AMERICAN CHANGER
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American Changer

1400 NW 65TH Place ♦ Ft. Lauderdale, FL 33309

"TOKENSTATION" – CHANGER

OPERATIONS MANUAL
MODEL AC2007/AC2006

ARL Listed STD: UL 756

Parts & Service: (888)741-9840

Service Fax: (954)917-5204

Sales: (800)741-9840

To order parts only, visit our website: www.americanchanger.com

Service Questions? E-mail: service@americanchanger.com

Model Number: _____

Serial Number: _____

Tested By: _____

Date: _____

Specifications

Operating voltage	120VAC +10% to -15%
Power consumption	Controller: 100W
Operating temperature	0 - 120 degrees Fahrenheit
Interface to hoppers	24VDC, 2.5 amps max.
Interface to validators	24VAC, 1.5 amps max.
Hopper coin capacities	100/hopper minimum to 10,000/hopper maximum (20,000 total maximum)

Warranty Information

A Return Material Authorization number (RMA #) must be obtained before returning a unit for repair. A copy of invoices must accompany any and all warranty work.

It is the end users' responsibility to follow cleaning and maintenance procedures as outlined in the validator manual.
Any unit returned for repair requiring only a cleaning will be charged a flat rate plus shipping and handling.

Validators

Validators are warranted for two years from date of purchase.

Hopper(s) and/or Dispenser(s) and Logic Board

These items are warranted for one year from date of purchase.

COVERED

- Manufacturers' defects in workmanship or materials

NOT COVERED

- Damage caused by shipping or physical abuse
- Misapplication
- Vandalism
- End users' attempt, on their own, to repair components
- Cleaning and maintenance
- Power surges and lightning strikes

Table of Contents

SECTION A
SETUP & INSTALLATION

Setup

Inspect for any connectors or components that may have been dislodged during shipping. The lock and keys for your changer will be inside the manila envelope along with this manual and other pertinent information. To install the lock, insert the cylinder into the hole in the middle of the T-handle and push until it stops. Turn the key until you hear it "snap." Turn the key counterclockwise ¼ turn and remove the keys.

NOTE: The only way to get a duplicate set of keys made is to save the tag that comes between the keys. This ID # starts with "AC or ACC ####."

CELLULAR WIRELESS CREDIT CARD SYSTEM (optional)

This feature is an optional add-on for most American Changer models.   A separate maintenance manual is included in your packet. You ***MUST*** call American Changer technical support at (888) 741-9840 for setup and operating instructions. Prior to startup in the wireless mode, the machine will operate and validate cash transactions only.

Assembling the TokenStation

Safety Note: The changer comes almost completely assembled, in a box strapped to a pallet. Care must be taken in unpacking and maneuvering the machine into place. It is not a one-man job.

Mounting the AC2007 into a Wall

IF YOU ARE UNSURE IN ANY WAY IN PROCEEDING WITH THE FOLLOWING STEPS, PLEASE HIRE A LICENSED ELECTRICIAN TO MOUNT YOUR CHANGER FOR YOU!

1. Disconnect any and all AC power going to the changer. (Unplug AC line cord from the Power Module Board and from the wall.)

2. Slide the hopper out of the cabinet.

3. Note: You will need to verify with the building code to see if it is allowable to plug the changer into a 3-prong grounded outlet. If it is not, there must be 120VAC run through conduit or other means to meet local codes to the changer. If it is not required, proceed to step #6.

4. Have the electrician run the conduit, install the new breaker, wire and help decide how the wiring will enter the changer (from the side or the bottom). This will affect the mounting location.

5. After the conduit has been installed, proceed with the mounting.

6. Locate the 4 punch-outs on the back or side wall of the changer. Using a screwdriver and hammer, remove the punch-outs by striking them from the inside of the changer.

7. Find an appropriate wall into which to bolt the changer. The wall should have studs or be constructed of concrete.

8. ***NOTE: SECURING THE CHANGER FROM FEWER THAN THE FOUR BOLTS OR WELDED ANGLE IRON MAY BE DANGEROUS. EACH HOLE NEEDS A BOLT THROUGH IT TO SECURELY MOUNT THE CHANGER INTO THE WALL. MOUNTING THE CHANGER IN ANY OTHER WAY MAY RESULT IN THE CHANGER BEING TORN FROM OR FALLING FROM THE WALL, RESULTING IN PERSONAL OR CUSTOMER INJURY ALONG WITH ELECTRICAL SHOCK.***

9. Choose a height to mount the changer, keeping in mind that a handicapped person in a wheelchair should still be able to insert a card into the card reader and/or a bill into the bill validator. (We recommend no higher than 4 feet above the ground.)

