



UNIVERSAL SATELLITE DEVICE MINI-SANDWICH VENDOR

MODEL 3122

**SERVICE
MANUAL**

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Record the Model Number and Serial Number of your machine below.

The Model and Serial numbers are needed to obtain quick service and parts information for your machine. The numbers are available on the identification plate located on the back side of the cabinet of the machine.

MODEL NUMBER: _____

SERIAL NUMBER: _____

INTRODUCTION

This manual should be read thoroughly to familiarize you with the functions and features of all components. The initial set-up of a vending machine is a very important step of insuring that the equipment operates in a trouble-free manner. Follow the instructions at the initial installation of the machine to avoid service problems and minimize setup time.

This service manual contains installation and service information on the **Model 3122 Universal Satellite Device (USD) Mini-Sandwich Vendor**. This is a nine-select sandwich vendor that operates on the “first-in, first-out” vending principle for all selections.

This vendor has a USD controller and must be used with a host vendor that is equipped with a MDB (Multi-Drop Buss) controller. The Mini-Sandwich utilizes the electronics of the host vendor for credit accumulation and refund of change when required.

The Mini-Sandwich consists of nine trays with one selection per tray. It is air-conditioned and designed to vend a variety of products. The nine selections can be individually priced. The maximum vend price is 255 times the smallest denomination of coin accepted.

Each machine has 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 on the Table of Contents. All inquires and correspondence pertaining to this vendor should reference the model and serial numbers.

Should you have any questions pertaining to the information in the manual, replacement parts or the operation of the vendor you should contact your machine supplier.

FOR U.S. UNITS:

VendNet™
165 North 10th Street
Waukee, Iowa 50263-0488

PHONE: 1-515-274-3641
1-800-833-4411

PARTS FAX: 1-515-987-4447
SALES FAX: 1-515-274-0390

SPECIFICATIONS

General

Height:	72 inches	183 cm
Width:	21 inches	53 cm
Depth:	36 inches	183 cm
Weight:	520 pounds	235.9 kg

Electrical

Power:	<u>120 VAC</u>	<u>230 VAC</u>
	60 cycle	50 cycle
Starting Amps:	35 amps	16 amps
Running Amps:	7 amps	3.5 amps

Factory Configuration

Expandable to 18 Selections

Pricing

Multi-Pricing

Refrigeration

Unit Size:	1/3 HP Hermetically Sealed
Refrigerant:	R-134a
Charge:	5 Oz.

UNPACKING

This machine was thoroughly inspected before leaving the factory and the delivering carrier has accepted it as 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 vendor

Carefully remove the outside packing 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. These numbers are on the Serial Number Plate on the back of the cabinet and/or inside the vendor. Refer to these numbers on all correspondence and inquiries pertaining to this vendor.

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

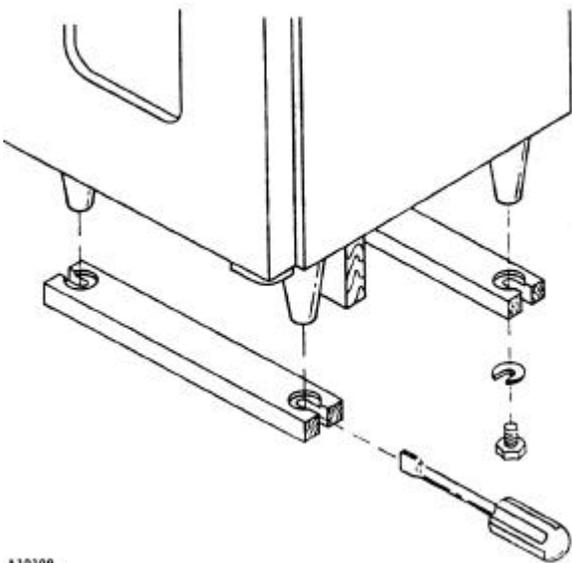


Figure 1. Removing the Knock-A-Way Support

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 its place of operation no further than six feet 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.

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 refrigeration failure.

Level the vendor, making sure all levelers are touching the floor. The vendor must be level for proper operation. If it is properly leveled, it should not “rock” or “teeter” on any of the levelers. 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.

Grounding (Earthing) & Electrical

Before connecting the equipment, the integrity of the main electrical supply must be checked for correct polarity, presence of ground (earth) and correct voltage. Repeat these checks every six months with the routine safety electrical testing of the equipment itself. To correct negative voltage, amperage, polarity, or ground (earth) checks, consult a licensed electrician.

A noise suppresser has been installed in this machine to compensate for any mains signal noise that could interfere with the normal operation of the controller.

