



Introduction

Purpose of this Manual

This manual provides instruction for installing TIRIS™ Mat Reader Assembly Kit C00016-XXX.

The TIRIS™ option allows customers to automatically authorize non-cash sales using a hand-held transponder tag.

Important Notice

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

The long term characteristics or the possible physiological effects of radio frequency electromagnetic fields have not been investigated by Underwriters' Laboratories, Inc. (UL®).

Required Reading

Before installing the equipment, the installer must read, understand, and follow:

- this manual
- NFPA 70, The National Electric Code
- applicable federal, state and local codes and regulations

Failure to do so may adversely effect the safe use and operation of the equipment.

Related Documents

Installer must obtain, read and understand all site preparation documentation provided by the point of sale company authorizing the installation **before** attempting to install this equipment.

In addition, the installer must be familiar with the information in the following documents.

Document Number	Title	GOLD Library
MDE-3110	PC-Based G-SITE System Installation Manual	G-SITE
MDE-3111	PC-Based G-SITE System Start-Up and Service Manual	• G-SITE • Service Manual
MDE-3620	Gilbarco POS Console Site Preparation Manual	Site Prep

Required Tools

The following equipment is needed to install all TIRIS™ mat reader kits:

- drill motor and bits
- needle nose pliers
- screwdriver, Phillips® head
- Zircon® stud/bracket finder

Parts Lists

C00016-006 Kits contain the following parts:

Description	Part Number	Quantity
box, interface assembly	M01814A001	1
tape, neoprene foam	M01870B001	2
channel, plastic filler	M01871B001	1
cable, mat reader drive	M01872A001	1
tape, acrylic foam	K85492-72	1
power supply	M01878B001	1
jack, jump, push-to-start	Q11011-01	1
cable, data, CAT-5	Q13482-06	1
clamp, cable, stick on, small	Q13459-01	3
document, installation (this document)	MDE-4017	1
diagram, block and/or interconnect	M01873	0

The following components are also required.

Description	Part Number	Quantity
graphics	MR01002G003	1
reader, mat, TIRIS device	M01787B001	1

Note: The Mat Reader is delivered with the graphics in place.

Important Safety Information

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Electrical shock could occur and cause death or serious injury if these safe service procedures are not followed.

Preliminary Precautions

Read, understand and follow this manual and any other labels or related materials supplied with this equipment.

Follow the Regulations

There is applicable information in: NFPA 70: *National Electrical Code (NEC)*; OSHA regulations; and federal, state, and local codes which must be followed. Failure to install, maintain or service this equipment in accordance with these codes, regulations and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Safety Symbols and Warning Words

Alert Symbol



This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions that follow must be followed to prevent death, injury or damage to the equipment.



DANGER

This signal word is used to alert you to a hazard or unsafe practice which **will** result in **death or serious injury**.



WARNING

This alerts you to a hazard or unsafe practice that **could** result in **death or serious injury**.



CAUTION

This signal word designates a hazard or unsafe practice which **may** result in **minor injury**.

CAUTION

When used by itself, CAUTION designates a hazard or unsafe practice which may result in **property or equipment damage**.

Proper Grounding is Required

Proper grounding is required for safe operation. See installation manual and applicable NEC, NFPA and local electrical codes for requirements.

Avoid Pinched Wires

Pinched or cut wires (cables) may damage components. Exposed wires could create sparks and electrical shorts when applying power.

Other Useful Safety Information

Replacement Parts

Use only genuine Marconi replacement parts. Using parts other than genuine Marconi replacement parts could create a safety hazard, violate national, state and local regulations or void warranty.

Installation

Note: All installation work is to be accomplished between the hours specified by the point of sale company authorizing the installation.

Install Mat Reader assembly according to the following:

- 1 Collect and arrange all tools and equipment.
- 2 If necessary for installation of kit in area specified by point of sale company, remove advertisement panels, saving all mounting hardware for re-use later.
Note: Make note of non-reusable fasteners, ensuring adequate replacements are available for later use.

