

INSTRUCTION MANUAL FOR

RCS20MDB/MDB2 & RCS15MDB/MDB2

Revised May 2003

RADDATZ
PRODUCT
DEVELOPMENT
Corp

1790 AMITY RD. • CONWAY, ARKANSAS 72032 • PHONE: 501-327-9496 • FAX: 501-327-9538

INSTRUCTION MANUAL FOR RCS20MDB & RCS15MDB

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
Warranty	1
Important Notices	2
I Operation Guide	3
II Positioning	4
III Installing Changer	4
IV Electrical Power	5
V Circuit Breaker & Transformer	5
VI Tray Latches	5
VII Loading Product	6
VIII Product Pushers	6
IX Price Tabs	7
X Product Spacer	7
XI MDB Controller Description	8
XII MDB Controller Operation	9
XIII MDB Controller Programming	10
XIV Changing Augers	12
XV Removing Cash Box	13
XVI Removing Vend Trays	13
XVII Converting Candy Selection To Snack	13
XVIII Replacing Vend Motor	13
XIX Removing Controller & Key Pad	15
XX Removing Delivery Door	15
XXI Removing The Transformer	15
XXII Lift Handle	16
XXIII Light Bulb Replacement	16
Appendix I – Electrical Diagram	17
Appendix II – High Voltage Electrical Diagram	18

WARRANTY

RPD Corporation 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 purchaser only and is limited to making good at our factory any part or parts thereof which shall, within one (1) year 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 RPD Corporation, found by us to be defective within the warranty period will be exchanged by RPD Corporation or their authorized dealer or distributor without charge to the owner.

This warranty applied 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 merchantability 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.

RPD Corporation 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 product theretofore manufactured or sold.

RPD Corporation
1790 Amity Rd.
Conway, AR 72032

IMPORTANT NOTICES

THIS MACHINE IS INTENDED FOR INDOOR USE ONLY!

AFTER THE UNIT IS POSITIONED IT MUST BE SECURELY FASTENED.

DISCONNECT POWER BEFORE CONNECTING OR DISCONNECTING THE CHANGER, DOLLAR BILL ACCEPTOR, ELECTRONIC CONTROLLER OR ANY OTHER ELECTRICAL COMPONENT.

IN AREAS OF HIGH ELECTRICAL USAGE, SUCH AS LAUNDROMATS, ELECTRICAL SURGE PROTECTION MUST BE PROVIDED AT THE WALL OUTLET.

INSPECT THE UNIT IMMEDIATELY UPON RECEIPT FOR FREIGHT DAMAGE. CLAIMS MUST BE MADE TO THE FREIGHT LINE.

DO NOT TOUCH LIGHT BULB WITH BARE SKIN, IT MAY BE HOT AND PREMATURE FAILURE WILL OCCUR.

I. OPERATION GUIDE

CONTROL SETUP AND OPERATION

Press mode switch once to enter service mode. Then press appropriate button on door front selection pad.

COIN DISPENSE

Press 1 - (Display will show "Coin.")

Press 1 to dispense lowest value coin.

Press 2 to dispense next value coin.

Press 3 to dispense next value coin.

Press 4 to dispense next value coin.

Press 5 to dispense next value coin.

Press 6 to EXIT FUNCTION.

ACCOUNTABILITY

Press 2 - (Display will show "Acct.")

Press 1 for total vend count.

Press 2 for total cash count.

Press 6 to EXIT FUNCTION

PRICE SETTING

Press 3 - (Display will show "PRC.")

Press 1 to set single selection.

Press Selection - Press 8 to increase price.

Press 9 to decrease price.

Press 2 to set row prices.

Press Row Letter, Adjust price by pressing 8 or 9.

Press 6 to EXIT FUNCTION

MOTOR TEST

Press 4 - (Display will show "TEST.")

Press 2 and then selection to run single motor.

Press 3 and then row letter to run entire row in sequence.

Press 4 to run all motors in sequence.

Press 6 to EXIT FUNCTION

VEND OPTIONS

Press 5 - (Display will show "opt.")

Press 0 for Forced Vend On.

Press 1 for Forced Vend Off.

Press 2 for Bill Escrow On.

Press 3 for Bill Escrow Off.

Press 4 for Multi-Vend On.

Press 5 for Multi-Vend Off.

Press 6 to EXIT FUNCTION

TUBE LOAD FUNCTION

Coins can be added to the change tubes by passing the vend cycle with this function. ALL COINS MUST BE LOADED THROUGH THE ACCEPTOR.

Press 7 to enter. "t-Ld" will be displayed.

Load lowest value coins first. The coin count and value will be displayed.

Load the next value coins. The coin count and value will be displayed.

Repeat process until all coins are loaded.

Press 6 to EXIT FUNCTION.

EXIT SERVICE MODE

Press mode button or wait 30 seconds.

II. POSITIONING

Your RCS15 or RCS20 is equipped with soft rubber legs to prevent slipping. Always set the vendor in position. Do not attempt to slide it as damage to the legs could occur.

CAUTION: What the vendor is set on must be sturdy enough to support it and always secure the unit into position. Two mounting holes are located in the product delivery area for that purpose.

III. INSTALLING THE CHANGER

CAUTION: DO NOT PLUG IN OR UNPLUG THE CHANGER OR BILL ACCEPTOR WHILE THE POWER IS ON!