10. Have someone hold the changer into the wall while someone else marks the holes. **CAUTION:** *THE CHANGER WEIGHS 91 POUNDS; DO NOT EXERT YOURSELF SO THAT YOU MAY CAUSE AN INJURY.*

11. ***BEFORE DRILLING THE MARKED HOLES, ENSURE THAT THERE ARE NO ELECTRICAL WIRES, TELEPHONE LINES, GAS OR WATER LINES BEHIND THE WALL.***

12. After drilling the holes, put the changer's back into the wall. Thread and tighten bolts.

13. Verify that the machine is securely mounted.

14. If the changer is permanently connected through a conduit, proceed to step #16.

15. Plug the power cord back into an AC wall outlet and into the Power Supply/Relay Board, if necessary. *Do not use an extension cord unless allowed by the building electrical code*.

16. Installation is completed. Proceed to the "Programming the Changer" section.

17. In order to continue, you will need to purchase numerous electrical components. We highly recommend hiring a licensed electrician to perform the following:

    a. Install the conduit box on the conduit entering the cabinet in the lower left side of the cabinet.
    b. Secure the 3 wires (hot, neutral and ground) to the AC wall outlet; the ground wire should also be directly attached to the cabinet ground terminal.
    c. Connect the AC line cord into the bottom of the Power Supply/Relay Board.
    d. Plug the male end into the AC outlet just installed.
    e. Properly fold the line cord to avoid sharp corners and any other damage.

17. Proceed to the "Programming the Changer" section.

Hopper Coin/Token Sizes & General Information

The hopper will automatically adjust to dispense coins/tokens in size from 20-30 mm in diameter and 1.25-3.5 mm in thickness. There is an option available to dispense smaller coins.

A nickel is approximately 21 mm, a quarter is approximately 25mm, and a dollar coin is approximately 28mm in diameter.

**Hopper coin bin
(Dump the coins into this hole;
1600 coin max.)**

Coin counting optic

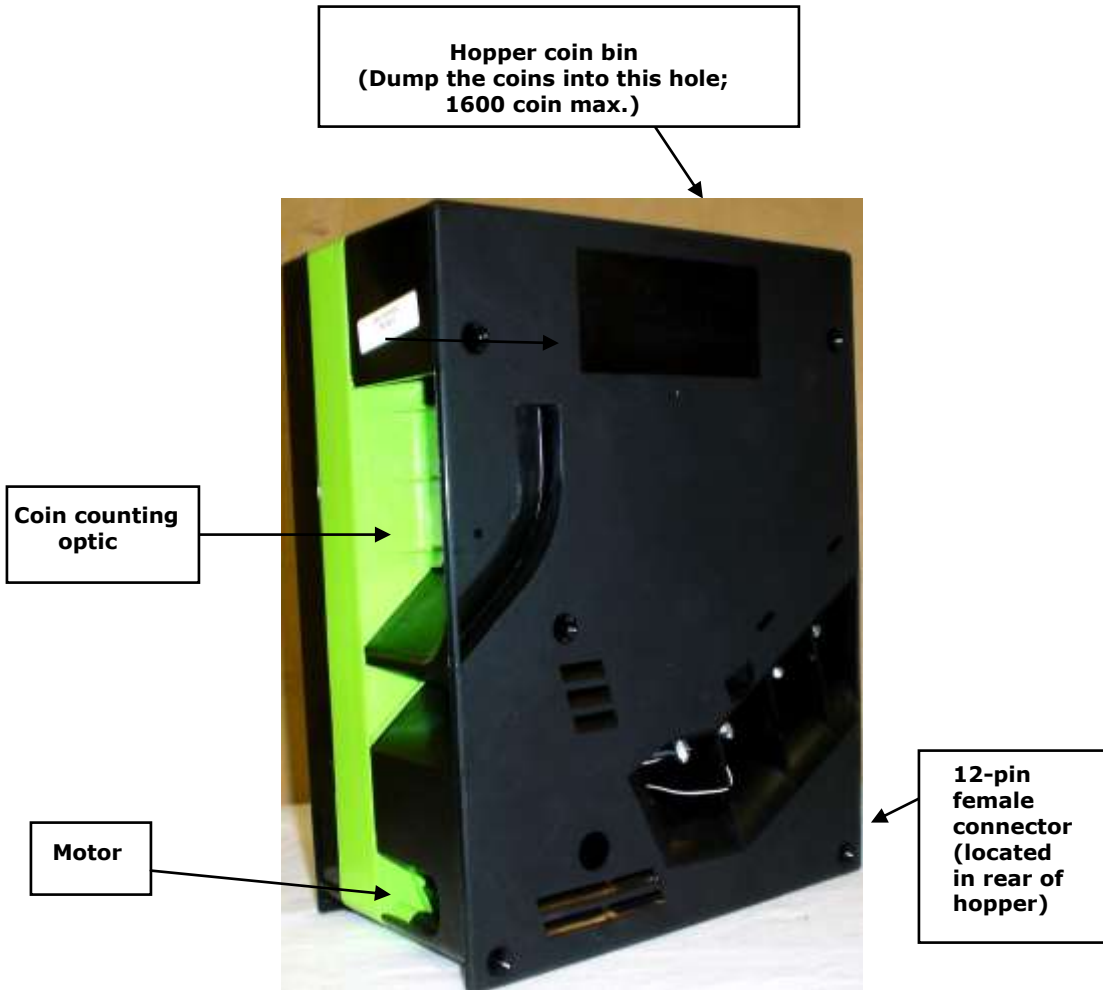**12-pin female connector (located in rear of hopper)**

