Access Control Devices Incorporated

1501/2001

ESCROW COIN-OP

COVERS SUFFIX SERIES ES, ESB, ESB/C

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Table of Contents

Before You Start 1

Section 1 – Mechanical Installation 3

1501ES/2001ES Coin-op 3

Section 2 – Electrical Installation 4

Standard Connections – Savin, Ricoh, Cannon, Minolta, Sharp, Konica, Toshiba and Panasonic 4

Universal Connections 6

General Connection Information 8

Section 3 – Operational Set-up (Copy Price, etc. …) 9

Service Copies 9

Page Price 9

Delays 10

General Information 12

Operational Parameters Record 13

Card Settings 13

STX and ROM Codes 14

Prepaid Bonus 14

Section 4 – Operation 16

Coins 16

Bills 16

Cards 17

Group Codes 18

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Bypass **18**

Coin Payout Instructions for 1501/2001 ES Series **18**

Loading the Coin Tubes **19**

Encoding Cards **20**

Reading Errored Cards **21**

Section 6 – Troubleshooting 22

Troubleshooting Guide **22**

Indicators – LEDs **24**

Test Mode **25**

ME1000 Board Reset Procedure **25**

Price Change **25**

Appendices:

Appendix A

Appendix B

Appendix C

Appendix D

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Before You Start

Each ACDI product includes all parts necessary for installation. Upon receiving your order, check to see that all parts listed below are included in your packaging. Every effort is made to ensure that your order is shipped correctly. If you do not have all of the items listed below, call us at 1-800-990-ACDI.

Drawings, Figures (photos) and Table Locations

For your convenience, all drawings, figures (figures are generally photographs), and tables are located in the back of this manual in Appendices A through D, instead of mixed in with the text of this manual. This allows for a more compact manual. Reference to "Figure 1" for example, refers to Figure 1 in Appendix A. Reference to "Drawing 1" refers to Drawing 1 in Appendix B. Reference to "Table 1" refers to "Table 1" in Appendix D.

STANDARD BOLT–PACK

2001ES Bolt–On:

- 2 – Door Keys #
- 2 – Coin Box Keys #
- 2 – Bypass Keys #
- 1 – 24vac Transformer
- 1 – Machine Harness
- 4 – Cable Ties
- 1 – Mounting Kit:
  - 6 – 5/16 x 32 x 1" Bolts
  - 6 – 5/16 x 32" Nuts
  - 12 – 5/16" Washers
- 1 – Sign Kit

****Important Note****

In order to provide you with proper assistance, when calling for assistance, you must have the unit's serial number before you can receive technical assistance. The serial number for the unit is located on the inside of the back door. All return authorizations will be issued against serial numbers and the Return Authorization (RA) number must be marked on the outside of the box. Boxes received without RAs printed will be refused, as we cannot guaranty timely service if packages are not received by the proper section.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Price Selection – Quick Start

* See Figures 1 and 2 (Appendix A) for button locations.

To go directly to Price Selection, follow the steps outlined below:

1. Open the bolt-on to allow access to the controller.
2. Press the Service (top) button.
3. "SERVICE MODE**" will appear followed by the copyright screens.
4. Press the Service button until "PRICE?" appears.
5. Press the Selection (bottom) button to select the menu option.
6. "PAGE COST $0.100" will appear.
7. Press the Selection (bottom) button to increase the price in five cent increments.
8. Turn the bypass key to decrement the price.
9. Press the Service button when finished.
10. Press the Service button until the unit exits the service mode.
11. The main screen will appear "EC: COPIES 0.100" will appear (showing your vend price).

Loading Coin Inventory Tubes

Initial loading of Coin Inventory Tubes will allow the coin-op to provide change immediately. If at least $5.00 is loaded, the bill acceptor will function also. For the bill acceptor to enable, the coin unit must have at least two nickels and two dimes as part of the $5.00. This is to ensure that change is available for any amount needed in Payout. The Coin Inventory Tubes are self-filling and will fill through normal use as customers insert coins. All coins go to the inventory tubes until the tubes are full, and then the coins are directed to the coin box. If you wish to completely load the Coin Inventory Tubes, you will need $38.50 (90 nickels, 115 dimes, and 90 quarters).

Coins can be loaded as shown below or using the quick method.

1. Load coins through the top of the unit as if you are going to make copies. This allows the controller to count each coin and provides better PAYOUT functions than would be achieved if the changers tube sensors were used to track change available.
2. Press the Service button and entering the service mode or turning on the Bypass key to clear the display and retain coin memory.

The unit is now ready to operate!

In the future, refer to Figure 1 (all photos are located in Appendix A) to locate the Service button (top button) and the Selection button (bottom). In all service settings, the Service button will skip an option and display the next option, the Selection button (bottom button) will select a menu option and then increment a value, and they bypass key will decrement a value (except when the bypass is used to clear some variables). <u>This remains true throughout the manual.</u>

Copyright 2006 Access Control Devices, Inc. All rights reserved.

SECTION 1 – MECHANICAL INSTALLATION

1501ES/2001ES Coin-op

Both the 1501 and 2001 series coin-op can be attached to any smooth surface that will support the unit's weight and will allow drilling for support bolts.

Other Surface Installation

Mark the mounting surface by using a pencil and marking through the bolt-on's mounting holes.

1. Drill, or otherwise prepare the surface to receive the mounting hardware that you are using for your specific application.
2. Secure the bolt-on following steps two through four.

Free-Standing Installation

1. Place the bolt-on on top of the pedestal-mounting plate.
2. Insert 5/16" bolts (with one washer) through the bolt-on down to the pedestal-mounting plate.
3. Secure the bolts with the 5/16" nuts and washers supplied.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

SECTION 2 – ELECTRICAL INSTALLATION

Most copiers can be connected using one of the methods described in the following pages. If you have doubts concerning the electrical connections, call 1-800-990-ACDI, *before* you proceed!

Because there is some variance in electrical and/or electronic operation of copiers (even copiers made by the same manufacturer), one set of instructions will not work for all copiers.

Follow the appropriate instructions to connect your copier. If you have any questions, call us toll–free at 1-800-990-2234.

Before you begin, it is recommended that the technician read the information contained in General Connection Information, page 12, before beginning installation.

Technicians should have a copier technical manual to use as reference during installation.

Standard Connections – Savin, Ricoh, Cannon, Minolta, Sharp, Konica, Toshiba and Panasonic

Begin with a fully functional copier that has been completely tested.

1. Remove power from the copier and the coin-op.

Warning: Failure to remove all power can result in personal injury and/or damage to the copier!

2. Locate the 'Key Counter' or 'Personal Counter' (Card Control for Cannon) connector in the copier.
3. Remove copier panels to expose the connector and to provide a routing path for the machine harness.
4. Connect the machine harness to the matching circular connector on the back of the bolt-on.
5. Route the machine harness to the 'Key Counter' connector.
6. Connect the Coin-op Harness Connector to the matching 'Key Counter' connector:

See Figure 1, Appendix B.

7. Route the machine harness away from moving parts and secure.

Copier 'Key Counter' Connector	Machine Harness Connector
Normally Jumpered (1st Wire)	Black (Enable Relay Common)
Normally Jumpered (2nd Wire)	White (Enable Relay Normally Open)
Counter Pulse (1st Wire)	Red (Billing Pulse Line – Price 1)
Counter Pulse (2nd Wire)	Green (Billing Pulse Line RTN – Price 1)

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Note: Check to see that that black/white wires are connected to the copier lines that were jumpered, or are used for enable (our enable lines provide a relay closer). **Incorrect connections will damage the copier. ACDI will not be responsible for damage caused while connecting to the copier. It is your responsibility to verify operation before connecting.**

Route the machine harness away from moving parts and secure.

1. Replace all copier panels and apply power to the copier and coin-op.
2. After the copier warms up, insert and turn the coin-op bypass key – the copier should make copies normally.
3. Turn off the bypass key – the copier should be disabled.
4. Open the coin-op by turning the door lock key.
5. Press the Service button.
6. Set Price 1.
7. Press the Select button at the exit prompt to leave the service mode.

The display will read “EC: COPIES 10” (or your price setting) meaning the exact change is required. If you have inserted at least one dollar in change, with at least two nickels and two dimes in that dollar amount, “OK: COPIES 10” will be displayed, meaning that change is available.

8. Insert enough change to make one copy.
9. Select 2 copies on the copier.
10. Press “Print.” The copier should produce one complete copy.
11. Insert enough change to make several copies and ensure that copies are made (and charged for) properly.
12. If the copier produces a partial copy, too many copies, charges too much, or fails to copy properly in any manner, turn to Section 3, page 12 (Delays) for instructions.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Universal Connections

****Use only if the above instructions will not work and you have consulted ACDI.****

These connection instructions are merely guidelines. Actual connections may vary. Consult your technical manual and Access Control Devices, Inc., technical support before you begin!

Begin with a fully functional copier that has been completely tested.

1. Remove power from the copier and the coin-op.

Warning: Failure to remove all power can result in personal injury and/or damage to the copier!

2. Locate the 'Key Counter' connector and the registration clutch (or solenoid) or equivalent in the copier.
3. Remove the copier panels to expose the connector and clutch and provide a routing path for the machine harness.
4. Connect the machine harness to the matching circular connector on the back of the bolt-on.
5. Route the machine harness, the 'Key Counter' connector and registration solenoid. **See** Figure 1, Appendix B.
6. Make the electrical connections using the UR connectors supplied:
7. Connect the machine harness ground to copier case ground (this wire has a ring terminal on the end).

Copier 'Key Counter' Connector	Machine Harness
Normally Jumpered 'Key Counter'	Black (Enable Relay Common)
Connector (1st Wire)	
Normally Jumpered 'Key Counter'	White (Enable Relay Normally Open)
Connector (2nd Wire)	
Copier Registration Clutch/Solenoid (or equivalent)	Machine Harness Wire
Clutch (24vdc)	Red (Billing Pulse Line – Price 1)
Clutch (RTN)	Green (Billing Pulse Line RTN – Price 1)

In this case, the billing pulse used by the coin-op will be provided when registration begins. This will normally provide a signal early enough in the copy cycle to allow only one copy

Copyright 2006 Access Control Devices, Inc. All rights reserved.

with no extras. This connection is for copiers that provide 'Key Counter' copier pulses from the exit switch, which are generally too late to stop extra copies from being fed.

Note: Check to see that the black/white wires are connected to the copier lines that were jumpered or are used for enable (our enable lines provide a relay closure). **Incorrect connections will damage the copier. ACDI will not be responsible for damage caused while connecting to the copier. It is your responsibility to verify operation before connecting.**

Route the Machine Harness away from moving parts and secure.