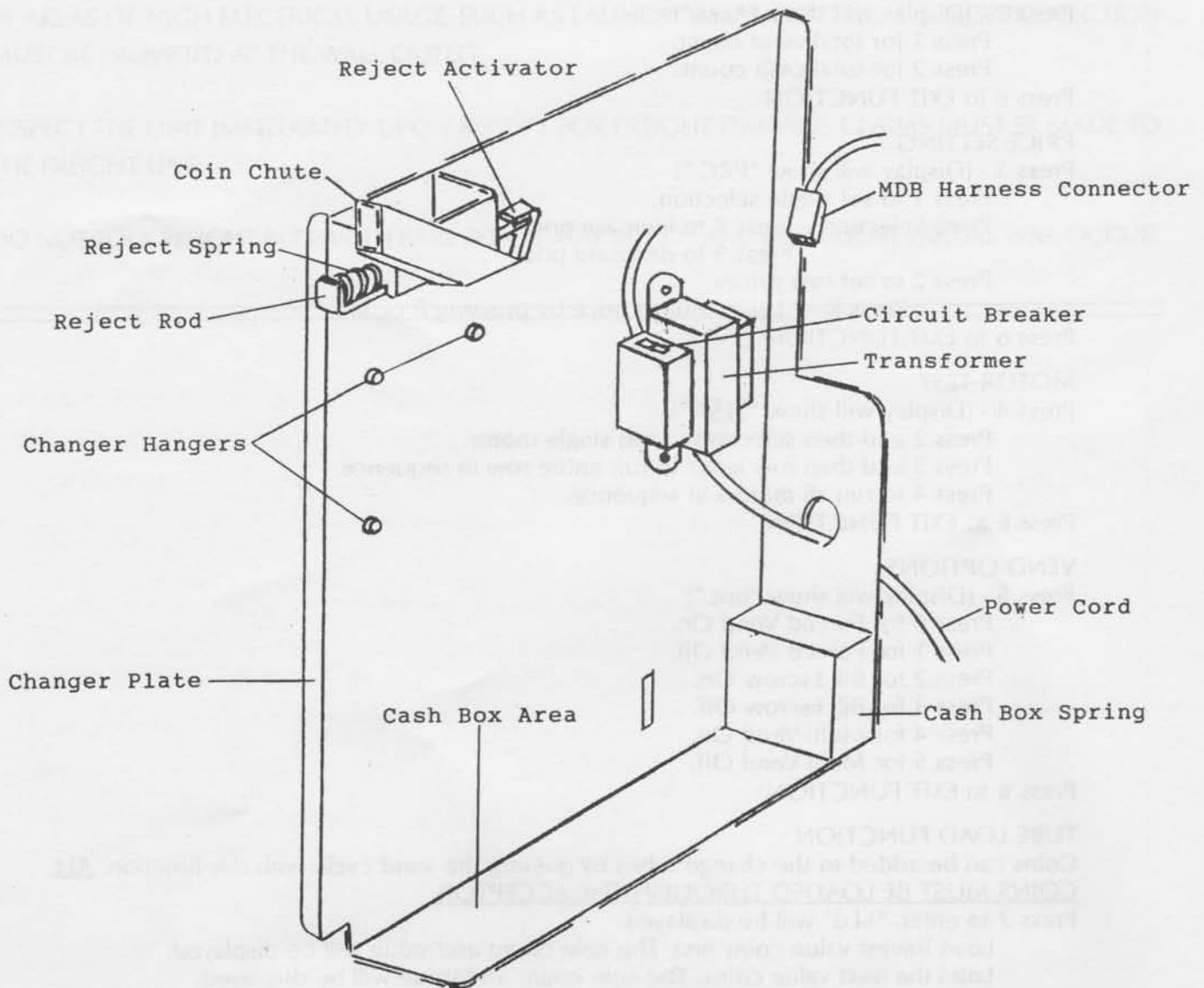


FIG. 1

To install the changer, slide the changer plate out till it stops (See FIG. 1). Then unlatch the changer acceptor (See Changer Instruction Sheet) and swing it down. Now mount the changer on the 3 mounting studs (See FIG. 1) and snap the acceptor back in place. Complete the installation by connecting the changer to the MDB harness (See FIG. 1). Press the detent latch on the ball bearing slide and push the changer plate back in position.

IV. ELECTRICAL POWER

Plug your RCS15 or RCS20 into an approved 115 VAC outlet which has a safety ground.

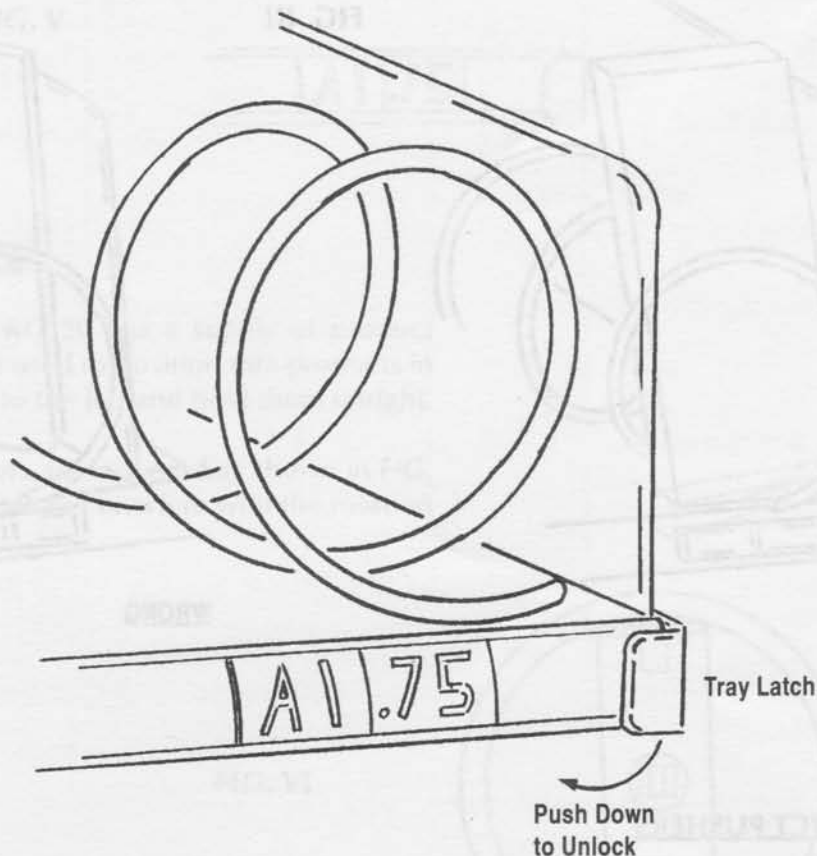
In areas of high electrical usage, surge protection must be provided at the wall outlet.

V. CIRCUIT BREAKER AND TRANSFORMER

Your RCS15 and RCS20 converts 115 VAC power (230 VAC for export machines) from the wall socket to its operation voltage of 24 VAC with a step down transformer. It is mounted on the changer plate (See FIG. 1).

