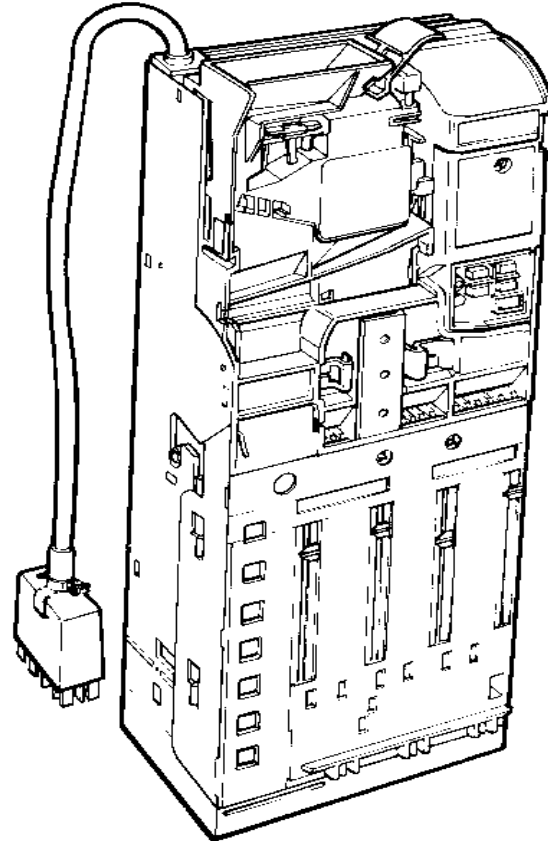


The  
VN4000, VN4010XV, VN4510  
INSTALLATION GUIDE



**MARS**  
Coin Changer  
*Series 4000*

## VN4000, VN4010XV, VN4510 Installation Guide

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Telephone: Customer Service: 800 345 8215  
Technical Support: 800 345 8172  
Facsimile: 610 430 2694

Internet: <http://www.meiglobal.com>

## VN4000, VN4010XV, VN4510 Installation Guide

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4. Best Change feature enabled. The changer makes the decision about the best change to pay out.
5. Changer dispenses \$1 coin if it senses four consecutive 25¢ dispense signals.
6. Changer will accept the cashbox coins.
7. Accepts \$1 coin regardless of the level of 25¢ in the tube.

### Factory Default Settings (VN4510)

With All Option Switches in the "OFF" Position, the factory default settings are as follows:

1. Accepts \$1 coin.
2. \$1 coin fills to upper level.
3. 25¢ fills to upper level.

### Cross Reference Table

Use this table in the event that the Tube Cassette Label is missing or the tubes have been changed differently from the label. The tube positions must exactly match the table below .

Press and hold the Mode (yellow) button for two seconds until the LED begins to flash. Press the three letter code for the desired tube configuration.

	Tube Position			
	A	B	C	D
DAA	10	5	25	\$1
DAB	5	5	10	\$1
DAC	10	5	\$1	\$1
DAD	5	5	25	5
DBA	10	25	25	5
DBB	5	25	25	\$1
DBC	5	25	\$1	\$1
DBD	5	25	25	25
DCA	5	5	\$1	\$1
DCB	5	5	25	25
DCC	5	5	10	25
DCD	5	5	5	\$1
DDA	10	5	10	5
DDB	5	5	25	\$1
DDC	10	25	10	5
DDD	Uses factory defined configuration			

## Diagnostics

The LED, located on the keypad, provides an indication of the coin changer status. Note any problems that occur when the LED pulses one or more flashes, followed by a pause, and then repeats.

<b>LED ON</b>	Normal operation.
<b>LED OFF</b>	No power/vendor error.
<b>1 FLASH</b>	Acceptor requires cleaning (see Figure 9).
<b>2 FLASH</b>	Changer senses an error in the accept gate.
<b>3 FLASH</b>	Changer senses an error in the separator.
<b>4 FLASH</b>	Changer senses an error in the dispenser.
<b>5 FLASH</b>	Changer has sensed water (may have shut down).
<b>CONTINUOUS FLASH</b>	Replace changer.

## Cleaning

For trouble free operation, develop a routine maintenance schedule and periodically clean the acceptor in the areas shown in Figure 9. Use a damp cloth with a **mild** detergent to clean the areas indicated below.

