-350	Assy, Media Drawer
SA3700-006B	Assy, door sensor
SA5300-003	Assy, thermistor
SA6000-174	Harness, Main

DECLARATION OF CONFORMITY

Declaration of Conformity

According to ISO/IEC Guide 22 and EN45014 Q544801WDCe.03.DoC Page 1 of 1

Manufacturer's Name: Garner Products, Inc.

Manufacturer's Address: 10620 Industrial Avenue, Suite 100
Roseville, California 95678-5902 USA
http://www.garner-products.com

declares that the product

Product Names: Continuous Degaussing System

Model Numbers:
1) HD-2
2) HD-2P
3) HD-2R
4) HD-3WT
5) HD-3WXL
6) I9000

Product Options: All

Conforms to the following Product Specifications

Safety: EN 292-2: 1991
EN 60204-1: 1998
Reference: EN 61010-1: 1993

Supplementary Information

The product herewith complies with the requirements of the following Directives:

- the Low Voltage Directive (73/23/EEC)
- the Machinery Directive (89/392/EEC) and the Council Directives amending the Machinery Directive (91/368/EEC and 93/44/EEC)

19 June 2009

For Compliance Information ONLY, contact:

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http://www.garner-products.com

Evaluation Laboratory: Pulver Laboratories Inc., Office of the President, 320 North Santa Cruz Avenue, Los Gatos, California 95030-7243 USA
http://www.PulverLabs.com/

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LIMITED WARRANTY

MBM CORPORATION LIMITED WARRANTY
AND
WARRANTY RETURN POLICY

MBM Corporation ("MBM") warrants this MBM-branded product ("Product") against defects in materials and workmanship for a period of ONE (1) YEAR from the date of purchase by the original end-user ("end-user") as evidenced by end-user's packing slip or invoice ("Warranty Period"). No Product may be returned except upon prior written permission by MBM and shipment to factory with transportation charges prepaid.

If a defect arises and a valid claim is received within the Warranty Period, at its option, MBM will either: (1) repair the Product, (2) exchange the Product, or (3) request that end-user replace defective parts with new or refurbished user-installable parts that MBM provides in fulfillment of its warranty obligations. A replacement Product or part, including a user-installable part that has been installed in accordance with instructions provided by MBM, assumes the remaining warranty of the original Product or ninety (90) days from the date of replacement or repair, whichever provides longer coverage.

MBM's liability under this warranty is limited to MBM's cost of replacing any part or Product found by MBM to be defective and shall not exceed the original purchase price of the defective Product. End-user's sole and exclusive remedy against MBM shall be for the replacement of the defective part or Product as provided herein.

This warranty does not apply to: (a) cosmetic damage, including but not limited to scratches, dents and broken plastic; (b) freight damage; (c) consumable parts; (d) normal wear and tear; (e) damage caused by accident, abuse, inadequate wiring, power surge, rust, corrosion, neglect, misuse, water, fire, earthquake or other external causes; (f) damage caused by operating the Product outside the permitted or intended uses described by MBM; (g) damage caused by service performed by anyone who is not a representative of MBM or a MBM authorized service provider; (h) a Product or part that has been modified to alter functionality or capability without the written permission of MBM; or (i) if any MBM serial number has been removed or defaced.

No MBM dealer or reseller is authorized to make any modification, extension, or addition to this warranty.

DISCLAIMER
THIS WARRANTY SET FORTH ABOVE IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR USE. MBM'S MAXIMUM LIABILITY SHALL BE LIMITED TO THE PURCHASE PRICE OF THE PRODUCT.

LIMITATION OF LIABILITY
IN NO EVENT SHALL MBM BE LIABLE TO ANY PARTY FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE THAT ARISE FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF REVENUE, LOSS OF ACTUAL OR ANTICIPATED PROFITS, LOSS OF BUSINESS, OR LOSS OF GOODWILL.

MBM'S MAXIMUM LIABILITY SHALL NOT EXCEED THE PURCHASE PRICE OF THE PRODUCT WHICH GIVES RISE TO THE CLAIM. END-USER'S SOLE AND EXCLUSIVE REMEDY FOR ANY CAUSE OF ACTION, WHETHER ARISING FROM BREACH OF CONTRACT OR TORT, IS A CLAIM FOR DAMAGES WHICH IN NO EVENT WILL EXCEED THE PRICE OF THE SPECIFIC PRODUCT AS TO WHICH THE CLAIM IS MADE.

WARRANTY RETURN POLICY

If a problem occurs with this product, contact MBM Corporation directly at **800-223-2508** to obtain technical support and/or to get a Return Authorization Number.