

# Virtual Cash Acceptor (VCA)

## Product Guide

Accountor Systems

Control - Accounting - Reports



Conforms to FCC CFR 47 part 15 and  
European Community EMC Directive 89/336/EEC

## ABOUT THE VIRTUAL CASH ACCEPTOR

Your VCA terminal should arrive in good condition. Check the carton for damage and store it in a safe place in the event you need to return the machine. If there is any visible damage to your machine, notify the shipping company as soon as possible and contact your equipment supplier.

### Contents of package

1. Virtual Cash Acceptor
2. Power cord
3. Parameters card
4. Warranty card
5. Product Guide

### Keypad

Your VCA is fitted with a high-quality, vandal-proof steel keypad.

### Bill acceptor

The CoinCo bill acceptor is easily upgraded for new currency to future proof your investment. International customers should contact Accountor Systems for details.

### User ID option

The VCA is standard-fitted with a track 2 magnetic card insert reader; options include track 1 and 3 insert readers, barcode scanner, Mifare, iClass, Prox by HID, Impro and EM4102 contactless RFID smart card readers.

### Coin acceptor/changer

Your VCA may be ordered with a 3.5" electronic coin acceptor capable of validating six coin values or a coin changer (see opposite) which pays change in nickel, dime, quarter for the US, call and ask for International options).

### Fuses

The VCA uses a 250 V, 4 A quick blow fuse. The size is 5 mm x 20 mm.



The VCA with optional Vortex changer and the lockable cash box beneath. The coin acceptor versions ship with the chute as shown below.



### Product information

Take a few minutes to complete these details. Have the information ready when you call Accountor Systems with questions about your product.

Product type: Virtual Cash Acceptor

Serial number \_\_\_\_\_ (9 digits)  
MAC address: \_\_\_\_\_ (12 digits)

### How to contact Accountor Systems

**Postal:** 16W361 S. Frontage Rd. #107  
Burr Ridge IL, 60527 USA

**Tel.:** +1-630-325-9200

**Fax:** +1-630-325-9201

**E-mail:** [sales@accountor.com](mailto:sales@accountor.com)

**Web sites:** [www.accountor.com](http://www.accountor.com)

# INSTALLATION AND SETUP

## Installing the Alpha touch screen controller

The Virtual Cash Acceptor can be easily installed using our dedicated floor stand or it may be mounted securely to a wall using appropriate fasteners for your wall (not supplied), if in doubt check with a professional.

1. Insert a connecting Cat5e cable, running from your chosen network port to the available port on the bottom of your VCA.
2. Check that all connections are secure, then plug in and power up the Virtual Cash Acceptor.
3. The VCA will not function until the appropriate network settings are entered into the parameters, see below.

## Network terminal settings

The VCA can boot up in either Static IP or DHCP mode. In the event the settings have been tampered with, or you need to change your configuration, you can reset the terminal.

### To change the settings (Static IP mode):

- When the terminal is off-line (network cable unplugged); Swipe your parameters card or, if you do not have your card, press and hold the '1' button until the display reads 'Enter next character', press and hold the '2' button until the display reads 'Enter Password' then press 9,8,7,6,5 in order and the parameters menu will appear. The display option scan be seen on page 7, select 'Set IP'.
- Press Static IP and this will bring up the IP parameters settings. You can either go through them line by line or touch the setting you wish to change. The display will appear as shown below.
- Press enter to exit

<b>Server:</b>	<b>192.168.001.100</b>
<b>Subnet:</b>	<b>255.255.255.000</b>
<b>Gateway:</b>	<b>192.168.001.001</b>
<b>Client:</b>	<b>192.168.001.101</b>

## Circuit boards

Your VCA has been thoroughly tested prior to shipping and so it is unlikely any parts will fail on installation. Problems are more likely to occur with the network connection or the external interfacing. Once you have checked the connections, check the following:

