

Instructions to Install Retrofit Kit AP 110 Machine

****TURN POWER OFF OF MACHINE BEFORE INSTALLATION****
READ ALL INSTRUCTIONS BEFORE STARTING INSTALLATION

Retrofit Kit Contents

PART NAME	QUANTITY	PART NUMBER
PCBA, Snack Retrofit	1	10-0253-00
Hardware Kit	1	05-0169-01
Display Panel Assembly	1	05-0091-10
Cable Assy, Retro Display	1	11-1700-01
Display Lens	1	05-0155-00
Keypad	1	16-0009-00
110 Header Assembly	1	05-0156-00
Front Cover Assembly	1	05-0150-02
Cable Assembly, Retrofit Keypad 2 (Pin12=Key)	1	11-1700-03
Cable Assembly, MDB Extension	1	11-1700-06
Sensor Kit	1	10-0073-00
Clamp Assembly	1	05-0157-00
CheckMate Label	1	15-0082-04

Tools Needed:

Screwdriver, Philips, magnetic
Needle nose pliers
Nut Driver, 3/8" and 1/2"

1. Carefully unlock machine door and open. Next, open the front panel so you can view the vending machine controller (VMC).



Figure 1.

2. Locate control board. Remove all connections. Using needle nose pliers, squeeze each of the six mounting fasteners and remove the VMC.

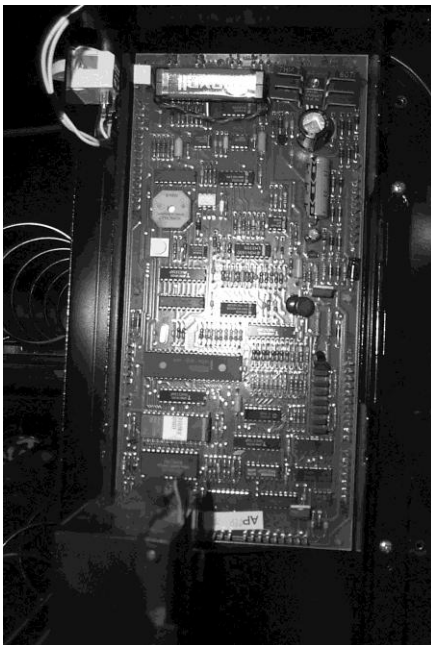


Figure 2.

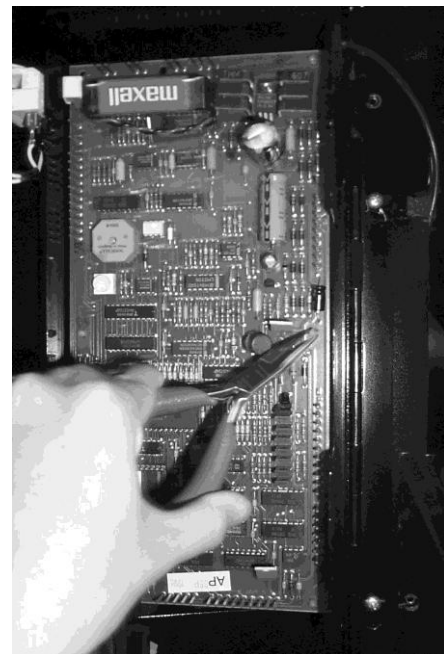


Figure 3.

3. Remove existing bill validator and any attached accessories it may have.
4. Locate the two pin keypad tail that is connected to the display board. Unplug the keypad from the display board. Using a Philips screwdriver, remove all four screws from display board and remove board.

