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# INTRODUCTION

This manual contains instructions, service and installation guidelines for the Can Drink & Can/Bottle Satellite Vendor. Read this manual thoroughly to become familiar with the features and functions of this unit. The initial setup of a vending machine is a very important step of ensuring that the equipment operates in a trouble-free manner. Following the instructions during initial installation of the machine will avoid service problems and minimize set-up time.

This model is a (S) serial, can or bottle vendor that operates on the first-in, first-out vending principle for all selections.

The satellite VENDOR uses the electronics and control systems of the host vendor for all vend functions, credit accumulation, and pricing.

Each machine is identified by a model and a serial number given on the Serial Number Plate attached to the inside or back of the vendor. Record these numbers for your records in the space provided below. All inquiries and correspondence pertaining to the vendor reference the model and serial numbers.

**MODEL NUMBER:**
**SERIAL NUMBER:**

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# SPECIFICATIONS

**DIMENSIONS** ...........................................  
**HEIGHT:** 685 ln (174 cm)  
**WIDTH:** 21 in (53 cm)  
**DEPTH:** 35 in (89 cm)  
**WEIGHT:** 900 lbs (903.3 kg)

**POWER** ...............................................  
**VAC:** 120 VAC  
**50Hz**  
**50Hz**

**CAPACITY** .............................................  
**SELECTED**  
**12 Oz.**  
**Cans**  
**20 Oz.**  
**Bottles**  
**UNIT SIZE:**  
**13 HP Hermetically Sealed**

**COLUMNS** .............................................  
**6**

**CHARGE** .............................................  
**35 Oz**

**REFRIGERATION** .......................................  
**SELECTION**  
**12 Oz. Cans**  
**20 Oz. Bottles**

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# UNPACKING

This machine was thoroughly inspected before leaving the factory and the delivering carrier has accepted this vendor on their responsibility. Any damage or irregularities should be noted at the time of delivery and reported to the carrier. Request a written inspection report from the claims inspector to file any claim for damage. File the claim with the carrier (not the manufacturer) within 15 days after receipt of the machine.

Carefully remove the outside packaging material in a manner not to damage the finish or exterior of the machine. Inspect the machine for concealed shipping damage. Report any damage hidden by the shipping material directly to the delivering carrier on a Hidden Damage Report.

Record the model number and serial number of the vendor for your records. Space is provided above.

Remove the Knock-A-Way support by placing a 2x4 under the vendor, inserting a screwdriver or pry bar into the groove of the Knock-A-Way and splitting it in two as shown in Figure 1. Turn the leveling screws in as far as possible.

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# INSTALLATION

Consult local, state and federal codes and regulations before installation of the vendor.

To minimize installation time and to avoid service problems due to improper installation, follow the instructions outlined in this manual.

Position the vendor in the place of operation no further than six feet (6') from the power outlet or receptacle and check that the door will open fully without interference. Leave at least four inches of space between the back of the machine and any wall or obstruction for proper air circulation.

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# CAUTION:

Do not block the ventilating screens in front or in the rear of the vendor. Always allow free ventilation behind a bank installation, so that exhaust air is not trapped. Failure to do so could result in a refigerator failure.

Level the vendor, making sure all leveling feet are touching the floor. The vendor must be level for proper operation. If it is properly leveled, it should not "rock" or "wobble" on any of the leveling feet. When the vendor is level, the door can be opened to any position and not move by itself. Try the door half closed, straight out and in a wide open position before deciding that the machine is level.

Remove all shipping brackets, tape and inner packing material from the vendor. Operating the vendor without removing the tape and packing material could result in damage to the vendor.

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1. GROUNDING (EARTHING) & ELECTRICAL

Refer to the Safety Manual and Installation Guidelines (PIN 4206816) that shipped in the service package with your machine.

Prior to connecting the equipment, the integrity of the main electrical supply must be checked for correct polarity, presence of ground (earth) and correct voltage. It is recommended that these checks be repeated at scheduled intervals with the route of safety electrical testing of the equipment itself.

To correct negative voltage, amperage, polarities, or ground (earth) checks, consult a licensed electrician.

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# WARNING:

Do not use extension cords.

