



DS200 Precinct Ballot Scanner

Pre-Election Day Training Manual

Version Number 1.*.x

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Security Recommendations, ES&S, Omaha, NE

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Proprietary Document Section	Description
All	

Table of Changes	
Date of Change	Description of Change
02.15.2008	Initial Documentation Submission
03.18.2008	Update to version information on cover page
04.03.2008	Update to version information on cover page
04.03.2008	Removed Default Password = 123 on page 8
04.03.2008	Updated Initial State report example
05.09.2008	Added information about Control Bar on ballot box
05.09.2008	Added information about the power down when Time Zone is updated
07.02.2008	Clarified Battery Status information on pages 11-12
11.20.2008	Updated Initial State Report example on page 10
06.08.2009	Updated version information on cover page Update number of USB Flash drives recommended on page 4 Added reference about manually testing to page 14 Added Appendix B, page 17, with instructions on completing a manual test and clearing the results
06.22.2009	Updated version information on cover
06.22.2011	Updated version information on cover

Checking Supplies and the Equipment

- 1. 1 spool 3” thermal paper per scanner per election
- 2. USB flash drive (1, 2, 4 or 8 GB)
- 3. Ballot marking devices
- 4. 2 pressurized cans of air
- 5. 1 clean lint-free cloth
- 6. 1 bottle of Isopropyl rubbing alcohol
- 7. 1 set of DS200 scanner keys
- 8. 1 ballot box per scanner with keys
- 9. DS200 power cord
- 10. Extension cord if required

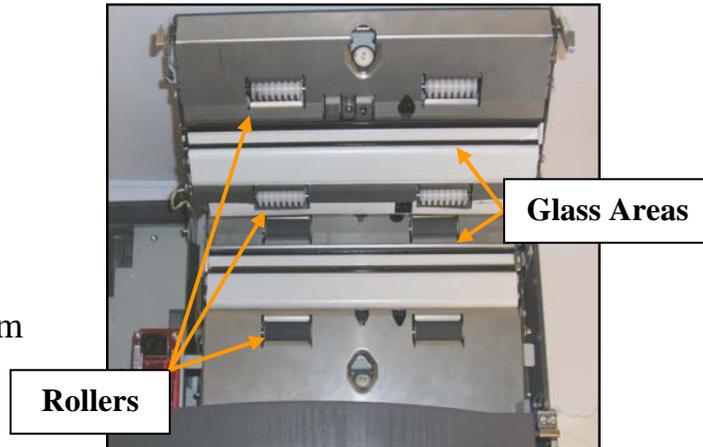
Cleaning the Scanner

- 11. Remove the scanner and power cord from the carrying case.
- 12. Clean the ballot entrance and exit slots with a can of pressurized, clean, dry air. Aim the air spray tube into the ballot entrance and exit slots and blow out all the debris.
- 13. Use the cloth and cleaning solution to clean the outer casing of the scanner.
- 14. Use a lint-free cloth and isopropyl alcohol to clean the LCD touch screen.
- 15. Wipe all traces of the cleaning solution after cleaning.
- 16. Unlock the rear access door on the back cover of the DS200.
- 17. Once this door is unlocked and the back cover of the DS200 is raised, the ballot transport mechanism can be opened.



Ballot Transport Cover

- 18. Lift up the latches on the left and right side of the ballot transport and lift the top cover to access the ballot area.
- 19. Use a lint-free cloth and isopropyl alcohol to clean the glass surface of the contact image sensors.
- 20. Wipe the rubber rollers on the bottom surface of the ballot transport.
- 21. Close and lock the rear access door.



Cleaning the Ballot Box

- 22. Wipe dust and debris out of both of the ballot box's bins.
- 23. Clean the outside of the ballot box with a soft cloth.

Attaching the DS200 to the Ballot Box

- 24. Unlock and open the Counter Access Panel. Place the scanner about 1/4 of the way into the recessed area and slide it on the mounting rails until it is four to five inches from the back of the recessed area.
- 25. Inspect the power cord for damage. If the cord is damaged, discard it and contact your election official or ES&S for a new cord.
- 26. Thread the cord through the opening on the back of the ballot box until it appears inside the opening at the top recessed area.
- 27. Plug the power cord into the power port on the back of the scanner (flat side of the plug facing up) and then plug the AC power cord from the external power supply into a 120-volt wall outlet.