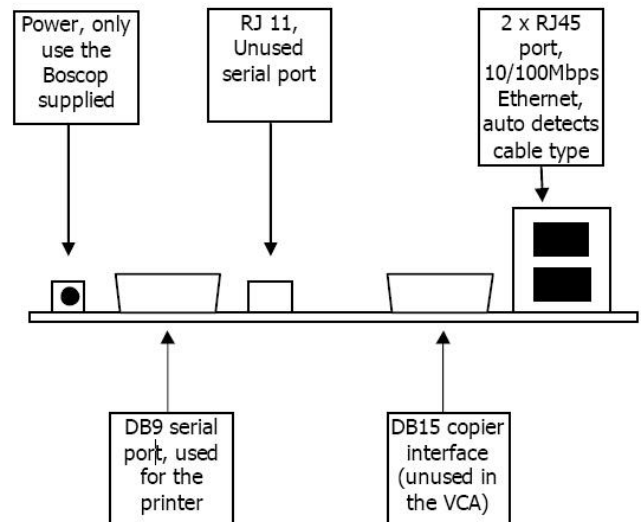
- Power – Is the display lit?
- Network – Can you see the pulsing LED to indicate the VCA is correctly hooked up to your network.
- Software – All products require installation of network software.

## Connection

- Power cord to wall socket (90 VAC to 264 VAC)
- Ethernet cable (not supplied)

It is vitally important that you do not either plug in, or unplug, any of the internal components of your Virtual Cash Acceptor. Check all connections are secure before powering the device. The VCA should boot up and sit with the display reading 'Waiting for network'. If it does not, then check the network connections and cabling.

## The board connections in your VCA:



## FLASHING IN SOFTWARE UPGRADES

The simplest, and preferred, method is to download and use the Network Flash Utility available from our website [here](#) Full instructions are in the program's help file.

If for some reason the network utility does not work we have a flash program requiring a serial connection.

Download and install the flash utility Flip from the Atmel Web site located at this address:  
[www.atmel.com/dyn/products/tools\\_card.asp?tool\\_id=2767](http://www.atmel.com/dyn/products/tools_card.asp?tool_id=2767)

1. Unzip the file received from Accountor Systems.
2. Connect the serial cable between the DB9, located on top of the main circuit board of the VCA, and your computer.
3. Plug in the VCA.
4. Launch the flash utility.
5. Go to Device > Select or press F2 and choose T89C51RC2.
  - Go to File > Load Hex and retrieve the hex file you unzipped.
  - Go to Settings > Communications > RS232 or press F3 and press the connect button.
6. If the program is able to communicate with the microprocessor, all the controls on the program will enable. If it can't, a timeout message will be displayed. If you get a timeout, use the checklist below to figure out why the connection failed. We recommend a baud rate of 57.6K.
7. Before starting the download, use the Operations Flow box on the left side of the screen to select which operations to perform (select Erase, Blank Check, Program and Verify).

## COMMUNICATION TIMEOUT REASONS

Before going through the following list, first verify there is communication between the program and the unit: Press F3, then push the Connect button.

### Problem – Solution

- The baud rate is too high. The board will successfully flash at speeds as high as 115K under most conditions. You may want to use something slower to be safe.
- The COM port selected may be wrong. Press F3 to access the communication window and the COM port settings.
- The utility was previously synched up to a different unit and you did not press disconnect before starting a new flash cycle.
- You cannot change baud rates after the utility and the board have synched up. You must power cycle the unit if you change baud rates after sync up.
- You didn't select the T89C51RC2 device. The device selected is displayed in the upper right-hand corner of the program. You can change your device by pressing F2.
- The microprocessor may be faulty. Send the unit back to the factory for repair.

8. Press Run in the lower left of the screen to start the flash download. The checkboxes should turn green after successful completion of each stage. If any of them turn red, a problem has occurred and you will have to start over.
9. If you have more than one machine to flash, press F3 after the download completes. This will break the serial connection.
10. The VCA should automatically reboot.

## VCA PAPER REPLACEMENT

Replacement paper rolls (Part number: TP3245-25C, 5 rolls to a box) may be ordered from Accountor Systems; call 630-325-9200.

To load the paper, be sure the roll is cut cleanly and square, feed the paper into the roller on top of the printer mechanism, and press the red button located by the door hinge. The paper should feed straight out of the slot on the front. If the paper is not straight, then paper misfeeding and jamming will occur.

## TROUBLESHOOTING

The Virtual Cash Acceptor does not function independently — it requires server-installed software to function. For Virtual Cash Acceptor support, please contact 630-325-9200 between 8:00 a.m. and 6:00 p.m. EST.