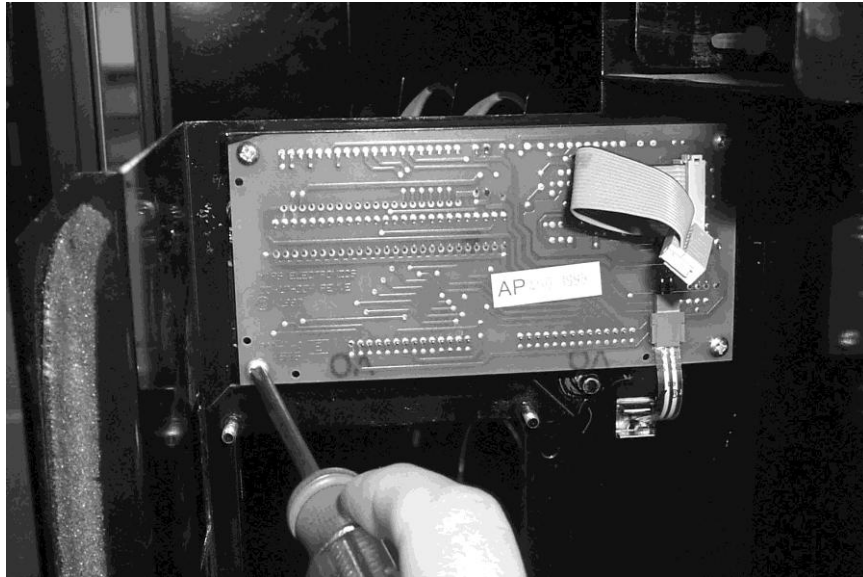


Figure 4.

5. Locate seven nuts that hold the front panel in place. Unscrew all seven nuts using a nut driver. Please note keypad may become loose when removing front panel!! Carefully pull off front panel.

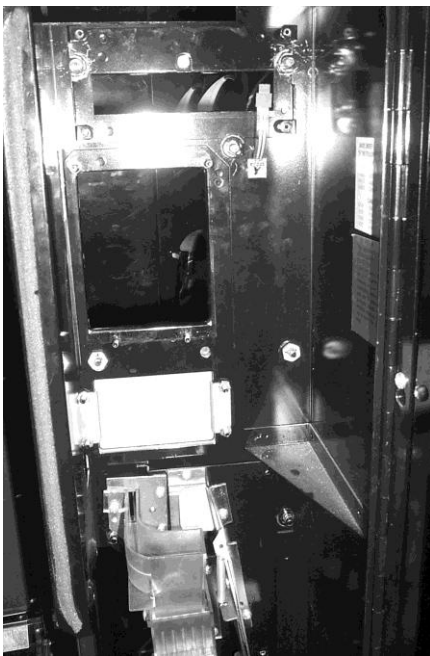


Figure 5.

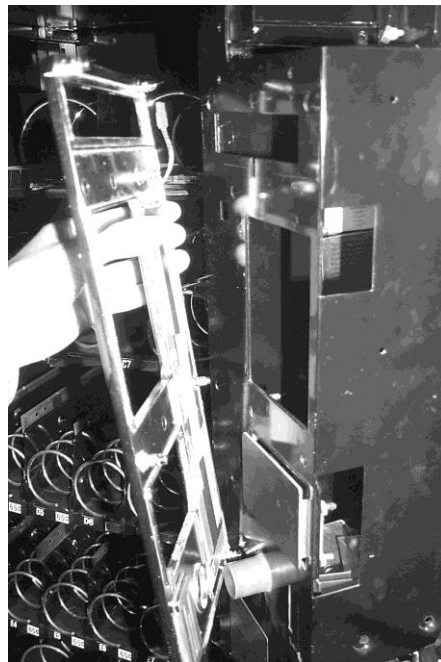


Figure 6.

6. Place front panel face down on flat surface. Remove any tape holding keypad in place. Make sure this panel is flat and face down. **The buttons located in front of the keypad and may become loose!!!** Remove the keypad from the panel.

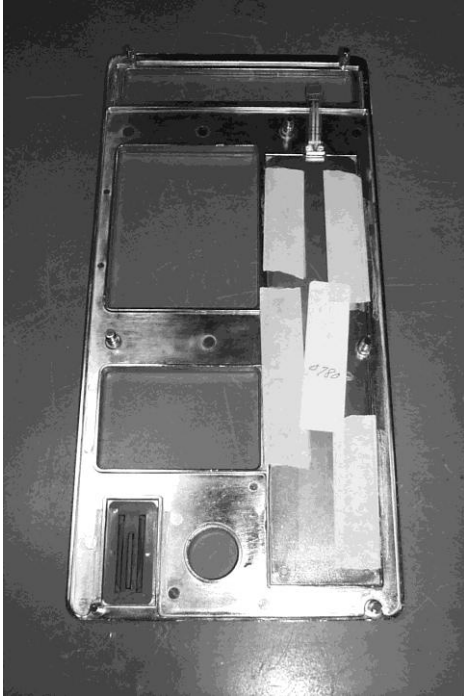


Figure 7.