1. Replace all copier panels and apply power to the copier and coin-op.
2. After the copier warm-up, insert and turn the coin-op bypass key – the copier should make copies normally.
3. Turn off the bypass key – the copier should be disabled.
4. Open the coin-op by turning the door lock key.
5. Press the Service button (top, or black, push-button) on the end of the control board (pressing the Select button will have no affect at this point). "SERVICE MODE" will be displayed.
6. Set Price 1.
7. Press the Select Button (bottom or red) at the exit prompt to leave the service mode.

   The display will read: "EC: COPIES 10" (or your price setting), meaning that exact change is required. If you have inserted at least one dollar in change with at least two nickels and two dimes in that dollar amount, "OK: COPIES 10" will be displayed, meaning that change is available.

8. Insert enough change to make one copy.
9. Select two copies on the copier.
10. Press "Print".

    The copier should produce one complete copy.

11. Insert enough change to make several copies and ensure that copies are made (and charged for) properly.

If the copier produces a partial copy, too many copies, charges too much, or fails to copy properly in any manner, turn to Section 3, page 12, Delays, for instructions. Some models must be controlled using the paper-out sensor. If you have questions about installation procedures, call ACDI before you begin installation and we will select the simplest method of connection.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

General Connection Information

All copier coin-ops generally control copiers in the following way:

The copier's enable jumper (normally located at the 'Key Counter' plug) is opened and replaced with two wires from the coin-op. These lines provide common, and normally, open relay contacts.

The copier's copy pulse (two, normally located at the 'Key Counter' plug) lines have a coin-op wire attached to each.

When the user inserts enough money to reach the copy price, the coin-op enable relay closes, providing the same enable jumper that the copier is originally equipped with.

Users may insert enough money to run multiple copies.

As a copy is made, the copier supplies a copy pulse, which is transmitted to the coin-op through the attached wires.

The copy pulse is used as a billing pulse and the user's balance is reduced.

When the user's balance falls below Price 1 (copy price), the coin-op's enable relay de-energizes, opening the enable line – the copier is now disabled.

If a balance is still displayed, the coin-op will pay-out automatically.

Note: The user can have the balance returned after making one copy.

The unit is now ready for the next customer.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

SECTION 3 – OPERATIONAL SET-UP (COPY PRICE, ETC. …)

To set up operational parameters you must first enter into the Service Mode. To do this, press the Service button (Switch 1). See figures 1 and 2 in Appendix A. "SERVICE MODE" will be displayed for a few seconds. The Service Mode menu consists of menu options that can be skipped or selected. The entire Service Mode menu is not listed here as the various options are presented as appropriate throughout this manual. The following listing consists of menu options commonly used to set up the coin-op for operation. The Service Copies option is the exception to this and is presented first, due to the fact that it is the very first "option" displayed:

Service Copies

This menu item is an automatic selection. When entering the Service Mode, the first screens display the ACDI copyright. Then, the following will display: "SERV Copies 0000." (Assuming that no copies have been made using the service mode)

The controlled device will be enabled when in Service Mode. This allows a method of making copies/prints during normal service sessions. The value shown will increment with each copy and will accumulate each time that Service Mode is used for making copies. The value shown will not record on any other meter, therefore; the sales meters will not contain copy/page counts not made by the customer. This count is cleared when the usage meters are cleared.

Page Price

Press the Service button (top push button) until "Price?" is displayed, then press the Select button.

Price

1. The default setting is 10 cents per page.
2. Press the Select Button (bottom) to increase price.
3. Turn on the bypass switch to decrease the price.
4. Press the Service button (top) when finished.

Press the Service button if you want to bypass this setting

From this point on we will assume that you understand that the Service button (top button) bypasses a setting (or leaves the setting when you are finished) and that the Select button (bottom) selects a menu option. Once a menu option has been selected, the Select button increments, while the bypass key is used to decrement values. If you make a short button press, the value increments by 1 or 10. The longer you hold the button, the faster the increment, up to 1000 per increment (or $1/per increment).

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Delays

Allows time delays to be entered for proper operation of some copiers.

When to Use Delays

Most copiers do not need delays to function properly. However, some will not operate without adjustment to the disable time. A brief description of symptoms indicating the need for delay times is presented under each heading below. The Troubleshooting Guide will also indicate when to set delays and which of the delay settings need modification. For further information, see General Connection Information and General Information later in this chapter. It is best to read this information if you are not familiar with the coin-op control of copiers. Do not hesitate to call us if you need help or further information. Remember, you may not need to set any of these parameters. They are provided to enable control of a wide variety of copiers (current and future).

Disable 1 50ms Increments

1. Default setting = 0.
2. Make this adjustment if your computer makes partial copies or jams before a copy is made.
3. Increase according to how much of the copy is lost.
4. Increase by 10 each time until a complete copy is made for single and multiple copies. If increasing by 10 does not show significant difference in copy, increase by a larger amount each time to speed up the process.
5. Check to ensure that extra copies are not made (delay too long).
6. If you insert enough money to make two copies and the unit makes three (three was selected), decrease this delay time.

Disable 2 50ms Increments

1. Default setting = 0.
2. Make this adjustment if your copier makes partial copies or jams before a copy is made using the second vend relay (special connections only).
3. Increase according to how much of the copy is lost.
4. Increase by 10 each time until a complete copy is made for single and multiple copies. If increasing by 10 does not show significant difference in the copy, increase by a larger amount each time to speed up the process.
5. Check to ensure that extra copies are not made (delay too long).
6. If you insert enough money to make two copies and the unit makes three (three was selected), decrease the delay time.

Billing Delay 50ms Increments

1. Default setting = 0.
2. Make this adjustment only on copiers using the paper bypass sensor (Konica 1112RE, for example).
3. Adjust for a delay of one section (set this parameter to 20)
4. The coin-op should not charge (reduce the displayed balance) for one second.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Copier 4ms Increments

1. Default setting = 0.
2. Make this adjustment only if you are allowing the copier to time-out and you want to "wake it up" when money is inserted (requires special connection to copier).
3. Set parameter to 15.
4. Increase if copier does not "wake up" when money is inserted.

Wake 4ms Increments

1. Default setting = 0.
2. Make this adjustment in conjunction with Copier delay.
3. Typical setting is 15.

Blind Time 50ms Increments

1. Default setting = 0.
2. Some copiers pulse twice for each copy. If the displayed balance is decremented twice or more for each copy, use this setting.

Force Vend Yes/No

This setting can be used to force the user to make a copy after money is inserted before change is returned (similar to vending machine operation). If this is set to 'Yes' (default), the user will have to make at least one copy/print before receiving any change. A setting of 'No' will allow the user to return change any time after inserting it.

Payout 50ms Increments

In some cases, customers may try to 'cheat' the coin-op by pressing the coin return immediately after pressing print. If this poses a problem with the operation of your unit, use this setting.

1. Default setting = 0 (no delay).
2. Increment (number entered will depend on the copier's speed) 1 = 50ms, 10 = 500ms, etc.
3. Only increment high enough to allow copy billing before payout.

Service Reset

Used to return all settings back to their default values. If this option is selected, all changes previously made to delays and prices will be lost.

To affect the service reset, turn the bypass key to the 'On' position. The display will indicate that reset has been accomplished and the bypass key can be turned to the 'Off' position.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

General Information

The parameters listed in this section are normally not needed. Some copier models operate in a different manner, which will require adjustment of these parameters and, possibly, will require electrical connections that differ from those found in this manual. The following is a brief discussion of the use of parameter settings. The described copier operation is general in nature. We will not presume to tell the service technician how a copier works – we intend to illustrate how the coin-op provides control for the copier. Remember, if you need to make parameter changes due to copy irregularities, we can help! It is recommended that service technicians read this manual to familiarize themselves with the coin-op equipment. However, if you need a nonstandard setup, we can help you accomplish this quickly – call us at 1-800-990-ACDI.

Basic Copier Operation

1. The copier is powered-up and ready to make copies.
2. User selects the number of copies and presses 'Start.'
3. Paper feeds from paper source.
4. Standard paper-path is followed.
5. During the copy cycle a copy pulse is sent to the Internal Copy Counter and to the Key Counter's connector for each copy.
6. Copy cycle ends.

Basic Copier Operation with Coin-op

1. Copier is powered-up and ready to make copies.
2. User selects the number of copies and presses 'Start.'
    a. Because the coin-op is connected to the copier, the copier's enable jumper has been removed.
    b. Copier will not come to ready until copy price has been inserted.
3. User inserts 10 cents (copy price 1 = 10 cents)
4. Paper feeds for paper source.
5. During the copy cycle a copy pulse is sent to the Internal Copy Counter and to the Key Counter connector for each copy.
    a. If copy pull is too early in the cycle, the copier is disabled and a complete copy is not produced.
    b. It is for these occasions that disable the delays are used.
    c. Simply enter the service mode and increase the disable delay(s).
6. If copy pulse is too late in the copy cycle, users can get a free, or blank, second page.
7. Simply enter the service mode and decrease the disable delay(s).
8. If disable delays are set at zero, move the two coin-op reset (billing) lines to a 24VDC solenoid, or clutch, that functions earlier in the copy cycle (Registration, Paper Feed, etc.)
9. The disable delay time or billing line connection will vary by copier.
10. Copy cycle ends.

Remember: Determining the proper connection for your copier is normally a very short, simple procedure. If you need help, call 1-800-990-ACDI.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Operational Parameters Record

It is good procedure to log your current settings into a document for future reference. Use the Appendix D log to record the parameter settings for this copier.

Card Settings

If you have a card unit installed in your bolt-on, the following settings will apply (Enter the service mode and bypass all menu options until "CARD READ SERV?" appears. Press the Select button). When the desired setting appears, press the Select button.

Prices

$/PG G1: Page Cost for Group 1 Cash Cards

1. Default 5 cents
2. Use the Select button to increase in 1/10-cent increments.
3. Use the bypass key to decrease in 1/10-cent increments.
4. Press the Service button to leave this setting.

$/PG G2: Page Cost for Group 2 Cash Cards

1. Default 5 cents
2. Use the Select button to increase in 1/10-cent increments.
3. Use the bypass key to decrease in 1/10-cent increments.
4. Press the Service button to leave this setting.

$/PG G3: Page Cost for Group 3 Cash Cards

1. Default 5 cents
2. Use the Select button to increase in 1/10-cent increments.
3. Use the bypass key to decrease in 1/10-cent increments.
4. Press the Service button to leave this setting.

