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# JCM Tool Suite™ Software

## Program Installation and Operation

This document contains information for downloading, installing, configuring and operating the JCM Tool Suite™ Standard Edition Software Program. The JCM Tool Suite™ Software Application is intended to aid the UBA® and iVIZION® Unit user in updating Software, retrieving performance data and performing calibration of the two related products. The JCM Tool Suite™ Application requires the following hardware support items:

- 1- Required JCM Tool Suite™ Software components:
  - 1 - JCM Tool Suite™ Software (“UBA® Tool Suite Standard Edition Rev.1”)
  - 1 - JCM Tool Suite™ Software Installation Guide (JAC Part No.960-000923R).
- Additional Equipment (not supplied).
  - 1 - PS75-002 Power Supply (JAC Part No: 701-000148R).
  - 1 - UAC Device Kit (JAC Part No: 701-100103R for UBA® or iVIZION®).
  - 1 - Personal Computer (PC) with Internet Connection; Windows® OS: XP, Vista 32 & Windows 7.

*The above Software is available at:*  
<http://www.jcmglobal.com/en/support/downloads/tools.aspx>

### JCM TOOL SUITE HARDWARE REQUIREMENTS

Figure 1 illustrates the JCM Tool Suite™ Software System’s Bench Technicians additional equipment components and download installation requirements.

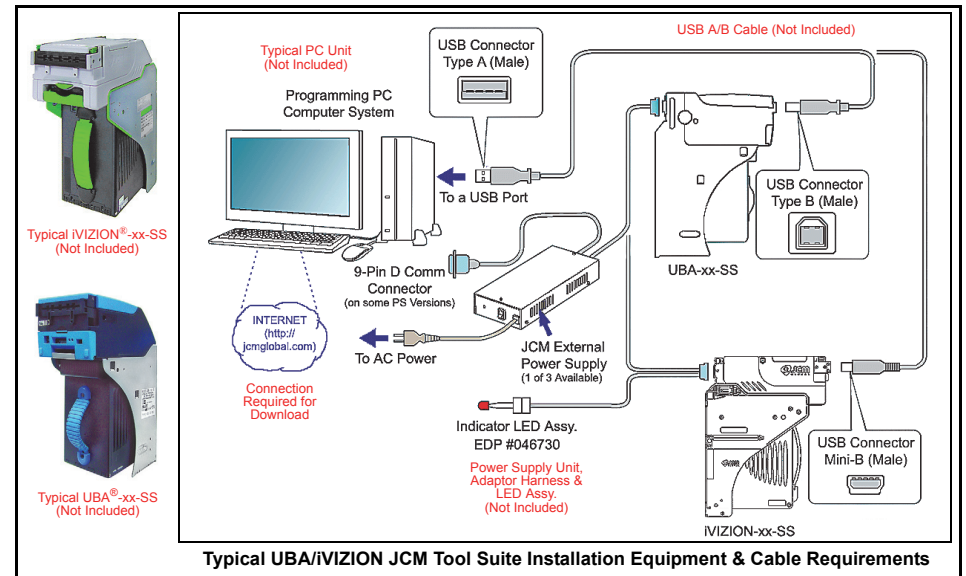


Figure 1 Typical JCM Tool Suite Hardware Component Interconnections

## INTRODUCTION

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The JCM Tool Suite™ is an application allowing Software to be updated, retrieving performance data and performing UBA® calibration, it is also used to access the iVIZION® performance tests and ICB Set-up Functions.

The "**JCM Tool Suite Standard Edition**" Application also allows AccLoad™ information to be accessed on a UBA® using only the front USB Port of the UBA® Unit. The "**JCM Tool Suite Standard Edition**" also works with the iVIZION® Units containing current released versions of the iVIZION® Software.

The JCM Tool Suite Standard Edition™ Application is Windows XP®, Vista® and Windows 7® compatible, and is available for download at the JCM Website (<http://www.jcmglobal.com/en/support/downloads/tools.aspx>).

## PERSONAL NOTES AND COMMENT AREA

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Write any pertinent notes or comments regarding your particular installation here.

## PARTS LIST

### ACCEPTABLE POWER SUPPLIES

Part No.	Description
701-000148R	PS75-002 (UBA)
701-100103R	JCM UAC Kit



*NOTE: The UAC Device will power both the iVIZION® and UBA® Units.  
The required Test Leads are included with this Unit.*

40i-000001R UBA to iVIZION Adaptor Cable.

If additional information for downloading or operating The JCM Tool Suite™ Software Application loaded into a UBA® or iVIZION® Unit, contact JCM Customer Support for further instruction.

## INSTALLING JCM TOOL SUITE APPLICATION

Perform the following steps to install the JCM Tool Suite Standard Edition™ Software Application onto your PC:

1. Obtain the required JCM Tool Suite Standard Edition™ Software Application from JCM's Website (<http://www.jcmglobal.com/en/support/downloads/tools.aspx>).
2. Save the Application into a File Folder on the PC.

### JCM TOOL SUITE STANDARD EDITION SOFTWARE INSTALLATION

To install the "JCM Tool Suite" Application proceed as follows:

1. Open the directory where the "JCM Tool Suite Standard Edition" Application was stored on the PC.



*NOTE: To make the access to the program easier, create a shortcut and move the shortcut ICON to the desktop.*

2. Extract the files contained within the compressed File Folder.
3. Double Mouse-click on the "Setup" Application.
4. Follow the prompts as presented.

When completed the "JCM Tool Suite Standard" ICON will be placed on the desktop.