Setting Baud Rate

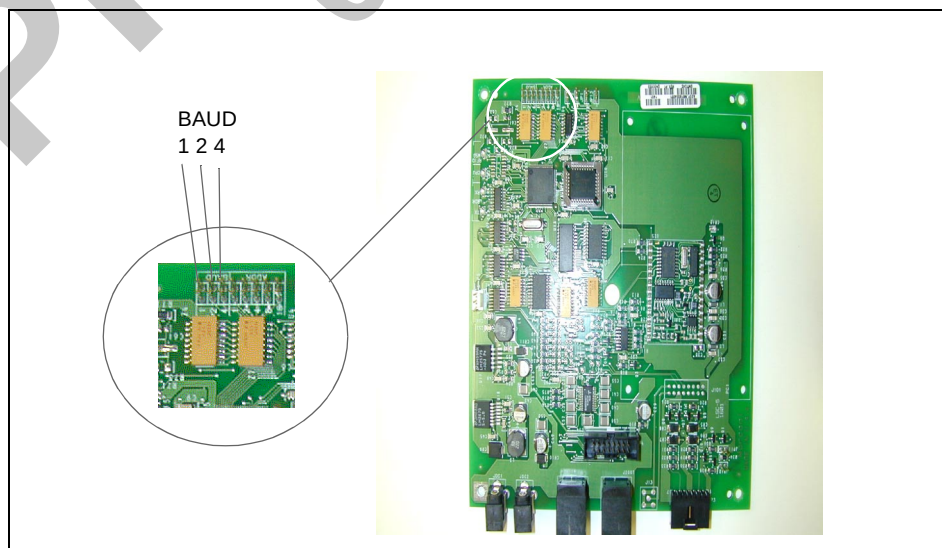
- 1 Remove Mat Reader Interface Box cover to access logic board.

Figure: **Mat Reader Interface Box Cover**



- 2 Locate jump jacks on logic board for Mat Reader.

Figure: **Jump Jacks for Baud Rate Setting**



- 3 Set the jump jacks as follows (see “Figure: Jump Jacks for Baud Rate Setting” on page 5).

CAUTION



Electrostatic Discharge Damage

Working on electronics without connecting to a ground or discharging static can damage electronic parts. Use a wrist strap.

Mat Reader Baud Rates

Baud Rate (Note)	BAUD 1	BAUD 2	BAUD 4
4800	OUT	OUT	OUT
2400	IN	OUT	OUT
1200	OUT	IN	OUT
300	IN	IN	OUT
38400	OUT	OUT	IN
19200	IN	OUT	IN
9600	OUT	IN	IN
4800	IN	IN	IN

Note: 4800 is the default value and the Mat Reader value.

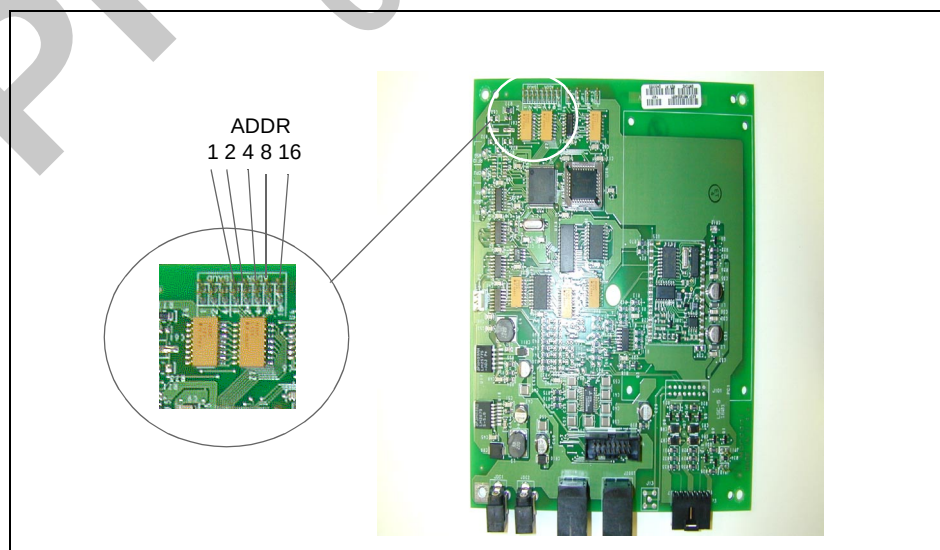
- 4 If not daisy chaining Mat Reader Interface Boxes, reinstall cover.
Note: Daisy chaining is connecting the output from one Interface Box to the input of another.

