# SNACKSHOP 103 <br> SNACKSHOP 103 <br> SNACKSHOP 103 

instruction manual for

## SNACKSHOP 103



75 WEST PLATO BOULEVARD - ST PALL, MINNESOTA $55107-2095$

## WARRANTY

The Automatic Products Company warrants this vendor, manufactured by it, to be free from defects in material or workmanship under normal use. Our obligation under this warranty is to the original purchaser only and is limited to making good at our factory any part or parts thereof which shall, within two (2) years after delivery of such product to the original purchaser, be returned to us or to our authorized dealer or distributor from whom purchased with all transportation charges prepaid to our factory. and which our examination shall disclose to our satisfaction to have been defective.

This warranty does not extend: 1: To any of our products which have been subjected to misuse, neglect, accident, incorrect wiring, improper installation, or to use in violation of instructions furnished by us; 2: To units which have been repaired or altered outside of our factory; 3: To cases where the serial number of the product has been removed, defaced or changed; 4: To electrical components, lamps, tubes or circuit breakers; 5: To accessories not of our own manufacture used with our products. Any part manufactured by Automatic Products Company, found by us to be defective within the warranty period will be exchanged by Automatic Products Company or their
authorized dealer or distributor without charge to the owner.

This warranty applies only to our products which are used within the United States of America, and is in lieu of all warranties expressed or implied, including, but not limited to implied warranties of merchantibility or fitness for a particular purpose, and no representative or person is authorized to assume for us any other liability in connection with the sale of our products.

The Automatic Products Company reserves the right to make any changes or improvements in its products without notice and without obligation, and without being required to make corresponding changes or improvements in products theretofore manufactured or sold.

Snackshop 103 has been designed from superior engineering and with quality throughout. It has been built of rugged construction for many years of reliable trouble-free operation. Note: (For Indoor use only)

To achieve the most economical trouble-free operation from your Snackshop 103, it is recommended that this service manual be thoroughly read and instructions followed pertaining to all loading and servicing, etc., of the vendor.

Should you have questions pertaining to this manual or the vendor, please contact your Automatic Products Company distributor or write directly to:

Service Manager<br>Automatic Products Company<br>75 West Plato Boulevard<br>St. Paul, Minnesota 55107

SPECIFICATIONS
HEIGHT $-72^{\prime \prime} \quad$ WIDTH $-38-7 / 8^{\prime \prime} \quad$ DEPTH $-35^{\prime \prime}$
FLOOR SPACE REQUIRED -9.5 SQ. FT.
SHIPPING CONTAINER SIZE -72.5 CU . FT.
POWER REQUIREMENTS $-115 \mathrm{~V} ., 60 \mathrm{HZ}$.
STANDBY AMPERES $-.7 \quad$ OPERATING AMPERES -3

Unless otherwise specified machine will be shipped with spiral assortment shown below.
Figures in circles represent capacities in each spiral.


MODEL 103-525
Capacity as shown: 310 units


MODEL 103-540
Capacity as shown: 677 units


MODEL 103-630
Capacity as shown: 370 Units


MODEL 103.530
Capacity as shown: 437 units


MODEL 103-545
Capacity as shown: 775 units


MODEL 103-635
Capacity as shown: 502 Units


MODEL 103-535
Capacity as shown: 551 units


MODEL 103-550
Capacity as shown: 894 Units


MODEL 103-640
Capacity as shown: 617 Units
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MODEL 103-645
Capacity as shown: 731 Units


MODEL 103-660
Capacity as shown: 1062 Units


MODEL 103-650
Capacity as shown: 839 Units


MODEL 103-655
Capacity as shown: 955 Units

PRODUCT SIZE CAPABILITY

| SHELVES | HEIGHT | WIDTH of Snack Shetves Only | WIDTH of Candy Shelves Only | DEPTH OF Snack Spirals Only Choice: | DEPTH OF Candy Spirats Only Choice: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Top | 7-3/4" | 21/2" to $51 / 4^{\prime \prime}$ | $1^{\prime \prime}$ to $21 / 4^{\prime \prime}$ |  | 12 - Item Spiral 1-7/8 ${ }^{\prime \prime}$ |
| Second | 7.1/4" | $212^{\prime \prime}$ to $51 / 4^{\prime \prime}$ | $1^{\prime \prime}$ to $214^{\prime \prime}$ | 7 - Item Spiral 2-1/2" | 15 - Item Spiral 1-5/16" |
| Third | 6-5/8' | 21/2" to 51/4' | $1^{\prime \prime}$ to $214^{\prime \prime}$ | 10 - Item Spiral 2-1/16" | 18 - Item Spiral 1-1/16" |
| Fourth | 7-1/4' | $21^{\prime \prime}{ }^{\prime \prime}$ to $51 / 4^{\prime \prime}$ | $1^{\prime \prime}$ to $21 / 4^{\prime \prime}$ | 12 - Item Spiral 1-11/16" | 24 - Item Spiral 3/4" |
| Fifth | 6.3/4" | $21 / 2^{\prime \prime}$ to $51 / 4^{\prime \prime}$ | $1^{\prime \prime}$ to $21 / 4^{\prime \prime}$ | 15 - Item Spiral 1-5/16" | 30 - Item Spiral 1/2" |
| Sixth | $6 \cdot 1 / 4^{\prime \prime}$ | $212^{\prime \prime}$ to $51 / 4^{\prime \prime}$ | $1^{\prime \prime}$ to 21/4" |  |  |

Ten selection shelves for candy and other narrow items fit on all six positions.
Spiral of one item capacity can be freely interchanged with any other of the same diameter.
Boxed items may need slightly larger clearances to vend properly.
Movable spacers available to adjust widths to ranges shown in each selection.

Gum-and-Mint Capacity. It is difficult to determine the true capacity due to variations of product size.
The average capacity for the Gum-and-Mint Shelf is $\mathbf{1 7 0}$ items.