The transformer has a built-in circuit breaker set for a 4 amp maximum current draw. If the breaker flips, repair the problem and reset the breaker.

FIG. II



VI. TRAY LATCHES

Each vend tray is equipped with a latch that keeps the tray in the "HOME" position. It is located on the right hand side of each tray. To unlatch the tray, swivel the latch downward.

VII. LOADING THE PRODUCT

NOTICE: To get a good vend, it is important that each product is loaded properly. The bottom of the product must rest on the vend tray and not on the auger (See FIG. III).

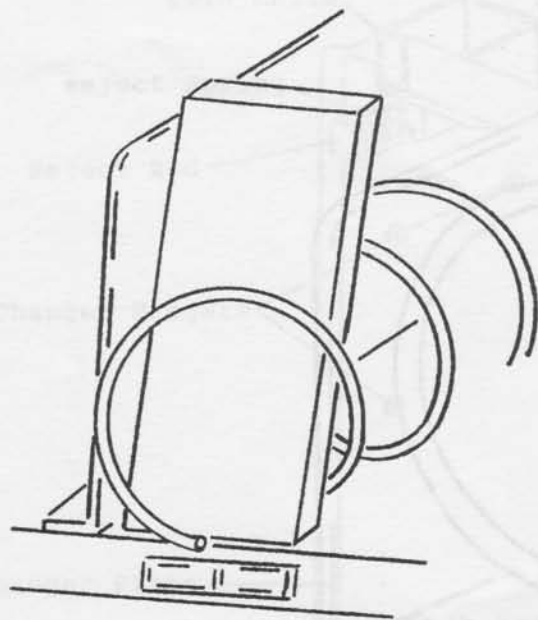
NOTICE: Never force the product between the spirals of the auger. If the product is too tight, use the next larger auger.

NOTICE: Be sure the end of the auger extends to or slightly beyond the end of the vend tray.

To load the product, unlatch the tray (Section VI) and pull it forward. When the rear stop is engaged, lower the front of the tray. You are now ready to load the product. Never load more than one tray at a time.

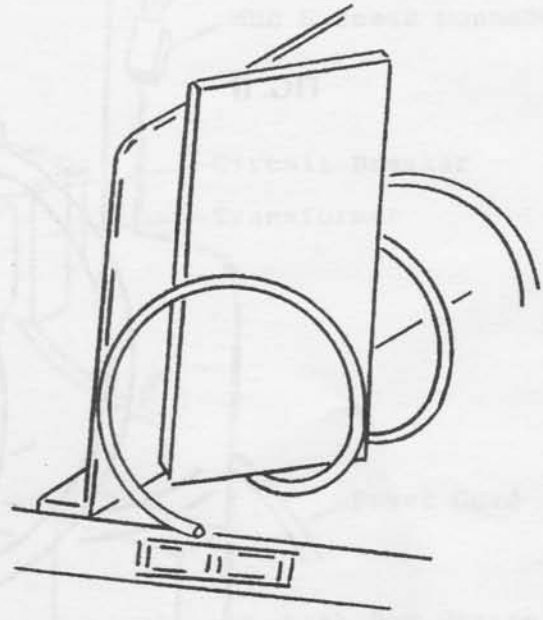
After the tray is loaded, lift its front and push it home. Be sure to reset the tray latch.

The top tray in the RCS20 has been lowered to provide more space for taller bags of snacks. If more width is required, an optional 4-selection tray is available.



RIGHT

FIG. III



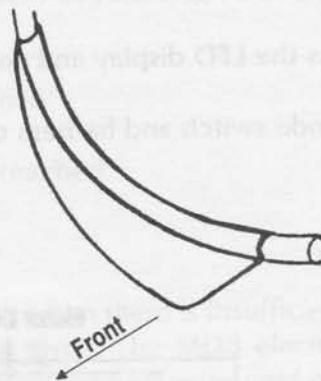
WRONG

VIII. PRODUCT PUSHERS

To get a good vend, the end of the vend auger must extend to or slightly past the edge of the tray. This insures that the product will be pushed completely off the tray.

To increase the length of the auger, a plastic product pusher can be snapped on the end as shown in FIG. IV. A supply of product pushers is in the "goody bag."

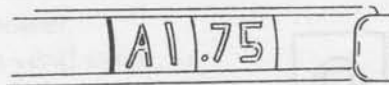
FIG. IV



IX. PRICE TABS

In the "goody bag" you will find a card of price tabs. Tear out the appropriate price, bend slightly and snap into the channel as shown in FIG. V.

FIG. V

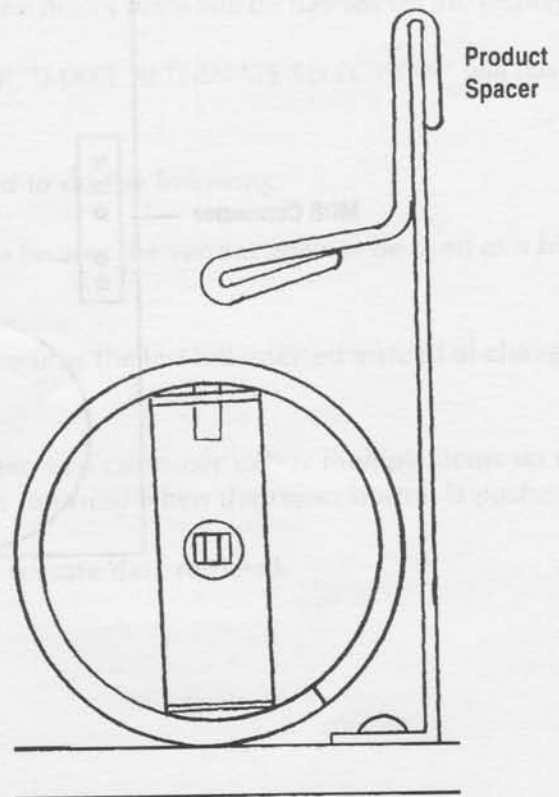


X. PRODUCT SPACER

Each RCS15 and RCS20 has a supply of product spacers. These are used to position thin products in a candy selection to the left and hold them upright.