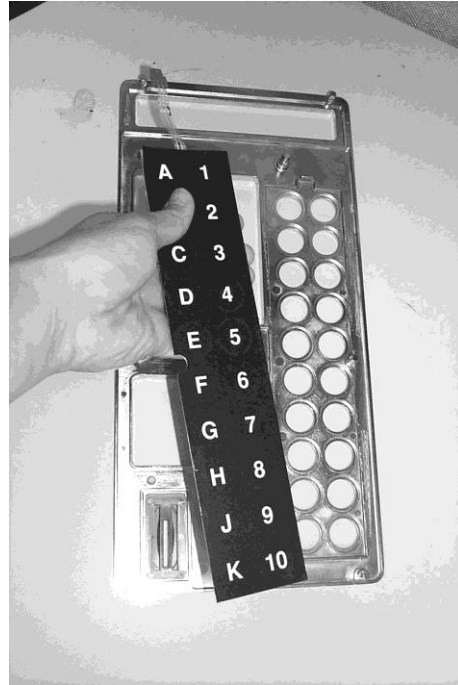


Figure 8.

7. Remove the display lens and replace with Retrofit display lens. Reuse tape if possible. Please see Figure 9 for correct orientation.

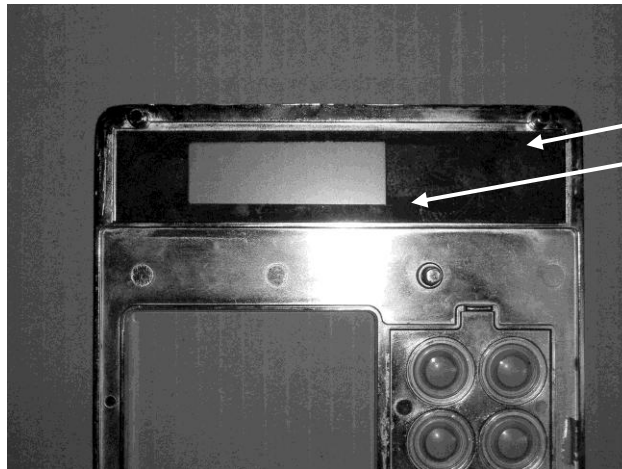


Figure 9. (view from back of panel)

****IMPORTANT!!**
Notice that it is thicker
on bottom and right
side viewing from
BACK of panel. This is
the correct orientation.

8. Install Retrofit keypad. Make sure the keypad is oriented correctly. See Figure 10. The tail should be towards the front panel opening (display). Push tail so it clears the stud on front panel. Reuse tape, if possible, or new masking tape and secure keypad in place. Please make sure the keypad is secure straight. Set aside.



Figure 10.

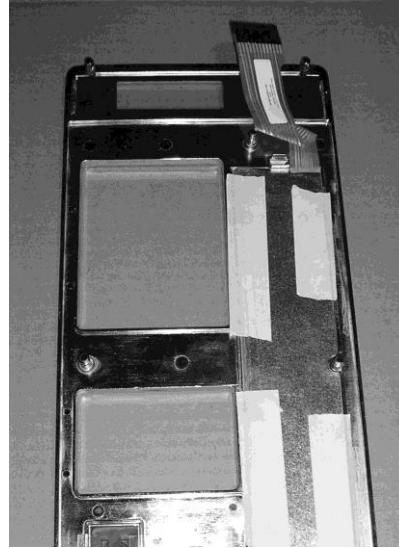


Figure 11.

****Make sure keypad is taped and secure!!!****

9. Install retrofit controller using four of the mounting holes. This board will mount using the **BOTTOM** four of the existing snap fasteners. See Figure 12 for board orientation.

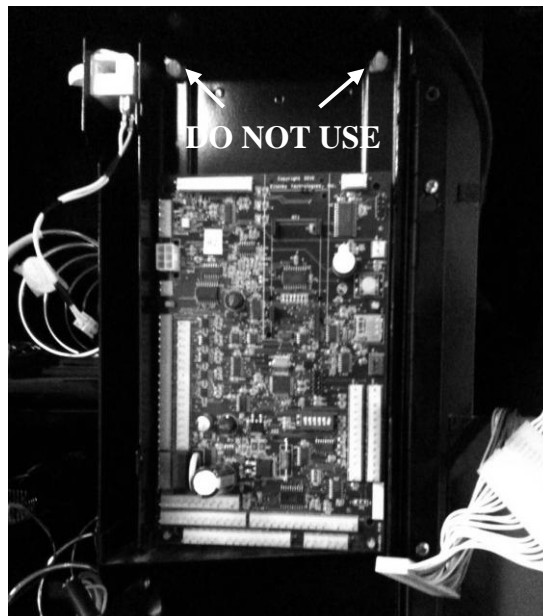


Figure 12.