WARNING: Only plug the scanner into a grounded, three-pronged electrical outlet. Plug only one scanner into an outlet. ES&S recommends that you do not use an extension cord.



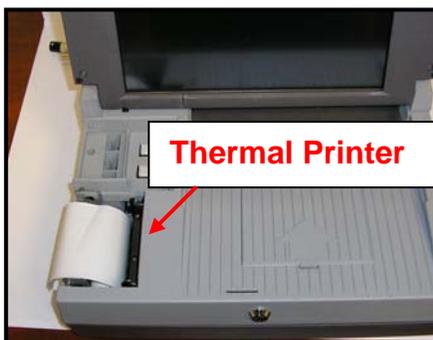
- 28. Slide the scanner until it is against the back of the ballot box.
- 29. Close and lock the Counter Access Panel in the UP position.

NOTE: On the back of the ballot box, there is a bar that controls the flap entrance to the ballot box. Assure this bar is in the down position so ballots can pass into the ballot box.

Changing the Paper in the Scanner's Internal Printer

NOTE: ES&S recommends that you begin each election with a new, full roll of paper on every scanner.

- 30. Unlock and open the DS200 screen.
- 31. Unlock the access door, located above the printer. This will allow you to access the printer release lever.



- 32. Press the lever to unlock and open the printer door.
- 33. Drop the paper into the printer paper compartment.

IMPORTANT: Make sure the glossy side of the thermal paper is facing the thermal printer.

- 34. Pull the end of the paper roll out toward the ballot input tray of the DS2000.

- 35. Close the printer door by pressing firmly to assure it locks into place.

Loading the Election Definition and Ballot Image Flash Drives

A USB flash drive stores the scanner's election definition and ballot count. A second USB flash drive stores the ballot images.

- 36. Lift the access door on the front left of the scanner to access the USB flash drive areas A, B and C
- 37. If necessary, remove the protective plastic covering of the USB flash drive containing your election definition or ballot images.
- 38. Insert the flash drive(s) into a slot. Do not force the flash drive into the slot – the ES&S label should be facing the left.



NOTE: The flash drive has a slot on top for a wire seal. If wire seals are used to secure the device, route the wire through this slot and through the associated seal hole on the tab next to the flash drive well.

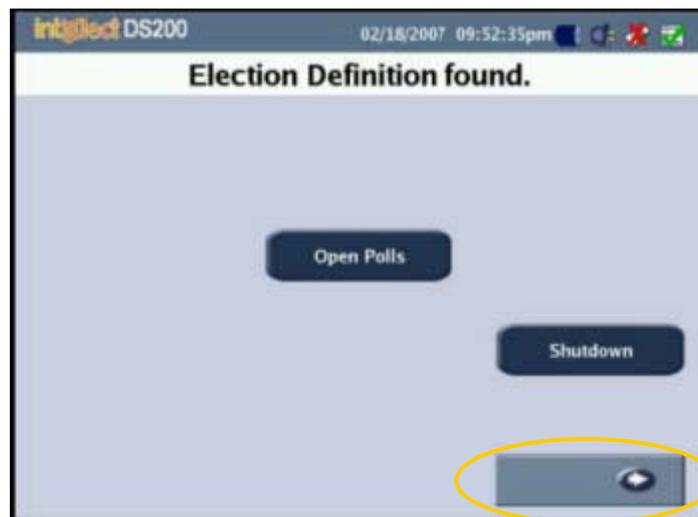
Calibration of the Scanner

Once you load the Election Definition the scanner must be calibrated to identify the election settings from the Flash Drive.

Access the **ADMINISTRATION MENU** to complete the steps.

The Administration Menu

- ❑ 39. The Administration Menu can be accessed to complete set up and testing on the DS200. Press the **ARROW** button in the lower right-hand corner then choose the **GO TO ADMIN** button to access the Administration Menu.

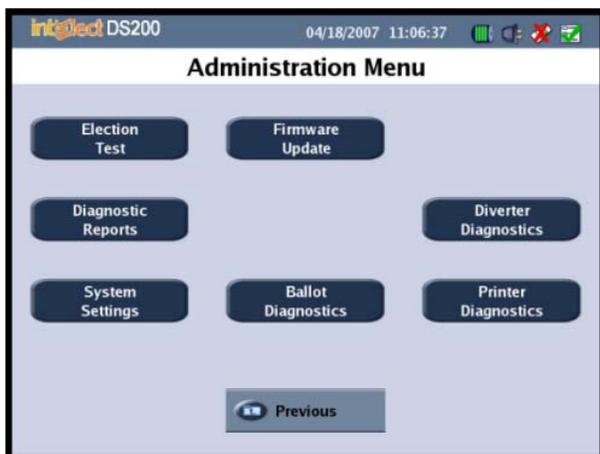


- ❑ 40. Enter the password to access the Administration Menu.