Addressing Logic Board - Only for Daisy chaining

Address for Mat Reader must match address on previously installed Mat Reader. Follow these steps:

- 1 Access logic board for Mat Reader being installed.
- 2 Locate jump jacks on previously installed Mat Reader logic board M01803A001.

Figure: **Jump Jacks for Address Setting**



- 3 Note position of jump jacks on previously installed Mat Reader logic board, and set jump jacks on board for Mat Reader being installed to match address on logic board.

CAUTION



Electrostatic Discharge Damage

Working on electronics without connecting to a ground or discharging static can damage electronic parts. Use a wrist strap.

Mat Reader Addresses					
Address on Logic Board	ADDR 1	ADDR 2	ADDR 4	ADDR 8	ADDR 16
M01803A001					
0	OUT	OUT	OUT	OUT	OUT
1	IN	OUT	OUT	OUT	OUT
2	OUT	IN	OUT	OUT	OUT
3	IN	IN	OUT	OUT	OUT
4	OUT	OUT	IN	OUT	OUT
5	IN	OUT	IN	OUT	OUT
6	OUT	IN	IN	OUT	OUT
7	IN	IN	IN	OUT	OUT
8	OUT	OUT	OUT	IN	OUT
9	IN	OUT	OUT	IN	OUT
10	OUT	IN	OUT	IN	OUT
11	IN	IN	OUT	IN	OUT
12	OUT	OUT	IN	IN	OUT
13	IN	OUT	IN	IN	OUT
14	OUT	IN	IN	IN	OUT
15	IN	IN	IN	IN	OUT
16	OUT	OUT	OUT	OUT	IN
17	IN	OUT	OUT	OUT	IN
18	OUT	IN	OUT	OUT	IN
19	IN	IN	OUT	OUT	IN
20	OUT	OUT	IN	OUT	IN
21	IN	OUT	IN	OUT	IN
22	OUT	IN	IN	OUT	IN
23	IN	IN	IN	OUT	IN
24	OUT	OUT	OUT	IN	IN
25	IN	OUT	OUT	IN	IN
26	OUT	IN	OUT	IN	IN
27	IN	IN	OUT	IN	IN
28	OUT	OUT	IN	IN	IN
29	IN	OUT	IN	IN	IN
30	OUT	IN	IN	IN	IN
31	IN	IN	IN	IN	IN

- 4 Reinstall cover.

Mounting Mat Reader Interface Box

- 1 Determine the location for the installation of indoor equipment.

Note: Refer to site prep document provided by point of sale company and keep in mind overall length of cable to connect Mat Reader Interface Box to Mat Reader.

- 2 Use a Zircon stud/bracket finder to ensure no electrical conduits or pipes are located inside of wall where the Mat Reader Interface Box is to be mounted. Also, ensure the Mat Reader Interface Box is to be located where studs or wall (concrete/brick/drywall) mollys can be used for mounting.
- 3 Mark and drill holes. Insert wall mollys as required.

CAUTION

Do not use the Mat Reader Interface Box as a drill guide. It may be used as a template to mark the holes to be drilled.

- 4 Use appropriate mounting hardware to secure the Mat Reader Interface Box to the wall.