Motor

Figure 7 – Hopper

Validator General Information

A validator user manual is included as part of your information packet. Please use this as your reference guide to address any questions you may have.
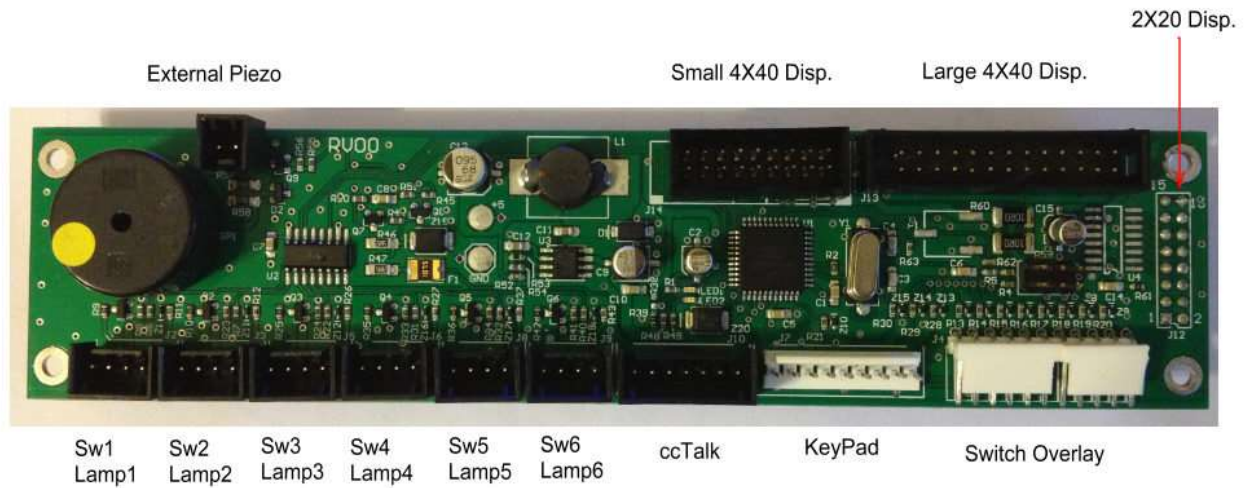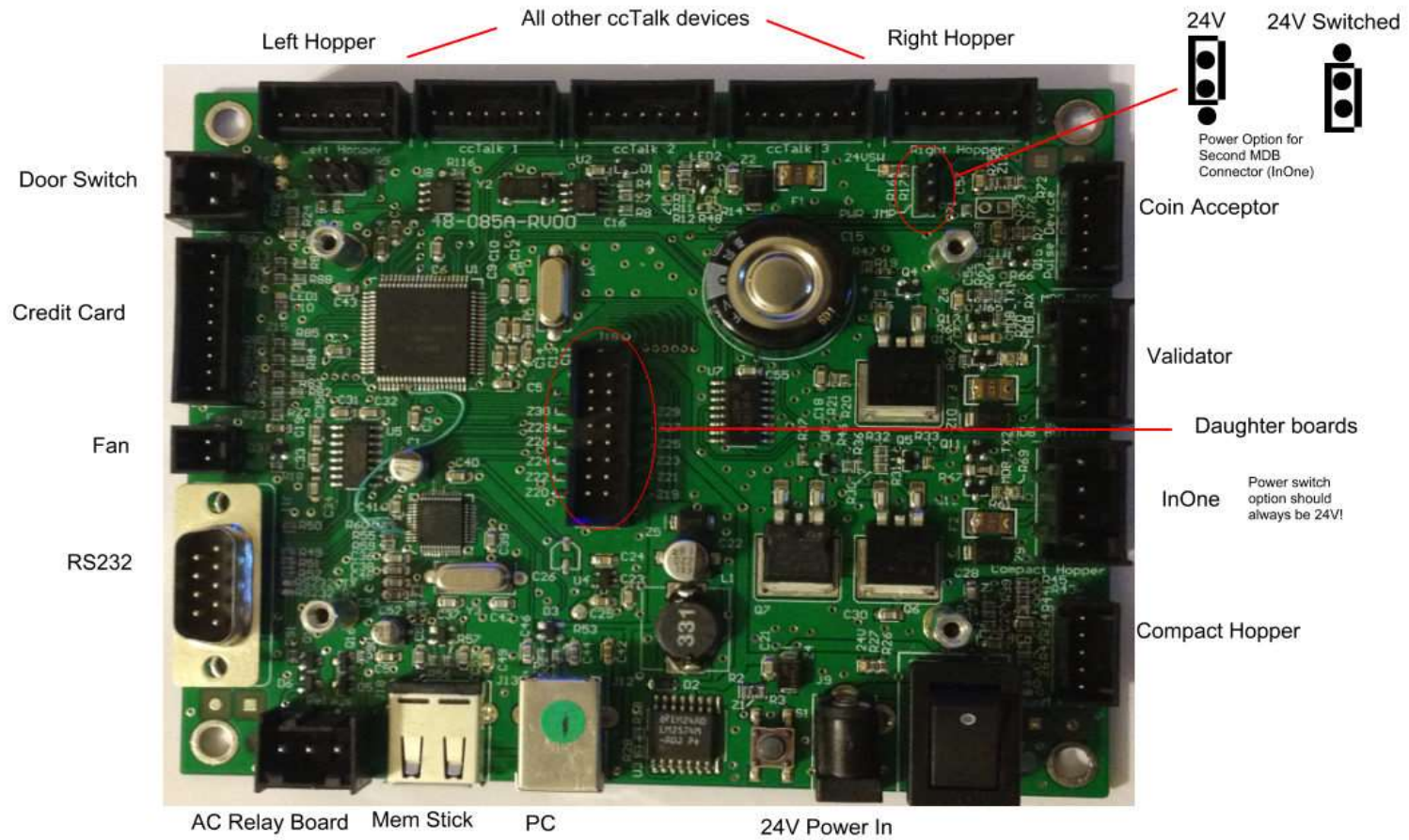
Figure 8 – AC8001-FLXIOB Flex I/O Board

Figure 9 – AC8001-FLEXBD Main Logic Board

Programming the AC2007 TokenStation

The configuration menu can be accessed only if the door is open.
Pressing the select switch on the Flex board (Fig. 9) will bring the display to show "EnterMenu".
Pressing the select switch again will get the user out of the menu mode.
Use the keypad to enter the menu number or press the **Back/Next** button to step through the menus.
All the menus work the same:
No/Yes: Selects status
Back/Next: Selects the item
Exit. Exit the setup menu

01- Print Help Menu
Prints the menu index

02- System Info
Prints the payout information and configuration settings.The following information is also included on the System Info Printout.

    Software Revision

Coin Acceptor Status	Validator Status
Credit Card Status	Zip Code Option Status
Printer Status	Hopper #1 Status
Temperature	Hopper #2 Status

03-- Button Price
Select the value for selection 1 thru 4

04- Button Payout
Setup payout count for the 4 selection buttons

05- Enable Bills
Selects which bills to accept and reject. This will only display bills the validator can accept.

06- Payout Per Bill (Only used for Quick Pay Option)
Only bills enabled in menu 05 will be available in this menu. Enter the number of items to be paid for each bill type.