Each vendor is equipped with a Door Interlock Switch. The door operates the switch. When the door is closed, power is enabled to the vendor. When the door is opened, power is disabled.

To operate the machine with the door open, pull the Door Interlock Switch out until fully extended.

WARNING:

Do not use extension cords.

230 Volt Vendors

The power source must be 230 VAC ($\pm 10\%$), 50 cycle.

- **Voltage Check:** With a Multi-Meter set to check AC line voltage, insert one connector to the hot (live) terminal and the other connector to the neutral terminal. The Multi-Meter should indicate 216 - 264 VAC.
- **Polarity and Ground (Earth) Check:** With a Multi-Meter set to check AC line voltage, insert one connector to the hot (live) terminal and the other connector to the ground (earth) terminal. The Multi-Meter should indicate 216-264 VAC.
- **Amperage Check:** At the fuse box or circuit breaker panel, ensure that the fuse or breaker protecting that circuit is rated at 35 amps or greater.

NOTE

The **ground (earth)** terminal is perpendicular to the other two terminals. See **Figure 2**.

120 Volt Vendors

The power source must be 120 VAC ($\pm 10\%$), 60 cycle.

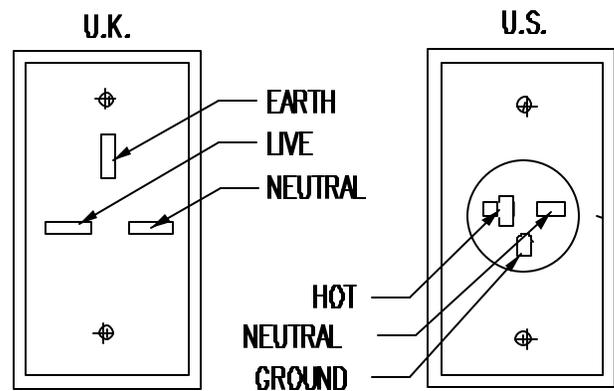


Figure 2. 230V Terminal Location

- **Voltage Check:** With a Multi-Meter set to check AC line voltage, insert one connector to the hot (live) terminal and the other connector to the neutral terminal. The Multi-Meter should indicate 108-132 VAC.
- **Polarity and Ground (Earth) Check:** With a Multi-Meter set to check AC line voltage, insert one connector to the hot (live) terminal and the other connector to the ground (earth) terminal. The Multi-Meter should indicate 108 – 132 VAC.
- **Amperage Check:** At the fuse box or circuit breaker panel, locate the proper circuit, and ensure that the fuse or breaker protecting that circuit is rated at 16 amps or greater.

NOTE

The **hot (live)** terminal is always counter-clockwise from the **ground** terminal. The **neutral** terminal is clockwise from the **ground (earth)** terminal. See **Figure 3**.

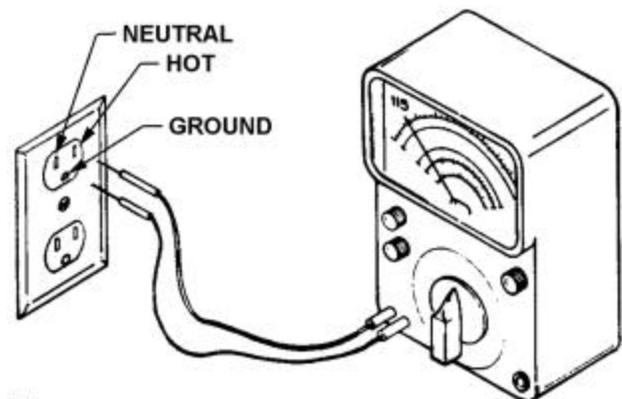


Figure 3. 115V Terminal Location

Connecting to the Host

1. Unplug the host machine from its power source.
2. Remove the hole plug on the back of the host cabinet.
3. Insert the umbilical harness from the Mini-Sandwich through the hole in the back of the host. Secure it with the attached flat bracket. See **Figure 4**.