Figure: **Mat Reader Interface Box Mounting Holes**

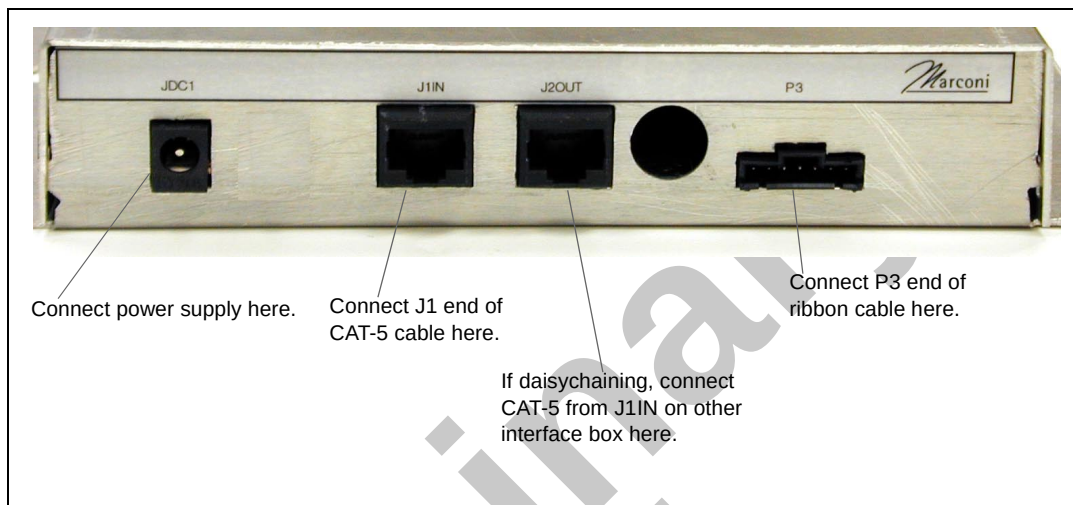


Connecting Data Cables to Mat Reader Interface Box

Run both power and data cables to port end of Mat Reader Interface Box (see “Figure: Mat Reader Interface Box Mounting Holes” on page 8) as follows.

- 1 Connect the P3 end of the ribbon cable (M01872A001) to the RFID interface port (P3) .
- 2 Connect the J1end of the CAT-5 cable (Q13482-06) to the J1IN port.

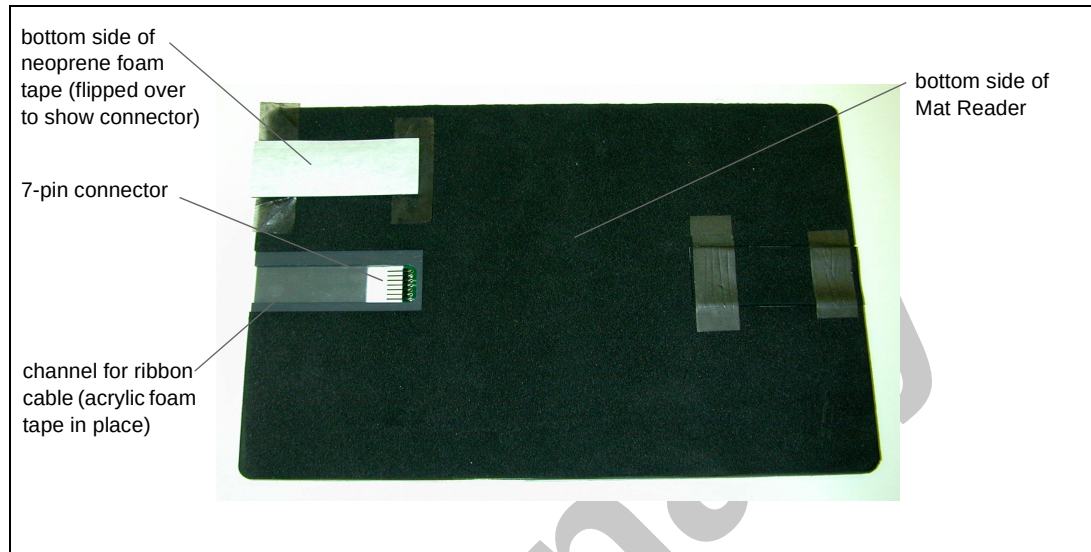
Figure: **Connecting to Mat Reader Interface Box**