The Snackshop 103 is assembled and packed so that a minimum amount of time is necessary for preparation to install it on location. The following steps are recommended to insure correct unpacking.

1. Shipping Damage: Thoroughly inspect the exterior of the carton for damage which may have occurred during shipment. Report any damage to delivering carrier and follow their instructions.
2. Remove staples from lower edge and those at top of carton, and slit carton vertically at the taped corner. Open and remove carton. Remove the remainder of the packing material. On machines shipped with lock in place, the keys are stapled to the carton base.
3. Remove Vendor With A Fork Lift Truck: Remove the carton from the vendor, Open the door on the vendor and remove the hold down bracket at the front center of the cabinet base and close the vendor door. From the front of the vendor tip the vendor backward and run forks under the cabinet.
4. Removing Vendor Without A Fork Lift Truck: Remove the carton from the vendor. Remove $1 / 4^{\prime \prime}$ piece of plywood
located just behind the front legs, then open the door on the vendor and remove the hold down bracket at the front center of the cabinet base and close vendor door. From the front of the vendor tip the vendor back far enough to clear the wood strip across the front of the base. Slide vendor toward the back until the back legs are off the base and pull base out.
NOTE: Because the weight concentration is toward the back of the cabinet, trucking and lifting should be done from the back. CAUTION should be taken when trucking from side.
5. On machines with lock in place, unlock, and turn handle to open door. When no lock is furnished, remove tape and turn handle. Swing door to its full open position.
6. Remove all packing tape and paper from various areas of machine and the shipping strap.
7. Wartanty: The warranty card is attached to the cover of this manual. It must be filled out in full and mailed at once to insure coverage.

## installation

1. GENERAL: In some locations, due to the size of this machine it is not possible to move the fully assembled machine through doors or narrow hallways. For such locations the door of this vendor can be removed, thus reducing the clearance required down to 32 inches.
DOOR REMOVAL: To remove the door, swing door to 90 degrees. Remove bolt and washer on door end of door stop. Remove the screw to the clamp of the door harness and unplug the door hamess from the cabinet and the light hamess from the main interlock box. The upper hinge is secured to the cabinet by one bolt extending through the hinge from the inside of the cabinet. Remove the bolt with a $1 / 2$ socket. Pull the door forward, the top hinge plate will slide out of its guide, freeing the doot, Lift the door off of the lower hinge. Remove the left side panel extension which is held on by four screws. Remove the cabinet to door filler assembly which is held on by twelve screws. To install the door, reverse the above procedure.
2. LEVELING THE MACHINE on location is important for the proper function of the machine. The four leveling screws in the legs are the means of leveling the machine. After positioning the machine, level machine in front to rear and right to left directions. After leveling, turn front right (lock side) leveling screw in about one-half turn to drop this corner slightly to make the door easier to close and lock.
3. THE MAIN POWER CORD is shipped fully inside the machine. Extend it through the hole located in the base on the left (hinge side) of the machine behind the transformer. Install the plate with key hole slots over the two screws in the base by the cord hole and drive screws tight
to hold cord in place. Plug the 3 pin grounded plug into a properly grounded 115 V 60 HZ outlet only.
In order to comply with electrical safery regulations and Underwriters Laboratories requirements, all electrical equipment must be properly polarized and grounded. The Snackshop 103 is wired so that it is properly polarized in accordance with the electrical code. If the wall outlet is wired and grounded properily, then the vendor will connect properly.
Shown in View A \& B are two properly grounded and polarized wall outlets. One is a three wire grounding type wall outlet (see View A) and one is a two wire wall outtet (see View B) with an adapter in place. To make a polarity check use a 115 volt neon test lamp as shown or a volt ohm meter. The hot side of the circuit should always be counterclockwise from the ground terminal (which should be at the bottom).
Should the polarity at the wall outlet show any way other than that shown below, the outlet should be rewired.


VIEW B

4. LOADING SNACK SHELVES: Open door to full open position, push down on white plastic lock lever (Figure 1) on right side panel by shelf to unlock shelf, holding lever down. Grasp the shelf slightly and pull forward until shelf reaches its stop. The shelves tilt down (do not drop) to make loading easier. Only one product shelf should be in the loading position at a time. When returning a shelf, be sure the shalf is in its full home or vend position. Begin loading with the top shelf. Move it to the loading position. The height spacing for items is greatest in this shelf and the tallest bagged items should be placed there. Soft items, such as pastry, pies, etc., should be placed in the lowest snack shelf, making the drop distance as short as possible,
IMPORTANT: Product must not be forced into the spiral spaces but should fit freely. If the product is too tight, use a larger pitch spiral. The bottom of the product should be placed on top of the spiral wire that rests on the shelf surface (see Figure 2). The width of the product must be greater than the diameter of the snack spiral. If it is smaller, the product may fall through when it is in the front, ready to vend position.


Figure 1. MOVING SHELF TO LOADING POSITION.


Figure 2. PLACEMENT OF PRODUCT ON MAIN PRODUCT SNACK SHELVES AND FRONT END POSITION OF SPIRAL,
5. REMOVAL OF SPIRAL: Grasp the front of the spiral and turn it clockwise. Lift the spiral up and off of the spiral lock. When replacing a spiral attach it around the tab on the spiral lock and turn the spiral counterclockwise to lock it in place. Be sure the front end of the spiral is positioned properly (with the front end of the spiral pointing downward on the left side) (see Figure 3). The spiral lock is attached between the spiral retainer tabs. Give a light forward pull on front of the spiral to check if it is locked in place,


Figure 3. REMOVING AND INSTALLING SPIRAL.