The product spacers are mounted as shown in FIG. VI. Make sure it does not interfere with the rotation of the auger hub.

FIG. VI



XI. MDB CONTROLLER DESCRIPTION

The MDB Controller is designed for years of service and features the industry's longest warranty.

The board contains the LED display and control system in one compact package.

See FIG. VII for mode switch and harness connector locations.

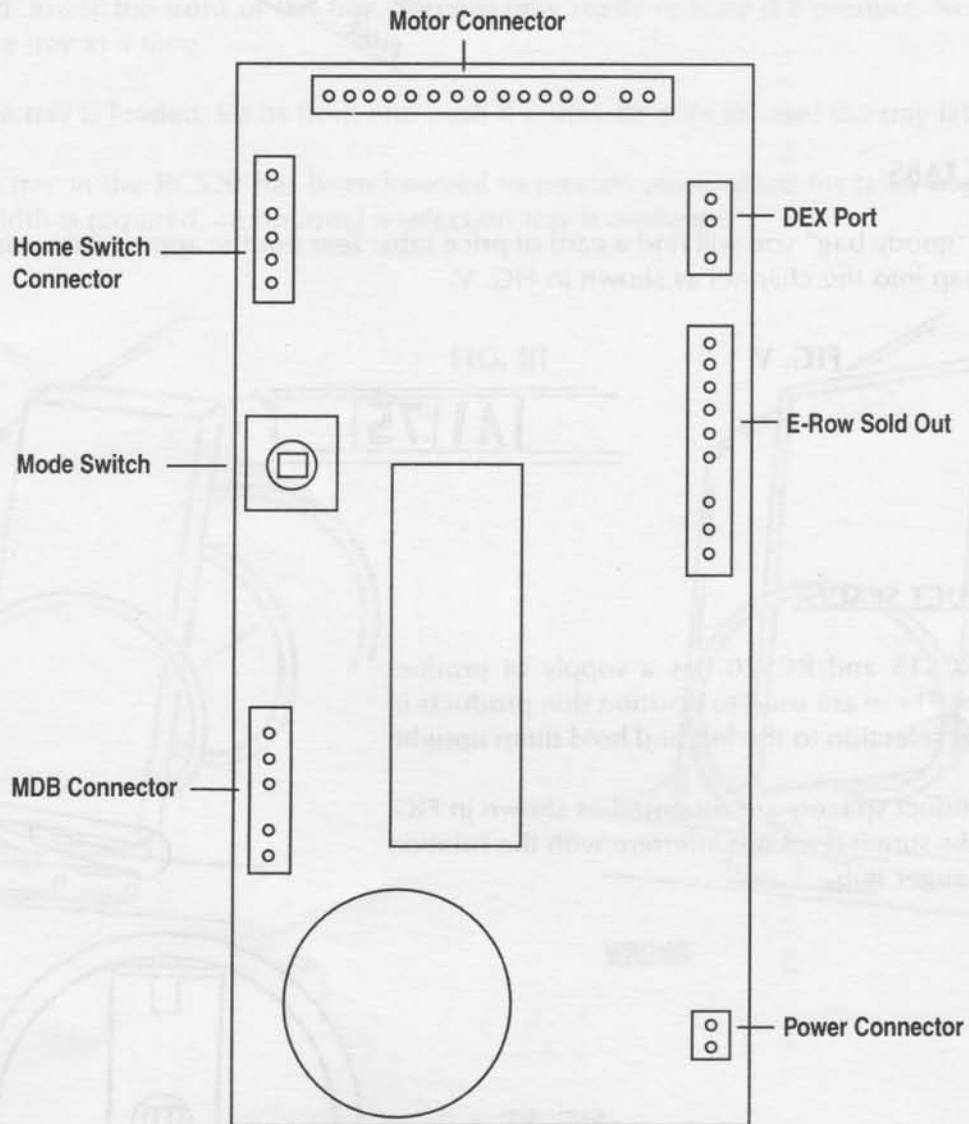


FIG. VII

XII. MDB CONTROLLER OPERATION

The electronic controller functions as the brain of your RCS15 or RCS20 and has the following operating characteristics:

1. The changer will not accept coins when
 - a. the top vend price has been reached,
 - b. the changer has no power or,
 - c. the machine is in vend cycle.
2. The "EXACT CHANGE" light will be lit when there is insufficient change in the coin tubes. During this time, change will not be given. The MDB electronics does not check coin levels in the tubes. It counts coins accepted and coins paid out.
3. The LED credit display will show the total amount of money deposited. If the selection price is greater than the deposits, the display will flash "CHECK PRICE."
4. The bill acceptor will not take bills if
 - a. the top vend price has been reached,
 - b. there are insufficient coins in the change tubes,
 - c. the unit has no power,
 - d. the machine is in vend cycle, or
 - e. the bill stacker is full.
5. Selection is made by first pressing the letter (A, B, etc.) and then the number of the desired item. If no credit has been established, the item's price will be flashed on the display.
6. If a vend motor fails to turn or complete a turn, "MAKE ALTERNATE SELECTION" will flash on the display.
7. The electronic controller can be programmed to do the following:
 - a. FORCED VEND on or off. This feature insures the vendor will not be used as a bill changer.
 - b. BILL ESCROW on or off. This feature returns the last bill inserted instead of change if a selection is not made.
 - c. MULTI-VEND on or off. This feature allows a customer to buy multiple items up to the amount of the deposit. Change is returned when the reject button is pushed.
8. This MDB controller features a DEX port for remote data retrieval.

XIII. MDB CONTROLLER PROGRAMMING

To dispense coins from the changer, access accounting registers, set vend prices, test motors and select vend options, you must enter the SERVICE MODE.

Press the MODE button on the controller to enter SERVICE MODE. "SET" will be displayed.

Press 1 to enter COIN DISPENSE function.

Press 2 to enter ACCOUNTING function.

Press 3 to enter PRICE SETTING function.

Press 4 to enter MOTOR TEST function.

Press 5 to enter VEND OPTIONS function.

To return to SALES MODE, press the MODE button or wait 25 seconds with no activity.

A. COIN DISPENSE FUNCTION

Press 1 to enter. "Coin" will be displayed.