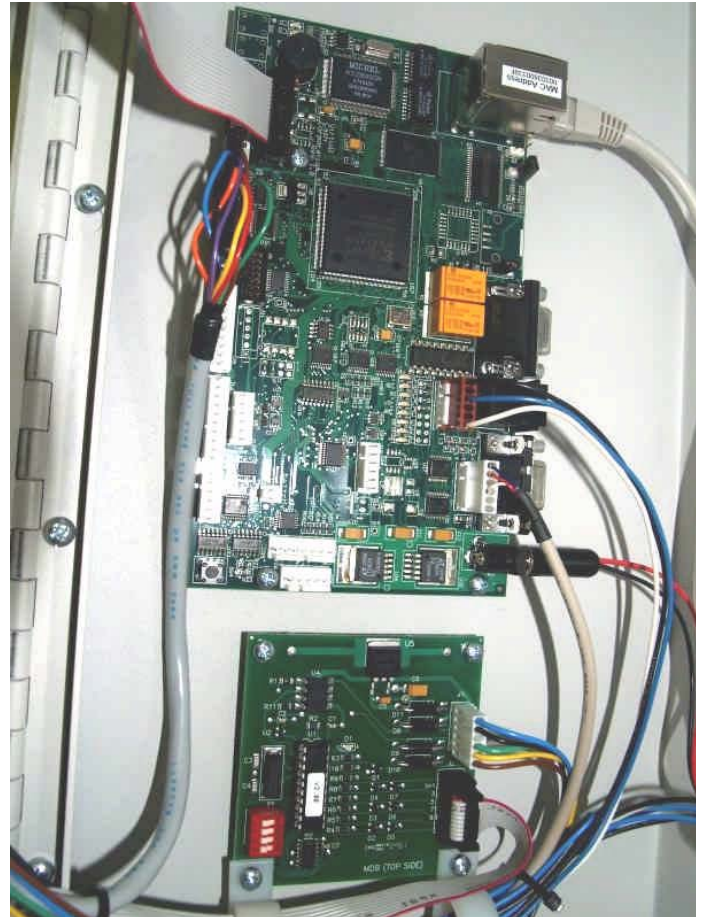
Please e-mail [support@accountor.com](mailto:support@accountor.com)

### Initial install

1. Check the cable and connections.
2. Can you ping the VCA unit from the server?
  - a) Yes – check the server software configuration
  - b) No.
- Is the network configured to pass broadcast packets? Destination port 2613 and source port 68 must be open for the VCA to contact the server. TCP ports 1234 and 1235 must also be open.
- Will another unit work in that same location?
- Will that unit work in another location closer to the server?
- Run the VCA test program on a lap top You will need a standard Cat5e Ethernet cable.
- Is the hardware in the VCA working? Check the LED status on the circuit board when connected to the network.
3. Does the bill acceptor/coin acceptor enable when an account is correctly verified with the server?
4. Does the VCA accept currency and show an increasing value on the display?
5. When the transaction is complete, does the VCA correctly print a receipt and return to “Swipe card or enter account number”.

### Post installation

1. Check that the network terminal settings are correct (you may need to contact the network administrator locally).
2. Can you ping the ALPHA from the print software server?
  - a) Yes. Check all software settings.
  - b) No. Run the ALPHA diagnostic tool from your laptop through the Ethernet port (you will need a standard Cat5e cable to run the connection through a hub).
  - c) Replace the terminal, if the problem persists, change the local hub and get the network connectivity verified to your position.
3. The most common fault is caused by the terminal setting having been changed inadvertently. Ask the network administrator to keep a record of all terminal settings for easy reference.



This picture shows the VCA board and the MDB board; the MDB board is not used for banknote only and for banknote with coin changer installations. The switches on the MDB board are used to set coin (up to six coin values) settings for different country currencies.

### LED Definitions

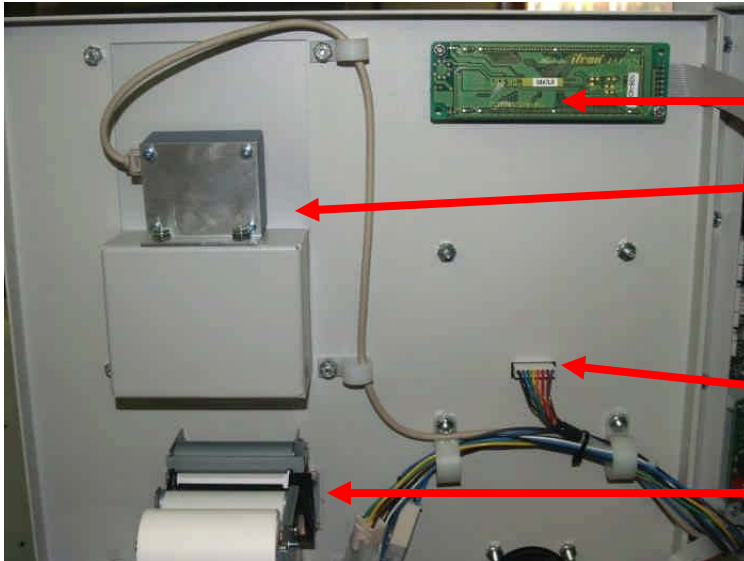
**Location:** Just below the RJ11 port viewed from left to right.