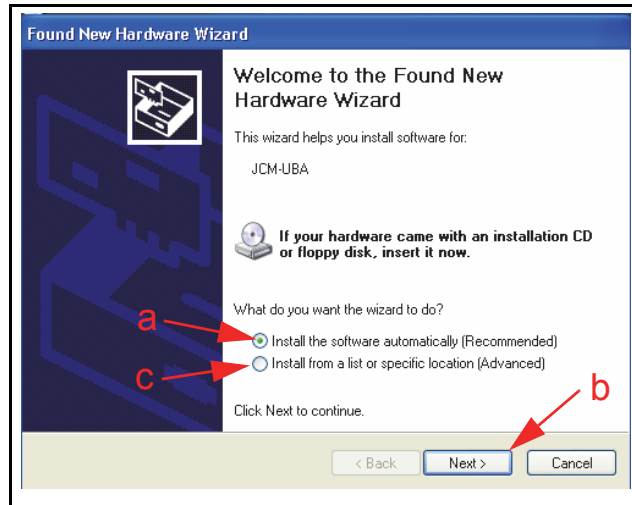
### INSTALLING RELATED DEVICE DRIVERS

**NOTE:** The JCM Device Drivers will only need to be installed if a UBA® Application was not previously installed on the PC.

The UBA®/iVIZION® USB Device Drivers need to be installed when using the JCM Tool Suite Application.

To install the necessary Drivers, follow these steps:

1. Connect power to the UBA® or iVIZION® Unit.
2. Attach a Male ‘A’ to Male ‘B’ Type USB Cable between an open Port on the PC and the UBA® or attach a Male ‘A’ to “Mini-B” Type USB Cable iVIZION® Unit.
3. When communication is established, a "Found New Hardware Wizard" prompt will appear (See Figure 2).



**Figure 2** Initial USB Driver Program Install Screen

4. Select the “Install the software automatically (Recommended)” Radio Button (See Figure 2 a).
5. Mouse-Click on the “Next>”  Screen Button (See Figure 2 b) and follow the prompt default instructions that allow the Application to automatically find and install the required Device Drivers. When complete, the “required "JCM-UBA/iVIZION" Device Driver will have been installed on th PC.

**NOTE:** If the required Drivers cannot be located, select the "Install from a list or specific location (Advanced)" Radio Button (See Figure 2 c) and “Browse” through the PC Folders to locate where the JCM Tool Suite Application was loaded. The required Drivers should be within the same Folder. For Windows 7, 64-bit Operating Systems, Contact JCM Technical Support to obtain the proper USB Devices.

### UBA BARCODE TICKET/COUPON REJECT ERROR CODES

Table 4 lists the UBA® and Barcode Ticket/Coupon Reject Error Codes mentioned on Sheet 4 of the AccLoad™ Application Program.

**Table 4** UBA Barcode Ticket/Coupon Reject Error Codes

Error No.	Error Description	Possible Cause
1	Barcode Function not set	Acceptance of ticket is disabled
2	Format Unknown	Incorrect Barcode format
3	Character Length	Improper character length
4	Start Character	Could not find the start character
5	Stop Character	Could not find the stop character
6	Barcode Type error	Barcode format error
7	Reserved	N/A
8	Ticket Transparency	Double Tickets detected
9	Reserved	N/A
10	Photo Level	Barcode too light
11	Upside down Ticket	Index mark on the wrong side
12	Reserved	N/A
13	Ticket Length	Ticket length is too long or too short
14	Reserved	N/A
15	Reserved	N/A


**NOTE:** iVIZION Error Codes are listed in the iVIZION® Operations and Maintenance Manual (JAC Part No. 960-100929R). Retrieve this Service Manual from the JCM Global Website at: <http://www.jcmglobal.com/en/support/downloads/Manuals.aspx>

### UBA ERROR CODES – ABNORMAL ERRORS (CONTINUED)

Table 3 lists the UBA® Abnormal/Malfunction Error Codes mentioned on Sheet 4 of the AccLoad™ Application Program.

**Table 3** UBA Abnormal/Malfunction Error Codes

Error No.	Error Description	Possible Cause
1	Cashbox Full	Replace Cash Box
2	Stacker Pusher Mechanism Fault, Jam in Transport (1)	Check for a Banknote jam in Cash Box, check Stacker Motor & Encoder
3	Jam in Transport (2)	Jam at Exit Sensor
4	Jam in Acceptor	Check Banknote Path, clean Sensor Lens. Replace Lower Sensor PCB
5	Transport Motor Speed Error	Check for debris on Belts, check for a Motor failure
6	Transport Motor Fault	Motor or CPU Failure (Motor Drivers)
7	Sensor Failure	Check and/or replace Upper or Lower Sensor PCB
8	Processor Communications	Check Upper Sensor PCB, Processor PCB and Cable connection between the two (2) Circuit Boards
9	Anti Pullback Unit Fault	Check for a jam at Pull Back Assembly
10	Cash Box Error	Re-insert Cash Box
11	ICB Module	Check ICB Function
12	Cheat Condition Detected	Check for debris in Banknote path, clean Sensor Lenses
13	Centering Mechanism Solenoid Fault	Check Solenoid Function
14	Centering Mechanism Fault	Check for Jammed Centering Mechanism and Centering Home Sensor
15	Reserved	N/A

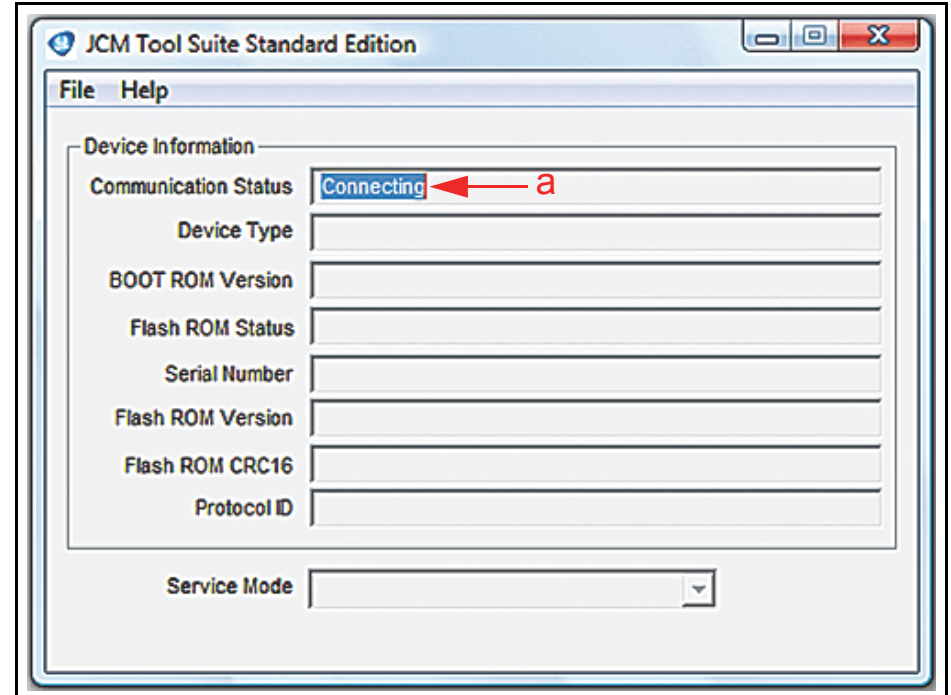
 **NOTE:** Startup Errors for a UBA® DO NOT show in the Accload™ Program. Refer to the UBA Operations and Service Manual, Appendix A for information regarding Start-up Errors (JAC No. 960-000097R). Retrieve this Service Manual from the JCM Global Website at: <http://www.jcmglobal.com/en/support/downloads/Manuals.aspx>