Press 1 again to dispense lowest value coin. The coin value will be displayed.

Press 2 to dispense next coin. The coin value will be displayed.

Press 3 to dispense next coin. The coin value will be displayed.

Press 4 to dispense next coin. The coin value will be displayed.

Press 6 to exit function.

B. ACCOUNTING FUNCTION

Press 2 to enter. "ACCT" will be displayed.

Press 1 to read total vend counter. "SALE" will display 1 second, then the total non-resettable vend count will appear. Press 2 to read total cash counter. "CASH" will display, then the total non-resettable cash count will appear.

Press 3 to read resettable vend counter. "r SLE" will be displayed, then the total vends since last reset will appear.

Press 4 to read resettable cash counter. "r CSH" will be displayed, then the total cash taken since last reset will appear.

Press 5 to clear resettable counters.

Press 6 to exit function.

C. PRICE SETTING FUNCTION

Press 3 to enter. "PrC" will be displayed.

Press 1 to set a single selection price. "one" will be displayed until a valid selection is pressed. Then the selection's price will appear. Press 8 to increase the price and 9 to decrease it. Repeat this operation for each selection to be priced.

Press 2 to set a total row of prices. "ro" will be displayed until a row letter is pushed (A, B, C, etc.). Then current price will be displayed. Press 8 or 9 to adjust the price.

Press 6 to exit function.

D. MOTOR TEST FUNCTION

Press 4 to enter. "TEST" will be displayed.

Press 1 to read valid motor count.

Press 2 to vend a single selection. "ONE" will be displayed until a selection is pressed.

Repeat this operation for each selection to be tested.

Press 3 to test a row of motors. "ro" will display until a row letter is pushed (A, B, etc.).

Press 4 to test all motors in the machine.

Press 6 to exit function.

E. VEND OPTIONS FUNCTION

Press 5 to enter. "oPt" will be displayed.

Press 0 for FORCED VEND on. F-on will be displayed.

Press 1 for FORCED VEND off. F-oF will be displayed.

Press 2 for BILL ESCROW on. E-on will be displayed.

Press 3 for BILL ESCROW off. E-oF will be displayed.

Press 4 for MULTI-VEND on. U-on will be displayed.

Press 5 For MULTI-VEND off. U-oF will be displayed.

Press 6 to exit function.

F. TUBE LOAD FUNCTION

Coins can be added to the change tubes by passing the vend cycle with this function.

ALL COINS MUST BE LOADED THROUGH THE ACCEPTOR.

Press 7 to enter. "t-Ld" will be displayed.

Load lowest value coins first. The coin count and value will be displayed.

Load the next lowest coins. The coin count and value will be displayed.

Repeat process until all coins are loaded.

Press 6 to EXIT FUNCTION.



XIV. CHANGING AUGERS

To remove only the auger, lift the auger front up till it pops off the bottom flange of the auger hub, then lift it out of the retaining hole (See FIG. VIII). To replace the auger, reverse the process and push the bottom on with a flat-bladed screwdriver (See FIG. IX). To remove the auger and hub, squeeze the motor output shaft locking lips together with needle nose pliers while pulling the hub towards you.

FIG. VIII

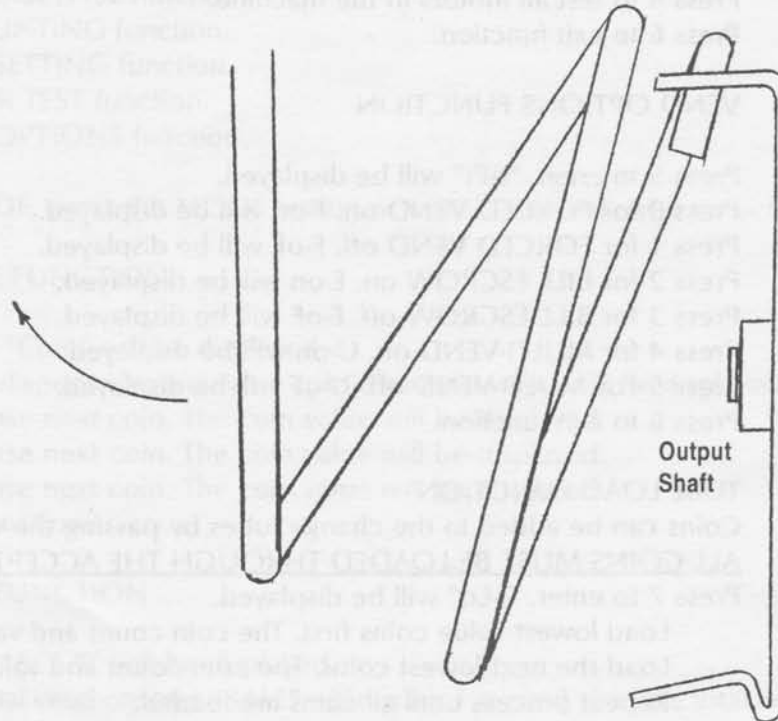
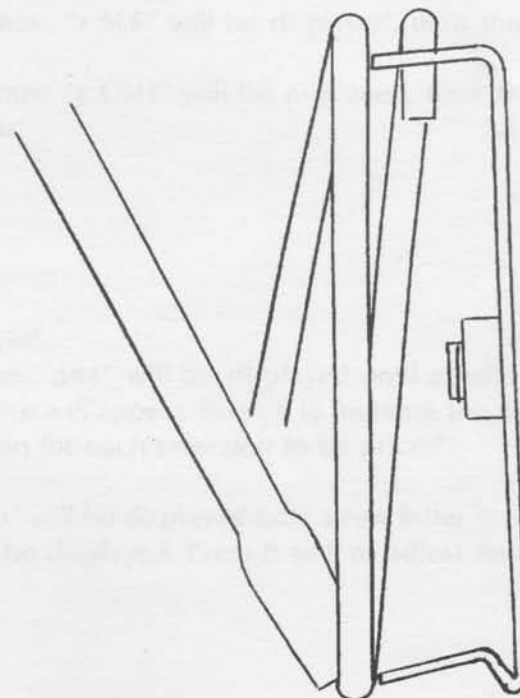


FIG. IX



XV. REMOVING THE CASH BOX

To remove the cash box, you must first open the service door. Then the cash box can be pulled forward out of the machine.