07- Enable Hoppers
Enable left and/or right hoppers

08- Hopper Coin Values
Use only for different value coins in each hopper.
Hopper 1= Left hopper   Set value of coin to be dispensed from $000.00 to $999.99
Hopper 2= Right hopper   Set value of coin to be dispensed from $000.00 to $999.99
If the same coins are to be dispensed from both hoppers press the "*" on the keypad for both hopper selections.

09- Enable Coin Acceptor
Enable/disable the coin acceptor

10- Change Payout
Set the payout for coins accepted

11- Promo Token Payout
Enter the # of items paid for each token type by using the keypad.

12- Dump Hoppers
Dumps the coins from both hoppers

13- Audit Information
Prints a summary of all the sales. There are separate counters for credit cards and items/change dispensed from hoppers 1 and 2.
Reset: Prints 2 copies of all the audit values and resets all the "**Resettable Counters**" to 0.
Every time **Reset** button is pushed the audit sequence number increases by one.
Print : Pushing the **Print** button prints all the audit values without resetting.
All the values are max 99,999 except for the **Total Cash** value which is $100,000.00.

14- Vend Item Name
Choose from Items, Tickets or Tokens

15- Date Setup
Enter the date in this format YY-MM-DD

16- Time Setup
Enter the time in this format: HH:MM. 24 hour format.

17- Machine Number
Use the keypad to enter the machine number.

18- Marquee Timer
Setup the time to turn on/off the marquee.

19- Zip-code Enable
 Enable or disable the zip-code verification feature

20- Access Code
Reset the access code for entering the program function.

21- Key Beep Enable
Enable/disable beep when keys are pressed.

22- Location Name
Set the name of the location to be printed on the credit card receipt.

Audit Print Definitions

Machine ### - Audit
Date – year, mm, dd -Time – hr: mm: ss
Audit Sequence #   #

== Non-Resettable Counters ==
Non-resettable lifetime machine counters.
Total Cash:	**$**	**######. ##**
Quarters:		**######**
Dollar Coin:		**######**
Ones:		**######**
Fives:		**######**
Tens:		**######**
Twenties:		**######**
Fifties:		**######**
Hundreds:		**######**
CreditCards:		**###, ###. ##**

Paid Hopper 1: ######
Paid Hopper 2: ######

== Resettable Counters ==
Resettable lifetime machine counters.
Total Cash:	**$**	**######. ##**
Quarters:		**######**
Dollar Coin:		**######**
Ones:		**######**
Fives:		**######**
Tens:		**######**
Twenties:		**######**
Fifties:		**######**
Hundreds:		**######**
Total Bills:	**$**	**###,###.##**
Visa:	**$**	**###, ###. ##**
Master Card:	**$**	**###, ###. ##**
American X:	**$**	**###, ###. ##**
Total CC:	**$**	**###, ###. ##**

Promo Token 1:######
Promo Token 2:######
Promo Token 3:######
Promo Token 4:######
Free Play Note: ######
How many times customers chose each of the credit card buttons for pricing choices
Selection 1:	**######**
Selection 2:	**######**
Selection 3:	**######**
Selection 4:	**######**

.

Paid Hopper 1: ######
Paid Hopper 2: ######
Paid Total: ######
== STATUS ==
Hopper #1:   OK
          Status of LEFT Hopper
Hopper #2:   OK
          Status of RIGHT Hopper
Validator: OK
          Status of Bill Acceptor
Credit Card: OK
          Status of CREDIT CARD Operations

```
         Machine #: 000 Information

         yyyy mm dd   hh mm ss
         2011-10-08   12:10:32
========== Pay Out ==========

1 Quarter    :          0
2 Quarters   :          0
3 Quarters   :          0
Ones         :          4
Fives        :         20
Tens         :         40
Twenties     :         80
Fifties      :          0
Hundreds     :          0
Hopper Type1:       Item
Hopper Type2: $     00.25


Sel1=$001.00:        004
Sel2=$005.00:        020
Sel3=$010.00:        040
Sel4=$020.00:        090
IDX #1 Value:          0
IDX #2 Value:          0
IDX #3 Value:          0
IDX #4 Value:          0

========== Status ==========
Software Rev: FLXV-0A-A04
Coin Accept.: Enable Low
Zip Code   : Enabled
Hopper #1  : Ok
Hopper #2  : Ok
Validator  : Ok
Credit Card : Ok
Printer    : Head Up
Temperature : 18deg C
```