### CONNECTING THE UBA/IVIZION TO A PC

The UBA® or iVIZION® Unit can be installed in a Game or located on a Workbench when connecting to the JCM Tool Suite.

To connect to the JCM Tool Suite, proceed as follows:

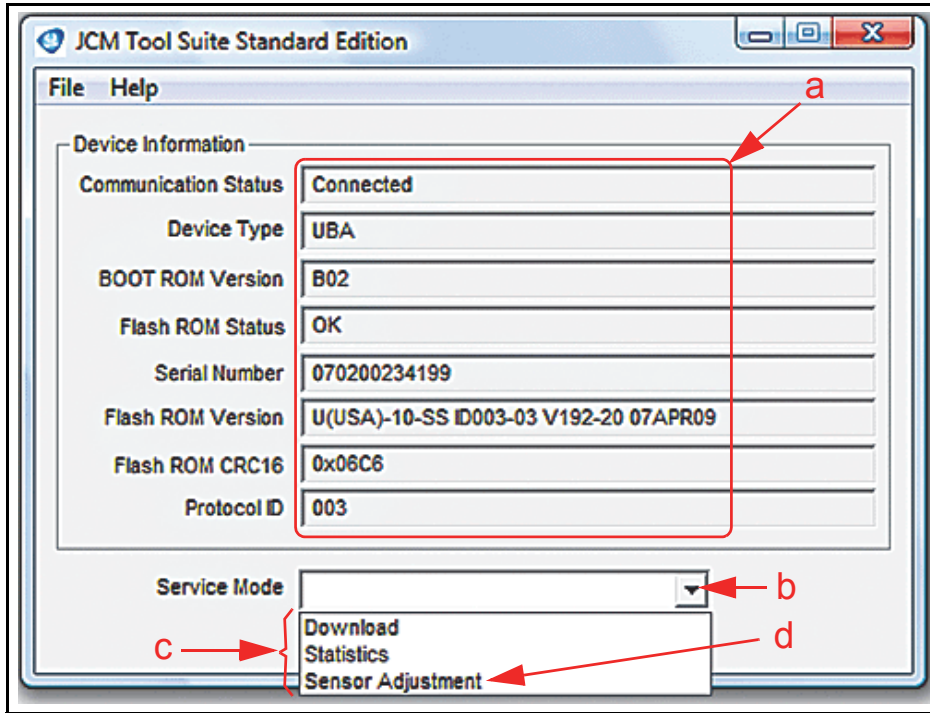
1. Connect the proper USB Cable between the UBA®/iVIZION® Unit and the PC.
2. Apply power to the UBA®/iVIZION® Unit.
3. Open the JCM Tool Suite Application Icon. Once the Application opens, the initialization Screen shown in Figure 3, with “Connecting” **Connecting** showing in the “Communication Status” Field (Figure 3 a), will appear.



**Figure 3** Initializing JCM Tool Suite Program Screen

When total communications is established, the available Fields will all contain data information (See Figure 4a on Page 6).

The Figure 4 example shown is for a UBA® Unit; a similar display will appear when connecting an iVIZION® Unit.



**Figure 4** Final Connected JCM Tool Suite Program Screen

**UBA ERROR CODES – REJECT NOTE ERRORS (CONTINUED)**

Table 2 lists the UBA® Reject Note Error Codes mentioned on Sheet 2 of the AccLoad™ Application Program.

**Table 2** UBA Reject Note Error Codes

Error No.	Error Description	Possible Cause
1	Reserved	N/A
2	Magnetic Pattern Error	Clean Magnetic Head and/or Roller
3	Reserved	N/A
4	Reserved	N/A
5	Reserved	N/A
6	Reserved	N/A
7	Photo Pattern Error	Bar Code Reader
8	Reserved	N/A
9	Reserved	N/A
10	Reserved	N/A
11	Reserved	N/A
12	Escrow Sensor Check Error	Optical Sensors
13	Bill Length Error	Validating Sensors
14	Photo Pattern Error	Check for dirty/clouded Lenses; clean the Lenses, Upper and/or Lower Sensor Circuit Board failure.
15	UV optical Sensor Error	Clean UV Sensor and White Reflection Block

## ACCLOAD ERROR CODE TABLES

### UBA ERROR CODES – REJECT ERRORS

Table 1 lists the UBA® Reject Data Error Codes mentioned on Sheet 4 of the AccLoad™ Application Program.

 **NOTE:** To define a specific UBA Data Error Code, refer to the UBA Operations and Service Manual on the JCM Global Website at: <http://www.jcmglobal.com/en/support/downloads/Manuals.aspx>.