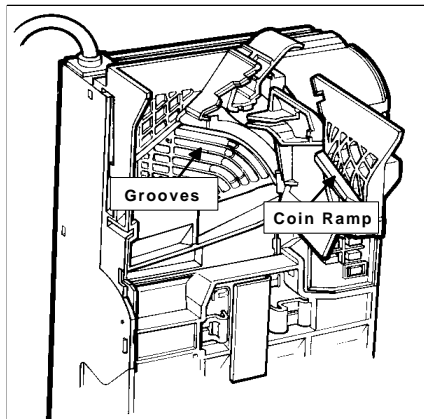


Figure 9

## Factory Default Settings (VN4000 & VN4010XV)

With all Option Switches in the "OFF" Position, the factory default settings are as follows:

1. Accepts \$1 coin.
2. \$1 coin fills to upper level.
3. 25¢ fills to upper level.

## General Information

This document contains information for installing the Mars Electronics Series 4000 Coin Changers.

- VN4000
- VN4010XV (15 pin only)
- VN4510

These Coin Changers fit into the standard coin changer channel provided by vending machine manufacturers. They mount on the existing three mounting studs located in the vending machine.

**NOTE:** A coin cassette is required for complete and proper operation.

The features of the Series 4000 Coin Changers include:

- Coin Cassette
- Four tubes for change payback (flexible)
- \$1 coin payout
- Diagnostic LED
- Advanced coin inventory control (float feature)
- 24V or 110V MicroMech® interface
- MDB interface

## Interface Options

The Series 4000 Coin Changers operates in machines which have the following interfaces:

- MicroMech® — VN4000 (110V); VN4010XV (24V)
- MDB — VN4510

## Installation Instructions

Install the Series 4000 Coin Changers using the standard mountings found in most vending machines.

1. Turn off the power on the vending machine.
2. Position the mounting holes over the mounting studs/screws in the vending machine (Figure 1).
3. Tighten the upper right mounting screw through the access hole.
4. If you need to tighten other mounting screws, follow Steps 5 and 6. Otherwise, go to Step 7.
5. Remove the coin cassette if needed (Figure 2). Loosen the fixing screw (Figure 3) above the keypad until it is possible to tilt the acceptor assembly forward (Figure 4). The remaining mounting holes are now accessible. Tighten the screws as needed.
6. Return the acceptor assembly and tighten the fixing screw.
7. Set the option switches (Figure 7) as desired.

For more information, see *Setting the Option Switches* on Page 6.

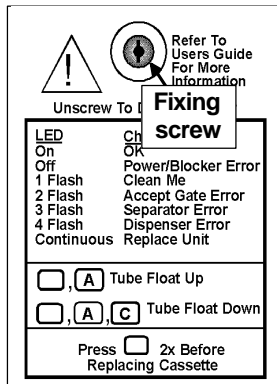


Figure 3

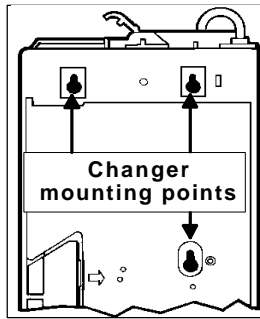


Figure 1

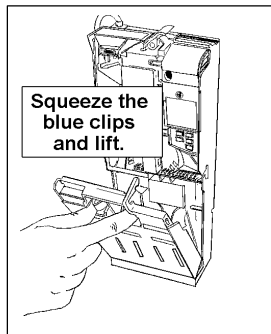


Figure 2

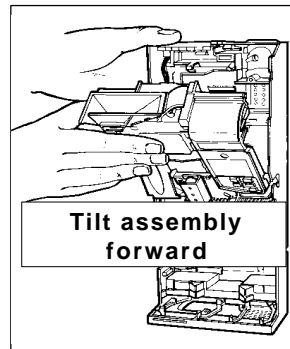


Figure 4

8. Connect the changer to the vendor and turn on the power.
9. If the coin cassette is not installed on the Changer, continue with these instructions, otherwise go to step 10.

## Loading with the Float Up Feature

When you load with the float up feature, the coin changer keeps an **exact account** of the number of coins in each tube.

