

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**OVERVIEW**

- Security and Chain of Custody Plan
- Certified System Software Version
- Acceptance Testing
- Ballot Management Plan
- Tabulation Plan
- Staff Training
- Poll Worker Training
- Voter information Campaign

**PRE-ELECTION PROCEDURES**

- Preventative Maintenance and Calibration
- Maintenance Documentation
- Initial State Report and Certification Zero Report
- Election Definition Programming
- Logic and Accuracy Test with Actual Election ballot
- Marking Devices
- Procedure Training Manual

**TABULATION**

- Initial State Report and Certification/Zero Report
- Blank Ballots
- Over-Voted Ballots
- System Messages and Errors
- Tabulating Write-in Ballots at the Polls
- Tabulation of Primary Non Partisan Ballots
- Posting Results Tapes

**POST-TABULATION**

- Returning Results Tapes, Ballots and PCMCIA Cards
- Returning the M100 and Ballot Box
- Results Accumulation and Reporting
- Final Logic and Accuracy Test
- Retain Ballots and Documentation
- Incident Contingency Plans

**BEST PRACTICES**

- Information Web Site
- ES&S Portal Web Site
- The U.S. Election Assistance Commission
- Prepare Detailed Plans and Procedures
- ES&S recommended marking Devices

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**OVERVIEW**

- ◆ Security and Chain of Custody Plan
- ◆ Certified System Software Version
- ◆ Acceptance Testing
- ◆ Ballot Management Plan
- ◆ Tabulation Plan
- ◆ Documentation Plan
- ◆ Staff Training
- ◆ Poll Worker Training
- ◆ Voter Information Campaign

**Security and Chain of Custody Plan**

“The integrity of elections comes down to a series of processes and procedures administered by each county, combined with the technology and its established procedures.” *From the Election Technology Center, an industry group representing voting equipment manufacturers.*

Election computers, computer ballots files, ballots, tabulator(s), and all PCMCIA election definition and results cards must be secured at all times. Disable wireless connectivity on election laptops.

Counties must develop written security procedures and have a manual available for training and review. This manual should detail physical security of buildings, tabulators, PCMCIA election definition and results cards, election computers, ballot files and ballots. Include subcontracted printers and secure transportation of ballots from printers to the county and to and from the polls.

County election personnel should operate in teams so that no one person is ever left alone with ballots, the tabulator(s) and the PCMCIA election definition and results cards once the logic and accuracy test has been certified.

Chain of custody procedures and sign off forms must be developed and implemented to track access to all ballots, ballot transport from printer(s) and to and from the polls, all PCMCIA election definition and results cards, election computers and tabulator(s).

AutoMARK units, PCMCIA flash cards and ballots should also be included in a comprehensive security plan including chain of custody for access and installation of PCMCIA cards by county personnel.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**OVERVIEW**

**Certified System Software Version**

Verify certified firmware and software versions on each unit. Document with date, ES&S technician, and responsible county observer(s).

M100 version 5.2.1.0

Election Data Manager, (EDM) version 7.4.4.0.

ES&S Image Manager, (ESSIM) version 7.4.2.0.

Hardware Programming Manager, (HPM) version 5.2.4.0.

Data Acquisition Manager (DAM), version 6.0.0.0.

Election Reporting Manager (ERM), version 7.1.2.1.

Audit Manager, version 7.3.0.0.

**Acceptance Testing**

Security begins with acceptance testing.

Validate the performance of the system before acceptance.

Before a county may accept any new tabulation equipment the county must perform detailed acceptance testing. The purpose of acceptance testing is to ensure that the tabulator(s) is reading, tabulating and reporting as specified.

Acceptance testing must include functionality testing of all features and controls on all units. Logic and accuracy testing must be performed and verified with a complete test deck developed by the county in addition to the vendor's test deck.

Load testing with 50 ballots must be performed on each M100 to assure the tabulator(s) are operating as specified in the contract with the vendor. Make arrangements with your vendor in advance to provide a test deck and additional ballots to perform a load test.