Replacing the Printer Paper

Before the printer paper runs out, you might wish to contact your Distributor and order more Printer paper. The part number is **AC7071-01**, and it is a special brand which is hard to find. Most AC6007 problems occur from the printer. Either the operator buys the wrong paper or has trouble loading the paper. Please follow the steps of either Method #1 or Method #2 below to properly load your thermal printer with new paper.
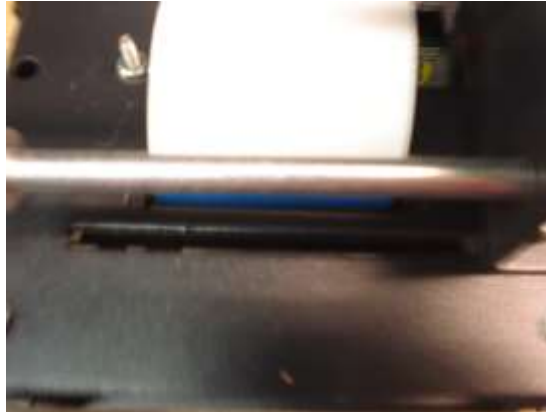

Figure P1: AC7084 Printer – Rear View

Method #1 – Automatic Feed:

NOTE: This method must be performed with the board power ON.

1. If there is paper remaining on the previous roll, it must be removed before proceeding. Move the "Paper Feed Lever" from the DOWN to the UP position (refer to Figure P2), and then pull out the remaining paper from the rear of the printer and discard the roll.
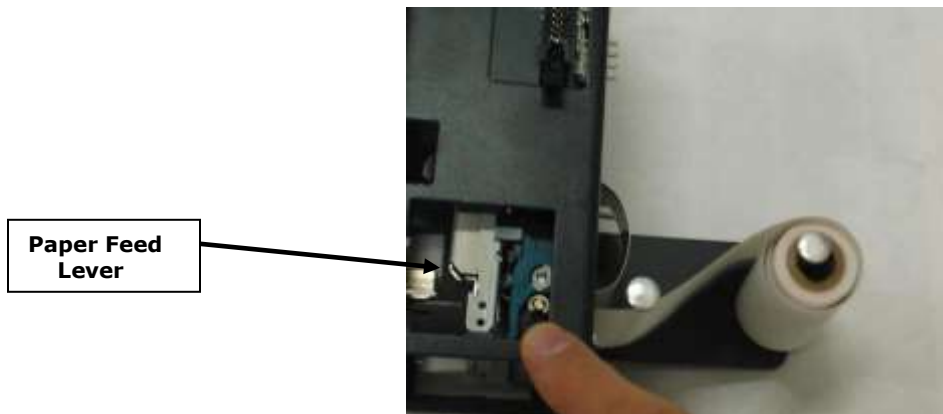

Paper Feed Lever

Figure P2: AC7084 Printer – Side View, with Paper

2. Move the "Paper Feed Lever" back to the DOWN position. Slide a new roll of paper onto the "Roll Holder," oriented so the paper comes off on the side toward the printer (refer to Figure P3 for the correct placement).

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Figure P3: AC7084 Printer – Side View, Showing Proper Roll Placement

3. Wrap the paper under the "Paper Guide" and begin to feed it into the "Paper Slot." You do not need to fold or cut the paper in any way; it should be left square in the front. At a certain point as the paper is being fed in, the printer will detect it and automatically feed it to the printing position. When done, the setup should look like Figure P3.

1. ***IMPORTANT!*** Turn OFF the Main Board power, and turn it ON again after a few seconds. *Note: The printer will not work until the power has been cycled!*

2. Enter the Setup Mode and perform a Printer Test. Make sure the printer prints all of the lines of text and cuts off the paper.

Method #2 – Manual Feed:

NOTE: This method can be performed with the board power ON or OFF.

1. If there is paper remaining on the previous roll, it must be removed before proceeding. Move the "Paper Feed Lever" from the DOWN to the UP position (refer to Figure P2), and then pull out the remaining paper from the rear of the printer and discard the roll.

2. With the "Paper Feed Lever" still in the UP position, slide a new roll of paper onto the "Roll Holder," oriented so the paper comes off on the side toward the printer (refer to Figure P3 for the correct placement).

3. Wrap the paper under the "Paper Guide," and begin to feed it into the "Paper Slot." You do not need to fold or cut the paper in any way; it should be left square in the front. Continue to feed the paper into the slot, through the print head, until it passes out through the front of the machine (refer to   Figure P4).