**Table 1** UBA Reject Data Error Codes

Error No.	Error Description	Possible Cause
1	Slant Insertion	Entrance Sensor, Validation Sensors
2	Magnetic Sensor Pattern Error	Clean Magnetic Head and Roller
3	Idle Detection	Check for jammed Banknote, clean Optical Sensor's Lens
4	Sensor Adjustment	Clean Upper or Lower Sensor's Lens, Calibrate if error continues
5	Banknote Feed Error	Clean Belts and/or debris blocking the Banknote's path
6	Banknote Identification Error	Check Banknote Condition, clean Sensor's Lens
7	Bar Code Error	Clean Barcode Reader's Lens
8	Double Detect	Double Banknote inserted, clean Validation Sensor's Lens
9	Inhibit Banknote	Banknote Disabled by Command or DIP Switch setting
10	Return by Host Command	Banknote Returned by Host Command
11	Reserved	N/A
12	Banknote Detection Error	Check all Banknote path Sensors, clean the Sensor Lenses
13	Banknote Length Error	Check Banknote condition, clean Validating Sensor's lens
14	Photo Pattern Error	Check for dirty/clouded Lenses; clean the Lenses, Upper and/or Lower Sensor Circuit Board failure.
15	UV Optical Sensor Error	Clean the UV Sensor and White Reflective Block.

## JCM TOOL SUITE FUNCTIONS - UBA OR IVIZION

### FUNCTIONS AVAILABLE

The available Functions for the UBA® Unit (Review Figure 4) using the JCM Tool Suite include the following three types:

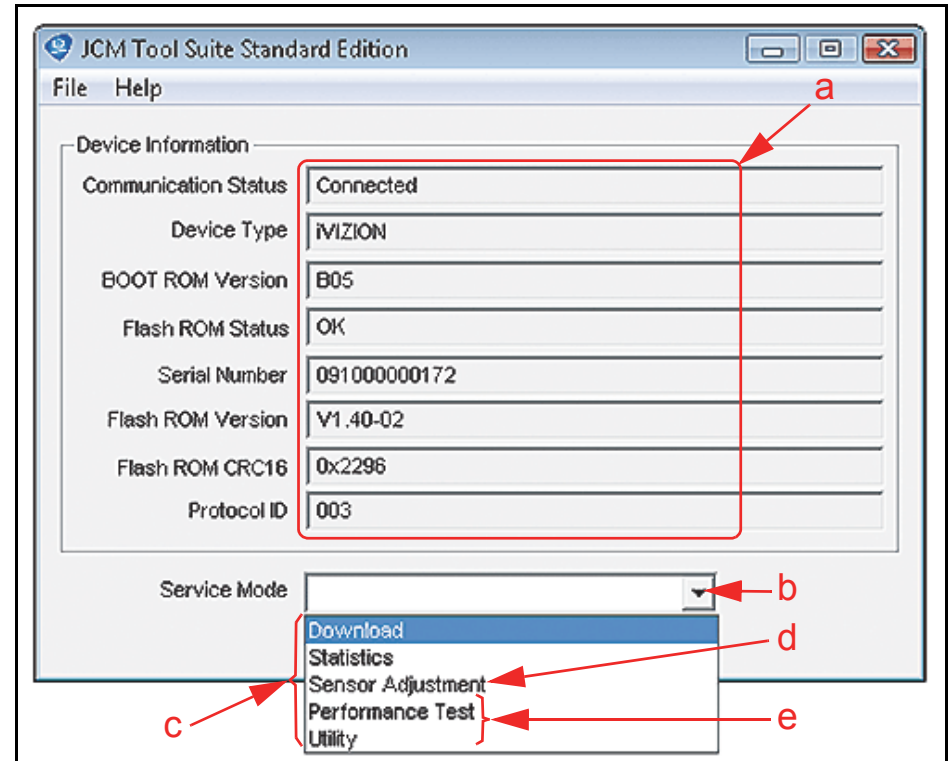
- Download
- Statistics
- Sensor Adjustment.

When an iVIZION® Unit (See Figure 5) is connected, the following functions are available in the Operations Mode:

- Download
- Statistics
- Utility.

If the iVIZION® Unit is connected to the JCM Tool Suite while in Maintenance Mode, the following additional functions will be available as well:

- Sensor Adjustment
- Performance Test.

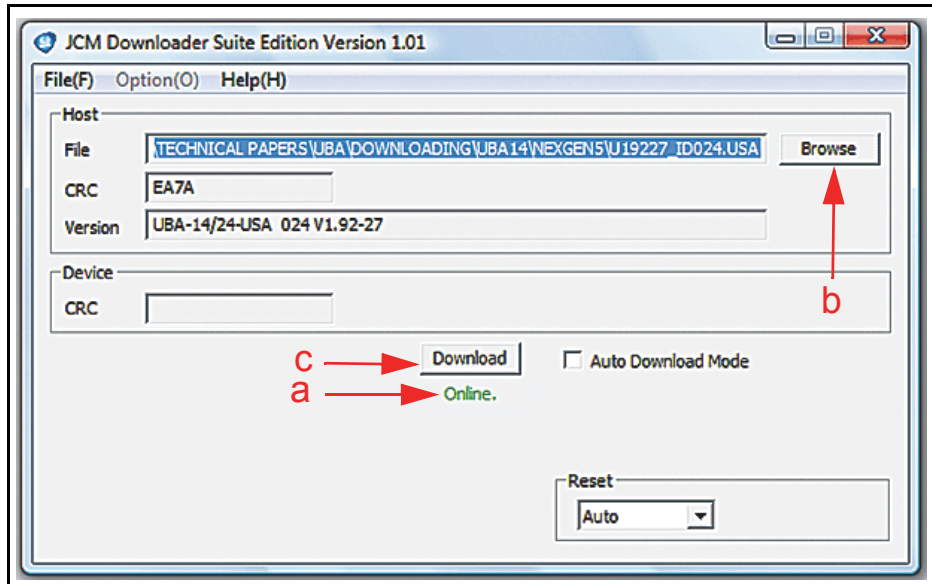


**Figure 5** iVIZION Unit Connected JCM Tool Suite Program Screen

### DOWNLOAD - UBA OR IVIZION

The Download Program is used to update software in a UBA® or iVIZION® Unit.


When selecting the download option, the JCM Downloader will open the Screen shown in Figure 6.



**Figure 6** JCM Tool Suite Download Program Screen

When this Screen opens, check the following conditions:

1. Ensure that the Green Status Line indicates "Online" (See Figure 6 a).

 *NOTE: The file location defaults to the last file downloaded.*

2. Use the "Browse"  Screen Button (See Figure 6 b) to select the data File to download. To begin the Software download, Mouse-click on Download Screen Button (See Figure 6 c).