XVI. REMOVING VEND TRAYS

To remove a vend tray, first unlatch the tray latch, then pull the tray forward till the rear tray stop is engaged. Now lift the front of the tray up till the rear tray stop is clear and pull the tray out. Disconnect the tray harness, and you have completed the removal. To reinstall the tray, reverse this process.

CAUTION: Be careful not to damage the motors.

XVII. CONVERTING CANDY SELECTIONS TO SNACK

To convert two candy selections to an additional snack or pastry selection, follow the steps listed below:

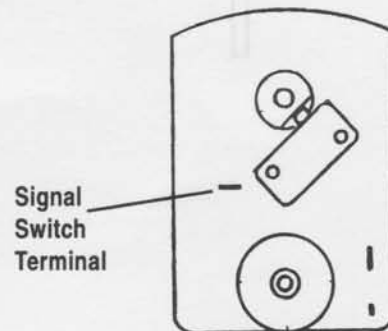
1. Remove the candy tray as directed in XVI.
2. Remove the left two augers as directed in XIV. (Note: Always start conversions from the left of the tray.)
3. Remove the two screws holding the divider and remove it.
4. Remove both motors and reposition one in the upper hole set on the back of the tray.
5. Attach the harness to the motor (either selection B0 or B1) and insulate the unused terminals.
6. Attach a snack auger and hub to the repositioned motor.
7. Remove the unused price sticker and reprice the used selection.
8. Change the price in the controller of the new selection as directed in XIII.

XVIII. REPLACING MOTORS

If a vend motor draws 300MA current or fails to complete rotation in 8 seconds, the electronics will signal "MAKE ALTERNATE SELECTION."

To remove a motor, first remove the vend tray. Then undo the harness and remove the two No. 8 screws securing the motor.

NOTE: Black signal wire goes on the top .187 wide terminal.



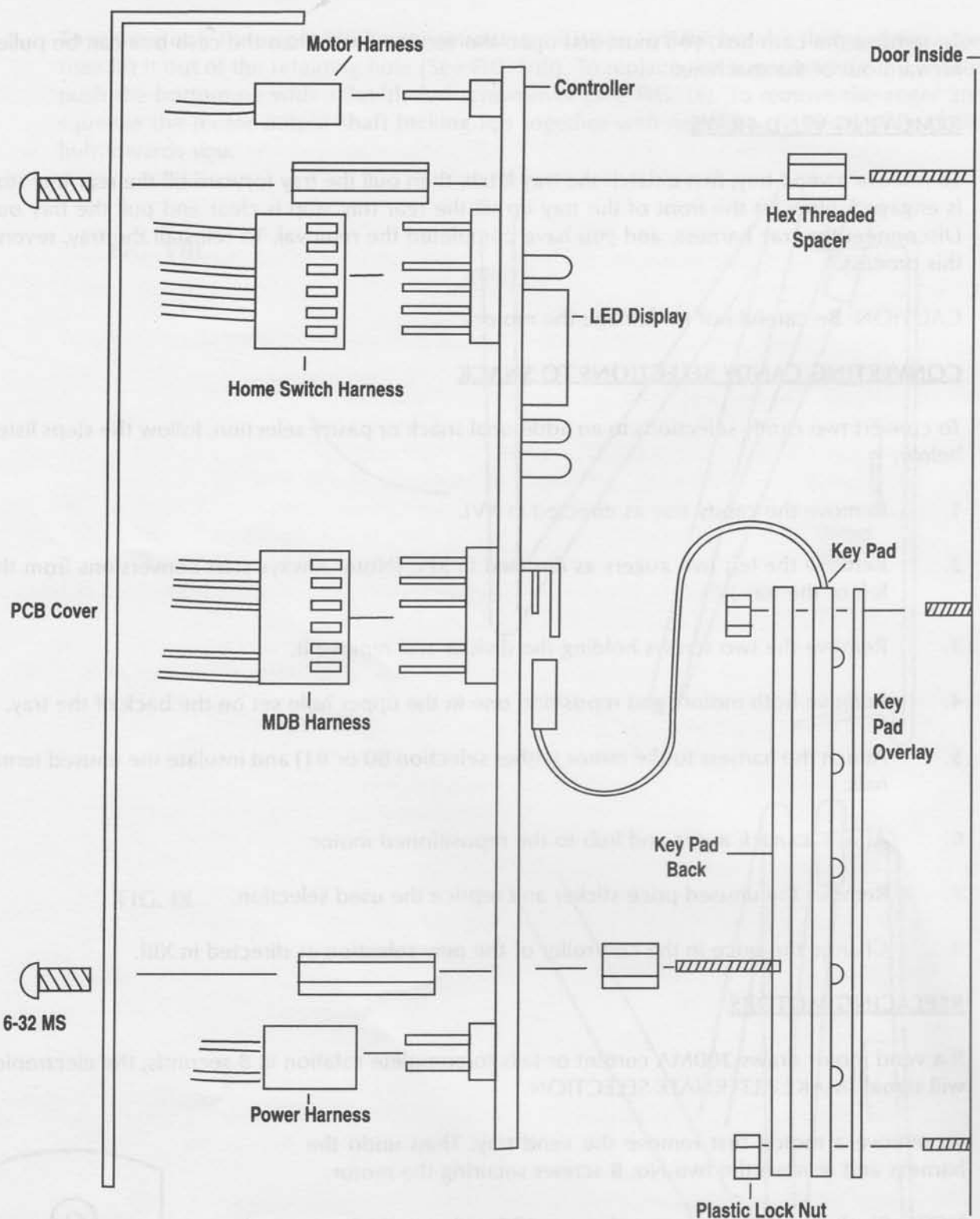


FIG. X

XIX. REMOVING THE CONTROLLER AND KEYPAD

CAUTION: Use extreme care while handling the electronic controller. Do not set it on metal.

To remove the controller and keypad, first remove the PCB cover, then the harnesses plugged to it. Remember the orientation.

Then remove the four hex nuts holding the controller (See FIG. X). Gently pull it off the studs and disconnect the keypad harness which is connected to the back side of the controller.

