

Hamilton Manufacturing Corp.

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Operational Manual for the MPU-1 & MPU-TK

ABOUT THIS MANUAL

This manual was designed to introduce the MPU-1 and the MPU-TK and to provide instructions on how to install the machines. This manual will enable the operator to train Tokenotes® to use with the MPU-1. A section on how to install the optional MPU Base is also included in this manual.

If further assistance is needed, please call the manufacturer at (800) 837-5561 or (419) 867-4858.

When calling for assistance it is very important to have the serial numbers readily available. Please record these numbers in the spaces provided.

MPU-1 / MPU-TK SERIAL # _____

VALIDATOR SERIAL # _____

STACKER SERIAL # _____
(OPTIONAL)

KEY / LOCK # _____

Please complete the warranty card, which was included with your machine, and return it to the manufacturer.

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I. INTRODUCTION

The Hamilton MPU-1 (Mini-Park Unit) is a compact unit which accepts Hamilton Tokenote® Paper Tokens and opens a barrier gate through the use of a dry contact relay.

The MPU-1 is not intended to accept U.S. currency. There are ten DIP switches on the side of the Validator. These switches must be set to reject all bills (\$1, \$5, \$10, and \$20.) See the side of the Validator for details.

The MPU-TK (Mini-Park Unit, Ticket Accepting Version) is intended to only accept blank tickets. However, since there is no security reading done by the Validator, it will accept any paper blindly, including U.S. currency. The ticket will be accepted and a relay energized to activate a Parking Lot Gate.

When referring to both the MPU-1 and the MPU-TK in this manual, the term “Mini-Park Unit” will be used. Otherwise, MPU-1 and MPU-TK will be used to identify the machines individually.

II. SPECIFICATIONS

The Hamilton MPU-1 and the MPU-TK are intended to be hard-wired through conduit to a dedicated circuit breaker. These machines operate on 120 VAC, 60Hz, and are fused internally with a 3-AMP FAST BLOW FUSE.

A GROUND FAULT INTERRUPTER IS REQUIRED. The recommended Ground Fault Interrupter is sometimes referred to as an ELCI (Equipment Leakage Circuit Interrupter) and should have the following specifications:

- 120 VAC
- 15-AMP
- 6-20mA trip level
- Should not trip when power is removed from circuit.

CABINET DIMENSIONS: 10" W x 20" H x 13"D

III. MPU-1 / MPU-TK INSTALLATION

There must be an unused, normally open, “gate up” switch on the gate. This switch will be used to disable the acceptance of Tokenotes® (for the MPU-1) and the acceptance of Tickets (for the MPU-TK) while the gate is up. To wire this switch, connect a wire from “common” of the gate switch to Terminal 6 on the Mini-Park Unit. Connect a wire from “normally open” of the gate switch to Terminal 7 on the Mini-Park Unit.

If you are not using a gate switch which connects to Terminal 6 and Terminal 7, then you will jumper Terminal 6 and 7 at the Mini Park Unit.

Terminals 4 and 5 on the Mini-Park Unit are a normally open contact which closes (for about 150 milliseconds) to signal the gate to raise.