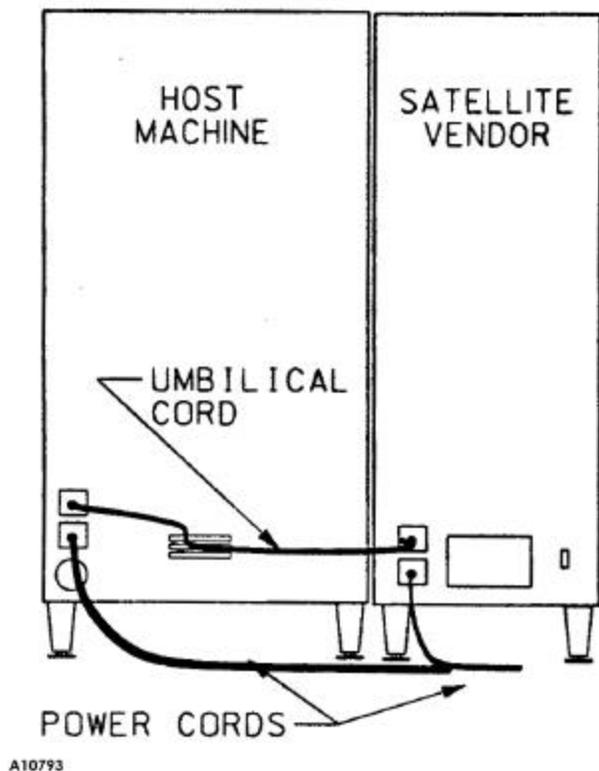


Figure 4. Connecting to the Host

4. Pull the umbilical harness to the front of the host, and push it up behind the right panel until it reaches the opening for the control board.
5. Connect the umbilical harness to the MDB adapter harness ("Y" harness).
6. Unplug the coin mechanism harness from the harness connected to the host control board.
7. Connect the coin mechanism harness to the Y harness.

8. Connect the Y harness to the harness connected to the host control board.
9. Plug the host and the Mini-Sandwich into their electrical power source.
10. If the Mini-Sandwich door is open, turn on the main power switch in the Mini-Sandwich by pulling out on the switch plunger on the lower, right hand side.

NOTE

When the door is opened, power is removed from all vendor components. To test components with the door open, the power switch must be pulled out.

11. Test the motors for proper operation.
12. Anchor the Mini-Sandwich to the host vendor. Remove the upper bracket on the host, saving the three screws. Hook the Tie Plate furnished with the Mini-Sandwich over the lip of the Mini-Sandwich. Use the saved screws to attach it to the host vendor. See **Figure 5**.
13. Plug in the host and the Mini-Sandwich.

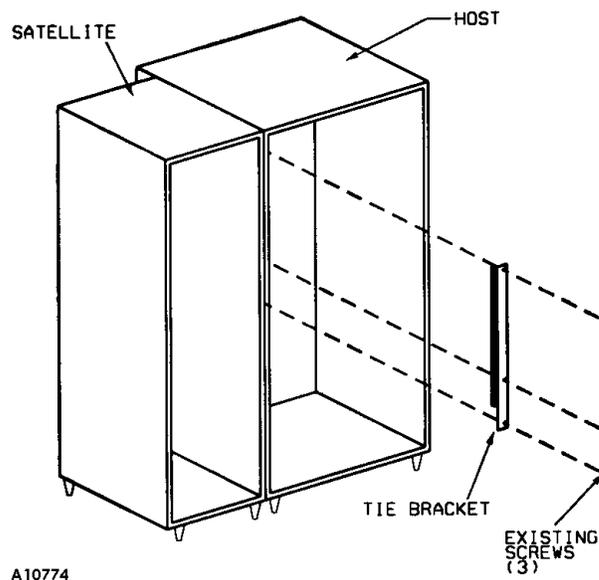


Figure 5. Tie Bracket Installation

LOADING INSTRUCTIONS

To load products, lift the tray slightly and pull forward until the tray stops. The upper-most trays tilt for easier loading.

Load products from front to back, making sure all items fit freely between the augers (also called helixes). Do not attempt to force over-size items or packages into the spaces. Do not skip a space.

The triangular sandwich product should be placed flat on the tray, with the longest edge parallel to the front of the machine. The package must be secure so that the fall does not cause the package to open, spilling its contents.

When finished loading each tray, make sure the tray is returned to its proper position. All trays must be pushed to the rear of the cabinet and properly seated in the “detent” position.

Auger Timing

Each auger can be rotated in 20-degree increments, changing the auger position for a different “drop-off” point at the front of the tray.

For dual-drive augers, the ideal timing is for the auger ends to meet at the center of the tray (left auger at 3 o’clock, right auger at 9 o’clock).

Should you experience difficulty in vending odd-sized or -shaped items, auger retiming can be accomplished on a trial and error basis as follows:

1. Pull the tray containing the auger to be retimed forward to its stop.
2. Remove the product from the compartment.
3. Remove the motor hold down bracket (one screw).

4. Lift the motor slightly (approximately 3/4”) to disengage the auger hub from the retaining rib in the bottom of the tray. See **Figure 6**.
5. Separate the hub from the motor by pulling forward on the hub to disengage its spline from the motor’s internal gear.
6. Rotate the hub and re-install by pushing the spline into the internal gear motor.
7. Replace the motor onto its retaining rib in the bottom of the tray.
8. Replace the motor hold down bracket, load product and push tray into its vend position, locked onto its detent.
9. Test vend for proper operation.