- D4 - MDB TX to coin change
- D5 - MDB TX to bill acceptor
- D6 - MDB coin changer enabled
- D7 - MDB bill acceptor enabled
- D8 - for future use
- D9 - TCP connection on port 1235
- D10 - TCP connection on port 1234
- D11 - OS heart beat signal.

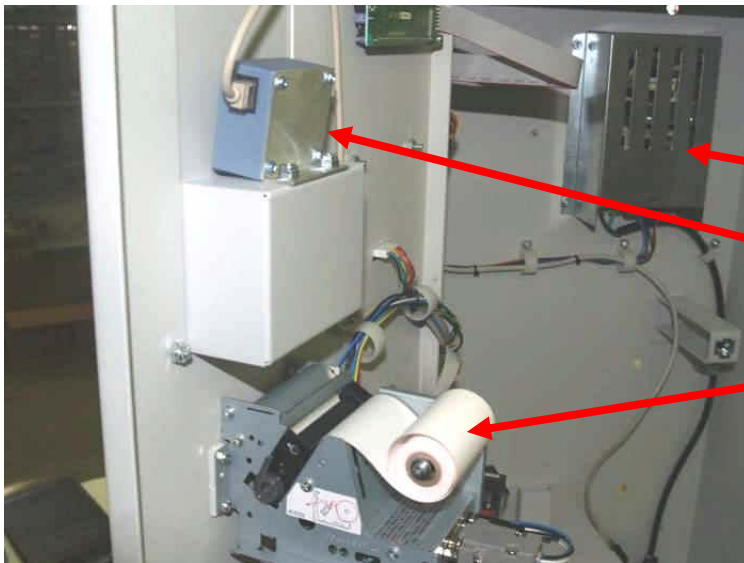
**Location:** edge of board below the RJ45 jack

- D1 - link status of bottom network port
- D2 - link status of top network port

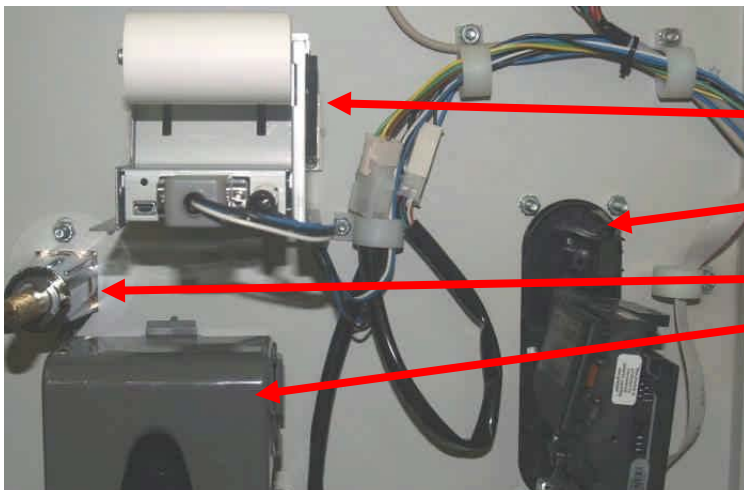
# Internal Components



1. Vacuum Fluorescent Display.
2. Barcode Scanner (other configurations include magnetic card reader, proximity card reader etc.).
3. Steel Keypad.
4. Nippon receipt printer



1. Power supply.
2. Barcode Scanner.
3. Receipt Printer.



1. Receipt printer (note DB9 and bayonet connector for power)
2. 3.5" coin acceptor (options include the Vortex coin changer)
3. T-handle lock screw thread
4. Bank-note acceptor (squeeze the sides to flip the top open and remove currency).

# Notes