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2. PARTS CHECKLIST

Find the service package envelope inside the SATELLITE VENDOR on the second shelf near the hopper. Please remove it and verify that it contains the following parts:

- Screws for umbilical cord flat bracket
- Wire nuts
- Tin bracket and mounting screws

If so equipped, also verify that you have the optimal Tilter (infrared shaped plastic) attached on the underside of the inner door. It might be molded in vending 16.9 oz. water bottles.

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3. TOOLS NEEDED

- Flat head and Phillips head screwdrivers
- Wire cutters

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4. SATELLITE VENDOR LOCATION

Position the SATELLITE VENDOR so that it is on the right side of the host vendor. Refer to Figure 2. Swing doors open and check for clearance.

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5. LOCATE HARNESSES

Turn off the host vending and unplug it from its power source.

Look for the external 12-pin connector and the motor harnesses inside the host vendor. The motor harnesses is usually hanging on the bottom right, or inserted through the hole on the second shelf, or laying on the second shelf. Refer to examples shown on Figure 3. Look for the MDB Power Harness 2-pin connector near the 12-pin connector. Have both the 12-pin connector and the 2-pin connector ready for the umbilical cord.

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6. CONNECT UMBILICAL CORD

Insert the cable cover or the back of the host cabinet. Insert the SATELLITE VENDR umbilical cord through the hole. Secure the bracket with screws provided. See Figure 4.

Connect the SATELLITE VENDOR umbilical cord to the 2-pin connector of MDB Power Harness and to the 12-pin motor harness. See Figure 5.

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To adjust the back spacer:
Lift the back spacer and raise it in the adjustment slots. Use notch markers as reference points to align it vertically. See Figure 10 on page 1.

To adjust the latch striker and gate assembly:
Pull and lift up on the lower end of gate assembly (or latch striker). Use a small screwdriver as a wedge to pry the plate away from the slot opening. See Figure 10 on page 1. Reposition them in the adjustment slots. Use notch markers as reference points to align it vertically.

The vend rack has been factory set for most 20-oz bottles or 12-oz cans.

11. TEST VEND
Close host vendor door and SATELLITE VENDOR door. Test vend both vendors for proper operation. Use real money to simulate actual vend conditions.

12. INSTALL TIE BRACKET

**WARNING**
Failure to install the Tie Bracket in strict accordance with the following procedure may create an unintentional tipping or hazard. All installation and service work must be done by a qualified service technician.

Attach the SATELLITE VENDOR to the host vendor as shown in Figure 11. If attaching on the left side of the host vendor, it might be necessary to remove the anti-theft upper bracket and use the other Tie Plate. Hook the Tie Plate furnished over the lip of the SATELLITE VENDOR and host vendor. Secure with screws provided.

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**CAUTION**
Do not load dented or damaged cans or bottles in the columns. Possible jams could occur.
INSTALLATION CHECKLIST
- All shipping brackets, packing material and tape have been removed.
- Make sure the level is level from left to right and front to back.
- The machine is plugged directly into a live dedicated outlet.

Note:
- Extension cords cause problems - Do not use extension cords.
- The dedicated outlet is polarized and grounded.
- All vend prices have been set correctly on the host vendor. Refer to the host vendor service manual.
- The SATELLITE VENDOR has been properly loaded and all items in each selection correspond to the display product and vend price. Refer to Load Products section on page 1.
- The machine has at least 4" of space behind it.
- The vendor door is closed tightly and locked.

DROP SENSOR
A drop (vibration) sensor on the delivery chute is your assurance that a product has been vendded after a selection is made.

The drop sensor is factory calibrated and should not need adjustment. The sensor indicator light (located on the sensor board before the adjustment screw) will blink when a product hits the delivery chute. See Figure 12. If the light does not blink on impact, then an adjustment should be made.

DROP SENSOR ADJUSTMENT
1. Locate the sensor adjustment screw on the Drop Sensor Board. See Figure 12.
2. Use a small flat head screwdriver to slowly turn the adjustment screw clockwise (decreases sensitivity) and stop when the indicator light comes on.
3. Slowly turn the adjustment screw counterclockwise (increase sensitivity) and stop when the indicator light goes out. Continue to turn the adjustment screw counterclockwise three (3) additional turns. Test the sensor for proper operation by tapping the delivery chute. The indicator light should blink when the chute is tapped.
4. Close the door and perform several test vends.
5. If vending special products, the drop sensor may need the following additional adjustments:
   - If machine is vendding more than one product per vend request, open the door and turn the adjustment screw clockwise ¼ turn to increase sensitivity.
   - If machine fails to vend product upon vend request, turn adjustment screw counterclockwise ¼ turn to decrease sensitivity.