4. Move the "Paper Feed Lever" back to the DOWN position. The printer is now ready to print.

5. Enter the Setup Mode and perform a Printer Test. Make sure the printer prints all of the lines of text and cuts off the paper.
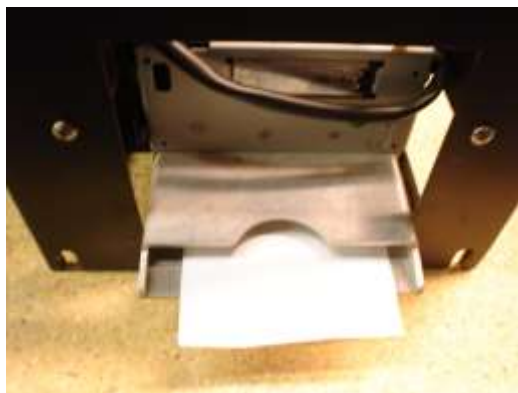

Figure P4: AC7084 Printer – Front View, Paper Fed Through

Functional Description of the AC2007 TokenStation

After the TokenStation has been installed and the computer programming complete, the machine is ready to operate. Exiting the "Program" mode will bring up the main Pricing screen.

Insert cash for immediate token payout. This ends your Cash transaction section. For credit card transactions, select one of the four arrow buttons to prompt the credit card menu. YOU MUST SELECT AN ARROW PAYOUT FIRST BEFORE THE TOKENSTATION WILL BEGIN ANY TYPE OF CREDIT CARD TRANSACTION.

Once the amount of the token transaction has been selected, the TokenStation will send alternating pulses to the hoppers to distribute the tokens evenly. As the transaction ends, the following occurs:

1. The "bills inserted" counters increase the appropriate slots and all other associated audit features.

2. The "hopper" total counter is incremented by the appropriate tokens paid out.

Functional Operation of the Hopper Out-of-Service Conditions

In a two-hopper system, the other hopper will work as a backup or give change as needed. In a one-hopper system there is no backup.

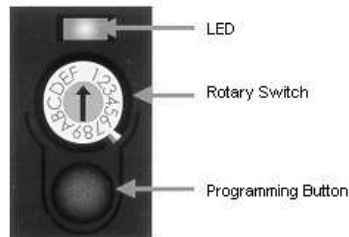There are 4 instances that will shut down a hopper:

1. Low Coin – This is the most common occurrence. This shutdown occurs when the coins in the hopper fall below the gold plates, which conduct low voltage between them. The hopper will dispense coins from the other hopper when the TokenStation reads the signal. Once the first hopper is read to have "low coins," a call over the phone line is placed to the pager/Cellphone that one hopper is down. The machine will now dispense all coins from the full hopper. If the other hopper runs out of coins, THE TOKENSTATION WILL CONTINUE TO DISPENSE COINS FROM EITHER HOPPER UNTIL BOTH HOPPERS ARE EMPTY (80-100 COINS WILL REMAIN IN THE HOPPERS). At this time, the machine will page out again to notify the pager/Cellphone that the second hopper is now empty.

2. Security Failure – There are 2 cases that will cause a security failure.
    a. The hopper is missing. The hopper is not slid into the hopper plate connector.
    b. There is a foreign object or coin lodged in the coin counting window. Remove the side of the hopper with 5 screws and look in the area where the coins exit the hopper. Check the slot for foreign matter and remove it from the slot.

3. Jammed or Timeout Failure – This failure occurs when the hopper is told to dispense coins and, after 45 seconds, no coin has been dispensed. This failure is present when the hopper coin belt is jammed or the hopper has run out of coins. If the coin belt is jammed, repair or replace unit.

4. Over-Pay Failure – This is the error that occurs when the hopper pays out more coins than told to dispense. A very dirty exit sensor most often causes this error.

Condor Coin Mechanism

The condor must be programmed for USA with the Quarter into the #1 slot and the dollar coin in the #4 slot. *If you notice a poorer than acceptable coin acceptance rate, you can turn back the Condor's security setting and increase your acceptance rate by turning the rotary dial (shown below) while in the "RUN" mode counter-clockwise 1 or 2 "clicks" from setting "0" to "F" or "E."*

SECTION B
MAINTENANCE

A full-size version of the cleaning kit instructions is included in your

LED

Rotary Switch

Programming Button

To Teach and Run a coin or token into Condor follow this procedure:

To start, the LED should be lit green and the rotary switch in position 0.

Using a small flathead screwdriver, turn the rotary switch to position 1 (or 1 to 6 for multi-coin Condors) and press the programming button. The LED should change to red.