Connecting Data Cables from the Mat Reader Interface Box

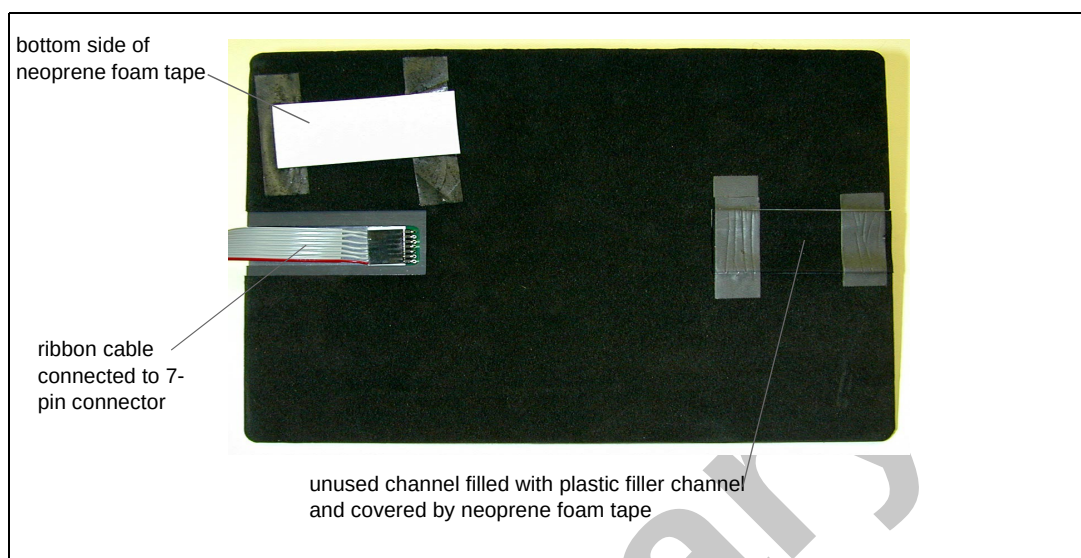
- 1 Position Mat Reader face down.

Figure: **Bottom Side of Mat Reader**



- 2 Select side for ribbon cable (M01872A001) connection based on counter top configuration requirements.
- 3 Install strip of acrylic foam tape (K85492-72) in base of channel on side selected for ribbon cable.
- 4 Peel second release liner, exposing adhesive.
- 5 Carefully connect the P1/P2 end of the ribbon cable (M01872A001) to the back side of the Mat Reader.
Note: The cable can be plugged in from either side. Since the cable is not keyed, the orientation does not matter. Be sure the cable will be flat and not twisted once the Mat Reader is face up.

Figure: **Connecting to Mat Reader**



- 6 Install neoprene foam tape (M01870B001) over ribbon cable and sides of channel. Foam tape should fit snugly into cutout of surrounding foam tape backer.
- 7 On unused cable channel, install plastic filler channel (M01871B001).
- 8 Install remaining neoprene foam tape (M01870B001) over filler channel. Foam tape should fit snugly into cutout of surrounding foam tape backer.
- 9 Gently turn the Mat Reader to the face-up position.

Figure: **Mat Reader - Face Up**



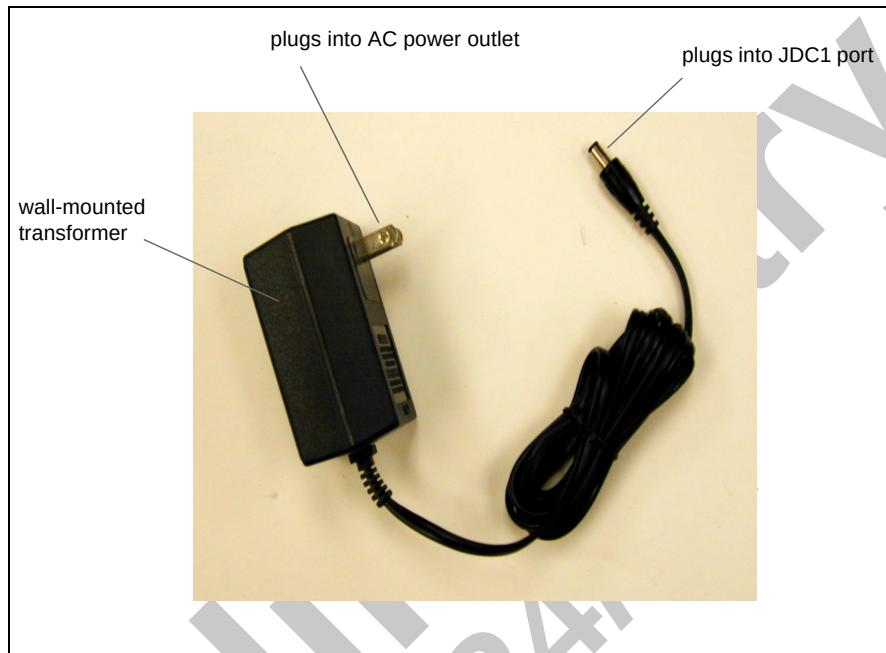
- 10 Connect the loose end of the CAT-5 cable to the RS-232-1 or RS-232-2 port on the back of the G-SITE system.
Note: The exact G-SITE system port depends on the G-SITE system configuration.