Figure 4. ALIGNMENT OF MOVEABLE PRODUCT SPACERS.
6. PRODUCT SPACERS-5 SELECTION SHELF: A product spacer is used to reduce the width of the product area and should be used on any 5 -selection snack shelf where the product width is $41 / 2^{\prime \prime}$ or less. Spacers should fit within $1 / 8^{\prime \prime}$ of the product but should not fit tight against the product. There are three positions in each snack space where these spacers can be placed. To install the spacer, align the lock ears (on the lower edge of the spacer) with one of the three sets of slots (one front and one rear). (See Figure 1). Push the spacer to the rear to allow the ears to enter the slots, then allow the spacer to move forward. Be sure the ears are in the same set of slots, front and rear. (See Figure 4). Continue loading all spirals adjust with spacers where needed in the top shelf. Return the top shelf to the vend position and following this procedure load the remainder of the large spiral shelves. The shelf divider separating the right (lock side) column from the next column is movable to allow vending of products wider than $51 / 2^{\prime \prime}$ in the second column. If this is used the right column must be used to vend a narrower product.
7. LOADING MAIN PRODUCT CANDY SHELVES: The 10 -selection (candy type) shelves are loaded similar to the 5 -selection shelves except that the bottom of the product sits on the shelf in front of the spiral wire (see Figure 5) that rests on the shelf. These products must also fit properly in the spiral space; do not force product into spiral.


Figure 5. PLACEMENT OF PRODUCT ON MAIN PRODUCT CANDY SHELVES AND FRONT END POSITION OF SPIRAL.

These spirals are removed and installed the same as the large spiral (see Figure 3), except that the front end position is different (approximately 5 o'clock) (see Figure 5) and the front left side of the spiral must be behind the small tab located on the left side of the product space side wall (see Figure 5, Detail A).
8. PRODUCT SPACERS-10 SELECTION SHELF: The 10 selection shelves are equipped with a product spacer (see Figure 6) that can be pivoted from the right side of each product space. These spacers should be pivoted out to hold the product upright, but not tight against the product. Leave about $1 / 8^{\prime \prime}$ clearance between the spacer and the product.


Figure 6. 10 SELECTION SHELF PRODUCT SPACER POSITIONED TO HOLD CANDY UPRIGHT.
9. PRODUCT PUSHER: The machine contains enough pushers for you to install a pusher on each candy spiral. This plastic part is designed to push the top of the product forward while it is vending, helping it fall from the shelf. It can also be used with products that have the wrapper end flap on the outside of the package. In this case, the pusher prevents these products from hanging on the spiral by spreading the flap. The pusher is installed approximately 210 degrees from the front end of the spiral with the tab extending forward (see Figure 7). Locate the pusher in its proper position, hold it against the spiral wire and push the semi-circular part around the spiral wire. Note: Not every selection spiral will need a product pusher. (Example-Box Items)


Figure 7. LOCATION OF PRODUCT PUSHER ON SPIRAL.
10. BAGGED OR BOXED ITEMS in the 10 -selection shelves if not loaded properly could be a problem. The sealed edge of the bag may get under the spiral wire causing the product to hang up after it has been vended. It is recommended that the lower edge of these types of product be folded forward and up (see Figure 8) next to the product before inserting into the spiral space. It is also recommended to use an 18 count spiral for bagged items because of the product settling to the bottom of the package.
11. CIGARETTE VENDING FROM SNACKSHOP 7000: Cigarettes can be vended from the candy shelves using the ( 15 capacity) spiral for the soft pack regular, king, 100 mm or 120 mm packs. The ( 12 capacity) spiral should be used for (box) packs.
12. LOCK PRODUCT SHELVES. After all the product has been loaded be sure all shelves are returned to their vend position behind the front roller guide.
13. INSTALL. PROPER PRICE TABS into price tab holder for each selection in the main product area. (See Figure 9.)
14. LOADING GUM AND MINT. The Gum and Mint shelf is located below the Snack Shelves (optional). Unlatch the shelf by pulling forward the two metal latches located to the right and left of the shelf and pull forward. The cover can be pushed back to the rear for easy loading. The shelf contains five individual selections.
The first selection on the left contains two fillers for use with thin mints. (Rolaids - certs, etc.). These fillers can be removed for standard gum or mints.


Figure 8. FOLD BAGGED ITEMS BOTTOM EDGE FORWARD AND UP.


Figure 9. INSTALLING PRICE TABS.

The two selections on the right of the Gum and Mint shelf also have fillers. These selections can be used for standard size gum and mints or the fillers may be removed for larger gum and mint products.

Each selection has a display hinge assembly which should be adjusted after the shelf is loaded. To adjust the display hinge, loosen the wing nut and slide the spring hinge of the flipper over the second product and fasten tightly.

## 1. POWER SUPPLY

The 115 VAC power cord from the wall outlet comes into the machine and plugs into the left side of the main junction box located on the bottom hinge side of the machine. The other four connections on the junction box are for the transformer, lights, fan (optional) and power plug to the control board. All these connections are different so you cannot plug them in wrong. The 115 VAC cord goes to the toggle switch (orvoff) inside the box and then to the circuit breaker. The 115 VAC goes to the transformer in which the voltage output is then 24 VAC The voltage goes through the circuit breaker and up to the P1 position (wires $11 \& 12$ ) on top of the control board.
2. CHANGER

The Snackshop 103 can use either a Mars (TRC-6010) or Coinco ( 9302 L ) changer. Both changers are $\mathbf{2 4}$ Volt. Before installing or removing a changer make sure the power is off. The changer is to be mounted to the door below the coin entrance chute with the three screws provided. After securing the changer to the door plug the changer into the receptacle plug making sure the changer cord is clear of the coin return lever operation. (Refer to the changer manufacturer on the installation and operation guide of the changer). Load change into the payout tubes and turn your power switch on.
3. MODE SWITCH

The Snackshop 103 has only one mode switch that allows control of the machine functions. It is located on the control board. This switch will allow three modes of operation - operate (normal mode), control \& service mode, and price setting mode.