For full information on updating UBA® Software refer to Section 6, Page 6-3 of the UBA® Series Operation and Maintenance Manual. This manual is available on the JCM Global Website.

For full information on updating iVIZION® Software refer to Section 6 of the iVIZION® Series Operation and Maintenance Manual. This manual is also available on the JCM Global Website.

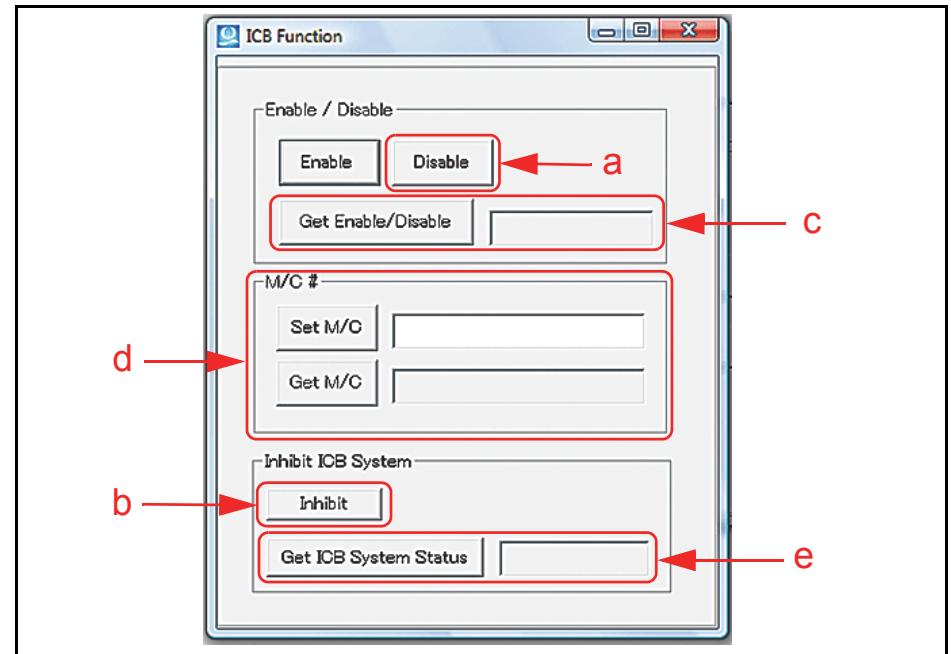
### ICB SETTING SCREEN

When the "2) ICB SETTING" Screen Button is selected, Figure 13 will appear.

#### ICB Function Screen

When "2) ICB SETTING" is selected, the user is able to input the necessary Parameters for enabling or disabling an Intelligent Cash Box (ICB) System. Currently, just leave the Parameters present set in their default condition.

If the iVIZION® Unit displays an "ICB Disabled" Error message, ensure that BOTH the "Disable"  Screen Button and the "Inhibit"  Screen Button are Mouse-clicked to completely disable the currently installed ICB System (See Figure 13 a & b).



**Figure 13** iVIZION Utility Tool Suite ICB Setting Program Screen

The "Get Enable/Disable"  Screen Button and related Data Text Field (See Figure 13 c) provide the ability to retrieve the current ICB Status from the iVIZION® Unit.

The "M/C #" Area's "Set M/C"  and "Get M/C"  Screen Buttons and their related Data Text Fields (See Figure 13 d) provide the ability to Set-up or Retrieve M/C#s to an iVIZION® Unit.

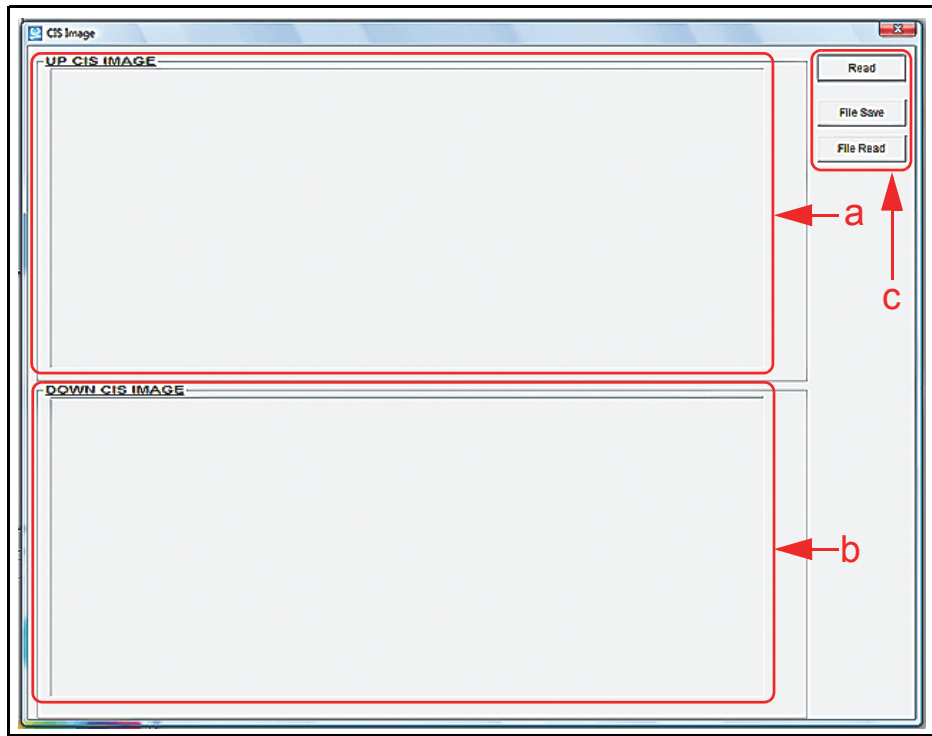
The "Get ICB System Status"  Screen Button and its related Data Text Field (See Figure 13 e) provide the ability to retrieve the current ICB Status from the iVIZION® Unit.

The "Inhibit"  Screen Button (See Figure 13 b) disables ICB Functions on the installed Cash Box.