Then press enter

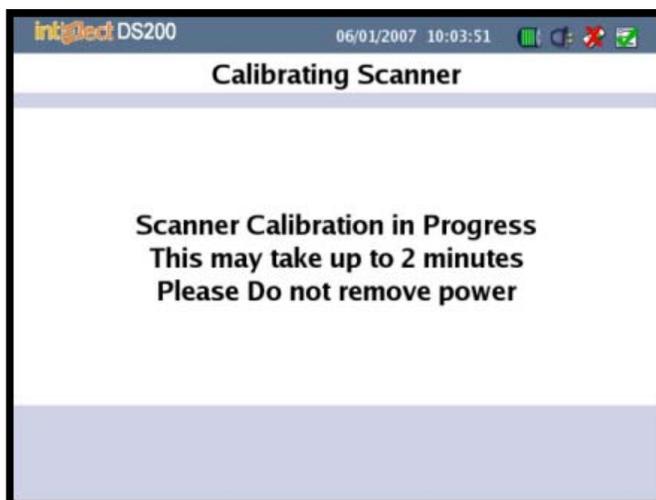


- 41. From the Administration menu, select **SYSTEM SETTINGS**.
- 42. From the System Settings menu, select **CALIBRATE SCANNER**.



- 43. The Calibrate scanner window appears. Press **CONTINUE**.

WARNING: Do not turn off the DS200 while the scanner is calibrating its settings.



- 44. Once complete a successful message will appear. Press continue to return to the previous screen.

Initial State Report

Once the Election Definition is loaded and recognized by the scanner, the Initial State Report will print.

45. The Initial State report is automatically generated when the DS200 is turned on and an election definition flash drive is accessible. Assure this information is correct:

- Current Date and Time
- Election Name
- Election Date
- Polling Place Information
- Number of Precincts
- Diverter Installed
- Report Type
- Ability to Reopen Polls
- Configuration for:
 - Over voted Ballots
 - Blank Ballots
 - Cross-over Ballots
- Ballot Information

NOTE: If any of the information is incorrect, contact ES&S for assistance and or instructions.

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*** Initial State Report ***
10:57:25 07/15/2007

DS200 Firmware Version:
1.3.7.0
Power Management Firmware Version:
1.2.0.0
Scanner Firmware Version:
2.6.0.0
Machine ID: 3159
Serial ID: 073223456
Crystal County
2006 General Election
0006 Absentee Poll 006
Election Date: July 4, 2006
Maximum Number of Types: 6
Number of Precincts: 5
Number of Ballot Face Styles: 24
Audit Log Entries: 34/21043

System Configuration:
Election Results Printing: Enabled
Election Results Transferred: YES
Diverter Installed: YES
Unreadable Marks Setting: Accept
Report Type: SUMMARY
Ability to ReOpen Polls: YES
Report Format: Poll Report
Report By Rotation: NO

Election Configuration:
Ballots by Style: NO
Overvoted Ballots: Query
Blank Ballots: Query
Cross-over Ballots: Query
Single Over-Vote: NO
Divert Blanks to Writein Bin: NO
Response Type: OVAL
Use Separate Non Party Type: NO
Language: E
Save Ballot Images: W
Suppress Race Title: Y

Ballot Information:
Inches:      14
Rows:       36
Columns:     3
Ballot Sides Defined: 1
Support Type: Election Day

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Checking the Scanner's Battery

The DS200 uses an 18-volt, 5 amp lithium ion battery to power the scanner in case of an electrical power failure. A fully charged battery can power an active scanner for two to three hours.

- ❑ 46. To externally check the charge of the backup battery, view the indicator light at the back of your DS200 machine.