10. The Retrofit display board can now be installed. With the display cable towards the top of the panel, screw in the four screws from original display board. See Figure 13.

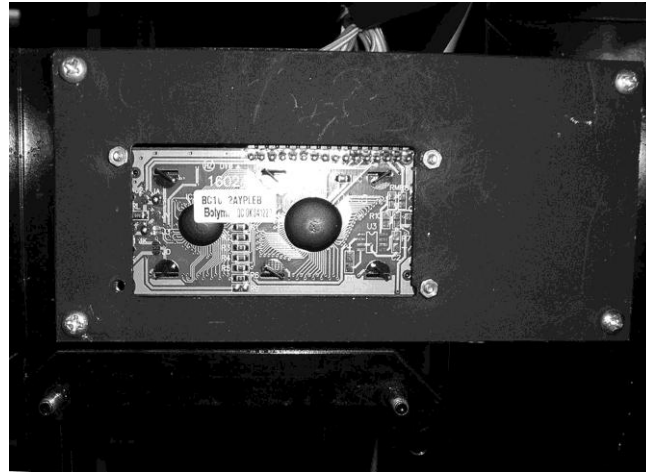


Figure 13.

11. The front panel can now be replaced. Direct the keypad tail through the larger slot where the display is positioned. See Figure 14. The tail should go under the display board. See Figure 15. Figure 16 will show the view from the front of the panel. **Please make sure that the display is shown through the window of the lens!**

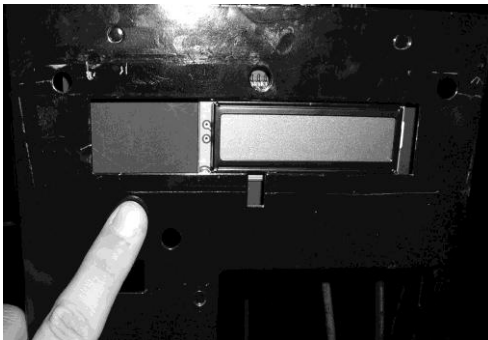


Figure 15.

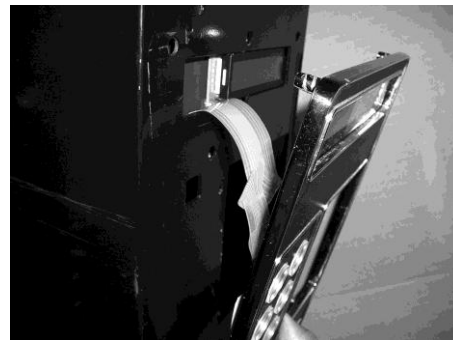


Figure 16.



Figure 17.

12. Using the nut driver, replace all seven cap screws to hold the front panel in place.
13. Insert the male conversion header (part# 14-0388-00) into the end of the Retrofit Keypad 2 cable (part # 11-1700-03). This header will be used to plug into the keypad tail. **Pin 12 is keyed. Notice on the keypad tail, pin 1 is marked with a triangle.** The other end will plug into J10 of the VMC. See Figure 18.

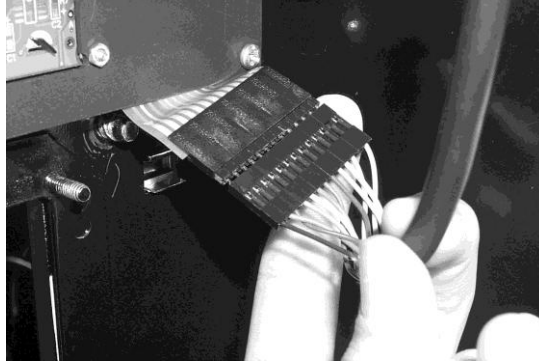


Figure 18.

14. Plug the display cable into J2.
15. Find the power cable from the machine. This is an 11 pin connector with the second pin keyed. This will plug into J20 of the VMC.
16. You can now plug the motors in. This is a 19 pin connector that plugs into J16 of the VMC.
17. The door switch will plug directly into J23 of the VMC.
18. If you are not installing a sensor kit, move to Step 25. However, if you need to install a sensor kit, continue with Step 19.