VEND CYCLE
When a carnivore selection is made at the front vendor, a 24VDC is sent from the host controller to the SATELLITE VENDOR vend motor. The vend motor rotates the product cradle and the product falls off the cradle. As the can or bottle drops onto the product delivery chute, the impact or vibration allows the drop sensor to send a low voltage signal to the drop sensor board indicating that a product has been vendded. The drop sensor board relays the information to the host control board. After receiving the drop sensor signal, the host control board will recognize how the machine is programmed and responds accordingly. Refer to host vendor service manual for control and programming information.

SOLD-OUT
Some host vendors will require resetting. Refer to host vendor’s service manual for additional information.

REFRIGERATION UNIT
The refrigeration unit is located on the right side under the hopper. See Figure 12 on page 2. If setting up for the first time, please allow sufficient time for the refrigeration system to cool the products.

WARNING
Colder setting does not cool drinks faster but may cause drinks to freeze.

REFRIGERATION TROUBLESHOOTING
Know and understand how to service the unit and how it operates. Units may vary, but the operation is basically the same. Never guess at the problem, find the symptom before attempting any repair.

NOTE:
10% of refrigeration problems are electrical.

The sealed hermetic system was not meant to be worked on outside the Factory Service Center. The few things that can go wrong with a sealed system and should be repaired at the Factory Service Center are:
1. Low Charge - usually caused by leaks; look for oil around seals and welds. Unit will not cool properly. The capillary tube will be frosted before it enters the evaporator inlet tube.
2. Restriction in System (unit frost, then melts) - not cooling properly.
3. Bad valves - unit does not cool properly; noisy compressor.

COMPRESSOR WILL NOT START
Compressor has no power:
1. Machine not plugged in.
2. Tripped breaker or blown fuse.
3. Faulty wall switch.
4. Short or tear in power cord.
5. Improper wiring.
6. Low voltage: 5% below. Check the power source with the Multi-Meter.

COMPRESSOR TRIPS ON OVERLOAD
1. Improper voltage: 5-10% above, 5% below. Check power source with Multi-Meter.
4. Compressor has shorted windings. Check compressor windings with Multi-Meter.

UNIT SHORT CYCLES
Temperature setting set too warm. See Refrigeration Controls section on page 2 of this manual.

UNIT OPERATES LONG OR CONTINUOUSLY
6. Air flow restricted.
   - Faulty evaporator motor or blades causing cooling to in low.
   - Loose connections on evaporator motor (One motor not running)
   - Air flow blocked by product in front of evaporator or air duct openings.

UNIT OPERATES TOO COLD
Refrigeration control setting too cold. See Refrigeration Controls section on page 2 of this manual.

UNIT OPERATES TOO WARM
1. Refrigeration control setting too warm. See Refrigeration Controls section on page 2 of this manual.
2. Restricted evaporator space.
   - Evaporator motor or blades faulty, causing the coils to ice over the evaporator.
   - Conductor air flow restricted.
   - Plugged or dirty condenser
   - Condenser motor or blades bad
   - Blade stick

TROUBLESHOOTING CIRCUITS WITH MULTI-METER
- Check the power source. Use voltage section of the Multi-Meter. Should measure within 5-10% above, 5% below.
- Check overload.

NOTE:
Power must be off and fan circuit open.

Using the resistance section of the Multi-Meter, check terminals 3 and 4 for continuity. If no continuity is measured (infinity), overload may be trapped. Wait 10 minutes and try again. If still no continuity, overload is defective.
- Check relay (See Figure 13. Compressor Schematic on page 2). Unplug lead and remove relay from compressor. (NOTE: keep relay upright).
- Check terminals 1 and S, or L and S with the Multi-Meter. Replacement relay if continuity exists.
- Check compressor windings. (See Figure 13. Compressor Schematic on page 2).
- Check windings resistance with the Multi-Meter. If readings are not within 2 Ohms, the compressor is faulty.
BEFORE CALLING FOR SERVICE