## 4. OPERATE MODE

The operate mode is the normal vending position. This position allows three functions:
A. Pressing a selection will display the price of that selection. If any selection is not operating or not programmed in the machine a beep will sound and the display will read "Make another selection".
B. Insertion of coins will display "Credit" and the amount.
C. Customer instructions will appear on the display "Make another selection", "Use correct change", or "Check selection price" for those three conditions which might occur. NOTE: If in any of the other modes of operation the mode switch or coin return has to be depressed to get back into the operate mode.
5. CONTROL-SERVICE MODE

The mode switch on the control board should be pressed once to enter the control-service mode. Upon pressing the switch all non-operating selections will be displayed. Entering into the service mode use of the selection buttons is necessary for the following functions:
Press \#1 - Dispenses 54 coins from the changer.
Press \#2 - Dispenses 10 t coins from the changer.
Press \#3 - Dispenses 254 coins from the changet.
Press \#4 - Displays escrow y/n.
(NOTE: y/n use is for yes or no. Pressing \#4 changes the position of the flashing letter. This display indicates which way the bill will be taken.)
Press \#4 - In the "yes" mode the bill will be escrowed so if you push the coin return button you will get that bill back. If the selection is priced over a dollar (Example A: is \$1.25) the bill validator will not take a second dollar. You must use a dollar and insert change. In the "no" mode the bill will not be escrow-
ed (goes directly into the stacker) so if you push the coin return you will get back change.
Press \#5 - Displays-force y/n. (NOTE: y/n use is for yes or no. Pressing \#5 changes the position of the flashing letter.) Pressing \#5 in the "yes" mode when pricing in the machine is above a dollar the bill will be taken and you must buy a selection. In the "no" mode allows you to make a selection or if you change your mind push the coin return button to get your money back.
Press \#6 - Provides the only stored data available which tells first the vend count (total vends). Pressing \#6 then gives the cash meter (total cash). Pressing \#6 then gives bills (total bills accepted).
Press \#7 - Displays multi $y / n$. (NOTE: $y / n$ use is for yes or no. Pressing \#7 changes the position of the flashing letter.) When multi vend is in the "yes" mode after a dollar bill or change is inserted will register the amount on the digital display. When a selection is made the amount on the digital display will deduct the price of that selection. At this time the total cash will be displayed of the amount leff of that dollar so that another selection may be made without inserting more money. You, therefore, can push the coin return for your change or make as many selections you want to until the digital display reads below the lowest selling price in the machine, then the rest of the money will be paid automatically. NOTE: When using the shoppers mode, there is also a delay time incorporated on the control board. If a customer does not make another selection after a period of 10-15 seconds the changer will pay back automatically.
Press \#8 - Displays the number of which type coin mechanism is to be used.
Press \#9 - Displays free vend $y / n$. (NOTE: y/n use is for yes or no. Pressing \#9 changes the position of the flashing letter). When using the "yes" mode push the coin return button and you can now free vend or test each motor. Closing the door removes the test mode to the "no" mode automatically.
Press \#10 - The Message Program Mode may be entered by using the code 1DE5. Upon entering this code the message can be changed to what ever message you want to program. The first nine characters of the user message are displayed beginning with a special start character 9 , which also indicates the boundaries of the display. The cursor is in the eighth character and is flashing this symbol. Using the letter " $A$ " on the selection panel will change the cursor to any of these characters:

- Word space
\$ Dollar sign
- Apostrophe
: > Parenthesis
ㅊ Character used for boundaries of display buffer
+ Plus
, Comma
- Dash or Minus
. Period
i Slash
0-9 Numbers
? Question Mark
A.Z Letters
$\Theta$ Character used for end of message
When programming a message with the letter " $A$ " and you pass up the letter or symbol you are looking for you may reverse the character direction by pressing the letter " B ",

Establishing the character you can push \#1 to move the cursor over to the right for the next character. Use \#2 button to move the cursor back to the left, if it is moved over to the right to far, (NOFE: Pressing " $A$ " or " $B$ " $-\$ 1$ or $\# 2$ for more than one second accelerates the cursor motion.)
After your message has been programmed depress the coin return button, push the mode switch twice or door operate switch to get out of the message program.
6. PRICE SET MODE

The mode switch on the control board should be pressed twice to enter into the price set mode or once from the service mode. The display will then show. 00 To set prices push the numbers (1-10) needed to change the display (Example $7 \& 5$ will display 75) Pressing the letter and then number (A-1) you will get two beeps indicating that seleciton price is set. To cancel the price display push letters, H, I. or K.
7. SELECTION PANEL

The selection panel (see figure 10) on the Snackshop 103 incorporates that use of a self enclosed membrane switch panel. This eliminates the need for individual switches and wiring. The membrane switch panel is housed in a stainless steel panel with individual buttons protecting the switch face. The casting front also houses the display lers. The display lens give instructions to the customer for three conditions which might occur (make another selection, use correct change, or check selection price). The display lens also can carry any message which can be programmed. For example "Have a good day."
8. VEND MOTORS

The Snackshop 103 incorporates the use of a high RPM DC motor. Due to the new design, the vend motor may no longer be homed by hand. DO NOT TRY TO TURN THE SPIRALS BY HAND. DAMAGE TO THE MOTOR WILL RESULT. It is also important to check polarity before applying current to the motor. Two diodes and a capacitor are used to prevent circuit feedback and may have to be checked when trouble shooting motor problems.

## 9. LIGHTING SYSTEM:

There is only one fluorescent lamp in the Snackshop 103. The lamp is located in the top of the door, and lights the main product area and the product sign, if used. The starter is located on the hinge side of the lamp. The ballast for the circuit is located on the main junction box.