1. Locate the Mode (yellow) button on the keypad. Press and hold the Mode button until the red LED begins to flash.
2. Release the Mode button and press the A button. The LED flashes quickly. The changer is now in float mode.
3. Insert the coins into the acceptor at the top of the changer.

You must enter a **minimum of two coins** in each tube, to assure dispenser reliability.

For **optimum performance**, cover the lower sensors (at least 15 coins per tube).

The coins will be accepted and routed to their respective tubes.

Note: The coin changer will automatically reject coins when the upper limit is reached.

4. When you are finished, press the A button to return to normal mode.

## Placing the Coin Cassette Back into Coin Changer

When you replace the coin cassette, you must first make sure that the white dispenser arms at the bottom of the unit are in the correct position (see Figure 7 on Page 7).

To put the white dispenser arms in the correct position:

1. Press the Mode (yellow) button twice.
2. Replace the coin cassette.
3. The tips of the white arms should be visible in tubes B, C, and D.

## Manually Dispensing Coins

In normal mode, the A, B, C, D keys on the keypad refer to the four tubes. To dispense a coin from a tube, press the appropriate blue key, for a single dispense.

For "latched" dispense, hold down one key for a few seconds, then release. The coins will rapidly payout until depletion or until any key is depressed.

## Token Teach Feature

The VN4510 - MDB Coin Changer includes a Token Teach feature, which allows you to program the changer to accept two types of tokens. For specific instructions on using Token Teach, see the *Series 4000 Operation and Service Guide*. Token Teach is not available on the MicroMech interface.

## Loading the Coin Cassette

You can load the coin cassette using any of these three techniques:

- Manually by removing the cassette
- Manually from the front
- With the Float Up feature

### Loading Manually by Removing Cassette

1. Remove the cassette.
2. It is recommended that you fill each tube (nickel, dime, quarter, and dollar) with at least 15 coins.

**Note:** Do not fill above the MAX FILL line.

### Loading Manually from the Front

1. Squeeze the blue clips in front and pull the top of the cassette out until the hook on the cassette catches (see Figure 8).
2. From the front, manually load the coins into tubes B, C, and D.
3. For tube A, push the bottom of the fill flap in and load the coins into the tube from the top of the fill flap (see figure 8).

**Note:** Do not fill above the MAX FILL line.

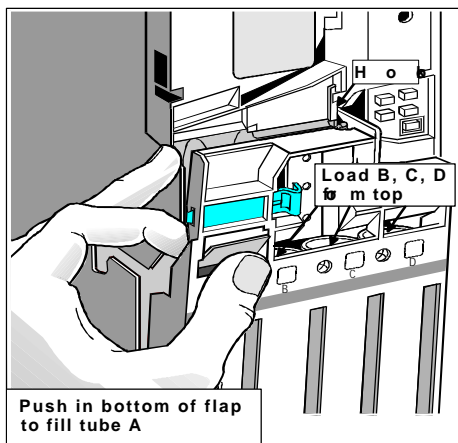


Figure 8

**Note:** Do *not* remove power from the vendor during this procedure.

- a. Remove the coin cassette from the box.  
**Example - Tube Cassette Option Label**

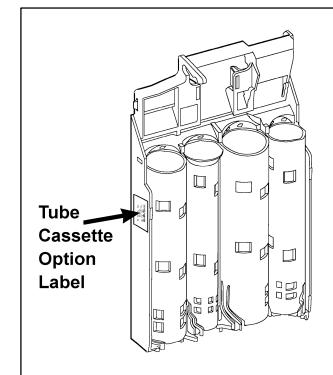
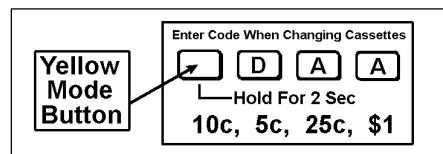


Figure 5

- b. Locate the Tube Cassette Options label (Figure 5) on the side of the new cassette. On the keypad, press and hold the Mode (yellow) button for 2 seconds (the LED will begin to flash). Enter the 3 letter code from the label. The LED will cease to flash.

- c. On the keypad, press the Mode (yellow) button twice to re-home the dispense mechanism.

- d. Install the new coin cassette. Align the bottom first (Figure 6), then ensure that the blue clips lock into position.