Feed a selection of the coin to be learned by the acceptor until the LED begins to flash green. This typically happens after 4 coins. Press the programming button once more.

The LED should return to green.
Turn the rotary switch back to 0.
The acceptor is now ready to accept coins.

information packet.

AMERICAN CHANGER MAINTENANCE KIT

This kit includes the following items:

#1 - 5 Validator Cleaning Cards
#2 - 4 Scotch-Brite LOW-COIN Cleaning Pads
#3 - Validator Optic Cleaning Pen
#4 - 2.75oz Can Compressed Air
#5 - 4oz Can of hopper Lubricant

Using the Maintenance Kit:

The following maintenance should be preformed monthly to extend the life of your components:

Cleaning & lubing the hopper.
NOTICE: THE HOPPER IN THE FOLLOWING STEPS IS SHOWN SEPARATED FOR EXPLANATION REASONS ONLY!!! It is not necessary to separate the hopper to perform these steps!

Step 1.

Do not separate the hopper to perform this step!
Using the dry Scotch-Bright pad clean Plates until they shine.

Step 2.

Do not separate the hopper to perform this step!
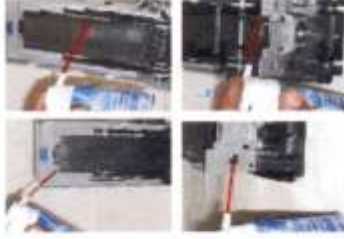
Place the changer in the dump mode:

1. Turn off power, remove the hopper extension.
2. Hold in "Dump Button".
3. Turn on power.
4. Count 1-2-3
5. Release "Dump Button"

Hopper should now be running. If not Repeat. Spray lubricant on the RED belt ONLY! Spray for 4-5 seconds. **DO NOT SPRAY SILICON ON THE TWO HOPPER LOGIC BOARDS!**

Cleaning the Validator(s).

Step 3.

Insert the soap & water-cleaning card as shown. (Card can be used until dry.)

Step 4.

Step 5.

Cycle the power on and off quickly until the stacker for the bill acceptor coasts into the out position. Using the can of air, blow out all of the following places.

Remove the lower unit as shown. Use the Citrus-Pen to clean the optics on the lower housing of the validator.

This completes all maintenance procedures.

1400 NW 65th Place Fort Lauderdale, FL 33309   Tel: (954) 917-5963 Fax: (954) 917-5204   www.americanchanger.com

"We're Changing The Industry"

Remote Loading Software to the Flex Board

1 What you need

Computer with a USB port running Windows
USB flash drive (Make sure that the flash drive has no files in it.)

2 Transferring the file into the USB flash drive

2.1 The software is in a zip format and will be sent as an attachment to an email.
2.2 Save the zipped file and then unzip it.
2.3 **Do not change the name or the file extension!!!**
2.4 Copy the program file to the empty flash drive.

3 Loading the file from the USB flash drive to the controller board

Note: All system settings will be erased once software is updated!!!

We recommend to make a print out of the settings before doing a software update.

3.1 Turn power off to the controller board.
3.2 Plug in the USB flash drive into the correct USB port labeled as J18 on the board.
3.3 Turn power on.
3.4 The display will show the software name to be loaded.
3.5 Follow the steps on the display.

18. Below are some of the display messages:

1. **Update: xxxx-xx-xxx**

   Yes

   xxxx-xx-xxx denotes the software name. After 5 seconds and if the YES button has not been pressed, the system will go to the regular running software.

2. **File Error!**

   Verify File on Drive

   Wrong file is loaded into the flash drive. Load the correct file. Try again.

3. **System Settings will**

   be Erased if Updated

   This reminder will stay on for a few seconds as a double check.

4. **Begin updating?**

   Start   Exit

   Press **Start** to load the software. Press **Exit** to cancel.

5. **Computing CRC!**
   Please wait...

   System is checking for any errors.

6. **CRC Error!**

   Update Required!

   V:XXX   There is a problem loading the software. The Red LED (LED1) on the Flex board will blink two consecutive times a second if CRC is bad. Turn power off. Remove USB flash drive. Check that the correct file is loaded into the flash drive. Try again.

7. **CRC OK, Initializing**
   Please Wait... V:XXX

   System is getting ready to update.

8. **Do Not Remove Drive**
   Updating Software!

   Software is being updated.

9. **Update Ok! Remove**

   Drive & Cycle Power

   Software is successfully updated! Turn power off. Remove drive. Turn power on.