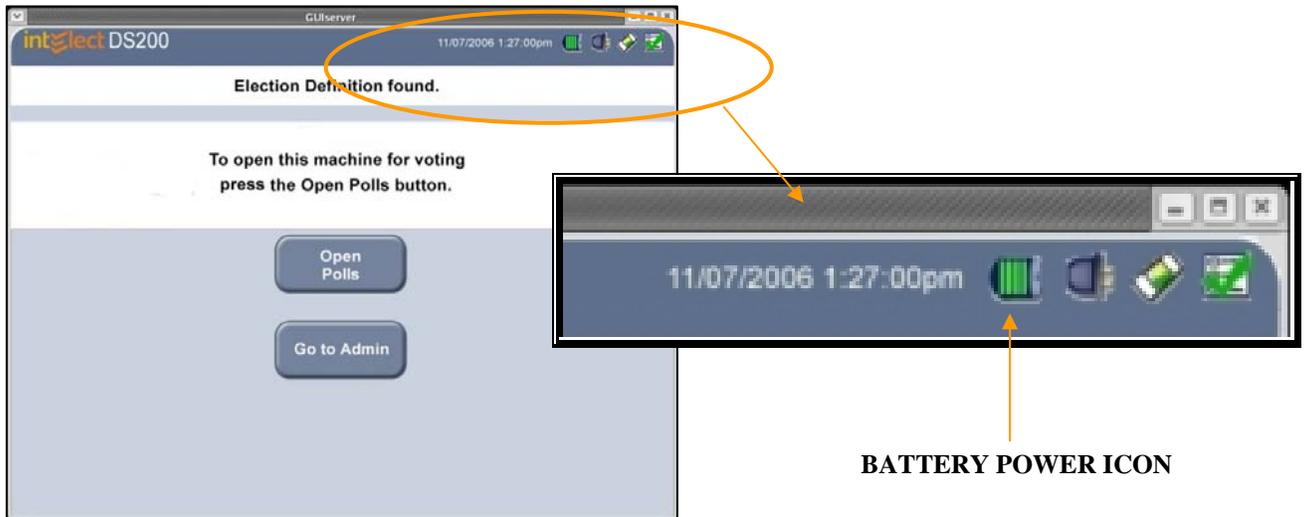


- Green Light = Battery is charged
- Amber Light = Battery is charging
- Flashing Red Light = Battery is defective or not hooked up

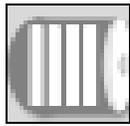
(For a detailed listing of all battery light indicators, refer to the System Operations Procedures manual.)

You can also check the battery charge on the screen by viewing the Battery Power Icon.

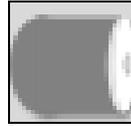
- ❑ 47. After the scanner powers up, a screen will appear depending upon the election definition flash card.



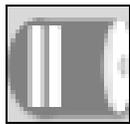
- 48. The Battery Power Icon is located in the upper-right area of the screen. You may find different icon pictures depending upon the battery status and if the unit is currently plugged in or running on battery.



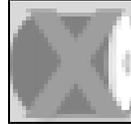
Full Charge



No Charge



50% Charge



Battery Not Found

Charging the Scanner's Battery

The amount of time to charge a battery can be up to seven (7) hours.

- 49. Plug the scanner into an outlet. An election definition flash drive is not required to charge the battery.

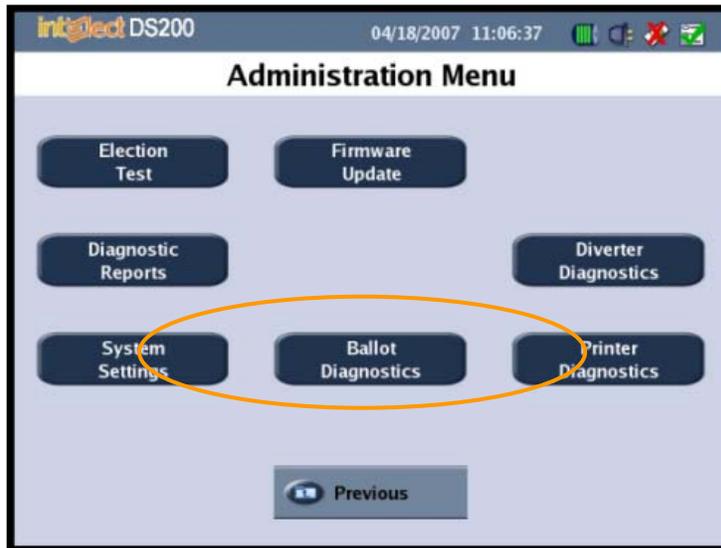
Setting the Date and Time

- 50. From the Administration menu, select **SYSTEM SETTINGS** to access the System Settings menu.
- 51. Press **DATE and TIME**.
- 52. Press the button of the information to be changed to access the specific data for the type of information.
- 53. Adjust the date, time or time format.
- 54. Press **PREVIOUS** when you have set the correct information.
- 55. Press **ACCEPT NEW TIME** to save the information.