19. At this point, please locate the Sensor Kit included in your Retrofit kit. Without unplugging and cables, unravel the boards.
20. The Receiver Mounting Plate (part # 05-0098-01) will now have to be mounted onto the Receiver board bracket, which is the larger of the two boards. The hardware that is needed is mounted on this bracket for convenience. See figure 19 for orientation.

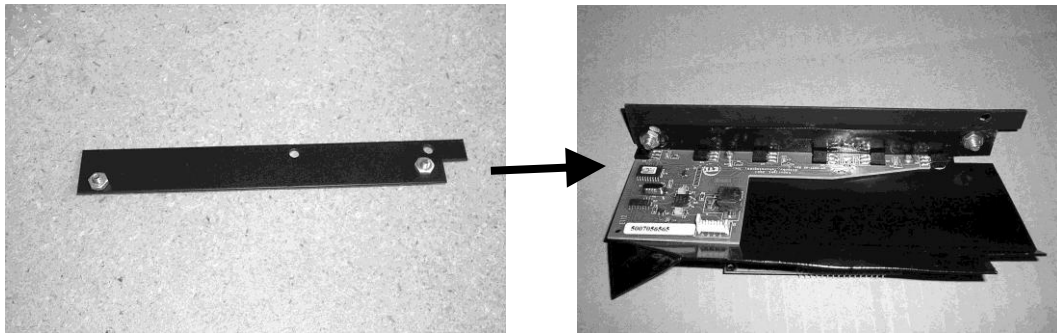


Figure 19.

21. Locate the two L-shaped brackets on both sides of the bin on the door. Unscrew the bottom screw completely with Philips screw driver. Next, loosen the top screw slightly to allow the bracket to move around freely. See Figure 20.

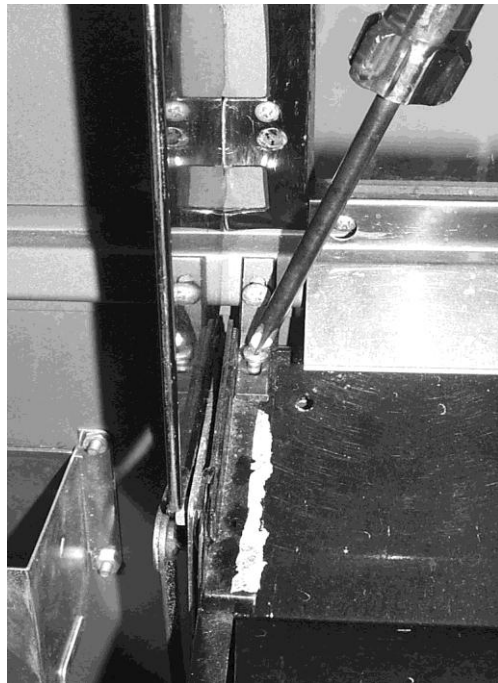


Figure 20.

22. You can now slide the receiver board bracket under the existing L-shaped bracket on the left side of the bin. This bracket should slide right underneath this L-shaped bracket and match up with the hole for the screw that has already been removed. The deflector may hit the bracket. If this happens, you may cut the corner of the deflector or bend it in so the bracket can be secured. Once you line this hole up, use a magnetic screwdriver to replace this screw. It may help to view this from the edge of the bracket where you can see straight back. Next, tighten the top screw by coming in between the bracket and the edge of the “bin wall” with your screwdriver. Make sure this bracket is secure and straight. This can be repeated for the transmitter board (the smaller board) as well. This bracket will get mounted on the right side of the bin (closest to the hinged part of the door). The two sensor boards should be “facing” each other.