### CIS IMAGE SCREEN

When the “1) CIS IMAGE” Screen Button is selected, Figure 12 will appear.



**Figure 12** iVIZION Utility Tool Suite CIS Image Program Screen

The image information can then be read from the iVIZION®, saved to a File or read from a File previously saved.

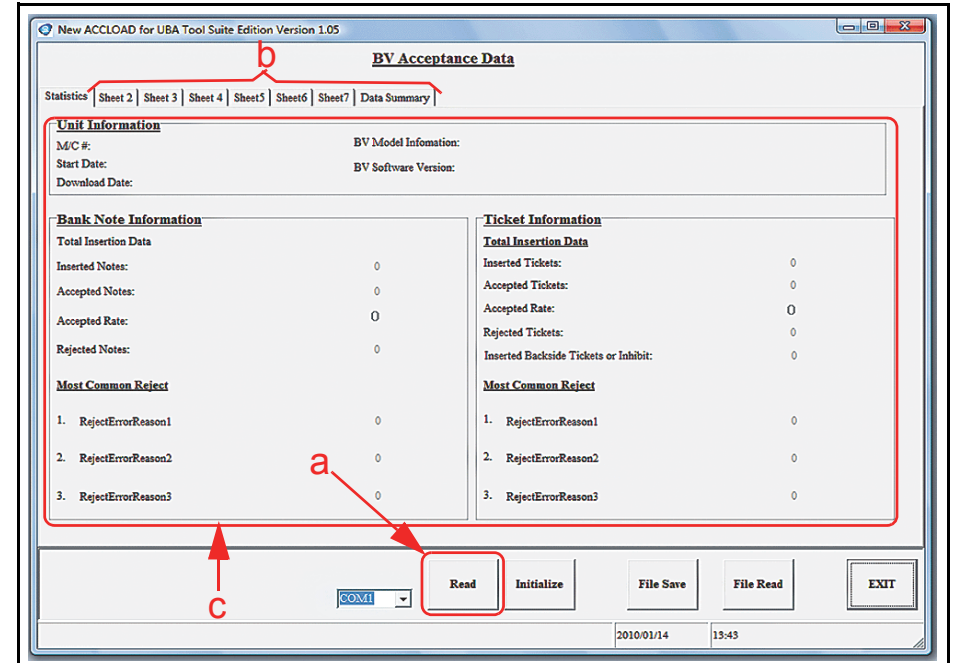
The “**UP CIS IMAGE**” Screen area (See Figure 12 a) shows the “UP” Side Surface of the Banknote as inserted, and the “**DOWN CIS IMAGE**” Screen area (See Figure 12 b) shows the “Down” Side Surface of the Banknote as inserted.

The “Read” , “File Save”  and “File Read”  Screen Buttons (See Figure 12 c) collectively provide the ability to retrieve or save an image to a File Folder.

### STATISTICS - UBA

The “Statistics” Function is used to read “AccLoad™” Statistics information from a UBA® Unit’s Memory.

When “Statistics” is selected the “**BV Acceptance Data**” AccLoad™ Screen automatically opens as shown in Figure 7.



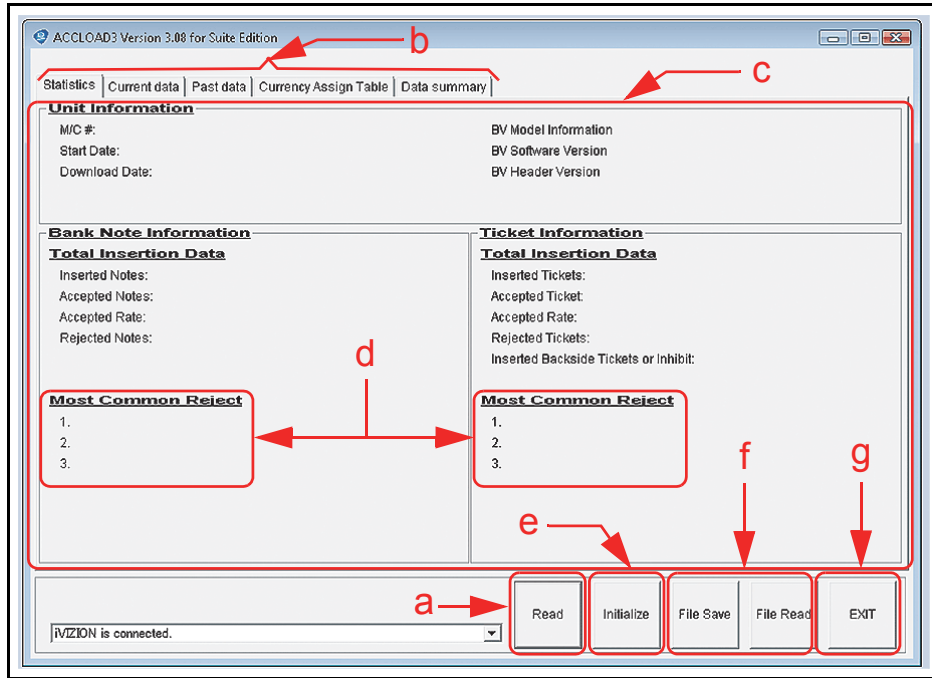
**Figure 7** UBA Statistics AccLoad Program Screen

To read the AccLoad™ Data from the UBA® Memory, Mouse-click on the large “**Read**” Screen Button (See Figure 7 a).

Further Information on using all of the Tabs and Fields on the Accload™ Program refer to the ACCLOAD Software Installation Guide, (Part No. 960-100918R\_ Rev. A) available on the JCM Global Website.

### STATISTICS - iVIZION

When the “Statistics” Function is selected on an iVIZION® Unit, the Screen shown in Figure 8 is displayed.



**Figure 8** iVIZION AccLoad Program Statistics Screen

To read the Accload information from an iVIZION® Unit, Mouse-click on the large "Read" Screen Button (See Figure 8 a).