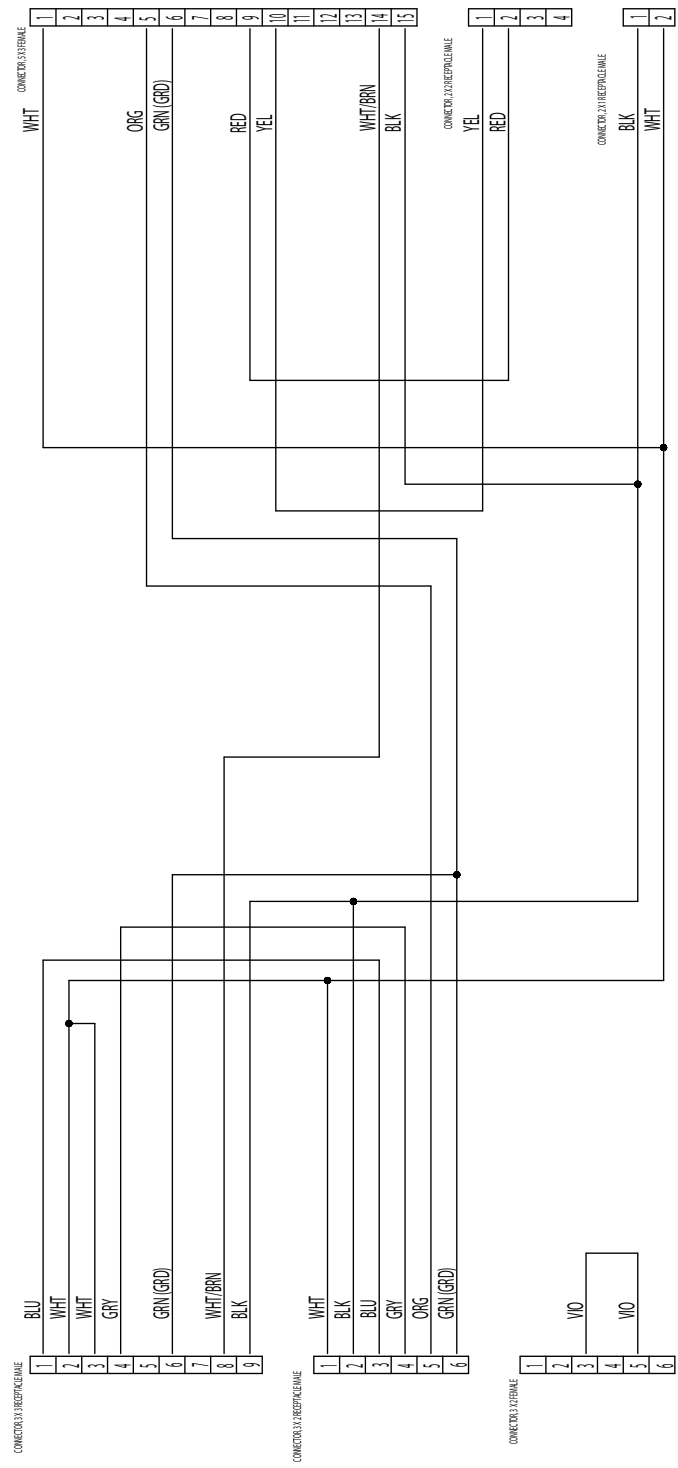
Below is a description of the Mini-Park terminals. To access these terminals, you must remove the cover from the Control Box.

MPU-1 / MPU-TK TERMINALS

Terminal 1-	HOT 120 VAC
Terminal 2-	GROUND
Terminal 3-	NEUTRAL 120 VAC
Terminal 4-	VEND COMMON
Terminal 5-	VEND N.O. (NORMALLY OPEN)
Terminal 6-	GATE BUSY COIL
Terminal 7-	GATE BUSY COIL