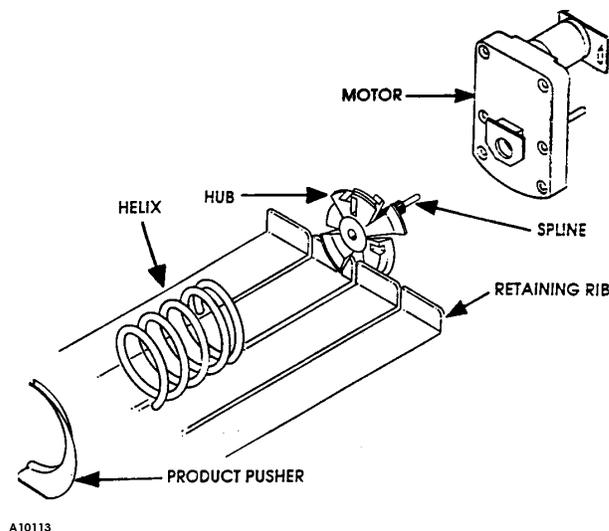


Figure 6. Auger Timing

INSTALLATION CHECKLIST

1. All shipping brackets, packing material and tape have been removed.
2. Vendor has been properly leveled from left to right and front to back.
3. Vendor is positioned no more than six feet from the power outlet.
4. There is at least four inches of space between the back of the machine and any wall or obstruction for proper air circulation.
5. Machine is plugged directly into a dedicated circuit properly polarized and grounded (earthed).
6. Machine has been properly loaded.
7. The correct vend prices have been programmed into the controller.
8. Each price scroll agrees with the vend price.
9. The vendor door is closed tightly and locked.

HEALTH SAFETY FEATURE

The Health Safety feature prevents the sale of the items in the Mini-Sandwich vendor if the temperature inside the cabinet area exceeds the Health Safety setting for an extended period of time. If an error occurs, **OFF2** displays during the *Sales Mode*.

The factory setting is 45°F/7°C for the Mini-Sandwich.

The setting ranges from 45°F/7°C to 55°F/13°C. It can be turned off by setting it outside of this range (below 45°F/7°C or above 55°F/13°C). To change the setting, see the “Health Safety Option” section of this manual.

NOTE:

The operator is responsible for setting the health safety at the correct level for the product being vended.

Opening and closing the door will clear a Health Safety error. The vendor will have 30 minutes to cool down to the setting.

CONTROLLER FUNCTIONS

Sales Mode

The *Sales Mode* is the normal operating mode of the vendor. As money is deposited, the amount of credit displays at both the Mini-Sandwich and the host.

Vend prices can be verified while in the *Sales Mode*. Press the selection letter and number at the Mini-Sandwich Vendor. A vend price displays momentarily in the digital readout.

Health Safety Error Code

If **OFF2** displays and the vendor will not vend, a Health Safety error has occurred. To reset the vendor, open and close the door. The vendor will have 30 minutes to cool down to the Health Safety setting.

Typical Sales Vend Cycle

As money is deposited, the amount of credit displays at both the Mini-Sandwich and the host. When a selection is made from the Mini-Sandwich, the credit is compared with the vend price. If sufficient credit is available the vend cycle will start.

At the start of the cycle the controller applies a 24 VDC to the vend motor. The Motor Switch on the motor is actuated, signaling the controller that the motor has successfully started. As the motor rotates, the auger will rotate until the product is dispensed and the motor returns to the detent position.

At the end of the vend cycle the motor switch is de-actuated, indicating to the controller that the motor has rotated 360°. At this time the controller will remove power from the motor.

At the end of the vend cycle, the Mini-Sandwich will return a *Vend Complete* or *Failed* command to the host. The host will return any change or credit due to the buying customer.

Service Mode

To change any settings or programs in the vendor, the controller must be placed in the *Service Mode*.

Table 1: Service Mode Options

PRESS	OPTION	DISPLAYS
[A]	Set Price	Pric
[B]	Test Motor	tEst
[C]	Change USD Address	Addr
[D]	Refrigeration Controls	Frig
[F]	Tray Configuration	tr -x* or tr x
[G]	Health Safety Controls	OFF or X^

* where x = tray number

^ where X = temperature

To enter the *Service Mode*, open the door of the Mini-Sandwich.

1. Turn on the main power switch in the Mini-Sandwich by pulling out on the switch plunger on the lower, right hand side.

NOTE

When the door is opened, power is removed from all vendor components. To test components with the door open, the power switch must be pulled out.

2. Press the Service Mode Button. **SErV** displays.

To exit the *Service Mode*, press the Service Mode Button. The vendor will also exit the *Service Mode* if there is no key pressed for approximately one (1) minute.