If the county is accumulating results with the Election Reporting Manager (ERM) software, the acceptance test must include transfer of data from the tabulator(s) to the Election Reporting Manager (ERM) to ensure accurate transmission and accumulation of results.

**Ballot Management Plan**

Diagram the ballot flow for your county.

All ballot management procedures must be evaluated and revised for the new system.

## **Idaho Procedures 2009 Revision**

### **M100 Optical Scan Precinct Tabulator**

#### **OVERVIEW**

Detail each step including ballot layout, acceptance of the PDF version of the ballot, acceptance of the printed version, transportation from the printer, transport to and from the polls, tabulation procedures and ballot flow including write-in procedures, and secure storage of the ballots, testing reports, and PCMCIA election definition and results cards.

Every step of the tabulation process with the new system must be evaluated to assure procedures are correct and personnel are prepared. Conducting a mock election is highly recommended.

Plan to save 4 ballots to forward to the Secretary of State.

#### **Tabulation Plan**

Develop a tabulation plan. Detail procedures and documentation for each phase of the process for both absentee ballots and Election Day ballots.

Include receiving ballots, ballot preparation of folded absentee ballots returned to the polls, duplication of blank ballots if using the M100 for central count, and a storage plan that allows access to duplications, originals and write-ins in case of a recount.

If your county is using Election Reporting Manager (ERM) software to accumulate data, develop a plan for transferring election data from each PCMCIA card to the election computer. Include machine reports for verification of election data after transfer into the Election Reporting Manager (ERM) and secure storage of the PCMCIA cards.

If your county is not using Election Reporting Manager (ERM), develop a plan for reporting election data on a spread sheet. Data must be entered from the M100 Poll Report by hand and verified.

The tabulation plan should also include election night reporting for both the public and the Secretary of State. Printed public reports, internet reports, computer displays and video displays should be prominently labeled "Unofficial Election Results".

For public reporting use the Short Form Summary Report if using Election Reporting Manager (ERM) that does not report overvotes and undervotes.

When using a spread sheet to accumulate results and build reports, do not include overvotes and undervotes and label all public reports "Unofficial Election Results".

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

## **OVERVIEW**

### **Documentation Plan**

Insure that all security procedures, test data, tabulator reports, transfer data if applicable, public reports and results are verified, documented, archived and accessible for review. Retain election documentation for 22 months.

Re-establish chain of custody if any component of the system needs to be returned to the manufacturer. This requires a new acceptance test when the component is returned to the county.

Track performance of each unit to facilitate repair and replacement of units if necessary. Document in detail any and all performed maintenance and/or upgrades. Retain maintenance and performance records on all units for the life of the unit.

### **Staff Training**

1. Election staff must receive detailed machine training from the vendor.
2. Election staff must receive training on security, chain of custody procedures.
3. Election staff must receive ballot management training detailing county procedures for securing, transporting, accumulating results, duplicating and storing ballots.
4. It is highly recommended that the county conduct a mock election to familiarize election officials with the processes and procedures that need to be implemented prior to conducting their first election on the system.

### **Poll Worker Training**

It is the responsibility of the county to insure that each voter receives a demonstration and knows how to properly cast a ballot that will be tabulated by machine.

“If a vote is properly cast according to the instructions given to the voter, the machine will count it.” U.S. Court of Appeals, 11<sup>th</sup> Circuit, December 6, 2000, Touchston and Sheppard vs. Michael McDermott.

Include in your poll worker training a required voter demonstration of proper ballot marking of an oval optical scan ballot which includes:

1. How to properly mark an optical scan ballot by completely filling in the oval
2. How to request a new ballot if they make any mistake
3. Not to erase or use “Xs” or check marks
4. To carefully check their own ballot for stray marks

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**OVERVIEW**

Instruct poll workers to make it clear to all voters that an improperly marked ballot or a ballot with unintentional stray marks may not have all votes recorded by the tabulation equipment.