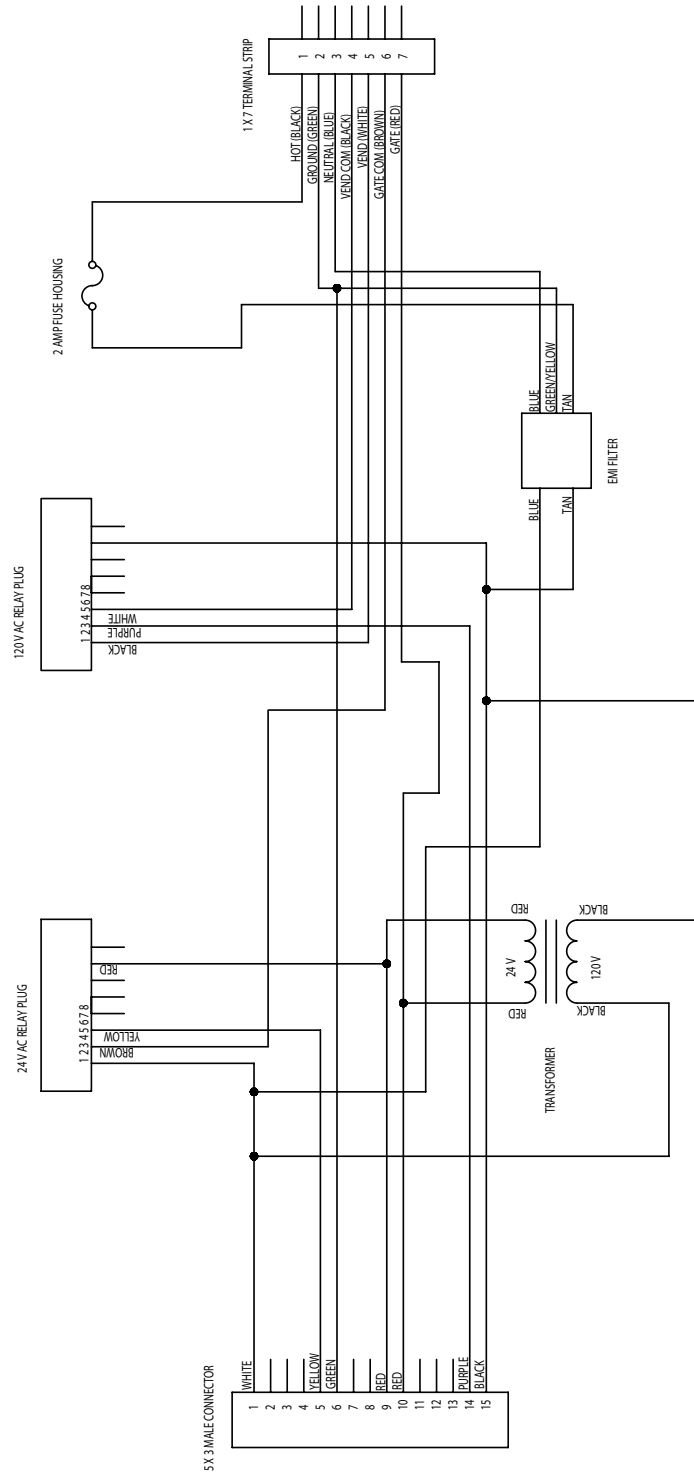
MAIN-MPU HARNESS

48-2121



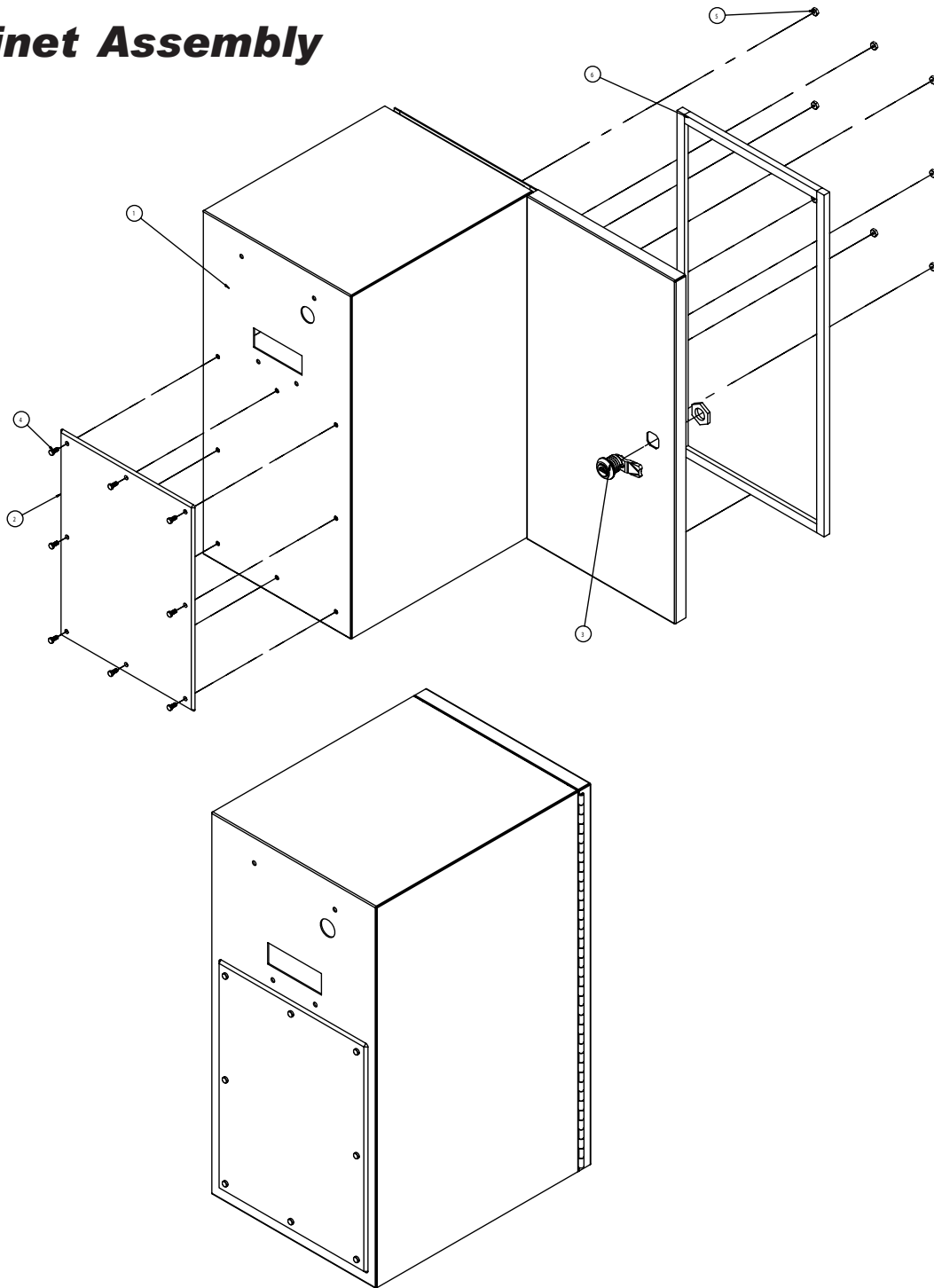
MPU CONTROLLER DIAGRAM

49-1060A

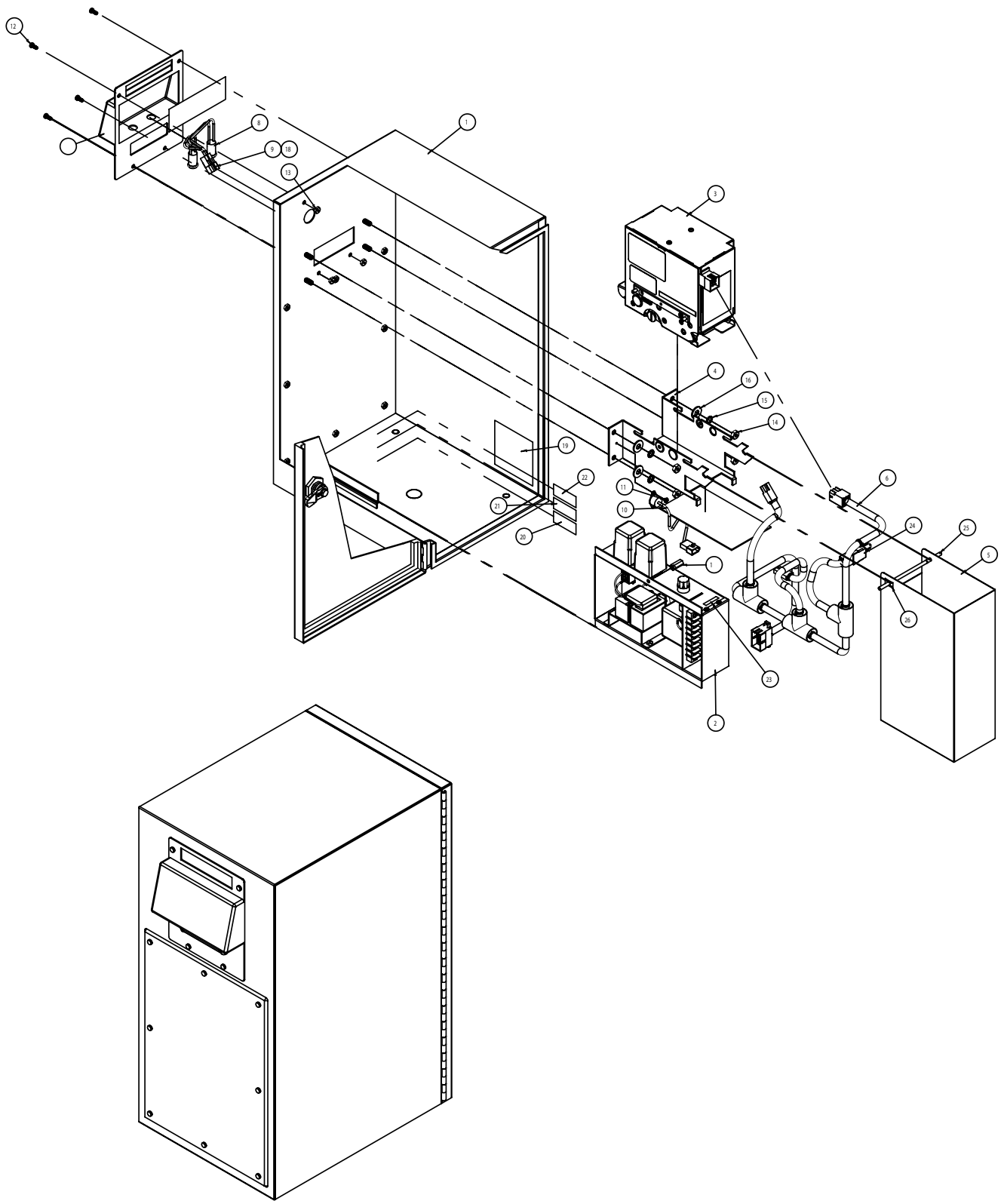


IV. PARTS

Cabinet Assembly



Item #	Part #	Description	Qty.
1	61-2422	CABINET, ASSEMBLY-MPU	1
2	63-0427	LEXAN, FACE PLATE-MPU	1
3	63-5166	ASSEMBLY, 1/4 TURN LATCH, CAM & GASKETS-EMKA	1
4	90-0517	STUD, #8-32 X 5/8 LG.-BALL	8
5	90-0321	NUT, #8-32 REGULAR, NYLON	8
6	47-3012	GASKET, SPUNGE RUBBER-WHITE/FOOT	5