**Note:** If the Tube Cassette Label is missing, refer to the CROSS REFERENCE TABLE on page 11.

10. Ensure the reject lever operates normally, without interference.

The installation is now complete. If you want to fill the coin cassette, see the section entitled *Loading the Coin Cassette* on Page 8.

**Note:** In some machines, you may need to dress the harness wires around the coin changer to prevent the sharp assembly edges from damaging the harness casing and wires.

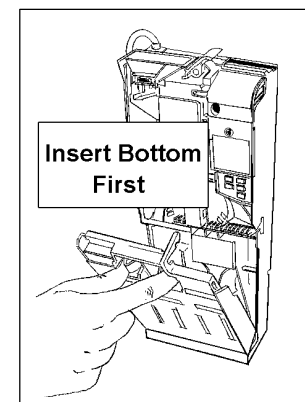


Figure 6

**Setting the Option Switches** (located behind coin cassette)

- For the VN4000 or VN4010XV (MicroMech interface: 12 pin - 110v; 15 pin - 24v), see *Options Switch Settings A*.
- For the VN4510 (MDB interface: 6 pin) see *Option Switch Settings B*. (See Fig. 7 on Page 7 for the location of the option switches in changer).

**Option Switch Settings A: VN4000 or VN4010XV**

Switch 1	ON	Accept \$1 coin.
	OFF	Reject \$1 coin.
Switch 2	ON	\$1 coins fill to low coin level; then are stored in cashbox.
	OFF	\$1 coins fill to upper coin level; then are stored in cashbox.
Switch 3	ON	25¢ coins fill to low coin level; then are stored in cashbox.
	OFF	25¢ coins fill to upper coin level; then are stored in cashbox.
Switches 4 & 5	—	See Table 1 below.
Switch 6	ON	Reject cashbox coins.
	OFF	Accept cashbox coins.
Switch 7	ON	Accept \$1 coins regardless of the level of 25¢ coins in the tube.
	OFF	Accept \$1 coins only when low 25¢ sensor covered.
Switch 8	ON	Option switch settings are in use.
	OFF	Option switch settings are ignored. Factory default settings are enabled if all switches (1-8) are in the "off" position (see default explanation on page 9).

TABLE 1

Switch 4 (Best Change)	Switch 5 (Emulation)	Comment
OFF	OFF	Setting for VN4010XV <b>only</b> on a machine with a \$1 coin payout line. Cassette must have 5, 10, 25, \$1 tubes.
ON	ON	All VN4000 and other VN4010XV configurations must use this setting.

**Option Switch Settings B - VN4510 (MDB)**

(see Figure 7)

Switch 1	ON	Accept \$1 coin.
	OFF	Reject \$1 coin.
Switch 2	ON	\$1 coins fill to low coin level and then are stored in cashbox.
	OFF	\$1 coins fill to upper coin level and then are stored in cashbox.
Switch 3	ON	25¢ coins fill to low coin level and then are stored in cashbox.
	OFF	25¢ coins fill to upper coin level and then are stored in cashbox.
Switches 4-7	NOT USED	
Switch 8	ON	Option switch settings are in use.
	OFF	Option switch settings are ignored. Factory default settings are enabled if all (1-8) switches are in the "off" position (see default explanation on page 9).

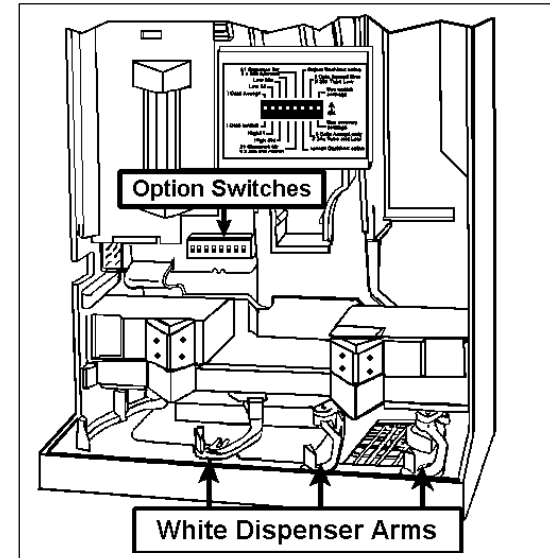


Figure 7