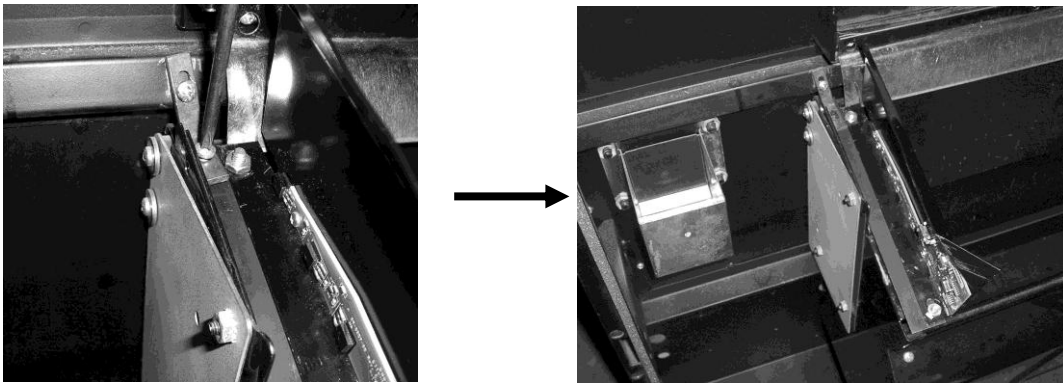


Figure 21.

23. Confirm these two boards are connected with the Sensor Board Cable. The connectors are polarized so please take note to how they are plugged in. The cable should run along the outside of the bin. Wire clasps are provided if needed. Make sure that this cable is OUTSIDE of the bin and not in the path of the boards. The two boards should be able to “see” each other with no obstructions. Refer to Figure 22.

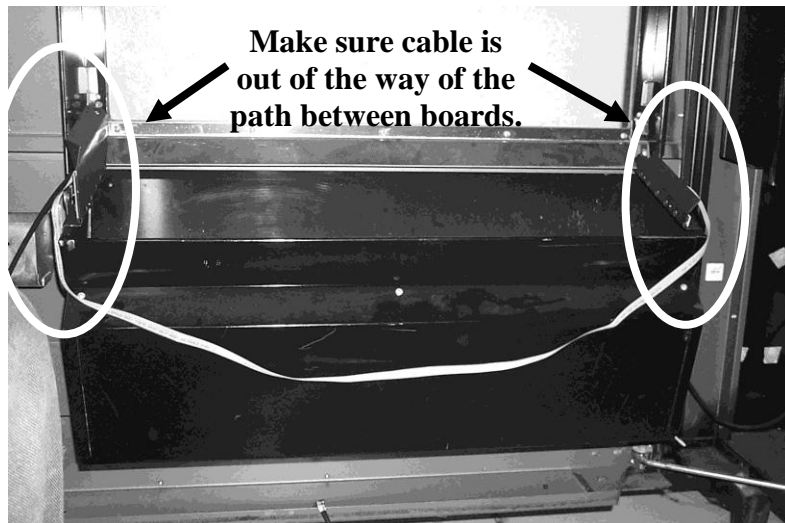


Figure 22.

24. Connect the receiver board to the control board. Use the Sensor to Control Cable that is already connected to the receiver board. The unconnected end will plug into the Drop Sensor header, J3, of the vending machine controller (VMC).
25. **IF INSTALLING MDB ACCEPTORS:** The current coin mech can now be replaced by the MDB coin mech. The coin mech can be removed by sliding it upwards and pulling it towards you. The MDB coin mech can now be installed using the same three mounting plugs on panel. You may now install the MDB bill validator using the four nuts from the original bill validator. The coin mech and/or bill validator can plug into J4 on the VMC. BV Extension Cable Assembly (part #11-1700-06) is included for extending the cable to the VMC.
26. **IF INSTALLING MICROMECH COIN ACCEPTOR:** The Micromech coin acceptor plugs directly into the 12 pin Jones receptacle. You will then find the cable from this Jones plug within the machine. It will be a 15 pin cable with pins 2 and 4 keyed. This will plug directly into J11 of the VMC.
27. **IF INSTALLING PULSE BILL VALIDATOR:** There is a connector coming from the bill validator that has 15 positions, with pin 10 keyed. This will plug into J15 of the VMC.
28. The front cover can now be installed. The DEX cable is mounted to this front cover. Connect this cable onto J5 of the VMC. Then, line up four of the mounting holes with the four standoffs already mounted on the VMC. Using the four 08-0632-00 screws, mount the cover.
29. Organize all cables so that the front panel is able to be closed. The sensor cable can run within the length of the door. All other cables should be on either side of the bill validator. You may now close the front panel. By keeping this in place, you can close the front of the vending machine.

**THE SENSOR BRACKET MAY HIT THE FRONT
PANEL. PLEASE CLOSE DOOR SLOWLY!!!! IT WILL
GUIDE ITSELF.**