## 10. MAIN PRODUCT SHELVES:

There are five or six main product shelves per machine. Each containing either five or ten selections. Each selection has its own motor mounted to the back of the shelf. Every shelf has its own harness and plug for connecting to the remainder of the curcuit through the cabinet receptacle, located in the rear center of the cabinet. The motors are the same on either type shelf. It is now possible in the Snackshop 103 to exchange a five selection shelf with a ten selection shelf or visa versa. You also have the capability to gain $1 / 2$ inch either up or down on the second and/or fifth shelf. To do this the shelf should be removed and the cabinet back harness receptacle lowered or raised. The six rollers on that particular shelf then should be lower or raised also.
NOTE: When exchanging the sheives, you will not need any parts, but you will have to reprogram the machines for prices and selections.


Figure 10

## REMOVAL OF PRODUCT SHELF:

A. Lift up and push the lock lever toward the back of cabinet. See Figure 1, Page 5.
B. Pull the shelf to its loading position.
C. Grasp shelf in front and rear center. Lift front of shelf up above horizontal and pull shelf forward while liftuing.
D To install shelf, reverse above procedure.

## 11. DELIVERY BIN:

This is located below the display window on the door and is mechanically operated. The linkage on the outside ends of the delivery bin may require occasional lubrication. Should the door become difficult to operate, place a small amount of grease on the arm tracks.

## REMOVAL OF DELIVERY BIN:

A. Remove the screws from the underside of the delivery bin. These screws fasten into the lower door brace and remove the two screws and brackets at the top of the delivery bin.
B. Grasp delivery bin on both sides and lift up and pull back. Should bin be tight, rock it by lifting on one end, then the other.

## components

## REPLACEMENT OF DELIVERY BIN:

A. Locate lip on front edge of delivery bin over lower edge of opening in door and behind trim. Press down along lip to make sure it is fully engaged between door and trim.
B. Install the four screws and two brackets, to secure bin to door.

## 12. COIN RETURN:

The coin return lever is located on the sliding panel and the coin return linkage is located above the changer, scavenges the slug rejector. Actuation of the coin return lever will clear the rejector of any damaged coins and will also cancel all credit on the changer, returning that amount to the customer.

## 13. COIN ACCEPTANCE:

A coin or coins (5d, 104 or 254 coin) being deposited pass thru the rejector and into their respective coin paths in the changer establishing the credit. The coins then enter either the self-load change tubes on the changer or the cash box. Actuation of the coin return lever prior to making a selection will cancel all credit on the changer and will return the amount of deposit back to the customer.

## 14. REMOVAL OF GUM AND MINT MOTOR AND/OR EJECTORS:

Disconnect the two wires going to the motor and remove the four screws holding it to the shelf. The components attached to the front base can also be replaced. These consist of the gum and mint shelf front (Price tabs and selection), gum and mint shelf front base, gum and mint display front stop (plastic) and the gum and mint ejector.

NOTE: Before replacing the gum and mint motor it would be helpful to tap the motor first with the screws. Assemble the four components together and mount them to the motor making sure that the head crank of the motor is inserted into the ejector. Replace the four screws and test vend that selection for proper operation.

## 15. REMOVAL OF GUM AND MINT SHELF:

Below the gum and mint shelf remove the two screws holding the gum and mint receptacle harness bracket (Page 18, ttem 15). Loosen the other two screws on each end of the gum and mint pusher stop strap (Page 24), them 20) and disengage it from the cabinet. Grasp the shelf and pull the shelf straight out. With the shelf out you can replace the gum and mint pusher (Page 24, item 31) by removing the screw (Page 24, Item 21). Reverse the procedure to replace the shelf. Pay special attention when you put the gum and mint pusher stop strap back on that all the gum and mint pushers have spring tension and are behind the strap.

## cleaning

The Snackshop 103 will do the best merchandising job for you if it is kept clean. The display window can be cleaned with any good glass cleaner. The exterior and interior surfaces should be cleaned with warm water and mild detergent. Rinse thoroughly an dry all surfaces

## CAUTION:

Do not use any cleaners containing silicon as this could cause electrical failures.

The main product shelves can be best cleaned with the spirals and product spacers removed. Refer to page 5 for removal of spirals and page 6 for removal of the product spacer. We do have cleaner available that we feel is superior to any other
cleaners we have tried in the past. The cleaner (Part \# 460386) comes in a 20 ounce aerosol can and is used by spraying a good coating over the surface to be cleaned, then letting the cleaner set for 3 to 3 y minutes and wiping it off. After the shelf has been cleaned a neutralizer (Part \# 460387) should be sprayed on and wiped off. The neutralizer will have to be transfered to a smaller bottle with a sprayer. There are openings in each end of the delivery hin at the back for cleaning out dirt.

Clean the acceptor on the changer frequenly as accumulated dirt in this area can cause coins to hang or not be accepted. Follow recommended cleaning procedures as described by the manufacturer.

## optional equipment

1. VENTILATING FAN: (Kit \#750102)

The ventilating fan operates on 115 volts and keeps a steady flow of fresh air moving through the vendor cabinet.

Installation of the ventilating blower takes but a few minutes and requires no additional wiring; all the vendors are wired with a plug for the fan. Installation instructions are sent with the kit.
2. BASE KITS:

Base kits are available to make the vendor compatible with other manufacturers.
3. GUM-AND-MINT:

Gum-and-Mint units are available as an option with Snackshop 103 vendors.

For information pertaining to loading or servicing gum-and-mint unit, refer to this service manual for loading instructions and for service instructions.

## 4. SPECIAL SPIRALS:

Special candy spirals are available for use in the five (5) selection snack shelves. For the sake of identification, the back end of these spirals are colored RED and should never be used in the ten (10) selection candy shelves.

These spirals allow vending products that are too wide for the standard candy columns but may be too thin for the
regular snack spirals. A product pusher and spacer should be used where required. Part numbers for these special spirals are as follows:

| 400139 | 12 space special spiral |
| :--- | :--- |
| 400140 | 15 space special spiral |
| 400141 | 18 space special spiral |
| 400142 | 24 space special spiral |
| 400143 | 30 space special spiral |

NOTE: The difference between the standard candy spiral and the special candy spiral used in the wide snack columns is in the overall length of the spiral. The special spiral is shorter than the standard candy spirals.