If you are in the process of changing data when you exit the *Service Mode* (either by pressing the Service Mode Button or by allowing the system to time-out) any unfinished changes are ignored, leaving the data in its previous state.

Set Price Option

Enter the *Service Mode*. **SErV** displays.

Press [A]. **Pric** displays.

Set Price - Single Selection

1. Press the selection letter and number of the selection you want to price. That selection's current price displays.
2. Use the numeric keypad to enter all four digits of the price.

EXAMPLE:

To set the price to .75, press the digits 0075. The price is updated in the display.

3. Press [L] to accept the displayed price. **Pric** displays.
4. To set another price, repeat steps 1 through 3.
5. To exit the *Set Price* option, press [L] again. **SErV** displays.

Set Price - Full Column

To price all the selections in a column in the Mini-Sandwich to the same price:

1. Press only the selection letter of the column you want to price.
2. Press [L]. The price of the first selection in that column displays.
3. Use the numeric keypad to enter all four digits of the price.
4. Press [L] to accept the displayed price. **Pric** displays.
5. To exit the *Set Price* option, press [L] again. **SErV** displays.

Set Price - All Selections

To set all selections in the vendor to one price:

1. Set the first selection in the Mini-Sandwich to the desired price.
2. Press [K], then press [L]. The price of the first selection in the Mini-Sandwich displays.
3. Use the numeric keypad to enter all four digits of the price.
4. Press [L] to accept the displayed price. **Pric** displays.
5. To exit the *Set Price* option, press [L] again. **SErV** displays.

Test Motor Option

To test one or more motors in the Mini-Sandwich:

1. Enter the *Service Mode*. **SErV** displays.
2. Press **[B]**. **tESt** displays.
3. **Test Motor - Single Selection**

Press the selection letter and number of the selection to be tested. The motor for that selection will run one time.

Test Motor - Full Column

After entering the *Test Motor Option*, press the selection letter of the column you want to test in the Mini-Sandwich. Then press **[L]** to start the test vend sequence. Each motor in that selection column will test vend one time starting with the first selection.

EXAMPLE:

Press the selection letter **[A]** and then **[L]**. The selection motor for A1 will run, and then the selection motor for A2 will run, and so on through A0.

Test Motor - All Selections

After entering the *Test Motor Option*, press **[K]**. **All** displays. Press **[L]** to start the test vend sequence. Each motor will test vend one time starting with the first selection.

EXAMPLE:

Press selection letter **[K]** and then **[L]**. The selection motor for A1 will run, and then selection motor for A2 will run, and so on through D1.

4. Press **[L]** to exit.

Change USD Address Option

The host supports additional satellite addresses: either addresses 1 and 2, or addresses 40, 48 and 50.

EXAMPLE:

Address series is based on the software revision in both the host and the satellite vendors.

1. To change the USD address of the Mini-Sandwich Vendor, enter the *Service Mode*. **SErV** displays.
2. Press **[C]**. **Addr** displays.
3. Press **[C]** to view the current address.
4. To toggle between the available addresses press **[C]** again.
5. To accept the displayed address, press **[L]**.
6. To exit without saving any changes, press the Service Mode Button.

EXAMPLE:

With an Address 1 and 2 software revision, the Mini-Sandwich is addressed as USD 1, and the Mini-Can is addressed as USD 2.

Refrigeration Controls Option

This setting controls the cut-in and cut-out points of the refrigeration system. The default cut-in setting is 38°F/3°C for the Mini-Sandwich, and the cut-out setting is 32°F/0°C.

1. To change the refrigeration control setting, first enter the *Service Mode*. **SErV** displays.
2. Press **[D]**. **C x** displays, where **C** indicates Centigrade and **x** indicates the current refrigeration point setting. The range is -9 through 3. To display in Fahrenheit, press **[F]**.
3. To raise the refrigeration point, press **[1]**. The cabinet temperature will increase by approximately 2°F/1°C for each press.
4. To lower the refrigeration point, press **[2]**. The cabinet temperature will decrease by approximately 2°F/1°C for each press.
5. To return the refrigeration point to its default settings, press **[0]**. **C 0** displays.
6. To save the setting, press **[L]** or exit from the *Service Mode* by depressing the Service Mode Button. All changes are saved.

Tray Configuration Option

Use this setting to toggle the tray configuration between snack and sandwich. The factory default setting for each tray is sandwich. Each tray is set independently.

1. To change the setting, first enter the *Service Mode*. **SErV** displays.
2. Press **[F]**, then press the tray number (1 – 9). The tray number displays in the format **tr -x** where **x** is the tray number.

If no dash (-) displays before the number, that tray is configured for snack (**tr x**).