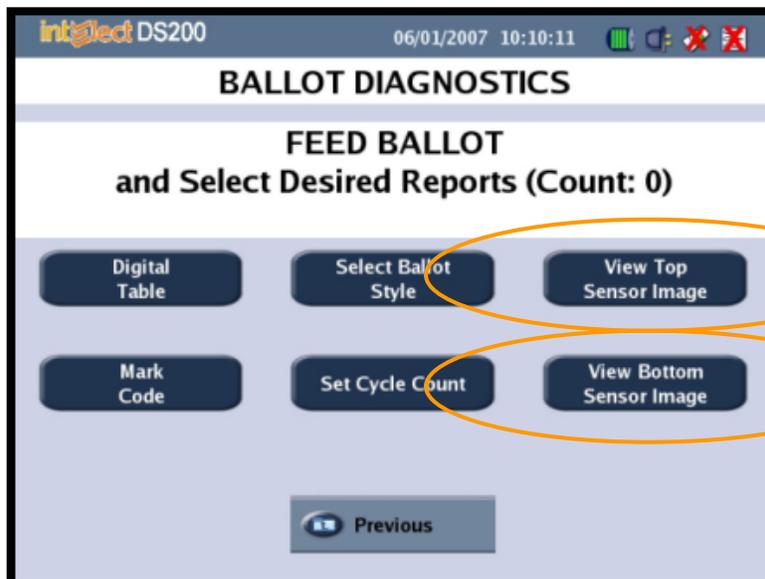
NOTE: Any changes to the Time Zone will prompt the DS200 to automatically power down. The user will need to power up the equipment using the power button.

Viewing the Front and Back Ballot Image

- ❑ 56. From the Administration menu, choose the **BALLOT DIAGNOSTICS** option.



- ❑ 57. Scan the ballot to be viewed and choose the type of view to display from the Ballot Diagnostics screen.

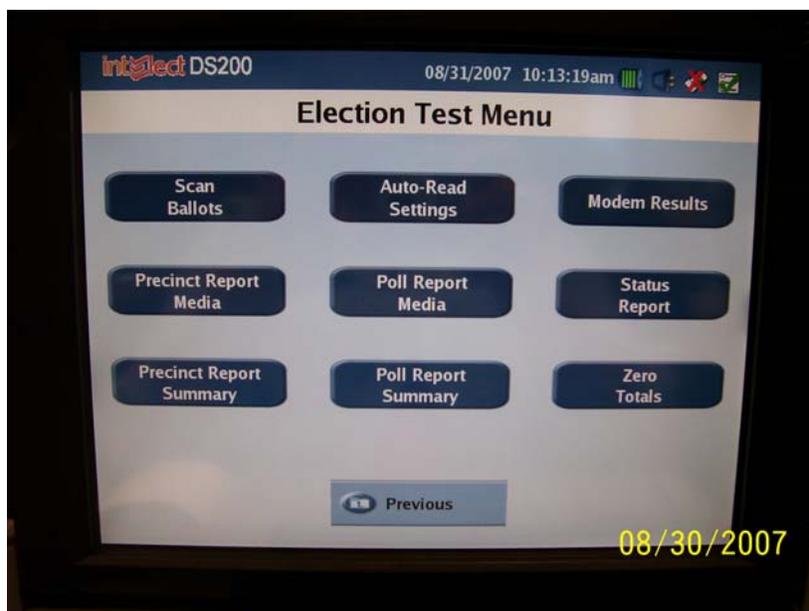


Testing the Election Definition

Use options from the Election Test Menu to verify the election definition and check the system counting logic.

NOTE: Testing can be done manually in the same manner as Election Day processes. See Appendix B to Test manually.

- 58. If not already in the Administration Menu, press the arrow button in the lower right hand corner then press the **GO TO ADMIN** button to access the Administration Menu.
- 59. Choose **ELECTION TEST** from the Administration Menu.
- 60. Select **SCAN BALLOTS** from the Election Test Menu.



- 61. Insert the Test Deck of ballots into the scanner one at a time. The DS200 can scan ballots inserted in any orientation. As ballots are scanned, the Election Test Count will increase by one for each ballot inserted.
- 62. After you finish scanning test ballots, press the **PREVIOUS MENU** button to return to the Election Test Menu.