- Does your machine have at least 4" of clear air space behind it?
- If the power is turned on at the fuse box, is the machine the only thing that doesn’t work?
- Is the machine plugged directly into the outlet?
- Extension cords cause problems. DONT USE EXTENSION CORDS.
- Is the evaporator coil free of dust and dirt?
- Is the condenser coil free of dust and dirt?
- Is the compressor free of dust? (A blanket of dust can prevent the compressor from cooling off between workload cycles."
- Are circuit breakers at the fuse box reset?
- Are evaporator fans running? Take a sheet of paper about 4" x 5" in size. Place the paper in front of the evaporator coil and see if the evaporator fans will draw the paper to the coil.
- Is the condenser fan running? Fold a sheet of 8 1/2" x 11" paper in half. Place the paper in front of the condenser coils and see if it draws the paper to it.
- Is the shelf in front of the evaporator coil clear? (Any tools or other air-restricting items)
- Is the cold control set between 0 and 20?

NOTE:
Setting the cold control higher does not accelerate cooling of product.

For additional information:
Phone: 1-800-833-4411 or E-Mail: vendnet@vendnetusa.com
Include model number and serial number.

TABLE 2 WINDING RESISTANCE

Approximate resistance reading across terminals- use D.C. scale

- Common to Start: 12 Ohms
- Common to Run: 2 Ohms
- Run to Start: 14 Ohms
- Common to Shell: No Continuity

Refrigeration Unit Removal

The refrigeration unit is a hermetically sealed, fully contained modular towel 1/4 H.P. unit charged with 3.6 ounces of Freon R-134a refrigerant. The complete refrigeration unit can be removed if there is a service problem.

CAUTION:
Do not place any object in the evaporator assembly area or inside the cabinet area that will block the air. This may damage the refrigeration system, which may void the refrigeration warranty.

1. Unplug the power cord.
2. Remove the two screws holding the suction line cover.
3. Remove the two screws holding the evaporator unit to the cabinet as shown in Figure 14.
4. From the front, disconnect the ground wire (earth) wire from the power switch plate.
5. From the front, remove the screws holding the hopper and remove the hopper.
6. From the front, remove the air duct.
7. From the front, uncover the "H" clamp that holds the main motor harness on the panel (always displace the main harness from the main motor cord to enter the cabinet). Slide the cord out of the slots (one on the outside of the panel and the other on the inside of the panel).
8. Reinstall the refrigeration unit, reverse the above procedures.

CARE & CLEANING

WARNING:
Always disconnect the power before cleaning.

CABINET EXTERIOR
Wash with a mild detergent and water. Rinse and dry thoroughly. Wipe occasionally with a clean cloth. Plastic cabinet parts may be cleaned with a gentle plastic cleaner.

CABINET INTERIOR
Wash with a mild detergent and water. ODors may be eliminated by including baking soda or ammonia in the cleaning solution. Remove and clean drain hose to eliminate any deposits that may restrict condensate flow.
The vent mechanisms must be kept clean. Any build-up of syrup deposits can cause the mechanisms to malfunction. Use soap and water with great care so as not to get water into the electrical components.
To ensure proper ventilation, keep delivery slide area free of dirt and sticky substances.

REFRIGERATION SYSTEM
Clean dust from condenser and screen in the front door with a soft-bristle brush or vacuum cleaner. Remove any dirt or debris from the refrigeration system compartment. Remove and clean the condensation pans.
Do not block the evaporator or any area of the airflow with product or supplies.

PARTS ORDERING PROCEDURE
When ordering parts, include the following:

1. The model number and serial number of the machine for which the parts are needed.
2. Shipping address.
3. Address where the invoice should be sent.
4. The number of parts required.
5. Always refer to the pertinent parts and parts manual for the correct part number and description of a specific part.

NOTE:
When RIGHT OR LEFT is used with the name of a part, it means the operator is facing the machine with the door closed.

6. Any special shipping instructions.
7. Center driven or air driven, truck, railroad, or air transport.
8. Signature and date.
9. If a purchase order number is used, be sure that it is visible and legible.

Mail your order to:
Vendnet®
105 North 10th Street
Waukee, Iowa 50263 USA
Phone: 515-274-3041
Fax: 515-274-1447
Sales Fax: 515-274-6590
E-Mail: vendnet@vendnetusa.com