EXAMPLE:

tr -A7 indicates a sandwich configuration,
tr A7 indicates a snack configuration.

3. To toggle the setting, press the tray number again.

Table 2. Snack Configuration

TRAY	SELECTION ID		
1	A1	B1	C1
2	A2	B2	C2
3	A3	B3	C3
4	A4	B4	C4
5	A5	B5	C5
6	A6	B6	C6
7	A7	B7	C7
8	A8	B8	C8
9	D1	E1	F1

Table 3. Sandwich Configuration

TRAY	SELECTION ID
1	A1
2	A2
3	A3
4	A4
5	A5
6	A6
7	A7
8	A8
9	D1

Health Safety Option

This setting controls the Health Safety setting of the refrigeration system. The default setting is 45°F/7°C for the Mini-Sandwich.

The setting can range from 45°F/7°C to 55°F/13°C or it can be turned off by setting it outside of this range (below 45°F/7°C or above 55°F/13°C).

1. To change the setting, first enter the *Service Mode*. **SErV** displays.
2. Press **[G]**. Either the temperature or **OFF** displays.
3. To increase the temperature, press **[1]**. To decrease the temperature, press **[2]**.

NOTE

The operator is responsible for setting the health safety at the correct level for the product being vended.

REFRIGERATION CONTROL

If the refrigeration unit is turned off or the power is interrupted, the refrigeration unit will not start for at least three (3) minutes regardless of the temperature.

The refrigeration control setting controls the cut-in and cut-out temperatures. When the temperature is above the programmed cut-in temperature, the unit will be turned on. When the refrigeration unit reaches the cut-out temperature it will be turned off.

To change the refrigeration control setting, see the "Refrigeration Controls Option" section of this manual.

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

Most refrigeration problems are electrical.

CAUTION:

Breaking the refrigerant joints or seals on this system voids the unit warranty.
Failure to keep the condenser coil clean and free of debris voids the unit warranty.

The sealed hermetic system should not be worked on outside the Factory Service Center. The three things that can go wrong with a sealed system and should be repaired at the Factory Service Center are:

- 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.
- Restriction in Systems (unit frosts, then melts) - not cooling properly.
- 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 outlet.
4. Short or tear in power cord.
5. Thermistor circuit is open. Check with the Multi-Meter.
6. Improper wiring.
7. Low voltage: 5 % below. Check the power source with the Multi-Meter.
8. Overload defective: Trips too fast. Check overload with the Multi-Meter.
9. Start relay defective: Check start relay with the Multi-Meter.
10. Compressor has open windings. Check compressor windings with a Multi-Meter.
11. Defective refrigeration relay.

Unplug power to the machine; remove the relay plate. Use an insulated jumper wire to short the wires on relay terminals 2 and 4 or 6 and 8; then restore power to the machine. The compressor should start, indicating a problem in the control circuit.

Check relay terminals 1 to 0 with a Multi-Meter. Should have 24VDC applied to them.

No DC voltage: Check control board output terminal for a loose connection.

Compressor trips on Overload

1. Improper voltage: 5-10% above, 5% below. Check power source with Multi-Meter.
2. Overload defective: Trips too fast. Check overload with Multi-Meter.
3. Relay defective: Won't open after starting. Check relay with Multi-Meter.
4. Compressor has shorted windings: Check compressor windings with Multi-Meter.
5. Short in other component: Isolate and eliminate each electrical component until short is found.
6. Compressor is too hot.
 - Dirty condenser.
 - Faulty condenser motor or blade.
 - Restricted air flow.

CAUTION:

Condenser must be kept clean of dirt and debris to allow for proper air circulation.

Noisy or vibrating unit

1. Components rubbing or touching each other.
 - Check fan blades and motor.
 - Loose shrouds and harness.
 - Copper tubing.
 - Loose or unsecured parts.
2. Worn or aged grommets.
3. Compressor
 - Bad valves
 - Slugging
 - Bad windings (See **Schematic 1.**)
 - Low voltage

Unit short cycles

1. Thermistor defective or not mounted in the return air duct.
2. Defective control board.
3. Temperature setting set too warm. See "Refrigeration Controls Option" section of this manual.

Unit operates long or continuously

1. Thermistor defective or not mounted in the return air duct.
2. Refrigeration relay shorted.
3. Air flow restricted
 - Faulty evaporator motor or blades causing coils to ice over.
 - Loose connections on evaporator motor. (One motor not running.)
 - Air flow blocked by product in front of evaporator or air duct openings
4. Gasket leak around door.
5. Excessive load: After loading, unit will run longer to pull out excessive heat from product.
6. Shortage of refrigerant or restriction.
7. Bad controller.