### UTILITY TOOL - iVIZION

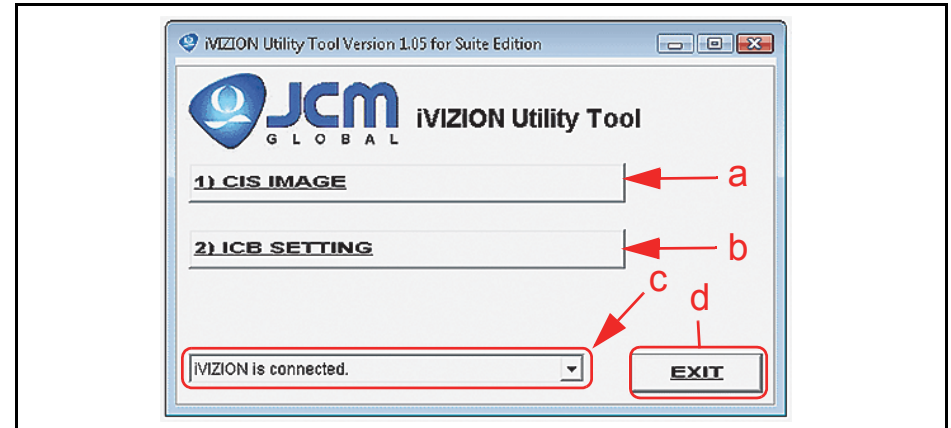
The iVIZION® Utility Tool provides the following two (2) iVIZION® Functions:

1. **1) CIS IMAGE** — Image Capture of the last Banknote inserted (See Figure 11 a).
2. **2) ICB SETTING** — Activation Set-up of the Intelligent Cash Box (ICB) System (See Figure 11 b).

Figure 11c displays the Connection Status of the iVIZION® Device connected.

To Exit the Utility Tool Suite Program, Mouse-click on the “EXIT”  Screen Button.

Figure 11 illustrates the iVIZION® Utility Tool Suite Program Primary Screen.



**Figure 11** iVIZION Utility Tool Suite Program Primary Screen

## iVIZION FUNCTIONAL TEST DESCRIPTIONS

The following Test Descriptions relate to the various Figure 10 Screen Button Selections:

**Transport motor Forward** – The “Transport motor Forward” Screen Button (See Figure 10 ①) causes the Transport Motor to run in the Banknote insertion direction (Forward). The **Yellow** LED will flash if no error is indicated. The **Yellow** LED will light steady if an error condition is detected.

**Transport motor Reverse** – The “Transport motor Reverse” Screen Button (See Figure 10 ②) causes the Transport Motor to run in the Banknote return direction (Reverse). The **Yellow** LED will flash if no error is indicated. The **Yellow** LED will light steady if an error condition is detected.

**Stacker motor Forward** – The “Stacker motor Forward” Screen Button (See Figure 10 ③) causes the Stacker Motor to activate testing the Note Stacking function of the iVIZION® Unit. The **Yellow** LED will flash if no error is indicated. The **Yellow** LED will light steady if an error condition is detected.


**Cycle Test** – The “Cycle Test” Screen Button (See Figure 10 ④) performs a full Transport and Stacking cycle to occur, then repeats until stopped. The **Yellow** LED will flash between cycles; if an error occurs, the **RED** LED will flash a related Error Code.

**Sensor ON/OFF Check** – The “Sensor ON/OFF Check” Screen Button (See Figure 10 ⑤) displays the current condition of each Validator, Transport and Cash Box Sensors being tested. As Sensor status changes, the Test reflects the new condition.

**Display Check** – The “Display Check” Screen Button (See Figure 10 ⑥) cycles the right side Status LED through a **RED**, **GREEN** and **BLUE** Color lighting sequence.

**Dipsw ON/OFF Check** – The “Dipsw OnN/OFF Check” Screen Button (See Figure 10 ⑦) displays the current status of each iVIZION® DIP Switch, as either ON or OFF.

**Accept Mode** – The “Accept Mode” Screen Button (See Figure 10 ⑧) places the iVIZION® into a Banknote Acceptance Test. As each denomination Note is accepted, the denomination amount is place in the DENOMI: Field. If a Bar Code Ticket is inserted, the indication is “Ticket” in the DENOMI; Field. To stop the Accept Test, reset the iVIZION® Unit.

 **NOTE:** To enter the Accept Mode, the iVIZION® must be reset if any other Tests have been performed.

**ICB Control Ticket Read Mode** – The “ICB Control Ticket Read Mode” Screen Button (See Figure 10 ⑨), allows the Intelligent Cash Box (ICB) function to be set-up by using ICB “Set” Tickets.

## iVIZION SCREEN TAB DEFINITIONS

The iVIZION® AccLoad™ Data Screen is divided into five (5) individual Sub-Screen Selection Tabs (See Figure 8 b) and Screen Buttons briefly described as follows:

### Screen Tabs

**Statistics Tab** – The “Statistics” Tab Screen provides an iVIZION® summary of its current performance Statistics. **Unit Information, Banknote Information and Ticket Information** (Acceptance) is displayed in the three (3) Major Boxed Areas located in the center Screen area (See Figure 8 c). The three Most Common Reject Errors for Banknotes and Tickets (See Figure 8 d) are also displayed in these central Boxes.

**Current data Tab** – The “Current data” Tab Screen lists the Acceptance Rate for each Banknote denomination inserted and displays its direction of insertion as well.

**Past data Tab** – The “Past Data” Tab Screen provides a history of the Software updates and initialization of Accload data.

**Currency Assign Table Tab** – The “Currency Assign Table” Tab Screen displays the Banknote denominations, and the current Software installed in the iVIZION® programmed to accept them.

**Data summary Tab** – The “Data Summary” Tab Screen is a Summary Page showing the acceptance activity of the iVIZION® Unit.

The four (4) Screen Buttons Located at Screen bottom perform the following functions:


### Screen Buttons

**Read Button** – The “Read” Screen Button allows the Accload information to be read from an iVIZION® Unit.

**Initialize Button** – The “Initialize” Screen Button (See Figure 8 e) sets the value of each Field to Zero (0), records the Date & Time that the PC was connected to the iVIZION®, and allows a Machine Number to be input for the Unit being tested.