U/PG G1: Page Cost for Group 1 Units Cards

1. Default is 1.
2. These are the units charged per copy setting (same as setting price per copy).
3. Use the Select button to increase in 1-unit increments.
4. Use the bypass key to decrease in 1-unit increments.
5. Press the Service button to leave this setting

U/PG G2: Page Cost for Group 2 Units Cards

1. Default is 1.
2. These are the units charged per copy setting (same as setting price per copy).
3. Use the Select button to increase in 1-unit increments.
4. Use the bypass key to decrease in 1-unit increments.
5. Press the Service button to leave this setting

U/PG G3: Page Cost for Group 3 Units Cards

1. Default is 1.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

2. These are the units charged per copy setting (same as setting price per copy).
3. Use the Select button to increase in 1-unit increments.
4. Use the bypass key to decrease in 1-unit increments.
5. Press the Service button to leave this setting.

Card Max

1. Default is $000.000. If set to $000.000, no limit will be applied.
2. Allows a card to be limited in value.
3. Bill acceptor is disabled when a card reaches this value.
4. If the coin-op has value displayed before the card is inserted, this value will be allowed to credit to the card, even if it is above the limit.
5. Range is 1 to 999 in $1 to $10 increments.
6. Use the Select button to increase in $1 increments (hold for $10 increments)
7. Use the bypass key to decrease in $1 increments.
8. Press the Service button to leave this setting.

Note: If a card balance is higher than the card max, the card will be returned and "Above Max" will display.

STX and ROM Codes

These codes determine which cards the reader accepts. These values are normally preset at the factory. Do not change without consulting ACDI.

Warning: Changing these codes will result in all cards being rejected.

Prepaid Bonus

The prepaid bonus function allows the user to receive a cash bonus for adding value to the card (units or dollars). The calculation is made by determining the initial value of the card and comparing this value to the value written to the card at the end of the copy session. The award is based on even dollars. If the customer has $5.30 on the card when it is initially inserted, and $10.00 is added to the card, the final displayed value will be $15.60. This assumes that the award function is enabled and, in this example, $10 is in the award ranges that pay 3% (3% of $10 = 30 cents). The award bonus is off by default.

Awd L1 % Bonus Percentage Award for Level 1

1. Default is 0 (disabled).
2. This is the percentage awarded.
3. Range is 1 to 50 in one-percent increments.
4. Use the Select button to increase in one-percent increments.
5. Use the bypass key to decrease in one-percent increments.
6. Press the Service button to leave this setting.

Awd L2 % Bonus Percentage Award for Level 2

1. Default is 0 (disabled).

Copyright 2006 Access Control Devices, Inc. All rights reserved.

2. This is the percentage awarded for level 2.
3. Range is 1 to 50 in one-percent increments.
4. Use the Select button to increase in one-percent increments.
5. Use the bypass key to decrease in one-percent increments.
6. Press the Service button to leave this setting.

Awd L3 % Bonus Percentage Award for Level 3

1. Default is 0 (disabled).
2. This is the percentage awarded.
3. Range is 1 to 50 in one-percent increments.
4. Use the Select button to increase in one-percent increments.
5. Use the bypass key to decrease in one-percent increments.
6. Press the Service button to leave this setting.

Awd L1 Award Level 1

1. Default is $5.00.
2. This is the minimum value needed for a card to receive an award.
3. Range is $1 to $99 in one-dollar increments.
4. Use the Select button to increase in one-cent increments.
5. Use the bypass key to decrease in one-cent increments.
6. Press the Service button to leave this setting.

Awd L2 Award Level 1

1. Default is $10.00.
2. This is the second level of award.
3. Range is $1 to $99 in one-dollar increments.
4. Use the Select button to increase in one-cent increments.
5. Use the bypass key to decrease in one-cent increments.
6. Press the Service button to leave this setting.

Awd L3 Award Level 3

1. Default is $15.00.
2. This is the third level of award.
3. Range is $1 to $99 in one-dollar increments.
4. Use the Select button to increase in one-cent increments.
5. Use the bypass key to decrease in one-cent increments.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

SECTION 4 – OPERATION

The following is a brief description of the coin-op's operation. If you need more in-depth information, call the Access Control Devices, Inc., toll-free technical support line at 1-800-990-ACDI.

Coins

1. Copier will be on and functional except that it will not run copies.
2. Customer inserts coins (nickels, dimes, quarters, and/or $1 coins).
3. Coin-op LCD display shows credit for the coins.
4. Once the copy price has been inserted, the coin-op will bring the copier to the ready state.
5. Customer can make one copy per copy price inserted.
6. After the customer has made at least one copy, pressing the coin return plunger will start the payout process.
7. Coin-op will pay remaining balance in least number of coins (depending upon coins available).
8. If coin-op runs out of change during a payout, the copier will be re-enabled and the customer must make copies.
9. When the balance falls below the price of one copy, remaining balance will payout automatically.

Bills

2001ESB

The bill acceptor will enable after approximately five dollars is in the inventory tubes. Of this five dollars, at least two dimes and two nickels must be in the tubes. The bill acceptor will enable if a valid debit card is inserted, regardless of the inventory tube status. The bill acceptor is set to accept up to $5 bills. As long as the inventory tubes have met the above conditions, the bill acceptor will function. Once the balance displayed is greater than the amount of change in the inventory tubes, the bill acceptor will be disabled until the credit balance falls below the available change. The bill acceptor can be set to accept $10 and $20 bills also (see Appendix C). If a card unit is installed, the bill acceptor will accept all bills and will enable when a card is inserted even if no change is in the inventory tubes.

1. When the bill acceptor is enabled (inventory requirements satisfied), valid bills will be accepted.
2. Coin-op display will delay for several seconds and then display the balance + bill value.
3. Make copies and receive changes as described above (Coins).

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Cards

If your coin-op is equipped with a card unit, it will function as follows:

1. When a card is inserted, the card's value (along with any balance already displayed) will be displayed.
2. If a card does not have the proper site code, it will be returned to the customer.
3. The displayed value will include any money previously inserted.
4. As copies are made the displayed balance will decrement by the card price set in the service mode.

   Note: If you did not change the card prices, they will default to the prices shown on page 16.

1. The customer may, at any time, insert change and/or bills to increase the balance displayed.
2. When the customer presses the coin return button, the remaining balance displayed will be written to the card and the card will be ejected. This allows the customer to add value to the card.
3. If a units card is used, the display will show units instead of dollars.
4. If a credit was displayed before the card was inserted (customer inserted change of bills), this value will be converted to units based on the unit-cost setting and re-displayed.
5. The display will decrement for each copy as set in the units-per-copy setting.
6. The changer is disabled when a units card is inserted.
7. If Bonus Award in enabled, the bonus (if any) will be added to the display value before the card is returned.

Occasionally, users will attempt to cheat the card unit by attaching tape or some other device to the card and retracting the card once the value is displayed. To avoid this, the card unit reads the value on the card the writes zero back to the card. If the card is removed, it now has a zero balance. If power is lost during operation, the value is stored in batter-backed RAM and this value will be written onto the card when power is restored (assuming that the card was not illegally removed). The card is then returned.

Note: If the service mode is called while a card is in the reader, the card will be returned to the user. If a card is inserted and no action occurs within the card timeout setting, the card will be returned.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Group Codes

Group codes can be used to allow access for some cardholders and not for others. Further, different group codes can be charged different rates. Each debit card is encoded with several fields of information including a group code. This code can be any number between 1 and 4095. This unit will store three different group codes. If the group codes on the card inserted matches any of the stored group codes, the card will be accepted, and charged accordingly. For instance, if this unit is set up with group codes, 1, 2 and 3 stored, a card with group code 17 will be rejected. When the group codes of 1, 2 and 3 are stored, prices can also be associated with the codes.

As an example, group code 1 can be set to charge 7.5 cents per copy, group code 2, 6.5 cents per copy and group code 3, 5 cents per copy. Cards inserted with any group code other than 1, 2, or 3 will be rejected. If a user inserts a card that has been encoded with group code 1, they will be charged 7.5 cents for each page printed or copied. Group codes and charge rates are set up as described under “Card Settings”.

Bypass

This unit is equipped with an electrical bypass key. To use the bypass function:

1. Insert the bypass key in lock.
2. Turn.
3. Display will read” **BYPASS MODE**”
4. Bill and coin acceptance is inhibited.
5. Copier will be enabled (all trays).
6. Copies can be made without money.
7. Number of copies is counting in Sales Information.
8. The bypass mode is disabled if a debit card is in the reader.

Coin Payout Instructions for 1501/2001 ES Series

Open rear door of unit and locate main board located on the upper right interior wall.

- Press the top service button until display reads “Payout Coins”
- Press the bottom button and display will read “Ready”

If the payout process is not started immediately the unit will timeout.

- Press the top button for nickels. You may hold button to payout continuously.
- Press the bottom button for dimes. You may hold button to payout continuously.
- Press both buttons for quarters. You may hold button to payout continuously.

After you are finished paying out coins the display will read “Reset Coin Count?” If all coin tubes are empty, insert operator key and turn to the on position. The display will then read “Reset OK” Turn the operator key off and remove.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

If the coin tubes still contain coins then press the top service button until display reads “Exit?” then press the bottom button.

Loading the Coin Tubes

In order to accurately track the number of coins available for change return, the controller must know how much change is in the inventory tubes when you begin operations. Load as follows.

Quick Method (Speed Load)

This method is fast, but it relies on you to tell the control board how many of each coin that you have inserted. For accurate payout, you must give the controller an accurate coin count to start with.

1. Insert coins from the front of the changer (see page B.5 in Appendix B – Coinco Changer ®, notice the arrow heads about half way down the changer – these slots are used to direct-load coins) counting each coin. The payout of coins can only be as accurate as the coin count that you give the control board. Using this quick load method requires that you accurately count all coins inserted.
2. Enter the service mode and repeatedly press the service button until “View Usage?” is displayed.
3. Press the selection button to select this option, and then press until “NKLS Stored” appears.
4. “NKLS Stored 000” will appear – press the selection button until the proper count appears. (turn on the bypass key to lower the count). Press the service button to go to the next display.
5. “DIMES Stored 000” will appear – store the proper number of dimes as described above.
6. “QTRS Stored 000” will appear – store the proper number of quarters as described above.
7. “EXIT? Bottom” will display – press the bottom switch to exit the service mode.

Standard Method

This method is much slower than the Quick Method, but it will always ensure accuracy of coins inserted.