CAUTION: Do not attempt to use the special candy spirals in a ten (10) selection shelf.
5. SOUP DISPENSER. (Kit 750083)

A canned soup dispenser is available as an option for use in the five selection snack shelves. The dispenser is easy to install and holds up to nine cans in the unit.
6. DOLLAR BILL VALIDATORS

There are two available validators Maka (Part \#420147-1) and Maka (Part\#420154-f). Both these units operate on 24 volts. The validators take but a few minutes to install and may be purchased through the manufacturer of that unit.


door - inside front


| Hem No. | Part No. | Description |
| :---: | :---: | :---: |
| 1 | 600499 | Door Only. |
| 2 | 360129 | Assy, Complete. Control Board. |
|  | 360131 | Control Board Only. |
|  | 360130 | Display Board Only. |
|  | 680357 | Ribbon Connector Only. |
| 3 | 300182-1 | Control Board Stand Off. |
| 4 | 116-6R4 | Screw Pan Hd. Philips (6-32 $\times 1 / 4$ ). |
| 5 | 201719 | Control Board Cover, |
| 6 | 201-6R7 | Screw Rd Hd. Phillips Type B (6-18 $\times 7 / 16$ ) (Oly, 2). |
| 7 | 680346 | Assembly Complete, Lamp Harness. |
|  | 360127 | Socket, Fluorescent Lamp Only, |
| 8 | 460350 | Insulation, Rubber. (Order number of inches needed). |
| 9 | 380022-4 | Fluorescent Lamp (F18T8 CW-K26). |
| 10 | 440271 | Front Window (445/B $\times 267 / 8 \times 3 / 16$ ). |
| 11 | 201-6R12 | Screw Rd. Hd. Phillips Type B (6-20 $\times 3 / 4$ ). |
| 12 | 201381.3 | Window Side Shield (clamp) Pivot. |
| 13 | 201384 | Bottom Window Clamp. |
| 14 | 114-41-8 | Screw, Hex Hd. Mach. (1/4-20 x 1/2). |
| 15 | 201042 | Door Stop Plate. |
| 16 | 300156 | Nut, Special. Door Stop Anchor. |
| 17 | 400095 | Door Stop. |
| 18 | 200906 | Delivery Bin Anchor Strap. |
| 19 | 276-8R6 | Screw, Pan Hd. Self-Tap ( $8-32 \times 3 / 8)$. |
| 20 | 660310 | Assembly Delivery Bin Complete. (See Page \#26 for Itemized Parts). |
| 21 | 600179-1 | Cash Box. |
| 22 | 660372 | Cash Box Mounting Bracket. |
| 23 | 400102 | Cash Box Retainer. |
| 24 | 420003-1 | Screw, Flat Hd. (1/4-20 $\times 1 / 2$ ). |
| 25 | 420003 | Screw, Flat Hd. (1/4-20 x 3/4). |
| 26 | 640154 | Lower Hinge Plate. |
| 27 | 420010-18 | Washer. |
| 28 | 460306 | Power Decal. |
| 29 | 201636 | Changer Socket Bracket. |
| 30 | $201381-2$ | Window Side Shield (clamp) Lock Side. |
| 31 | 380258 | Door Operate Switch. |
|  |  | - |
|  |  | - |




| Item No. | Part No. | Description | Item No. | Part No. | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 750100-2 | Assembly Compiete. Cabinet Whegs. Specify Color. | 26 | 201386 | G \& M Filer Panel. (Use without $G \&$ M sheif). |
| 2 | 164-51-7 | Screw, Hex Hd. Sems (5-16-18 $\times 3 / 8$ ). | 27 | 300137 | Screw, Shelf Roller. |
| 3 | 600310 | Assembly, Cabinet. | 28 | 440278 | G \& M Tray Slide. |
| 4 | 276-8R6 | Screw, Pan Hd. Sell Tap ( $8-32 \times 3 / 8)$. | 29 | 440264 | Front Roller Guide. Left Side. |
| 5 | 600195 | Leg Assembly Rear. | 30 | 201383 | Panel, Leh Side Extension. |
| 6 | 114-51-12 | Screw, Hex Hd. Mach. (5-16-18 $\times 3 / 4$ ). | 31 | 440161 | Sheif Lock. |
| 7 | 300103 | Leg Leveler. | 32 | 276-8R12 | Screw, Pan Hd. Phillips (8-32 $\times 3 / 4$ ). |
| 8 | 600302 | Assembly Leg Front. Pivot Side.. | 33 | 201389 | Roller Retainer. |
| 10 | 201012 | Lower Hinge Support. | 34 | 440263 | Front Roller Guide. Right Side. |
| 11 | 420010-18 | Washer (1 1/4). | 35 | $660311-5$ | Assembly Complete. Right Side Panel, 5 |
| 12 | 420003 | Screw Flat Hd. ( $1 / 4 \times 20 \times 3 / 4$ ). |  |  | Shelf. |
| 13 | 640154 | Assembly Lower Door Plate. |  | 600415 | Panel Only. Right Side. 5 Sheif. |
| 14 | 300156 | Nut, Special. Door Stop Anchor. |  | $660311-6$ | Assembly Complete. Right Side Panel. 6 |
| 15 | 400095 | Door Stop. |  |  | Shelf. |
| 16 | 420010-10 | Washer. |  | 600416 | Panel Only. Right Side. 6 Sheif. |
| 17 | 114-41-8 | Screw, Hex Hd. Mach. (1/4-20 x 1/2). | 36 | 440306 | Sheli Guide Button. |
| 18 | 440204 | Washer. | 37 | 277-10R8 | Screw Pan Hd. Sell Tap (8-32 $\times 1 / 2$ ). |
| 19 | 201042 | Door Stop Friction Pad. | 38 | 420023 | Wing Nut (8-32). |
| 20 | 277-10R16 | Screw, Pan Hd. Self-Tap ( $10-32 \times 1^{\prime \prime}$ ). | 39 | 750102 | Kit , Complete. Ventilating Fan. |
| 21 | 600197 | Assembly Leg Front. Lock Side. |  | 680313-2 | Assembly, Fan Complete Only. |
| 22 | $660312 \cdot 7$ | Assembly Complete. Let Side Panel. 5 Shelf. | 40 | $\begin{aligned} & 750102 \\ & 640118 \end{aligned}$ | Kit, Complete. Ventilating Fan. Assembly, Fan Chute Only. |
|  | 600417 | Panel Only. Left Side. 6 Shelf. | 41 | 201176 | Fan Screen. |
|  | 660312-12 | Assembly Complete. Left Side Panel. 6 | 42 | 380215 | Fan, Finger Guard. |
|  |  | Shell. | 43 | $404-8$ | Nut, Hex Hd. |
|  | 600418 | Panel Only. Left Side. 6 Shelf. | 44 | 640107-1 | Assembly Top Hinge. |
| 23 | 201450 | Filler, G \& M Pivot Side. | 45 | 400003-1 | Screw, Flat Hd. (1/4-20 $\times 1 / 2)$. |
| 24 | $437-41$ | Nut, Keps (1/4-28). | 46 | 201382 | Fan Hole Cover. |
| 25 | 201550 | Plate, G \& M Filler. Defiector. | 47 | 335-8R6 | Screw Pan Hd. Tap Tite Phillips ( $8.32 \times 3 / 8)$. |