To remove the keypad back, the keypad and keypad overlay, undo the four plastic nuts holding it with a nut driver.

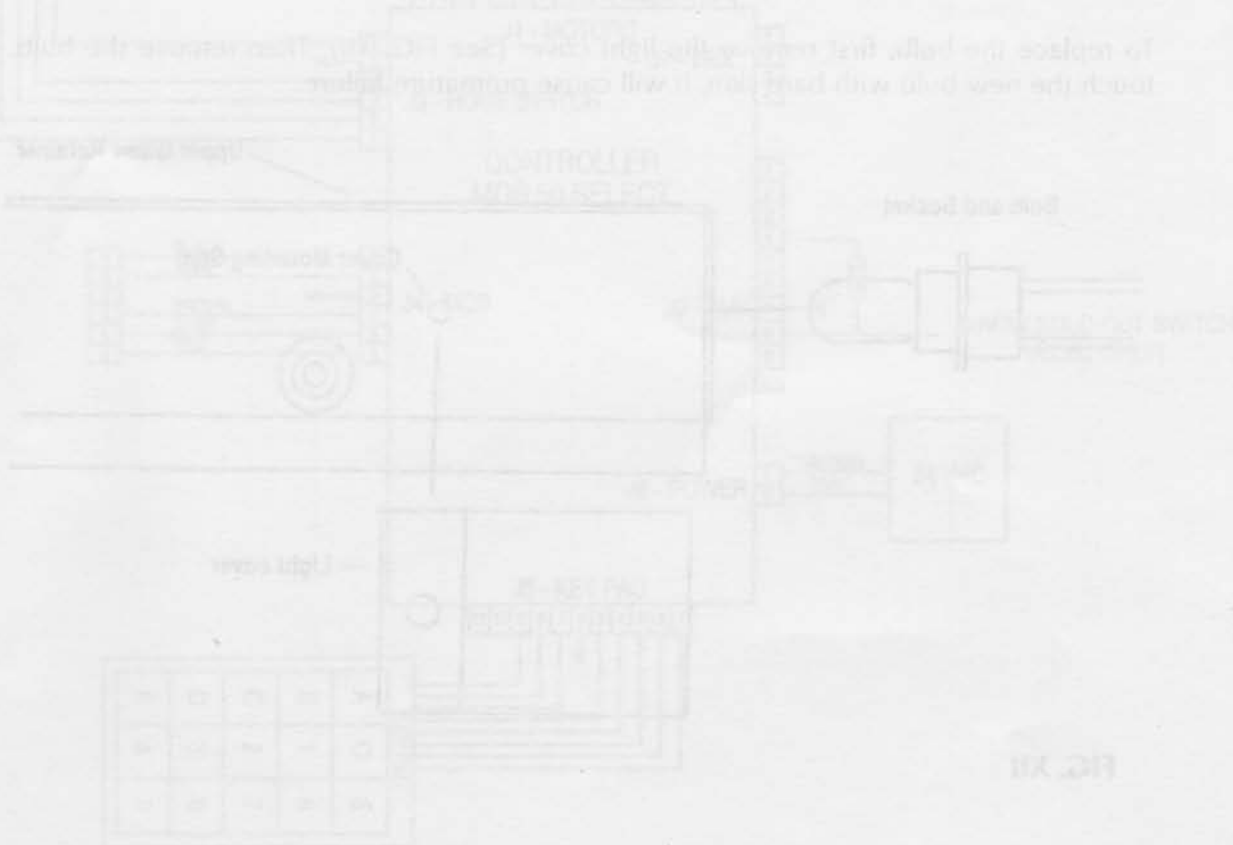
XX. REMOVING THE DELIVERY DOOR

First open the service door. Grasp the left hand side of the steel rod the delivery door pivots on with pliers. Tap the pliers so the rod moves to the left. This will pull the rod out of the retainer located in the right hand side of the door. Now the rod and door are free. Reverse the process to reinstall.

XXI. REMOVING THE TRANSFORMER

The transformer is mounted on the changer plate (See FIG.1).

First pull the changer plate out until it stops. Press the ball bearing slide detent latch and continue pulling the changer plate all the way out. Now the two nuts holding the transformer can be removed. Finish removal by disconnecting the harness wires.



XXII. LIFT HANDLES

Handles to aid in moving the RCS20 or RCS15 are located on the back of the machine. They can be removed when the unit is in position (See FIG. XI).

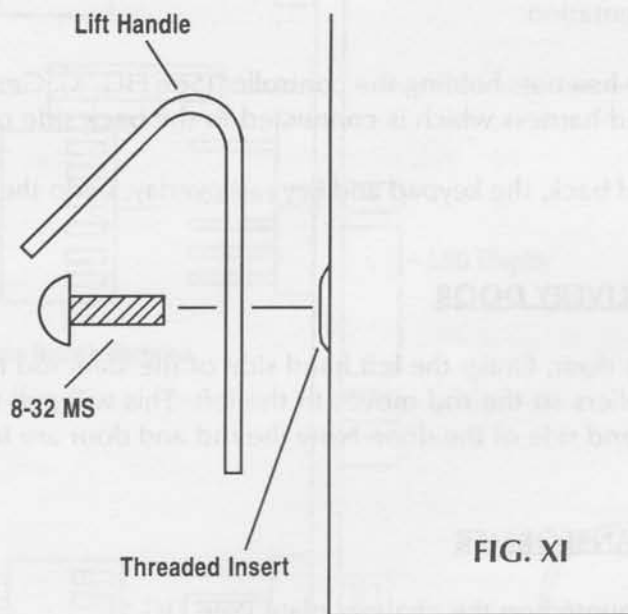


FIG. XI

XXIII. LIGHT BULB REPLACEMENT

CAUTION: BULB MAY BE HOT!

To replace the bulb, first remove the light cover (See FIG. XII). Then remove the bulb. Do not touch the new bulb with bare skin, it will cause premature failure.