Connecting Power Supply

Connect the power supply (M01878B001) provided with kit as shown.

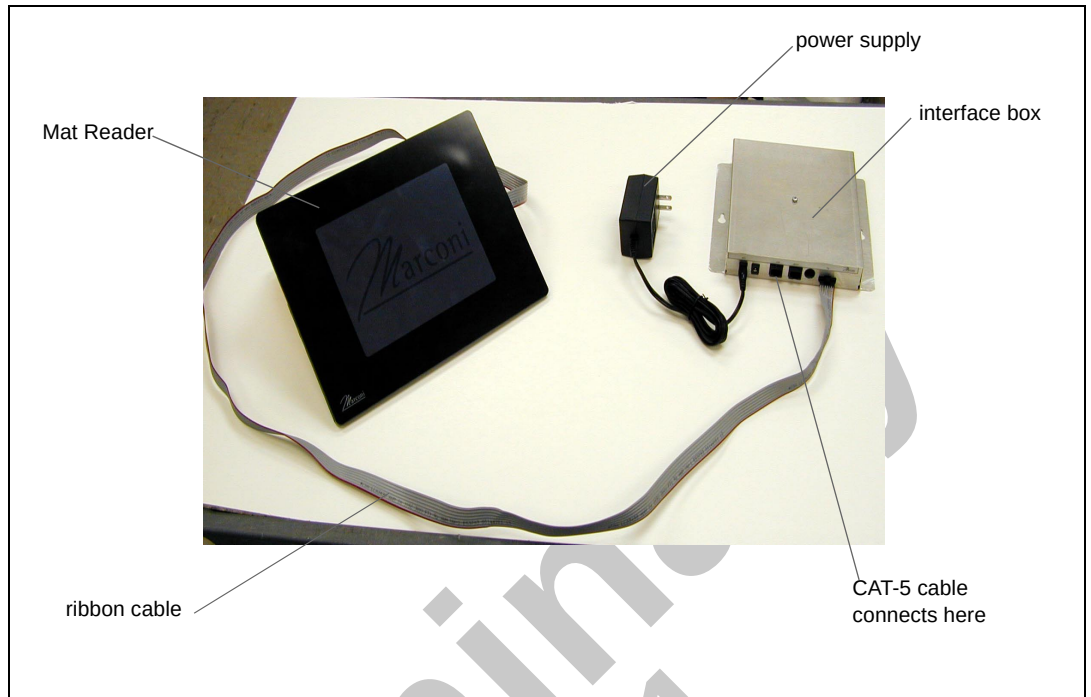
- 1 Plug the wall-mounted transformer into the AC power outlet.
Note: This AC power outlet must be on the same circuit as the G-SITE system.
- 2 Connect the plug end of the power supply cable to the JDC1 port on the Mat Reader Interface Box (see “Figure: Connecting to Mat Reader Interface Box” on page 9).

Figure: **Power Supply (M01878B001)**



Completing Installation

Figure: **Mat Reader Connections**



- 1 Dress all cables and secure with stick on cable clamps (Q13459-01).
- 2 Clean up the work area.
- 3 Go to "Commissioning and Warranty Information" on page 14.

Commissioning and Warranty Information

Upon completion and testing the Mat Reader system, the installing contractor must call the Marconi Commerce Systems Call Center @ 1-888-800-7498 to register the installation and activate the warranty. Note the installed unit's full Model Number (C00016-XXX) and serial number before making this call.

- All Mat Readers have a one-year parts only warranty.

Note: Parts are to be returned through and obtained from the local Marconi distributor.

- Labor warranty, if any, is unit and customer specific.

Marconi Commerce Systems strongly recommends using only Marconi trained ASCs (Authorized Service Contractors) to perform service on the units. Use of non-authorized service personnel to repair or service these units may void warranty. Call your local distributor for service.

Preliminary
05/24/01

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