Item #	Part #	Description	Qty.
1	61-2512	ASSEMBLY, CABINET PREP-MPU	1
2	49-1060A	ASSEMBLY, CONTROLLER-MPU	1
3	46-4001	VALIDATOR-XE (MPU-1)	1
	46-4002	VALIDATOR-XE TICKET GOBBLER (MPU-TK)	1
4	60-0052	BRACKET, VALIDATOR MOUNT, REARLOAD-XE	1
5	60-0287	ASSEMBLY, DROP BOX	1
6	48-2121	HARNESS, MAIN-MPU	1
7	60-2232	FACE PLATE-MPU	1
8	47-0106	LAMP-MPU	2
9	47-0253	CONNECTOR 2 X 2 FEMALE (MOLEX #03-09-2049)	1
10	48-0006A	ASSEMBLY, HEATER PAD	1
11	90-0130	SCREW, #6-32 X 1/8 LG. PAN HEAD PHILLIPS, CLEAR ZINC PLATE	1
12	90-0517	STUD, #8-32 X 5/8 LG. BALL	4
13	90-0319	NUT, #8-32 REGULAR HEX	4
14	90-0331	NUT, 1/4-20 REGULAR HEX, CLEAR ZINC PLATE	4
15	90-0403	WASHER, #1/4 INTERNAL LOCK CLEAR ZINC PLATE	4
16	90-0429	WASHER, 1/4 CLEAR ZINC PLATE	4
17	90-9078	COUPLING NUT, #10-24 REGULAR HEX, CLEAR ZINC PLATE	1
18	46-1059	TERMINAL MALE-.093 (MOLEX #02-09-2118)	2
19	96-2054	DECAL STANDARD GENERAL INFO	1
20	96-0112	DECAL, DISCONNECT	1
21	96-0116	DECAL, CONDUIT	1
22	96-0113	DECAL, FIRE WARNING	1
23	96-0111	DECAL, AMP-YELLOW	1
24	48-0033A	HARNESS, STACKER BYPASS PLUG	1
25	90-0547	ROD, STACKER MOUNTING	1
26	90-9081	NUT, TINNERMAN CLIP	2
	101-0065	OPERATIONAL MANUAL FOR THE MPU-1/MPU-TK	1
	101-0029	MANUAL, XE VALIDATOR	1
	5034	Tokenote® DOCUMENTATION	1
	63-5016	Screw, T-Handle Large (OS)	1
	65-0026	Lock Insert, T-Handle V-2 (OS)	1
	61-0532A	Assemble Cabinet Prep MPU (OS)	1

V. TOKENOTES®

PROGRAMMING TOKENOTES®

Hamilton Tokenotes® are uniquely coded paper coupons that can be accepted by the Validator and used as credit. Since thousands of different codes are available, the MPU-1 must be trained to recognize a Tokenote®. (The MPU-1-TK does not accept Tokenotes®.) To train a Tokenote®, follow the steps below:

It is important that all Tokenotes® and Coupons are intended for the type of Validator being used. When ordering new Tokenotes® and Coupons, please specify the Validator model and serial number.

VALIDATOR

1. With the power on, check the operation of the changer. A dot flashing on the LED indicates the machine is operating normally.
2. Note the position of each switch on the DIP switch. (the DIP switch is located on the side of the Validator.)
3. Set all 10 DIP switches to the OFF position. Then, starting with Switch #10, slowly move the switches to the ON position, one switch at a time and in decreasing order (10, 9, 8, 7...). The LED should now be flashing the letter "P". This signifies that the Validator is in the Tokenote® Programming Mode.
4. At this point, it is recommended to insert the CLEAR ALL Training Coupon, especially if this the first time the Validator is being programmed or if it has just been returned after being serviced. the CLEAR ALL Coupon will erase any previously trained Tokenotes® from the Controller's memory.
5. Insert one coded Tokenote® into the Validator, making sure that it is accepted.
6. Repeat Step 5 for each uniquely coded Tokenote® you wish to program. Up to 16 different codes can be programmed.
7. Starting with switch #1, slowly move the switches back to their original positions one at a time. This must be done in increasing order (1, 2, 3, 4...). A dot should now be flashing on the LED. (Switch #2 must be in the OFF position in order to accept Tokenotes®.)