**Voter Information Campaign**

Plan to develop a comprehensive voter education campaign that instructs voters on how to mark an optical scan ballot properly.

The State will develop a campaign based on the following copy:

**Follow Marking Instructions**  
**If You Make A Mistake Ask For A New Ballot**  
**Check Your Ballot For Stray Marks**

**A Properly Marked Ballot Will Be Counted Properly**

**[idahovotes.gov](http://idahovotes.gov)**

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**PRE-ELECTION PROCEDURES**

- ◆ Preventative Maintenance and Calibration
- ◆ Maintenance Documentation
- ◆ Initial State Report and Certification/Zero Report
- ◆ Election Definition Programming
- ◆ Logic and Accuracy Test with Actual Election Ballot
- ◆ Marking Devices
- ◆ Procedure Training Manual

**Preventative Maintenance and Calibration**

All M100 tabulators must be calibrated by the vendor during preventive maintenance.

Make sure the “read heads” are cleaned and that the M100 calibration is set as these procedures can only be performed by an ES&S technician.

Make sure the batteries in the PCMCIA cards are good. E&S recommends routine replacement of the primary battery every two years.

**Maintenance Documentation**

Required maintenance documentation must track dates, county and vendor personnel with access to the tabulator(s) and PCMCIA cards and detail all services performed on each tabulator. “Maintenance” is not adequate detail for documentation. Be specific.

**Initial State Report and Certification/Zero Report**

The Initial State Report and Certification/Zero Report are necessary to assure that the election definition is correctly programmed and that no totals remain in the tabulator memory from a previous election or from logic and accuracy testing. Print these reports if they are not automatically generated from your election definition.

**Election Definition Programming**

Order a backup PCMCIA card with the election definition from the vendor in addition to PCMCIA's necessary for each machine. Store the backup PCMCIA card in your vault.

At all times the PCMCIA cards are to be treated as ballots and stored securely with chain of custody documentation showing all personnel with access to the cards.

Plan to insert the PCMCIA cards into the M100 before transport to the polls. Instruct poll workers to remove the card after closing the polls and printing Poll Reports. Return the card with voted ballots in a sealed, waterproof, static free bag from the vendor.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**PRE-ELECTION PROCEDURES**

*Continued Election Definition Programming*

Develop a timeline and sign-off procedures with the vendor to document and ensure the timely delivery of ballots and election specific programming for the tabulators. Allow adequate time for testing, possible changes, and pre-election logic and accuracy testing.

**Logic and Accuracy Test with Actual Election Ballots**

A public Logic and Accuracy test is required by Section 34-2417 of the Election Laws of the State of Idaho.

Perform the logic and accuracy test with actual ballots to confirm the PCMCIA cards containing the M100 election definition coding is correct and that the machine is properly reading, tabulating and reporting the actual ballots from your printer.

This test should be done as soon as you receive ballots from your printer and the election definition from ES&S to allow time for corrections to coding or ballots.

Zero all tabulators before testing. Print a Certification/Zero report and verify that no votes remain in the machine before testing.

The vendor will send you a test deck. The state will also send a test deck for one precinct. However you need to make your own test deck from your actual printed ballots with enough ballots to cover all precincts and rotations. Test all machines.

Print a Poll Report to confirm expected results of the logic and accuracy test.

After successful testing, zero the tabulator and print a Certification/Zero report to confirm no votes are left in the memory.

Save all testing documentation with ballots for 22 months.

**Marking Devices**

Counties are to provide voters at the polls with ES&S approved marking devices. Absentee voters are to be instructed to use a #2 pencil or Blue or Black ink pen. A list of approved marking devices is included at the end of this document.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

## **PRE-ELECTION PROCEDURES**

### **Procedure Training Manual**

Develop written procedures to train personnel in:

- Security and Chain of Custody procedures and documentation
- Pre-tabulation ballot preparation procedures, logging and container labeling
- Folded absentee ballot preparation, logging and container labeling
- Election Day ballot management, closing the election and printing of election reports, poll worker signatures and verification of reports, posting reports at the polls, labeling procedures and secure transport of results tape and PCMCIA cards to the election office for accumulation of results.
- Poll worker training to respond to voters when “Ballot Exceptions” occur at the polls including Blank Ballots, Over-voted Ballots, under voted ballots and system Messages and Errors.
- Write-in procedures including ballot box procedures for sorted write-in ballots.
- M100 machine failure procedure and replacement or backup at the polls.
- Accumulation of results procedure to county spreadsheet from M100 printed reports or electronically if using the Election Report Manager (ERM) software.
- Backup and secure storage of all election data including results tapes and PCMCIA cards from the M100 containing results.
- Verification and presentation of all public “Unofficial Election Results” reports. Be sure to label all public “Unofficial Election Results”.
- Election night reporting to the Secretary of State.
- Election computer failure procedure.
- Secure storage and container labeling procedures for absentee ballots, Election Day ballots, write-in ballots, testing reports, election night unofficial reports, printed reports and PCMCIA cards from each tabulator.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

## **TABULATION**

- ◆ Initial State Report and Certification/Zero Report
- ◆ Blank Ballots
- ◆ Over-voted Ballots
- ◆ System Messages and Errors
- ◆ Tabulating Write-in Ballots at the Polls
- ◆ Tabulation of Primary Non Partisan Ballots
- ◆ Posting Results Tapes

### **Initial State Report and Certification/Zero Report**

The Initial State Report confirming the correct election programming will print automatically when the M100 is powered up. Poll worker signatures are required to verify the M100 is programmed correctly and working properly at the polls. Print a Zero Report to confirm that no votes are left in the machine from logic and accuracy testing. Save these reports with the ballots.

### **Blank Ballots**

The M100 should be coded to detect and notify the voter when it encounters a blank ballot. An audio alert will sound and the display will indicate that a blank ballot was detected and offer the voter two choices, **Accept** or **Return**.

If the voter selects **Return** they may take their ballot back to a voting booth and mark their choices.

### **Over-voted Ballots**

The M100 is coded to detect and notify the voter when it encounters an over-voted ballot. An audio alert will sound and the display will indicate that an over-voted race or issue was detected and offer the voter two choices, **Accept** or **Return**.

If the voter selects **Accept** the ballot will be counted and the over-voted races will receive an over-vote. If the voter selects **Return**, spoil the ballot and issue the voter a new ballot.

### **System Messages and Errors**

If a ballot is unable to be processed due to damage, inappropriate marks or an M100 problem, an error message will appear and an audio alert will sound. If the problem is a ballot issue, spoil the ballot and issue the voter a new ballot.

## Idaho Procedures 2009 Revision M100 Optical Scan Precinct Tabulator

### **TABULATION**

#### *Continued System Messages and Errors*

If the display indicates a system message, instruct the poll worker to contact your election office for assistance.

If an M100 fails at the polls all ballots must be recounted. Instruct poll workers in the use of the emergency/auxiliary ballot bin during training. Recount ballots with another M100 at the election office using the backup PCMCIA card after printing a zero report to assure no totals are left in the tabulator memory.

#### **Tabulating Write-in Ballots at the Polls**

Ballots with valid write-ins programmed in the election definition will be sorted by the M100 internal diverter. Instruct poll workers to remove write-in ballots from the ballot box, tabulate manually and write results on the Poll Report. Paper ballot counting procedures should be followed.

#### **Tabulation of Primary Non Partisan Ballots**

On a single page Primary Ballot the Non Partisan candidates will appear on both side of the ballot. Due to a limitation in the ES&S software the results from both sides can not be combined automatically. Poll Reports that provide totals for Non Partisan side “A” and Non Partisan side “B” must be combined manually and recorded on the Poll Report. Paper ballot counting procedures should be followed.