Refrigerated space too cold

1. Thermistor defective. Check with Multi-Meter.
2. Refrigeration control setting too cold. See "Refrigeration Controls Option" section of this manual.
3. Refrigeration relay bad. Check with Multi-Meter.
4. Faulty control board.

Refrigerated space too warm

1. Thermistor defective. Check with Multi-Meter.
2. Refrigeration control setting too warm. See “Refrigeration Controls Option” section of this manual.
3. Refrigeration relay bad
4. Faulty control board
5. Restricted evaporator space

Evaporator motor or blades faulty, causing the coils to ice over the evaporator

Condenser air flow restricted

- Plugged or dirty condenser
- Condenser motor or blades bad
- Blade stuck

Condensing space restricted

- Unit placed too close to a wall.

Compressor - bad valves

- Capillary tube will start frosting 8 to 10 inches past evaporator connection tube.

Troubleshooting circuits with Multi-Meter

See Schematic 1 for the wiring diagram.

WARNING:

Wiring diagrams must be followed as shown. Any miswiring can cause serious electrical hazard and potential damage or rupture component electrical parts.

- Check the power source.
- Use the 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 1 and 3 for continuity. If no continuity is measured (infinity), overload may be tripped. Wait 10 minutes and try again. If still no continuity, overload is defective.

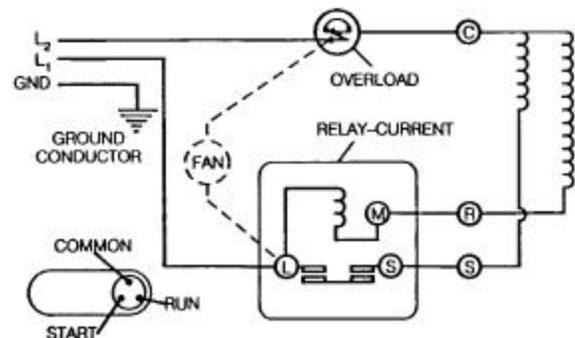
- Check relay (See **Schematic 1.**) Unscrew lead terminals and remove relay from compressor. (NOTE: keep relay upright).
- Check terminals 1 and S, or L and S with the Multi-Meter. Replace relay if continuity exists.
- Check thermistor with the Multi-Meter.
- Check compressor windings as shown in **Schematic 1.**

Check winding resistance with the Multi-Meter. If readings are not within 2 Ohms, the compressor is faulty.

Table 4. Winding Resistance

Approximate resistance reading across terminals
- use RXI scale:

MEASURE BETWEEN	OHMS
COMMON To START	12
COMMON To RUN	2
RUN To START	14
COMMON To SHELL	? 2 Meg



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Figure 7. Compressor Schematic

REFRIGERATION UNIT REMOVAL

The refrigeration unit is a hermetically sealed completely self-contained modular 1/3 H.P. unit charged with 5.0 ounces of ozone-friendly R-134-a 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 flow. This may damage the refrigeration system, which may void the refrigeration warranty.

1. Unplug the power cord.
2. Open the door.
3. Remove the screws at the bottom, front of the cabinet.
4. Remove the side cover plates at the bottom of the cabinet liner.
5. Remove the side support bracket (two screws on each side).
6. Unplug the tray harnesses and remove the bottom two trays.

7. Remove the angle baffle at the top of the refrigeration unit: loosen three screws and slide off the keyhole slots.
8. Disconnect the sensor cable.
9. Disconnect and remove the lamp assembly: Loosen three screws and slide off the keyhole slots.
10. Pry up the front corners of the base with your fingers. Lift enough to clear the foam over the lip.
11. Tip the back up and rock to remove the cover.
12. Take the screen out and clean.
13. Unplug the refrigeration harness on the right, back side of unit.
14. Loosen the screws on the brackets holding the refrigeration unit in place. Slide the keyhole slots off.
15. Move the sensor cord out of the way.
16. Pull the refrigeration unit forward and lift out.

To reinstall the unit, follow the preceding steps in reverse.

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 quality car wax. Plastic exterior parts may be cleaned with a quality plastic cleaner.

Cabinet Interior

Wash with mild detergent and water. To eliminate odors, include baking soda or ammonia in the cleaning solution.

The vend mechanisms must be kept clean. Use soap and water with great care so as not to get water into the electrical components.

To insure proper vending 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 pan.

Do not block the evaporator or any area of the air flow with product or supplies.

BEFORE CALLING FOR SERVICE

Please check the following:

- 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?