VOIDING TOKENOTES®

To void unwanted Tokenotes®, follow the steps below:

1. With the power on, check the operation of the changer. A dot flashing on the LED indicates the machine is operating normally.
2. Note the position of each switch on the DIP switch. (The DIP switch is located on the side of the Validator.)

3. Set all 10 DIP switches to the OFF position. Then, starting with Switch #10, slowly move the switches to the ON position, one switch at a time and in decreasing order (10, 9, 8, 7...). The LED should now be flashing the letter "P". This signifies that the Validator is in the Tokenote® Programming Mode.
4. Insert the Tokenote® you wish to void into the Validator, UPSIDE-DOWN, or insert a blank piece of paper the size and shape of a Tokenote®.
5. Starting with switch #1, slowly move the switches back to their original positions one at a time. This must be done in increasing order (1, 2, 3, 4...). A dot should now be flashing on the LED.

VI. INSTALLING THE OPTIONAL BASE

MPU BASE

When installing the angled MPU base it is important to use the correct base for the location. It is suggested that the validator be positioned approximately 46" above the driving surface, to aid accessibility. To accomplish this, two types of bases are made. The SHORT base is used for curbside mounting and the TALL base is used for mounting on the driving surface.

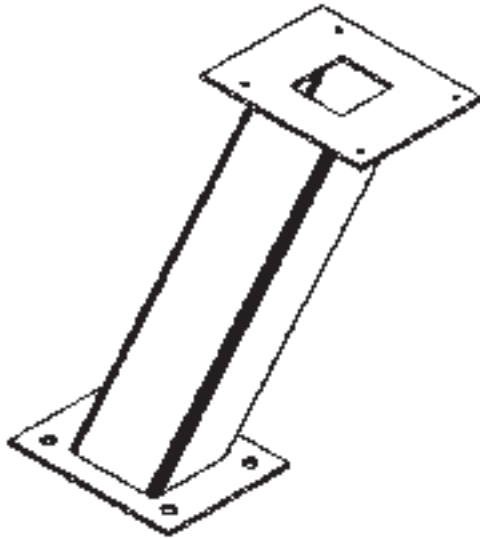


Figure 1-Tall MPU Base

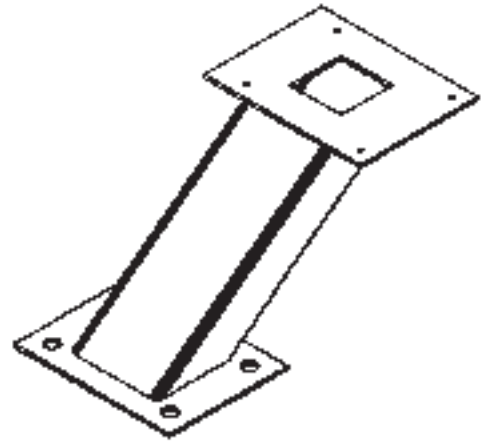


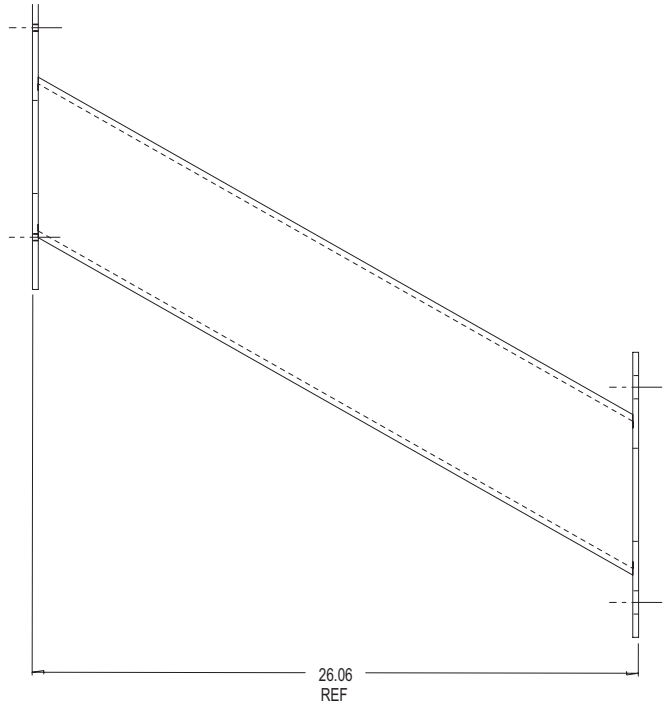
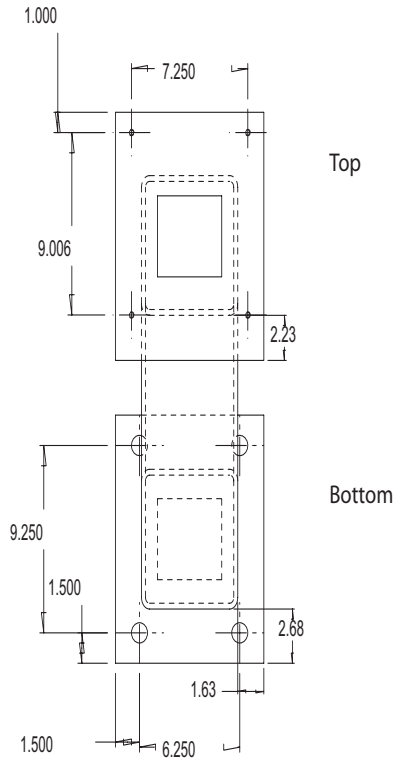
Figure 2-Short MPU Base