| hem No. | Part No. | Description |
| :---: | :---: | :---: |
| 1 | 750100.2 | Cabinet Assembly Complete. w/hegs 103. Specity Color. |
| 2 | 420142 | Pin, Cabinet Receptacle. |
| 3 | 680303 | Cabinet Hamess Complete. 5 Shelf. |
|  | 680304 | Cabinet Harness Complete. 6 Shelf. |
| 4 | 201373 | Receptacle Mounting Plug. |
| 5 | 276-8R6 | Screw, Pan Hd. Self-Tap (8-32 $\times 3 / 8$ ). |
| 6 | 600433 | Door Lock Catch. Heavy Duty. |
| 7 | 300167 | Pin. |
| 8 | 420045 | Rubber Bumper. |
| 9 | 680350 | Assembly Complete Main Junction Box. (See Page 28 for Itemized Parts). |
| 10 | 660240-1 | Assembly Complete. Cord Set. |
| 11 | 420040-4 | Snap Bushing. $15 / 16$ Diameter. |
| 12 | 276-8R6B | Screw, Pan Hd. |
| 13 | 360083 | Transformer. |
| 14 | 201453 | Gum \& Mint Tray Catch. |
| 15 | 201415 | Gum \& Mint Mounting Bracket Plug. |
| 16 | 380230 | Plug Only. |
| 17 | 660316 | Gum \& Mint Shelf Complete. (Seo Page 24 for Itemized Parts). |



| Item No. | Part No. | Description |
| :---: | :---: | :---: |
| 1 | 750121 $600240-1$ | Assembly Complete. Snack Shelf. wo Spirals. <br> Snack Shelf Only |
| 2 | 300137 | Screw, Shelf Roller. |
| 3 | 440277 | Roller, Shelf. |
| 4 | 437-41 | Nut, Keps. (1/4-28). |
| 5 | 440285 | Price and Selection Tab Holder. |
| 6 | 460346 | Item Tabs. |
| 7 | 460347 | Price Tabs. Assorted 10¢-\$1.50. |
|  | 460347-1 | Price Tabs. All 304-354. |
|  | 460347-2 | Price Tabs. All 40¢-456. |
|  | 460347.3 | Price Tabs. All $50 ¢ 554$. |
|  | 460347-4 | Price Tabs. All 60c-654. |
|  | 460347-5 | Price Tabs. All $70 c \cdot 754$. |
|  | 460347-6 | Price Tabs. All $80 ¢-854$. |
|  | 460347.7 | Price Tabs. All 90c-954. |
|  | 460347.8 | Price Tabs. Ail \$1.00-\$1.05. |
|  | 460347-9 | Price Tabs. All \$1.10-\$1.15. |
|  | 460347-10 | Price Tabs. All \$1.20-\$1.25. |
|  | 460347-11 | Price Tabs. All \$1.30-\$1.35. |
|  | 460347.12 | Price Tabs. All \$1.40-\$1.45. |
|  | 460347-13 | Price Tabs. All \$1.50-\$1.55. |
|  | 460347-14 | Price Tabs. All \$1.60-\$1.65. |
|  | 460347-15 | Price Tabs. All \$1.70-\$1.75. |
|  | 460347-16 | Price Tabs. All \$1.80-\$1.85. |
|  | 460347-17 | Price Tabs. All \$1.90-\$1.95. |
|  | 460347-18 | Price Tabs. All \$2.00-\$2.05. |
| 8 | 305-8R6 | Screw, Pan Hd. Phillips, Plastite (8-16 $\times 3 / 8)$. |
| 9 | 640101 | Spacer, Snack Shelf. |
| 10 | 201534 | Front Support Only. |
| 11 | 660330 | Assembly Product Rail. For use w/Pastry Spiral. |
|  | $860330-2$ 440148.1 | Assembly Product Rail. For Use With Special Candy Spiral in Pastry Selection. Plastic Product Rail Only. |