1. Power the coin-op so that it is ready for operation “EC: COPIES 10” (or your price).
2. Insert the coins from the top of the coin-op as if you were making copies - the coin-op will display credit.
3. When you have finished loading the tubes, enter the service mode (or turn on the bypass key momentarily). This clears the balance from the display, but records the coin count.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

4. Exit service.

Note: If coins are loaded directly into the changer, the controller will not be aware that coins are available! Also, if you enter the Service Mode and select "**Reset Coins**" (under the Payout Coins menu option), the coin count is reset and you will need to payout any coins in the tube and reload.

Encoding Cards

The UCR1000-S reader can be used to encode cards. It can be used in place of the CopyMate® KPE Keypad Encoder, but is limited in functionality. Cards can be encoded for any of the three site/group codes and can be for cash or units.

1. Enter the service mode (press the Service button, top push button) or proceed from 'View Usage'.
2. Press the Service button until "Card Read Serv?" is displayed.
3. Press the Select button (red push button) to select.
4. "Encode Cards?" will appear (this is the first reader menu option).
5. Press the Select Button – G1 Code: 9 (your group code 1 setting). This is normally the group code that you will use. Do not use the other two unless directed to from the factory. (To select another group code, press the service button and the second group will appear).
6. Press the Select button –"Encode Cash? Will display (press the Service button if you want to encode units).
7. Press the Select button to encode cash – "Balance: $ .000" will display.
8. Press the Select button to increment the balance, turn on the bypass key to decrement.

Note: The value will increment by 1 cent if you press the select button quickly, pressing and holding will result in 10-cent increments. If the select button is held down, the balance will increment in $1 values after about $2 worth of 10-cent increments. Be careful not to exceed the desired value by a large margin as the decrement speed is only 1 cent and this can take several minutes if you pass the desire value by a significant margin. To decrement the value turn on the bypass key.

9. Once the desired value is displayed, insert a card into the throat of the reader and remove it.
10. The display will flash and "Insert Card…" will display.
11. Insert a card to be encoded – the card will cycle for writing and verification and then will be returned. Cards can be encoded one after the other.

Note: If a card is inserted that already has value, the old value will be lost and the new value will be encoded.

12. Press the Select button to end the encode session.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Reading Errored Cards

A card that has been pulled from the reader by an enterprising user (and –rarely– when value could not be written back to the card) will have zero value recorded in the first frame of data and the starting value recorded in the second frame.

When a card is inserted, zeros are written to the first frame to prevent pulling. The initial value is recorded in the second frame. When the copy session is over, the correct value is written to both frames.

Cards that have zero value are automatically returned to the user after displaying the value. If a user complains that his/her card has been zeroed (or lost its value), chances are that the card was pulled illegally from the reader. Actual data loss is very rare.

The original value that was on the card at the start of the copy session can be displayed by simply inserting the card into a CopyMate ® Express or into the coin-op's reader…

Insert the card and the display will read as follows:

"Balance:$ .000" then "Balance:$ 5.000" then "Format Error" – This example shows an errored card that has $5 at the time of insertion.

As the example shows, a card that is errored will, when inserted, display zero value (Balance:$ 0.000) then the value before being pulled (Balance:$ 5.000), and finally, the display will read "Format Error" before ejecting the card.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

SECTION 6 – TROUBLESHOOTING

ACDI products are designed with reliability in mind. It is out goal to provide customers with highly reliable products that offer trouble-free operation. Each unit is simple with enough sophistication to handle your needs without a great degree of complexity. Each unit is tested for proper operation before it is shipped. If you experience any difficulty with an ACDI product, call us for immediate help.

If your unit does not function properly, call our toll-free line for help – regardless of your warranty status. We will talk you through the proper steps for testing and we will send a replacement part if necessary. If you are returning a part to us, or if you are sending a part in for repair, you must call to receive a Return Authorization Number. This number must be printed on the outside of the return box for our shipping department to accept the package.

Troubleshooting Guide

Troubleshooting		
Symptom	**Possible Cause**	**Solution**
No display, no controller LEDs.	Bad transformer	Test for 24vac from transformer.
No display, status lights OK.	Improper display harness connection	Ensure that display is correctly connected.
No display, status lights OK.	Bad display	Return to ACDI – call for RA number.
Coins are rejected.	No power or defective changer	Test to ensure that the unit has power.
Dollar coin rejected.	$ Accept switch is off, or change low (changer inventory tube must contain approximately 8 qtrs, 10 dimes and 10 nickels of $ coin is rejected).	Lower the acceptor to expose three-position dip switch. Be sure that switch 3 (right-most switch) is on (pushed in at the top of the switch).
Coins are rejected.	Changer needs tuning.	See tuning instruction in Appendix B.
Will not accept bills.	Coin inventory was reset, or not enough coins are in the inventory tubes.	If coins are in the payout tubes, enter service mode and payout all coins. Load the coin tubes as described under heading “Loading the Coin Tubes.”
Will not accept bills.	Bill acceptor harness connection.	Ensure that the bill harness is fully seated.
Will not accept certain bills.	Bill acceptor is not set up to take specific bill.	Set dip switches correctly on bill acceptor. See BA30B Bill Acceptor Operation guide in Appendix B and Figures 7 and 8 in Appendix A.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Troubleshooting

Symptom	Possible Cause	Solution
Will not accept cards.	Card reader not powered or is not communicating with the ME1000.	LED3 should be linking. If LEDs 1 and 2 are alternating, check harness.
Holds card in reader.	Communication between ME1000 and reader lost.	Check harness connection from card reader J8 to ME1000 J2.
Rejects all cards, displays "Format Error."	Read/write head is bad or bad connection STX and/or ROM code set improperly.	Be sure that r/w head is positioned properly. Check connections from head to connector. Consult ACDI for correct codes (or test against codes recorded in this manual).
Makes more than one copy.	Disable delay setting is too high.	Enter service and lower the delay per copy price setting.
Makes more than one copy per	Billing lines connected to late copy cycle point.	Move billing lines to solenoid/clutch farther back in the cop cycle (move from exit sensor to registration, etc.).
Copier jams or gives partial copy.	Disable delay not set high enough.	Enter service mode and adjust delay up.
Coin-op does not decrement.	Improper connection of billing lines.	Ensure that the billing lines are connected to the proper copier points and that the electrical connection is good.
Coin-op does not decrement.	Improper shunt setting.	Refer to Figure 2 in Appendix B and Figures 9 and 10 in Appendix A. Call ACDI.
Coin-op charges twice for some copies.	Copier produces two pulses for every copy.	Enter service mode and increase blind time to a higher value.
Copier does not "wake up."	Automatic wake-up of copier is a special function.	Call ACDI for connection instructions for this unit. 1-800-990-ACDI

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Indicators – LEDs

Small light emitting diodes (LEDs) are provided on the ME1000 control board to aid in troubleshooting. The location of these LEDs is show in Appendix B, Figure 2, page B.3.

LED 1 – Changer Enabled/Test

This LED will be on during normal operation to indicate that the changer is enabled. This LED may be off during long disable delay times. The unit will not accept coins if this LED is off.

This LED also is used as an indicator during test mode. It will flash alternately with LED 2 during test mode.

LED 2 – Bill Acceptor Enabled/Test

This LED will be on during normal operation to indicate that the bill acceptor is enabled. This LED may be off during long disable delay times. This LED will not be on until the changer has at least $5 in change in the payout tubes (must include at least two nickels and two dimes). See “Bills” in Section 4, page 19. The unit will not accept bills if this LED is off.
This LED also is used as an indicator during test mode. It will flash alternately with LED 1 during test mode.

LED 3 – Vend Relay Status

This LED is on when vend relay 1 is energized. This normally indicates that the unit under control is enabled. The controlled device will not operate if this LED is off. The LED should be on if the balance displayed is greater than or equal to the vend price set in the service mode, or the bypass switch is on, or the control board is in the service mode.

LED 4 – Vend Relay 2 Status **(This LED is only on the board for custom applications)**

LED 5 – 24vac

This LED indicates presence of 24vac-supply voltage when lit.

LED 6 – 5VDC

This LED indicates presence of 5VDC-supply voltage when lit.

LED 7 – Copy/Print Made

This LED is on during a copy/print pulse. If this LED lights, the balance displayed should be decremented by the vend price.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Test Mode

The ME1000 control board is designed with on-board self-diagnostics. These diagnostics test all functions of the board and provide data indicating any component failure. The diagnostics are activated at the factory and required a special test fixture harness.

Test mode can be used to completely reset the control board back to its factory defaults if necessary. If this reset is activated, all values will be reset including all sales meters, coin counts (coin counts (coins will need to be paid out and re-entered), prices and delays. To accomplish this rest, follow these steps:

ME1000 Board Reset Procedure

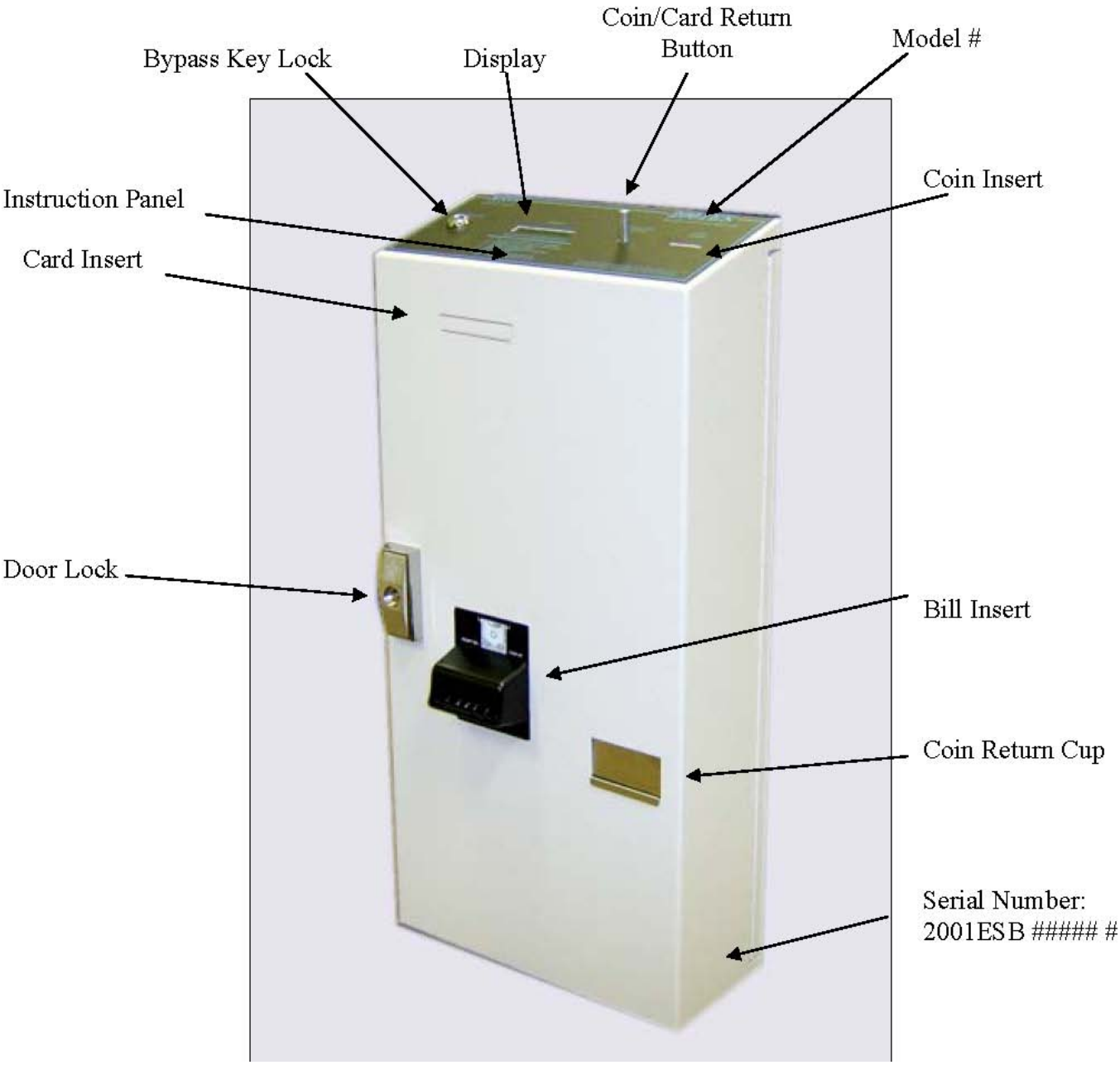
1. Power down the coin unit.
2. Remove JP1 (three pin header with a jumper on 2 pins). Remember which two pins the jumper was placed on.
3. Place jumper on JP11.
4. Power up the coin unit.
5. Display should read “Press Top SW”
6. Press the top switch on the board (S1).
7. Display should read “Failed Test #2”.
8. Press the top switch.
9. Display will flash “Init Mem”, “OK”, and then go blank.
10. Power down the coin unit.
11. Remove from JP11 and place back on JP1, remember to place it on the same two pins.
12. Power up coin unit.
13. Display will read “Exact Change, Copies .10”.
14. Test accordingly.

Price Change

1. Press the top service button until display says “Set Price?”
2. Press the bottom service button one time and display will say “Page Cost $0.10”
3. Set the price to the desired amount by either pressing the bottom button to increment the amount by multiples of $.05, or turn the bypass key (operator key) located on top of the machine to decrement the amount in multiples of $.05.
4. After price is set press the top button several times until you are out of service mode or display says “Exit”. When “Exit” is displayed press bottom button one time to exit service mode.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Appendix A



Copyright 2006 Access Control Devices, Inc. All rights reserved.

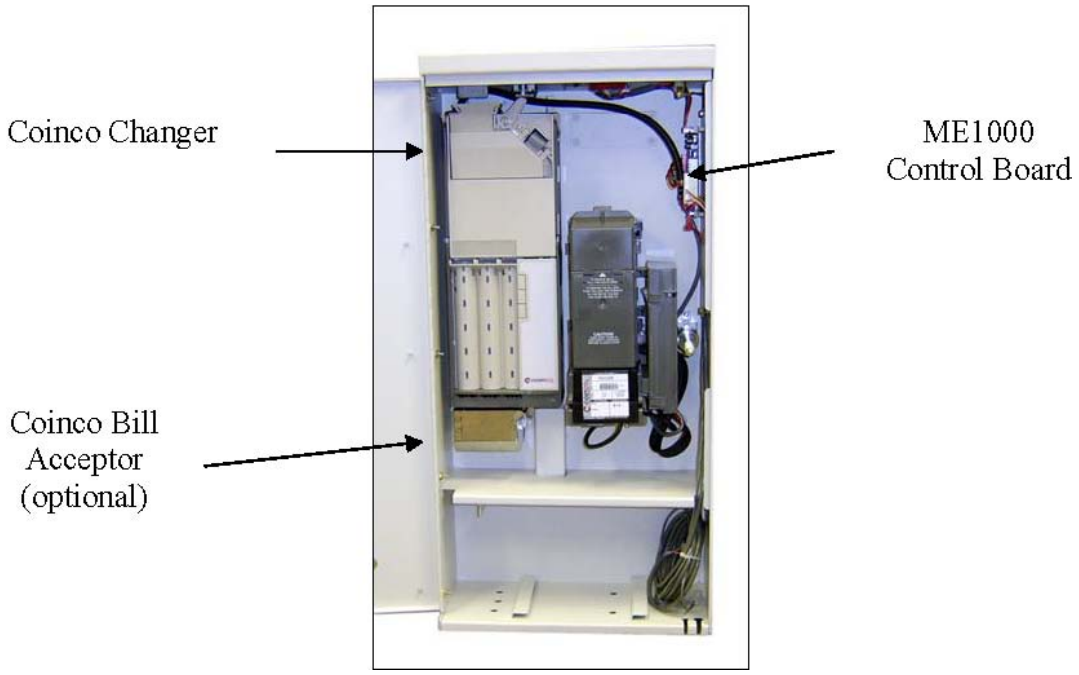


Figure 1

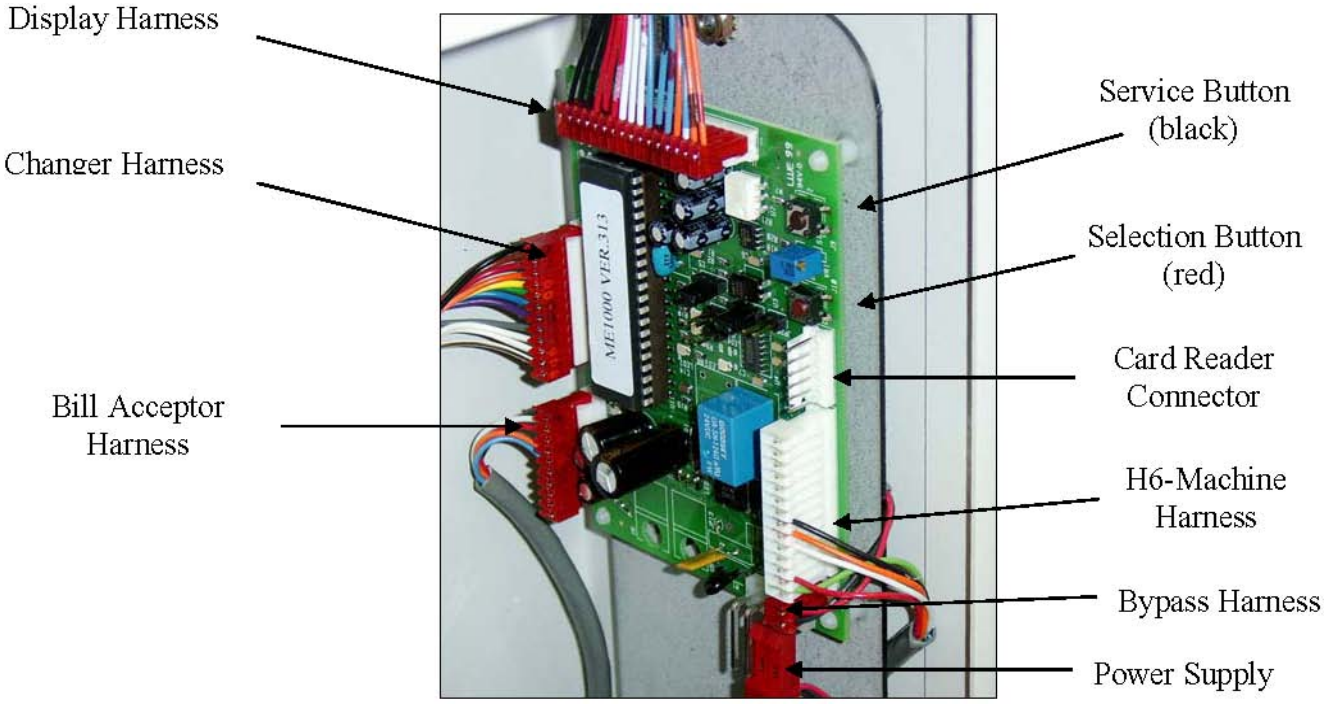


Figure 2

Copyright 2006 Access Control Devices, Inc. All rights reserved.