SITE

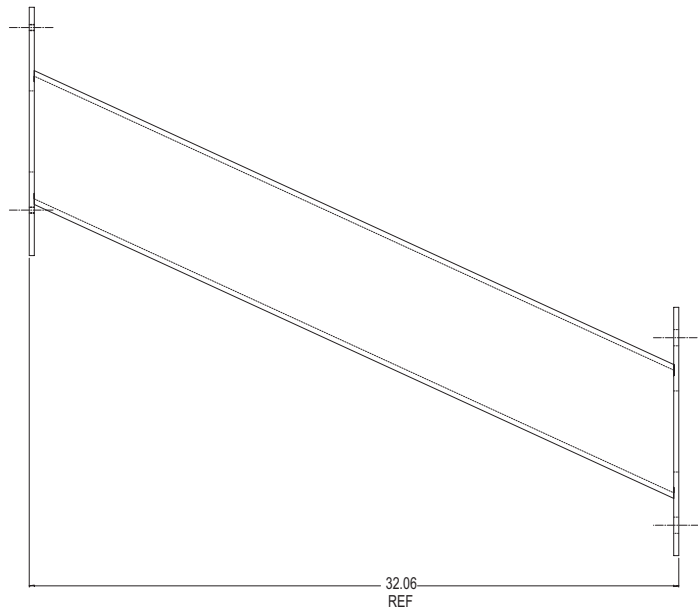
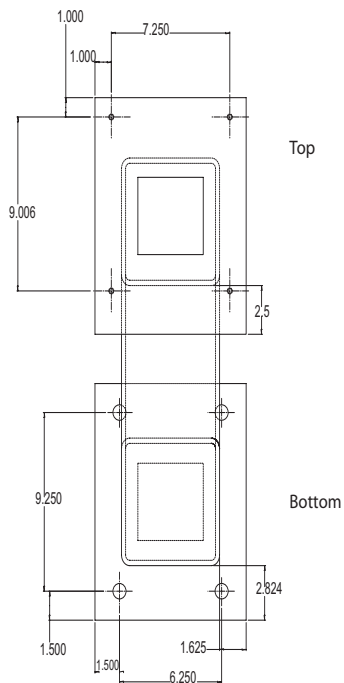
To prepare the site, Hamilton recommends placing four anchoring bolts into the concrete with the threads extending at least 1 ¼" above the surface. Use the diagrams on the following page to determine the placement of the bolts. Please follow all applicable local codes.

It is also recommended that the wiring be run through the concrete and up through the center of the base, using flexible conduit.

DIAGRAM A MOUNTING DETAILS



Short MPU Base



Tall MPU Base

MOUNTING

After the site is prepared, run the conduit up through the center of the base. Place the base over the anchoring bolts and bolt down, following all applicable local codes. It is recommended that protective posts be placed around the base to maintain the reliability and appearance of the machine and base.

OTHER

Fasteners to be used should be recommended by your engineer as to strength and suitability. Consult local codes before installing. **Hamilton will not be responsible for injury or damage due to improper installation.**

LIMITED WARRANTY AGREEMENT OF HAMILTON MANUFACTURING CORP.

Hamilton Manufacturing Corp., an Ohio Corporation, (“Seller”) warrants to Purchaser that all new equipment shall be free from defects in material and factory workmanship for a period of one (1) year from the original shipping date. Hamilton Manufacturing Corp. further warrants if any part of said new equipment in Seller’s sole opinion, requires replacement or repair due to a defect in material or factory workmanship during said period, Seller will repair or replace said new equipment. Purchaser’s remedies and the liabilities and obligations of Seller herein shall be limited to repair or replacement of the equipment as Seller may choose, and Seller’s obligation to remedy such defects shall not exceed the Purchaser’s original cost for the equipment. Purchaser EXPRESSLY AGREES this is the EXCLUSIVE REMEDY under this warranty. There are no other express or implied warranties which extend beyond the face hereof. All warranty repair service must be performed by either a Factory Trained Service Representative or **HAMILTON MANUFACTURING CORP., 1026 Hamilton Drive, Holland, Ohio 43528 PHONE (419) 867-4858 or (800) 837-5561, FAX (419) 867-4867.**