**File Save/File Read Buttons** – The “File Save/File Read” Screen Buttons (See Figure 8 f) allows the Accload™ information to be saved to a File or allows the reading of a pre-recorded saved File respectively.

**EXIT Button** – The “EXIT” Screen Button (See Figure 8 g) allows the user to Exit from the program.

 **NOTE:** To define a specific iVIZION Error Code, refer to the iVIZION® Operations and Service Manual on the JCM Global Website at: <http://jcmglobal.com/en/support/downloads/manuals.aspx>.

## SENSOR ADJUSTMENT - UBA

The Sensor Adjustment Program is used to calibrate the UBA® Unit. To open the Sensor Adjustment Program, select the “Sensor Adjustment” Option within the JCM Tool Suite Application “Service Mode” Pull-down Menu (Review Figure 4 d).

To adjust the UBA Sensors proceed as follows:

1. Mouse-click on the “✓START”  Screen Button (See Figure 9 a) to begin the UBA® Calibration Process.

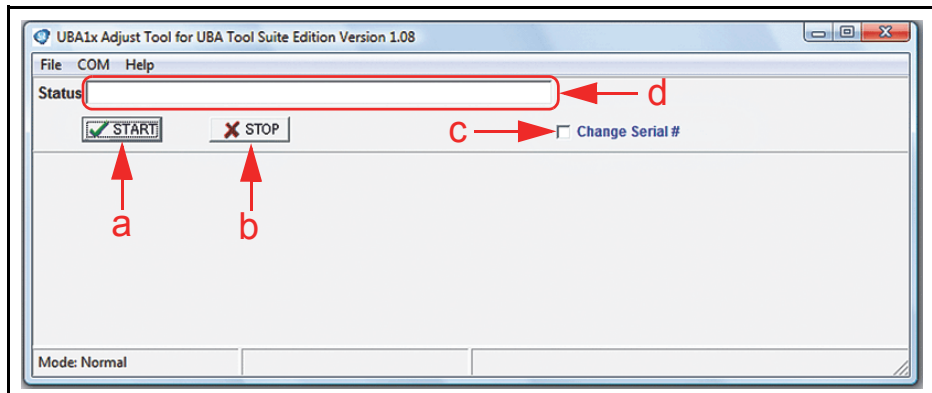



Figure 9 JCM Tool Suite Sensor Adjustment Program Screen

2. Mouse-click on the “✗STOP”  Screen Button (See Figure 9 b) to end the UBA® Calibration Process.
3. To change the UBA Units Serial Number during the Sensor Calibration Procedure, Mouse-click select the “Change Serial #” Check Box (See Figure 9 c).
4. The “Status” Field shows a Text Message of the Calibration Procedure progress (See Figure 9 d).

For the complete details and requirements regarding proper use of the UBA® Series Calibration Program, refer to Section 6, Page 6-5 of the UBA® Series Operation and Maintenance Manual.


## SENSOR ADJUSTMENT - IVIZION

Calibration of the iVIZION® Unit requires the use of Custom Factory Tools; consequently, this function is for Factory use only. The iVIZION® Unit DOES NOT require calibration in the field.

### PERFORMANCE TEST - IVIZION

To access the iVIZION® Performance Test function, the iVIZION® Unit must first be placed in Diagnostic Mode as follows:

1. Turn DIP Switch No. 8 to "ON" to activate the Diagnostic Mode.

 NOTE: The DIP Switches are located on the bottom of the iVIZION® Transport Assembly.

2. Apply power to the iVIZION® Unit. The Status Indicator on the front right side of the Unit will light Blue to indicate the iVIZION® Unit is in Diagnostic Mode.
3. Enter the Performance Test Mode, by selecting "Performance Test" (Review Figure 5 e) using the Down Arrow ▼ to the right of the Service Mode Pull-Down Menu on the Screen (Review Figure 5 b), select "Performance Test" from the Menu and the Figure 10 Screen will appear.

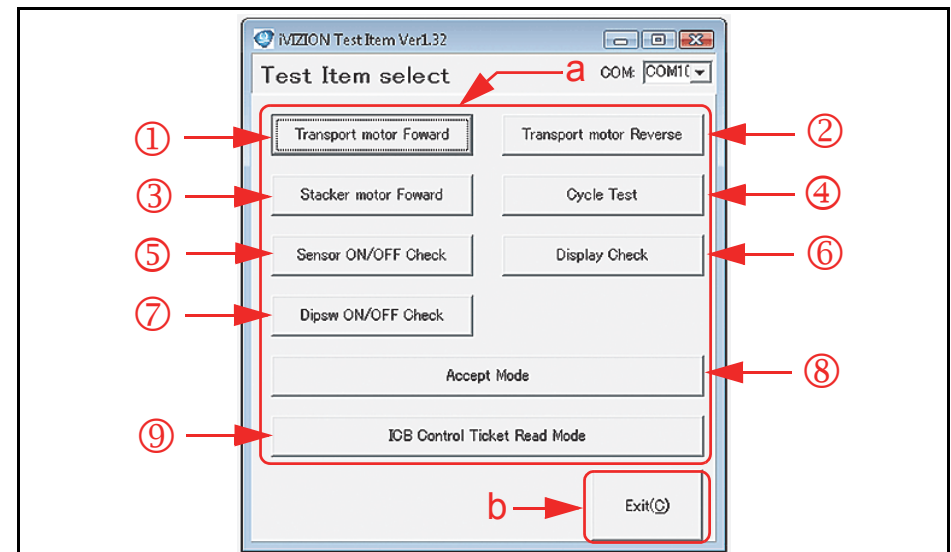




Figure 10 iVIZION Test Item Select Performance Test Selection Screen

To activate each Performance Test, Mouse-click on the related function selection Screen Button for the desired Test (See Figure 10 a); an activation Dialog Screen for each Test Selected will then open. Mouse-click on the “✓START”  Screen Button to begin the desired Test, and Mouse-click on the “✗STOP”  Screen Button to end the Test. To close a particular Test function, Mouse-click on the large “Exit(C)” Screen Button located on bottom of the “Test Item select” Main Menu (See Figure 10 b). For each Function, the expected Test result will be shown in the right hand window of the selected Test Menu Screen.