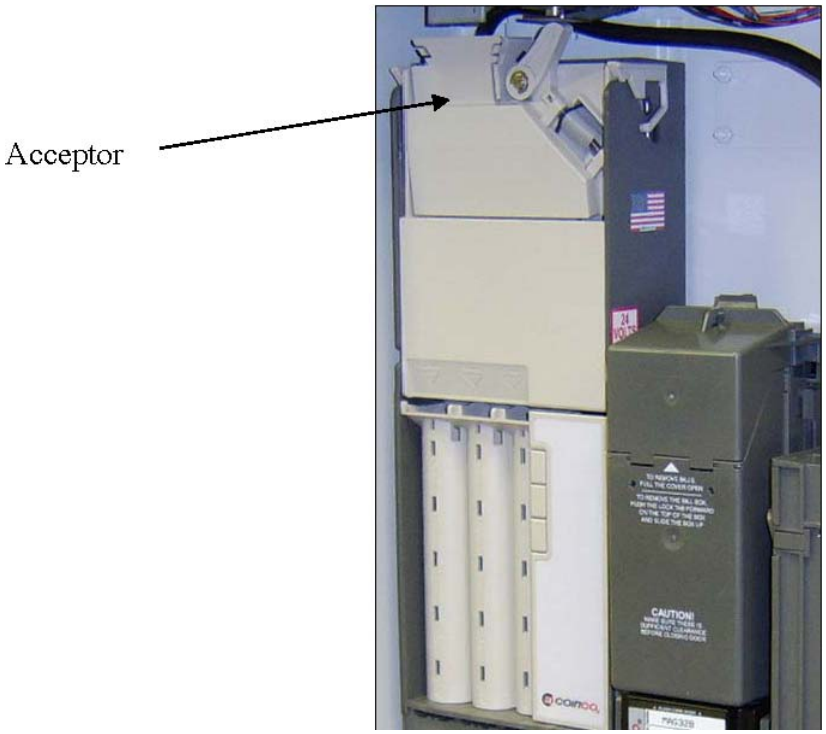


Figure 3

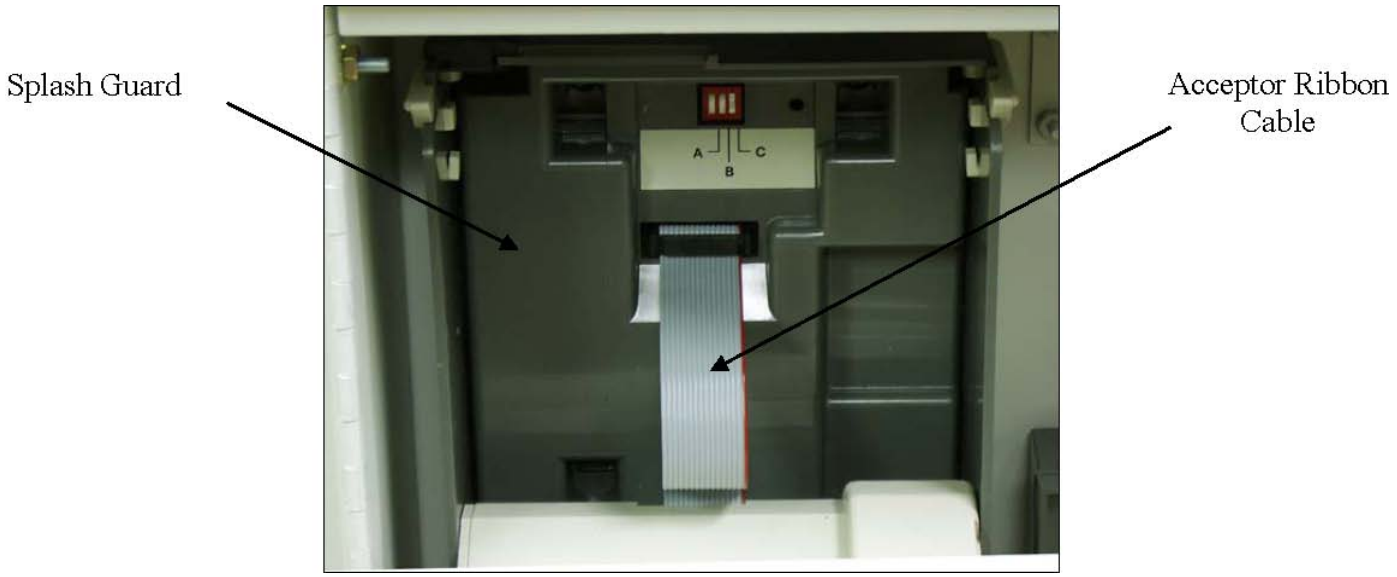


Figure 4

Copyright 2006 Access Control Devices, Inc. All rights reserved.

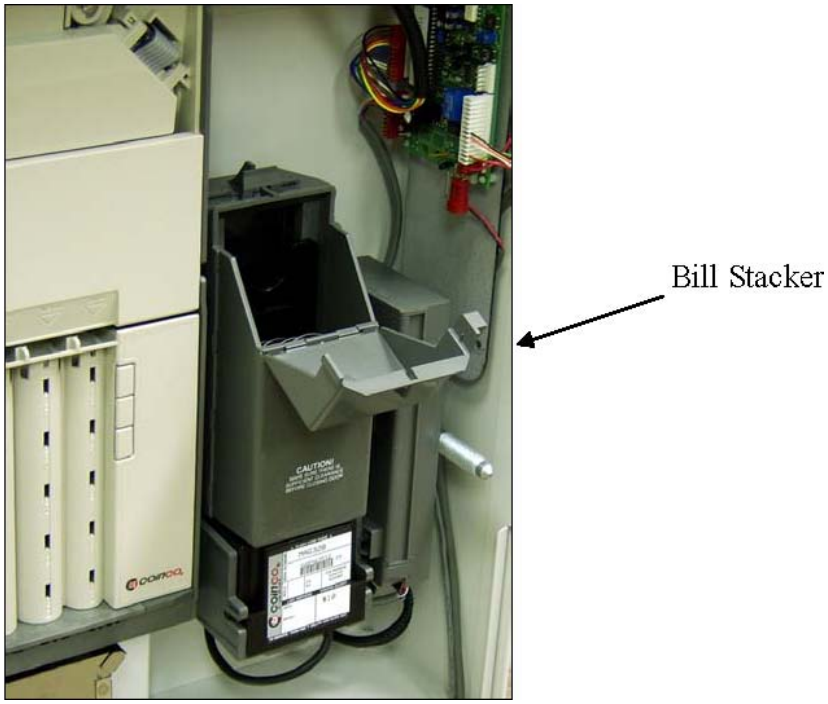


Figure 5

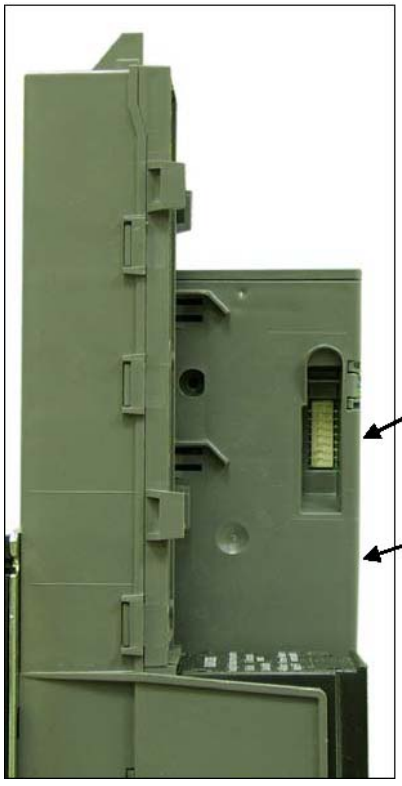


Figure 6

Copyright 2006 Access Control Devices, Inc. All rights reserved.

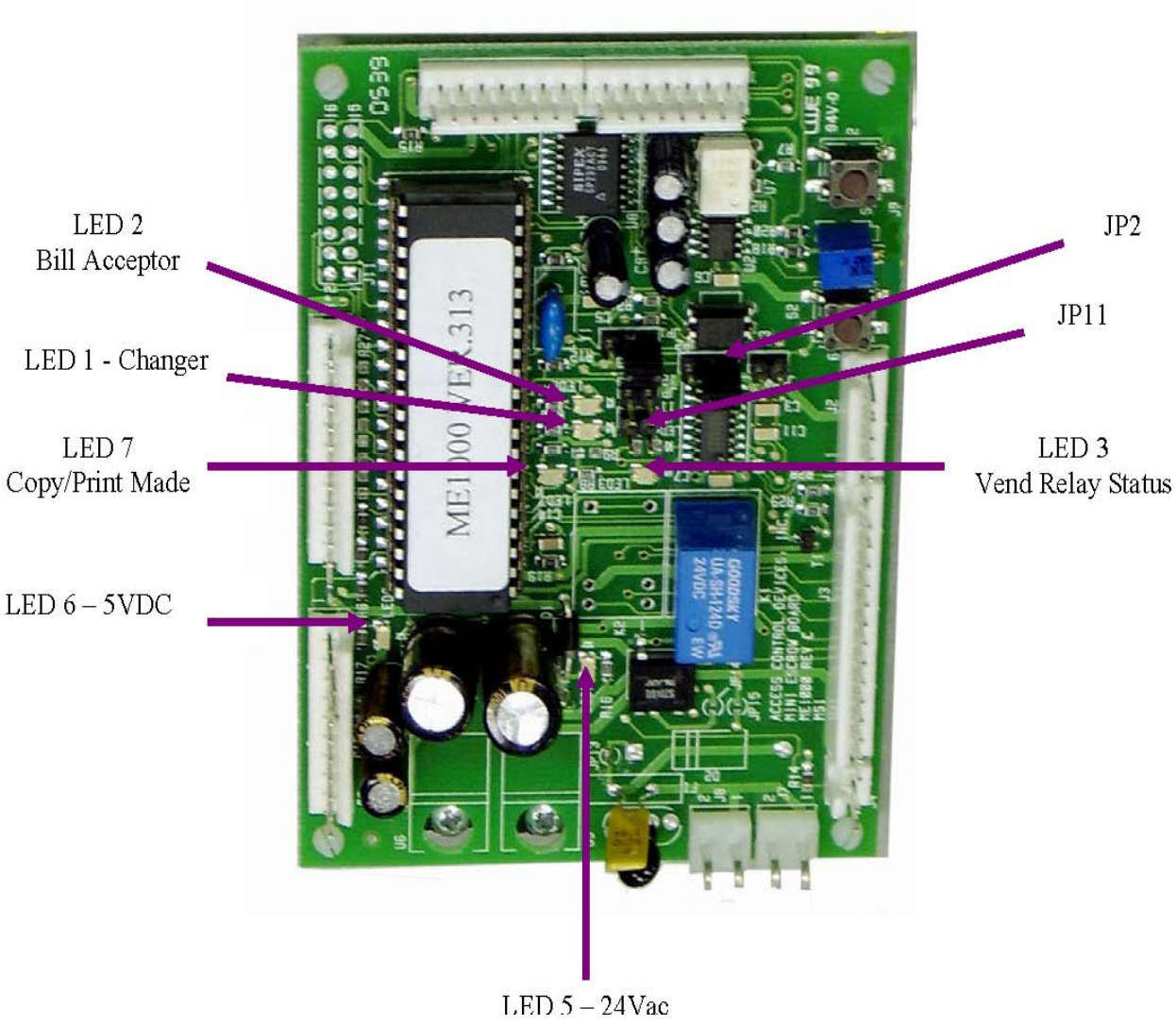


Figure 7

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Appendix B

MAG Bill Acceptor

Models

MAG32B MAG Bill acceptor, 300 capacity stacker, 24 VAC, Bottler mask,

Features

- • Modular design
- • Bill Hold Feature
- • Center drive belt
- • Scalloped bill path for wet bill acceptance
- • State-of-the-art electronic logic system
- • Switch selectable acceptance of the following bills: $1, $5, $10 and $20
- • High capacity bill box
- • Vandal resistant design protects against: saltwater, bill pullback, counterfeit bills
- • Utilizes standard mounting and electrical interfaces
- • 24 VAC interface
- • High impact, non-corrosive plastic construction
- • Easily accessible bill path
- • Self-diagnostics communicated via status light
- • Standard/High Level security switch
- • Switch selectable acceptance of bills face up, in one or both directions
- • Optional hasp for locking bill box
- • Manufactured and supported by Coinco.
- • Made in the U.S.A.

Main Logic Board Assembly

The main logic board contains the microprocessor, which controls all the functions of the bill acceptor based on information from the vending machine, coin mechanism and various bill acceptor sensors.