| Item No. | Part No. | Description |
| :---: | :---: | :---: |
| 12 | 750083 | Kit, Can Dispenser Assembly. |
| 13 | 200913-1 | Rear Support Bracket Only. |
|  |  | Use w/Pastry Spiral. |
|  | 200913 | Rear Support Bracket Only. |
|  |  | Use w/Special Candy Spiral. |
| 14 | 400129 | 15 Space Snack Spiral. |
|  | 400128 | 12 Space Snack Spiral. |
|  | 400127 | 10 Space Snack Spiral. |
|  | 600206-3 | 7 Space Snack Spiral. |
|  | 440287 | Spiral Lock (Not Shown). |
| 15 | 276-8R6 | Screw, Pan Hd. Self-Tap (8-32 $\times 3 / 8)$. |
| 16 | 420142 | Pin, Shelf Plug. |
| 17 | 680301 | Harness, Complete. Pastry Shelf. |
| 18 | $600246 \cdot 1$ | Bracket Only. |
| 19 | 305-7R8 | Screw, Pan Hd. Phillips, Plastite. ( $7 \times 1 / 2$ ). |
| 20 | 440125 | Spiral Metainer Only. |
| 21 | 750106 | Vend Motor Complete. |
| 22 | 380070 | Switch. |
| 23 | 100-4-9 | Screw, Rd. Hd. Mach. (4-40 x 1/2). |
| 24 | 440201 | Drive Cam. Rear. |
| 25 | $751-31$ | Retaining Fing. ${ }^{\text {a }}$ 31. |
| 26 | 440200 | Drive Cam. Front. |
| 27 | 300184 | Shoulder Bushing. |
|  | 277-10R8 | Screw, Type 23 (\#10-32 $\times 1 / 2$ ). |
| 28 | 400094 | Actuator Wire. |
| 29 | 440196 | Price and Selection Trim. |
| 30 | 440199 | Stop Lever. |
| 31 | 440197 | Top, Can Guide \& Sign Trim. |
| 32 | 440198 | Leg, Top Can Guide \& Sign Trim. |
| 33 | 600308 | Can Dispenser, Trough Only. |
| 34 | 640109 | Cam, Mounting Bikt. \& Spring Assembly. |





delivery bin



| Item No. | Part No. | Description |
| :---: | :---: | :---: |
| 9 | 440129 | Door Bearing. |
| 10 | 200763 | Inner Dodr. |
| 12 | 600258 | Door, Delivery Bin. |
| 13 | 420029 | Rubber Bumper. |
| 14 | 640100.1 | Bin Door Drive Assambly (Pivot Side). |
| 15 | 640099.1 | Arm Mounting Bracket. (Pivot Side). |
| 16 | 200902 | Baffle, Rear Delivery Bin. |
| 17 | 200906 | Delivery Bin Anchor Strap. |
| 18 | 660238 | Dalivery Bin Pad Assembly for Can Dispenser. |


| Item No. | Part No. | Description | Item No. | Part No. | Description |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 200-6R6 | Screw, Rd. Hd. Phillips ( $6-18 \times 3 / 8$ ). | 7 | 380243 | Toggle Switch. |
| 2 | 201189 | Cover, Ballast and Switch Bracket. | 8 | 380241 | Circuit Breaker 3 Amp. |
| 3 | 680350 | Assembly Complete, Main Junction Box. | 9 | 380189 | Molex Receptacle. 2 Pin. |
|  | 201153 | Box Only. | 10 | 380034 | Molex Plug. 3 Pin. |
| 4 | 680278 | Assembly Complete. Ballast. | 11 | 380035 | Molex Receptacle. 3 Pin. |
| 5 | 276.8R4B | Screw, Pan Hd, Phillips Type 23. $(8.32 \times 1 / 4) .$ | $\begin{aligned} & 12 \\ & 13 \end{aligned}$ | $\begin{aligned} & 380107 \\ & 380106 \end{aligned}$ | Molex Receptacle. 6 Pin. Molex Plug. 6 Pin. |
| 6 | 276-6R4 | Screw, Pan Hd. Phillips Type 23. $(6-32 \times 1 / 4) .$ |  |  |  |


electrical harnesses

| Part No. | Description |
| :--- | :--- |
| 360086 | Cord Set. |
| $660240-1$ | Assembly Complete. Cord Set. |
| 680305 | Harness, Gum and Mint Shelf. |
| 680299 | Harness, Candy Shelf. |
| 680301 | Harness, Pastry Shelf. |
| 680351 | Harness. Door. |
| 680349 | Cabinet Back Harness 5 Shelves. |
|  |  |


| Part No. | Description |
| :--- | :--- |
| 680348 | Cabinet Back Harness 6 Shelves. |
| 680352 | Harness, Mars Changer Hook-Up. |
| 680275 | Fan Cord. Harness |
| 680346 | Assembly Lamp Harness. |
| 680354 | Harness, Operate Swtich. |
| 680355 | Harness, Mars Bill Validator. Hook-Up. |
| 680357 | Connector Ribbon. |
|  |  |






## furniture II style




high-tech style



##  <br> CABLE TIE 460044

CB
FEMALE QUICK DISCONNECT TERMINAL

9/64-380213
3/16-380001 $1 / 4-380003$


MOLEX MALE CONNECTOR
3 PIN - 380034
6 PIN - 380106

##  <br> $B A B A B A B A B A B A B A$



MOLEX FEMALE CONNECTOR
2 PIN - 380189
3 PIN - 380035
6 PIN - 380107


CHANGER
RECEPTACLE AND COVER
12 PIN - 380200
COVER - 380201
FEMALE PLUG TERMINAL
LARGE - 380004
SMALL - 380129

AMP IN-LINE CONNECTOR . 156 CTRS.
7 PIN - 380210
18 PIN - $380210-1$
13 PIN -380210.2
17 PIN - 380210.3
19 PIN - 380210.4
molex connector 100 CTRS.
17 PIN - 380207
$\Longrightarrow$
MALE PLUG TERMINAL
LARGE - 380005
SMALL - 380130

## 



MAIN PRODUCT SHELF RECEPTACLE 380238 UG 380237


MOUNTING TYPE CABLE TIE 380078


ADHESIVE BACKED
CORD CLIP 420097

