

American Changer
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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
Power consumption
Operating temperature Interface to hoppers
Interface to validators
Hopper coin capacities

120VAC +10\% to -15\%
Controller: 100W
0-120 degrees Fahrenheit
24VDC, 2.5 amps max.
24VAC, 1.5 amps max.
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


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## SECTION A SETUP \& I NSTALLATI ON

## 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 $1 / 4$ 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 AC2207 into a Wall

IF YOU ARE UNSURE IN ANY WAY I N PROCEEDI NG WITH THE FOLLOWI NG STEPS, PLEASE HI RE A LICENSED ELECTRICI AN 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. Find an appropriate wall into which to bolt the changer. The wall should have studs or be constructed of concrete.
7. NOTE: SECURI NG THE CHANGER FROM FEWER THAN THE FOUR BOLTS OR WELDED ANGLE I RON MAY BE DANGEROUS. EACH HOLE NEEDS A BOLT THROUGH IT TO SECURELY MOUNT THE CHANGER INTO THE WALL. MOUNTI NG THE CHANGER IN ANY OTHER WAY MAY RESULT IN THE CHANGER BEI NG TORN FROM OR FALLI NG FROM THE WALL, RESULTI NG IN PERSONAL OR CUSTOMER I NJ URY ALONG WI TH ELECTRICAL SHOCK.
8. 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.)
9. 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 I NJ URY.
10. BEFORE DRILLI NG THE MARKED HOLES, ENSURE THAT THERE ARE NO ELECTRICAL WIRES, TELEPHONE LI NES, GAS OR WATER LI NES BEHI ND THE WALL.
11. After drilling the holes, put the changer's back into the wall. Thread and tighten bolts.
12. Verify that the machine is securely mounted.
13. If the changer is permanently connected through a conduit, proceed to step \#16.
14. Plug the power cord back into an AC wall outlet and into the Power Supply, if necessary. Do not use an extension cord unless allowed by the building electrical code.
15. Installation is completed. Proceed to the "Programming the Changer" section.
16. 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.
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 I nformation

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

A nickel is approximately 21 mm , a quarter is approximately 25 mm , and a dollar coin is approximately $\mathbf{2 8 m m}$ in diameter.


Figure 7 - Hopper

## Validator General I nformation

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 AC2207 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

Menu Index
$01=$ Print Help
$02=$ System Information
$03=$ Button Plice
$04=$ Button Payout
$05=$ Enable B111
$06=$ Payout Per B111
$07=$ Enable Hoppers
$08=$ Hopper Coln Value
$09=$ Enable Coin Acceptor
$10=$ Change Payout
11 = Promo-Token Payout
$12=$ Dump Hoppers
$13=$ Audit Information
$14=$ Vend Iten Name
15 = Date Setup
$16=$ Time Setup
17 = Machine Number
$18=$ Marquee Timer
$19=$ Zipcode Enable
$20=$ Access Code
21 = Key Beep Enable
$22=$ Location Name

## 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
Credit Card Status
Printer Status
Temperature

Validator Status
Zip Code Option Status
Hopper \#1 Status
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 $\quad$ 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 <br> Date - year, mm, dd -Time - hr: mm: ss Audit Sequence \# \# |  |
| :---: | :---: |
| == Non-Resettable Counters == <br> 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 |  |
| credit card buttons for pricing choices |  |
| Selection 2: | \#\#\#\#\#\# |
| Selection 3: | \#\#\#\#\#\# |
| Selection 4: | \#\#\#\#\#\# |
| Paid Hopper 1: \#\#\#\#\#\# |  |
| Paid Hopper 2: \#\#\#\#\#\# |  |
| $\begin{aligned} & \text { Paid Total: } \\ & =\text { STATUS }\end{aligned}==$ \#\#\#\#\#\# |  |
|  |  |
| Hopper \# 1: ${ }_{\text {Status of LEFT }}$ OK |  |
|  |  |
| Hopper \#2: OK |  |
| Status of RIGHT Hopper |  |
| Validator: OK |  |
| St | s of Bill Acceptor |
| Credit Card: OK |  |
| Status of CREDIT CARD Operations |  |



## 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.


## 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).


## 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.
4. I MPORTANT! 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!
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.

## 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 AC2207 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 counterclockwise 1 or 2 "clicks" from setting " 0 " to "F" or"E."

## SECTION B MAI NTENANCE

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



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

information packet.


# 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.
17. Below are some of the display messages:

1. Update: $\mathbf{x x x x}-\mathbf{x x}-\mathbf{x x x}$ Yes
2. File Error!

Verify File on Drive
3. System Settings will be Erased if Updated
4. Begin updating?

Start Exit
5. Computing CRC!

Please wait...
6. CRC Error!

Update Required!
7. CRC OK, Initializing Please Wait... V:XXX
8. Do Not Remove Drive Updating Software!
9. Update Ok! Remove

Drive \& Cycle Power
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.

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

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

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

System is checking for any errors.
$\mathbf{V}: \mathbf{X X X} \quad$ 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.

System is getting ready to update.

Software is being updated.

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