WARNING:

**Extension cords cause problems.
DO NOT USE EXTENSION CORDS.**

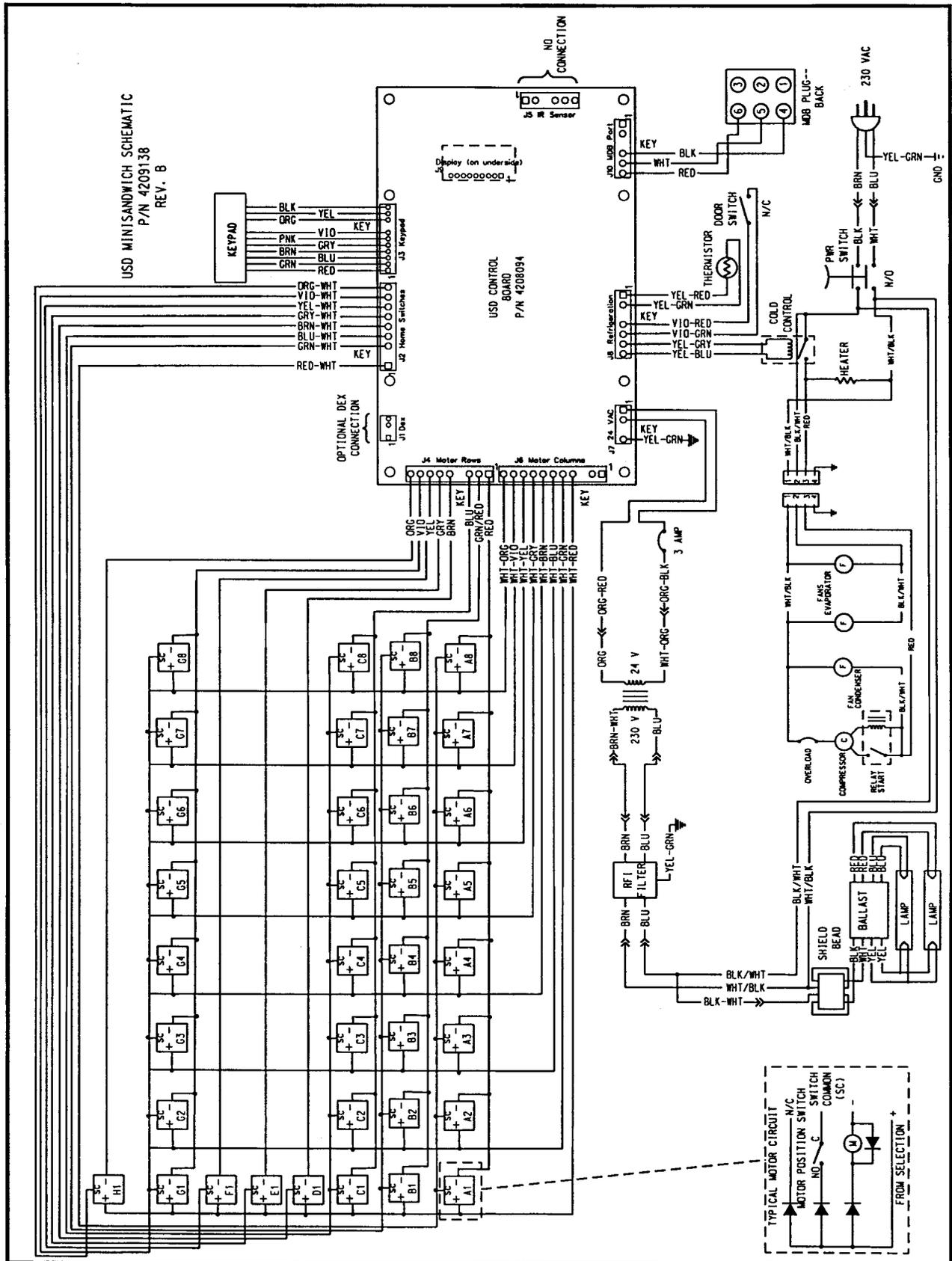
- Is the evaporator coil free of dust and dirt?
- Is the condenser coil free of dust and dirt?
- Is the compressor free of dust? (A blanket of dust can prevent the compressor from cooling off between workouts).
- Is the circuit breaker at the fuse box reset?
- Are evaporator fans running? Fold a sheet of 8 1/2" x 11" paper in half from top to bottom so it is now 8 1/2" x 5 1/2". Place the paper in front of the evaporator coil and see if the evaporator fans will blow the paper away.
- 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? (No tools or other air-restricting items placed on the shelf).

NOTE

Setting the cold control lower does not accelerate cooling of product.

If you have any questions: Call VendNet™ at 1-515-274-3641 or 1-800-833-4411 (USA)
Ask for the Service Department. We will be happy to assist you.
Send us email at VendNet@Ecity.net

SCHEMATIC



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