The limited warranty for new equipment is conditioned upon the following:

1. The subject equipment has not, in the Seller’s sole opinion, been subjected to: accident, abuse, misuse, vandalism, civil disobedience, riots, acts of God, natural disaster, acts of war or terrorism.
2. The Seller shall not be liable for any expense incurred by Purchaser incidental to the repair or replacement of equipment and Purchaser shall assume full responsibility for any freight or shipping charges.
3. The coverage of this warranty shall not extend to expendable parts.
4. Purchaser shall have a warranty registration card on file with Seller prior to any claim in order for warranty protection to apply.
5. No warranty coverage is applicable to any equipment used for currency other than that specified at the time of the purchase.
6. Seller expressly disclaims any warranty that counterfeit currency will not activate said equipment.
7. Seller expressly disclaims any warranty for any losses due to bill manipulation or theft or loss of cash under any circumstances.
8. Use of the equipment for anything other than its intended and designed use will void the Limited Warranty Agreement. Use of equipment for anything other than its intended and designed use includes, but is not limited to, downloading software/applications not certified by Seller such as e-mail, spyware, screen savers, viruses, worms, third party software, web search engines, cookies, spam, desktop applications, games, web surfing, etc.

Seller further warrants all repair or service work performed by a factory trained representative or Hamilton Manufacturing Corp. for a period of ninety (90) days from the date the repair or service work was performed. Purchaser’s remedies and the liabilities and obligations of Seller herein shall be limited to repair or replacement of equipment as Seller may choose, and Seller’s obligation to remedy such defects shall not exceed the Purchaser’s depreciated value of the equipment. Purchaser EXPRESSLY AGREES this is an EXCLUSIVE REMEDY under this warranty. There are no other express or implied warranties on repair or service work performed by a factory trained representative or Hamilton Manufacturing Corp. which extend beyond the face hereof.

The limited warranty for repair and service work is conditioned upon the following:

1. The subject equipment has not, in the Seller's sole opinion, been subjected to: accident, abuse, misuse, vandalism, civil disobedience, riots, acts of God, natural disaster, acts of war or terrorism.
2. The Seller shall not be liable for any expense incurred by Purchaser incidental to the repair or replacement of equipment and Purchaser shall assume full responsibility for any freight or shipping charges.
3. The coverage of this warranty shall not extend to expendable parts.
4. Purchaser shall have a warranty registration card on file with Seller prior to any claim in order for warranty protection to apply.
5. No warranty coverage is applicable to any equipment used for currency other than that specified at the time of the purchase.
6. Seller expressly disclaims any warranty that counterfeit currency will not activate said equipment.
7. Seller expressly disclaims any warranty for any losses due to bill manipulation or theft or loss of cash under any circumstances.
8. No person or entity other than a factory trained representative or Hamilton Manufacturing Corp. has performed or attempted to perform the subject repair or service.
9. Using equipment which has been serviced or repaired for anything other than its intended or designed use such as downloading software applications not certified by Seller will void the Limited Warranty Agreement. This includes software/applications such as e-mail, spyware, screen savers, viruses, worms, third party software, web search engines, cookies, spam, desktop applications, games, web surfing, etc.

THIS AGREEMENT IS MADE WITH THE EXPRESS UNDERSTANDING THAT THERE ARE NO IMPLIED WARRANTIES THAT THE EQUIPMENT SHALL BE MERCHANTABLE, OR THAT THE GOODS SHALL BE FIT FOR ANY PARTICULAR PURPOSE. PURCHASER HEREBY ACKNOWLEDGES THAT IT IS NOT RELYING ON THE SELLER'S SKILL OR JUDGMENT TO SELECT OR FURNISH EQUIPMENT SUITABLE FOR ANY PARTICULAR PURPOSE AND THAT THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THAT WHICH IS DESCRIBED HEREIN.

The Purchaser agrees that in no event will the Seller be liable for direct, indirect, or consequential damages or for injury resulting from any defective or non-conforming new, repaired or serviced equipment, or for any loss, damage or expense of any kind, including loss of profits, business interruption, loss of business information or other pecuniary loss arising in connection with this Limited Warranty Agreement, or with the use of, or inability to use the subject equipment regardless of Sellers knowledge of the possibility of the same.

Hamilton Manufacturing Corp.

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