Also contained on the main logic board is the power supply, which receives its primary voltage from the vending machine. For 24VAC and 24 VDC (MDB) units, no transformer is needed. The primary voltage is rectified and filtered on the main logic board.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

Specifications

Power Requirements

MAG32B -- 24V AC
20 to 32 VAC, 60 Hz
0.2 Amp average standby
2.5 Amp average operating

Operating Temperature
0° To 150° Fahrenheit
-18° To 65°. Celsius

Storage Temperature
-22° To 160° Fahrenheit
-30° To 72° Celsius

Relative Humidity
5% to 95% non-condensing

Physical Weight in Shipping Carton
4 pounds - 24VAC

Option Switch Settings

MAG bill acceptor contains an option switch bank on the main logic board which allows the unit to be customized to the requirements of the individual account. This switch bank is factory set with switch 3 and 8 in the ON position, and 1, 2, 4, 5, 6, and 7 in the OFF position.

Setting Option Switches (see Figure 1)
Remove power from the bill acceptor. Remove the bill box. Located on the side of the logic board cover is the option switch access hole. Insert a small screwdriver through the access hole to set the option switches as desired (see Figure 2). Reinstall the bill box. Apply power and test for proper operation.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

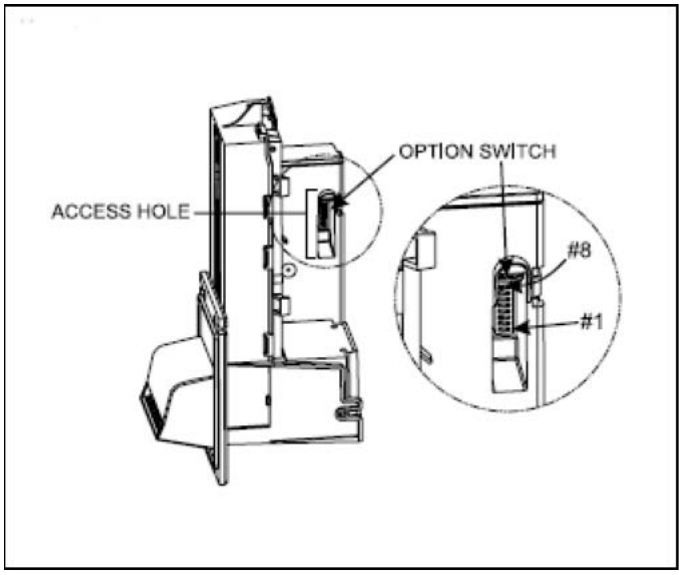


Figure 1

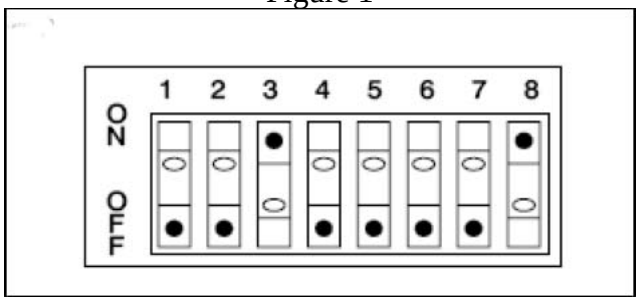


Figure 2

MAG**B Option Switch Settings (See Figure 2)

SWITCH	ON	OFF
1	High Security	Standard Acceptance
2	Accepts bills in one direction only (face up, green seal first)	Accepts bills in both directions (face up)
3	Standard credit pulse 150 ms on, 150ms off	Short credit pulse 50 ms on, 50 ms off
4	$20 Accept	$20 Reject
5	$10 Accept	$10 Reject
6	$5 Accept	$5 Reject
7	$2 Accept	$2 Reject
8	$1 Accept	1 Reject (see NOTE)

Note: The 407982 logic board with software 67090 will accept $1.00 bills with switch 8 "OFF", if no other bills are enabled. This is the maximum

Copyright 2006 Access Control Devices, Inc. All rights reserved.

acceptance mode.

If however, another bill switch is "ON", then $1.00 bills will be rejected if Switch 8 is "OFF".

Installing the Bill Acceptor

Remove power from the vending machine.
Set the bill acceptor option switches as desired.
Connect the bill acceptor harness to the mating harness in the vending machine.
Mount the bill acceptor according to the instructions found in the vending machine manual or
appropriate kit literature

Note: Ensure bill acceptor is free of all obstructions.

Load the vending machine with product and fill the coin changer with change.
Apply power to the vending machine.
Test for proper operation.

Troubleshooting

Introduction

The Troubleshooting Guide on the following pages is intended to help locate problems within the
bill acceptor. If a bill acceptor cannot be repaired by following this guide, return the unit to the nearest Coinco Service Center for repair along with a complete description of the problem you are
having with the bill acceptor.

Logic troubleshooting minimizes the time spent in removing and replacing parts that are not defective. Some failures are caused by minor problems such as dirt or loose/faulty connections.
Please check the following before replacing any parts.

Clean any dirt or dust from the bill path.
Coin changer inventory tubes are filled to their correct levels.
Connectors are inserted correctly.
Connector pins are not bent or broken.
All wires are properly secured.

Copyright 2006 Access Control Devices, Inc. All rights reserved.

MAG32 Diagnostic Codes

Trouble shooting can be done by reading the number of flashes or blinks of light from the LED located inside the logic board cover. These flashes can be seen through the gray cover. (See Figure 3)

Diagnostic codes 2, 8, 14 and 18 are not used. Codes 1, 3, 4, 5, 15 and 16 may appear during normal servicing of the MAG32. If the MAG is flashing a #5 code, turn off power to the MAG for 10 seconds. Reapply power ot the MAG32 and diagnostic codes 6, 7, 9, 10, 11, 12, 13 and 17 will appear for approximately thirty seconds. After thirty seconds, these codes will revert back to the #5 code. If more than one error exists, the lower number code will appear until it's condition is corrected. The left and right sensors referenced in the next column are given viewing the MAG32 from the front.

Note: With software 67090 and 67126, diagnostic code #4 (4 flashes) will not appear if all bill accept switches are off.

# of Flashes	Description of Diagnostic Codes
1	Bill Box Full
2	(Not used)
3	Check Bill Path
4	All Bill Accept Switches Are Off
5	Check Optical Sensors
6	Stacker Motor/Home Sensor
7	Transport Motor/Encoder Sensor
8	(Reserved for Future Use)
9	EEPROM Check Sum Error
10	RAM or ROM Check Sum Error

# of Flashes	Description of Diagnostic Codes
11	Center Optic Sensor
12	Right Optic Sensor
13	Left Optic Sensor
14	(Not used)
15	Right Position Sensor
16	Left Position Sensor
17	Lower Board Anti-Pullback Lever Sensor
18	(Not used)

Copyright 2006 Access Control Devices, Inc. All rights reserved.

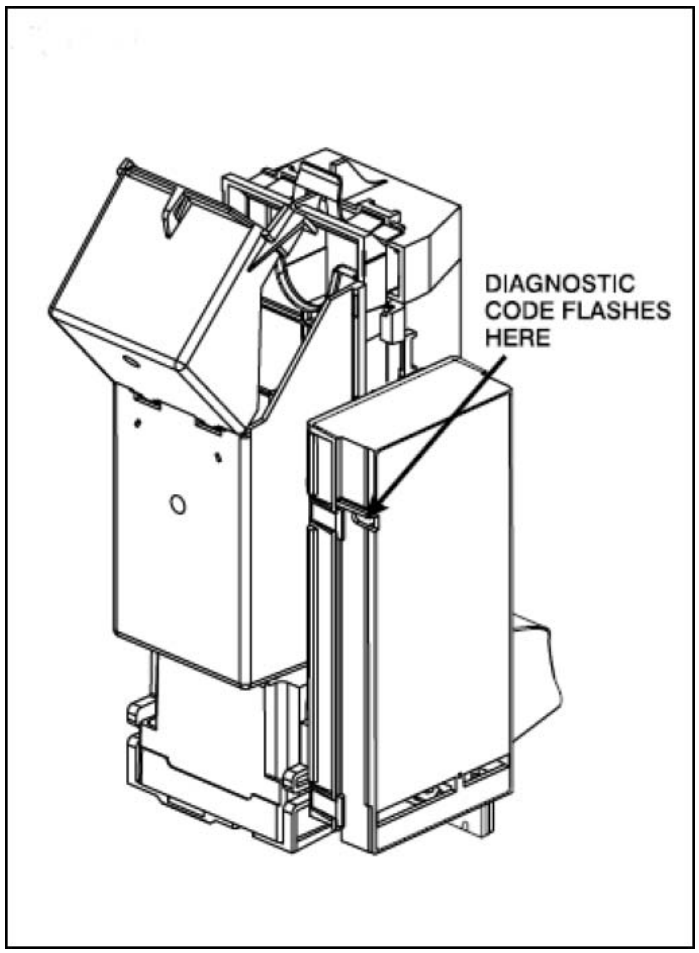


Figure 3

Copyright 2006 Access Control Devices, Inc. All rights reserved.

9300-LF Series Electronic Changer

Features

- For use in electronically controlled vending machines only.
- Select high or low quarter tube level by simply flipping a switch.
- Dollar coins can be rejected or accepted by flipping a switch.
- Heavy-duty D.C. payout solenoids provide fast, accurate payout.
- Change capacity of $40.55.
- Lightweight, rugged plastic construction provides dependable, maintenance-free service.
- Provides the fastest and most accurate coin acceptance of any electronic unit available today.
- Pays out to the last coin in the changer tube to provide the maximum usage of a bill validator.

Specifications

24 volts (full wave rectified)
20 to 30 volts at 3.0 amps max.
+5 volts DC +/- 0.25, 0.5 amps continuous

Operating Temperature

0°. To 150° Fahrenheit -18° To 65° Celsius

Storage Temperature

-22° To 160° Fahrenheit -30° To 72° Celsius

Relative Humidity

20% to 98% Non-condensing

Physical Dimensions

Height: 14.81 Inches (base to top of coin return lever)
Width: 5.28 inches (acceptor latch to acceptor latch) Depth: 2.86 inches (gate closed)

Physical Weight in Shipping Carton

4 pounds

Coin Tube Capacity

Copyright 2006 Access Control Devices, Inc. All rights reserved.