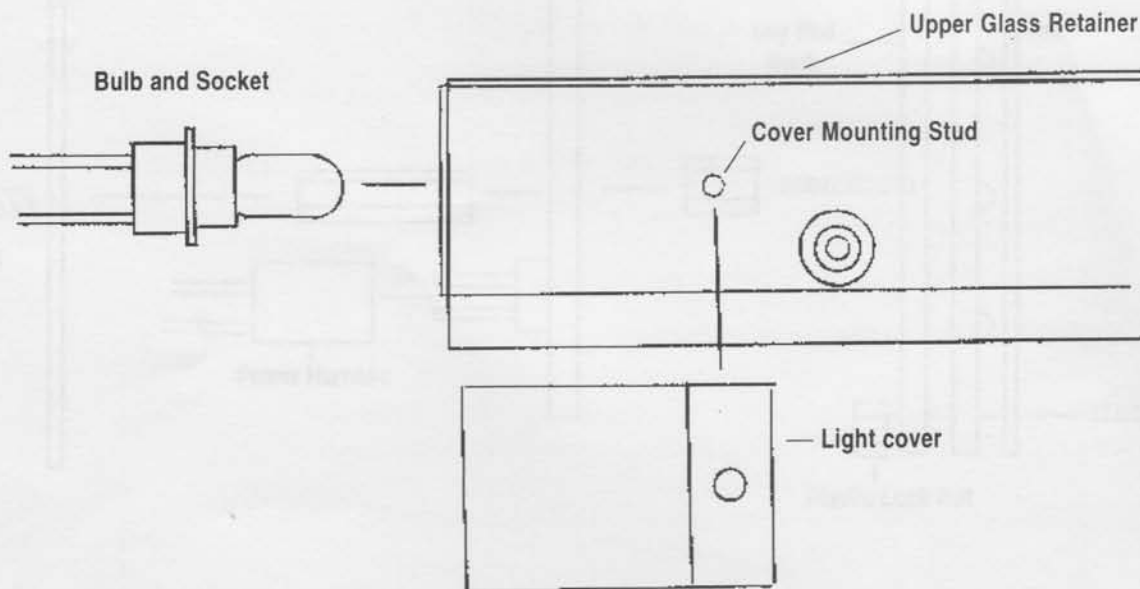
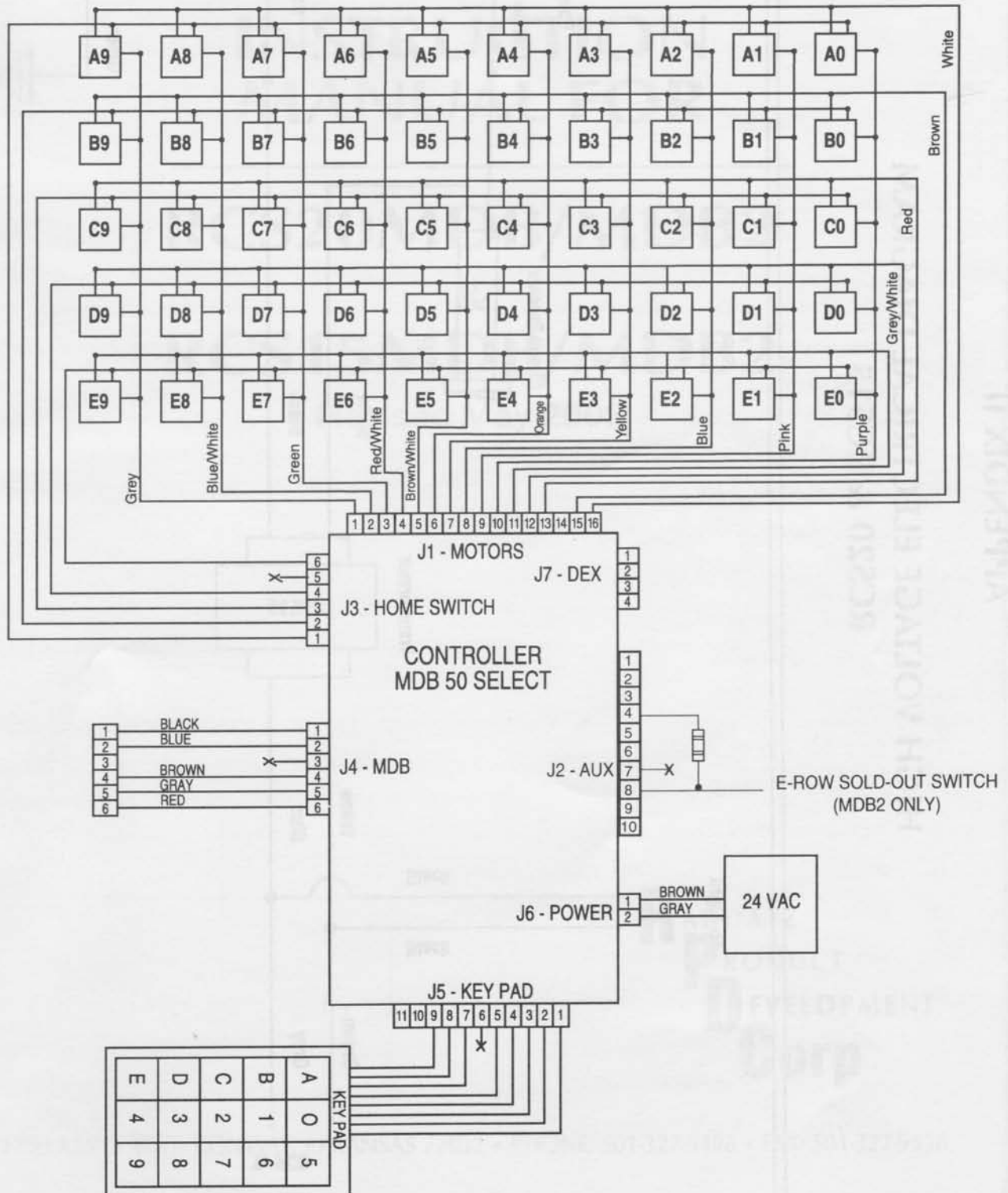


FIG. XII

APPENDIX I

ELECTRICAL DIAGRAM RCS20MDB & RCS15MDB



APPENDIX II

HIGH VOLTAGE ELECTRICAL DIAGRAM RCS20 & RCS15