63. From the Election Test Menu select one of the following options to generate reports for the testing:
- Status Report – this report includes the number of ballots processed, the ballots counts for each precinct and the totals for the polling place.
 - Precinct Reports – these reports includes the results for each contest broken down by precinct. The Media report will not include counts for over and under votes while the Summary report will break out those counts.
 - Poll Reports– these reports includes results for all precincts in a single report. The Media report will not include counts for over and under votes while the Summary report will break out those counts.
64. Verify your results by comparing the Test Deck results to the DS200 printed report results.
- If the results match, Zero the Totals, then press Shutdown to turn off the DS200.
 - If the results do not match, review the test ballots for errors, zero the totals and repeat the test by repeating steps 58 – 64.
 - If the results do not match after the 2nd test, contact ES&S.

Clearing the Test Results

65. From the Election Test Menu, choose **ZERO TOTALS**.
66. Confirm you want to zero totals by pressing Yes.
67. An audible alert will sound showing the counters were cleared. Press OK to return to the Election Test Menu. Then press Previous to return to the Administration Menu.

Shutdown

68. Shutdown the DS200 by pressing Shutdown. Store in accordance to your county's procedures.

WARNING: Do Not Remove the DS200 flash drive before the equipment is completely powered off (the Power button will not be luminated). Prematurely removing the flash drive could result in damage to the equipment.

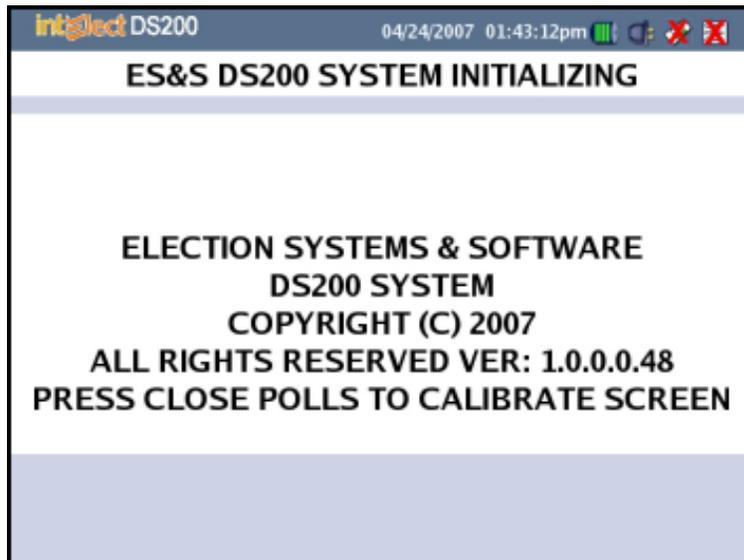
APPENDIX A

Calibration of the Touch Screen

NOTE: The DS200 should be off to begin the calibration process.

- Some DS200 units may be programmed to automatically power up when you raise the LCD screen. If your DS200 does not power up, unlock the switch door covering the power button.
- Unlock the access door, located above the printer.
- Once the DS200 has powered up, press and hold the **CLOSE POLLS** button (top button) until the button lights up. The calibration screen will appear.

NOTE: You must **IMMEDIATELY** press and hold the Closed Polls button once the DS200 initializing screen appears.



- On the calibration screen, press the circle in the upper-left corner. The circle will turn black. Then press the circle in the lower-right corner that circle will turn black and a confirmation screen will appear.
- From the confirmation screen press **SAVE & EXIT** to save the calibration settings or press **RECALIBRATE** to repeat the calibration process.

APPENDIX B

Testing Manually

- From the initial screen press **OPEN POLLS**.
- Choose the type of Zero Report – Totals Only or All Precincts.
- Scan Test Deck of ballots through the DS200.
- Once the ballots have been scanned, **CLOSE POLLS** by pressing the Close Polls button (top button).
- Compare the Results Report with the Test Deck results to assure scanning and tabulation are working correctly.
- Should the results not match clear the results and re-run the test. If the test results do not match on the second test, contact ES&S for assistance.

Clearing the Manual Test Results

- From the Polls Closed menu, choose Reopen Polls.
- Enter the reopen password using the keyboard, press enter.
- From the Reopen Polls menu, chose **CLEAR COUNTS**.
- Confirm the clearing of counts by pressing **YES** to continue.