	$0.05 Tube	$0.10 Tube	$0.25 Tube	
			LO $0.25 Option Switch set to OFF position	LO $0.25 Option Switch set to ON position
Low Sensor Level	7	9	7	7
Full Sensor Level	78	113	77	22
Hand Load Level	86	125	95	22

Installing the Changer

1. 1. Remove power from the vendor.
2. 2. Remove the acceptor from the changer by releasing acceptor latches and pulling the top of the acceptor forward, away from changer. Unplug ribbon cable from changer. Free lower acceptor studs from changer housing. Free lower acceptor studs from changer housing. With the acceptor removed, set key holes in back of changer housing over mounting screw in the vendor. Tighten snugly.
3. 3. Set desired changer options. (See Option Switch Settings)
4. 4. Replace the acceptor by inserting bottom acceptor studs into changer housing guides. Plug the acceptor ribbon cable into the changer. Press top of acceptor into changer housing until top acceptor studs lock into changer's acceptor latches.
5. 5. Plug changer into vendor socket.
6. 6. Load coin tubes making sure all coins lie flat.
7. 7. Test changer with a variety of coins to ensure proper operation.

Note: *SAVE THE COIN CHANGER CARTON*. Always store coin changer in its shipping carton when not in use. This will keep the unit clean and protected.

Option Switch Settings

See Figure 2

Hinge acceptor down by releasing acceptor latches and pulling the top of the acceptor forward, away from the changer. Located in the upper portion of the changer, behind the acceptor, is a single switch module containing three rocker switches. When the top of the rocker switch is pushed in, it is in the ON position. The switches correspond as follows:

Switch #		Options
A		Not Used
B = LO $0.25	ON:	Quarters are directed to cashbox once change tube has approximately 22 quarters.
	OFF:	Quarters are directed to cashbox once change

Copyright 2006 Access Control Devices, Inc. All rights reserved.

	tube is full
C = $ACPT	ON: Dollar coins will be accepted OFF: Dollar coins will be rejected

Set option switches to desired setting.
Return acceptor to operating position making sure acceptor latches secure acceptor.

Test with a variety of coins to insure proper operation.

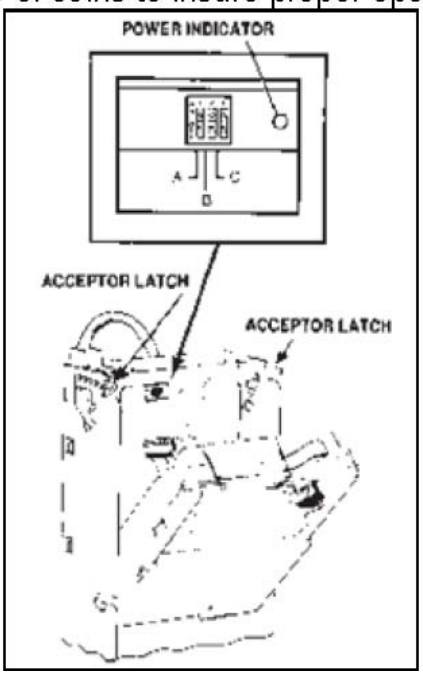


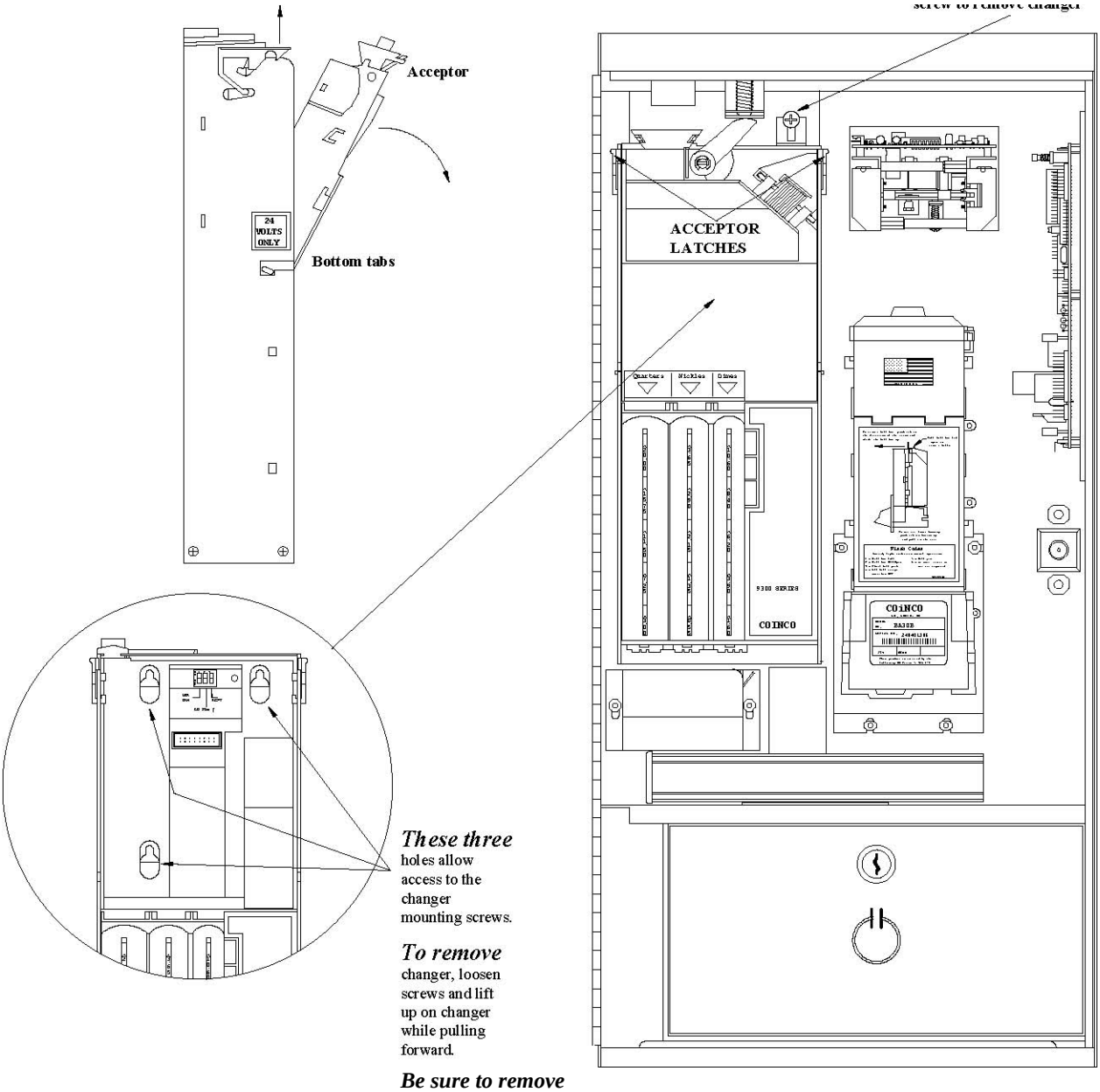
Figure 4

CHANGER REMOVAL DISCONNECT POWER BEFORE REMOVING CHANGER

ACCEPTOR REMOVAL

Lift up on the Acceptor latches .Pull Acceptor forward and lift up to slide bottom tabs out of slots. Unplug ribbon cable. **Loosen shipping retainer screw to remove changer**

Copyright 2006 Access Control Devices, Inc. All rights reserved.



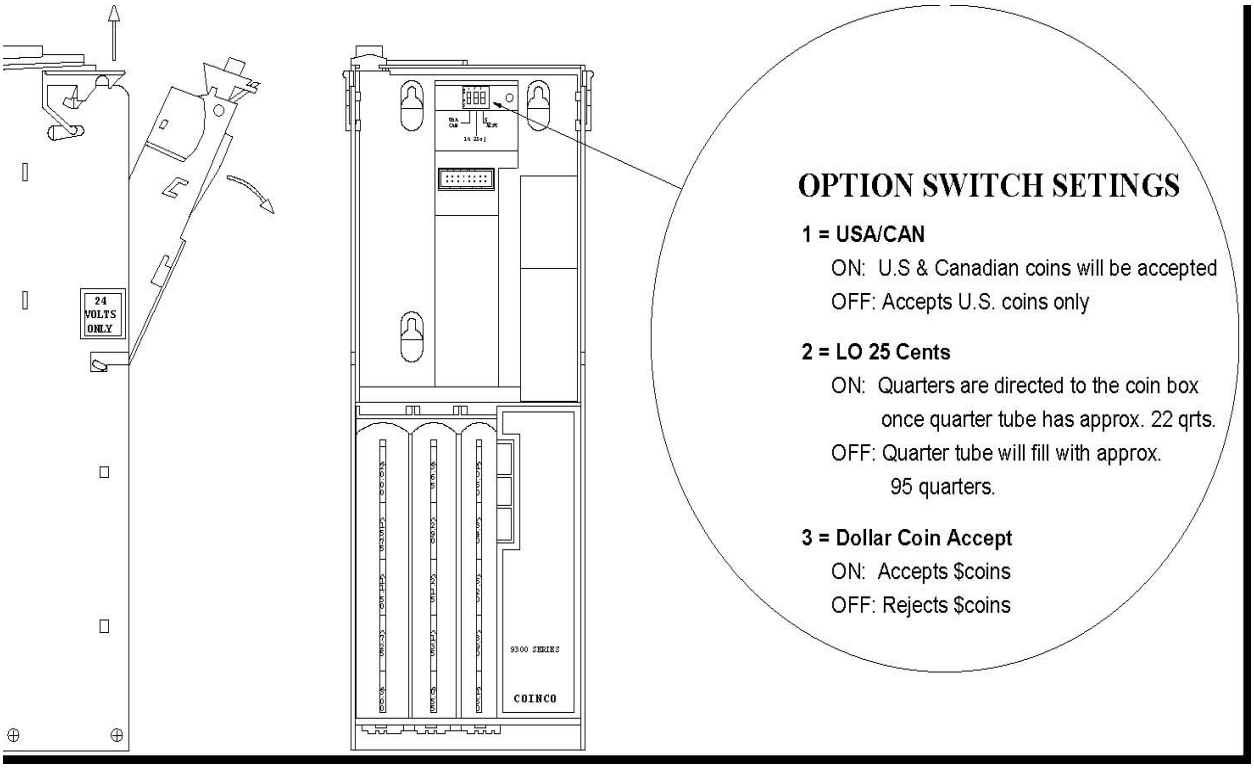
These three holes allow access to the changer mounting screws.

To remove changer, loosen screws and lift up on changer while pulling forward.

Be sure to remove wire ties and disconnect changer harness from control board before removing changer from screws.

CHANGER SERVICE

Copyright 2006 Access Control Devices, Inc. All rights reserved.



Copyright 2006 Access Control Devices, Inc. All rights reserved.

ACDI
Little Rock, AR
Phone: (501) 664-3433
Fax: (501) 664-8085
1 (800) 990 – ACDI
www.acd-inc.com

Copyright 2006 Access Control Devices, Inc. All rights reserved.