#### **Posting Results Tapes**

Section 34-1203 of the Idaho Election Laws requires poll workers to post a copy of election results at the polling place. Instruct poll workers to print 2 copies of the Poll Report after closing the polls, write the results of Write-Ins and Non-Partisan races on the reports if appropriate and verify with signature. Label the reports “**Unofficial Election Results**”. Post one at the polling place and return the other to the county clerk as directed.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**POST-TABULATION**

- ◆ **Returning Results Tapes, Ballots and PCMCIA Cards**
- ◆ **Returning the M100 and Ballot Box**
- ◆ **Results Accumulation and Reporting**
- ◆ **Retain Ballots and Documentation**
- ◆ **Incident Contingency Plans**

**Returning Results Tapes, Ballots and PCMCIA Card**

Remove all ballots from the M100 ballot box and return to the county clerk in a secure container as directed. Keep valid write-ins separate from other ballots for review.

Remove PCMCIA card and return with voted ballots in a sealed, waterproof, static free container available from the vendor.

**Returning the M100 and Ballot Box**

Return the M100 and ballot box to the county as prescribed by the county clerk.

**Results Accumulation and Reporting**

Counties not utilizing the Election Reporting Manager (ERM) software will accumulate results directly from the printed Poll Reports from each precinct in a spread sheet. Check data entry careful and verify accuracy before issuing any public or internet reports.

**All public reports in all forms must be stamped or labeled “Unofficial Election Results.”**

**All public reports should not display overvotes and undervotes.**

**Retain Ballots, PCMCIA cards and Documentation**

All ballots and PCMCIA cards, test decks, logic and accuracy verifications, Zero Totals Reports, and results spread sheets are to be retained for 22 months.

**Incident Contingency Plans**

It is essential that counties develop an incident contingency plan in case of M100 or election computer failure.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**BEST PRACTICES**

- ◆ **Information Web Site**
- ◆ **ES&S Portal Web Site**
- ◆ **The U.S. Election Assistance Commission**
- ◆ **Prepare Detailed Plans and Procedures**
- ◆ **ESS Recommended Marking Devices**

**Information Web Site**

2008 procedures are posted on the clerk's information website along with an election calendar, EAC Quick Start Manuals, ES&S manuals and documents, and other resources. <http://www.sos.idaho.gov/elect/clerk/clerkinfo.htm>.

Check this site often for updates.

**ES&S Portal Web Site**

Check the ES&S Portal for equipment updates. Download and print all appropriate technical bulletins. <http://www.essvote.com/HTML/home.htm>.

**The U.S. Election Assistance Commission**

The U.S. Election Assistance Commission, (EAC), has issued seven Quick Management Guide brochures. Each brochure contains valuable, helpful information about how to effectively manage and administer an election and can be accessed at: <http://www.eac.gov/election/quick-start-management-guides>.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**BEST PRACTICES**

**Prepare Detailed Plans and Procedures**

- Evaluate and document security for ballots, tabulator(s), PCMCIA cards, computer files and election computers.
- Design, use and archive chain of custody sign off forms for personnel.
- Diagram ballot flow from incoming through final storage of ballots to insure ballots are not mixed during tabulation.
- Diagram data flow from ballots through public reporting and archiving of all files, testing reports, results tapes and public reports.
- Design absentee procedures and tabulation plan.
- Develop a tabulation plan for exception ballots (duplications, blanks and write-ins)
- Document in procedural manuals all processes and forms for review and training.
- Ensure that all procedures, testing verifications, tabulator report tapes, public reports and results are verified, archived, and accessible for review.
- Develop a voter information campaign. Emphasize properly marking an optical scan ballot so that all ballots are machine readable.
- Design poll worker training to demonstrate and instruct proper marking, requesting a new ballot for any mistake, no erasures, Xs, or check marks. Voters should be instructed to carefully check their ballot for stray marks that may affect readability by the scanner.
- Develop detailed contingency plans for power failure, M100 failure, election computer failure, mixed ballots during tabulation, precinct header card procedure, and Election Reporting Manager (ERM) failure.
- Master and duplicate election definition PCMCIA cards are to be treated like ballots and secured at all times. Use sign-off forms for personnel.
- Make pre-printed labels for all cards, transfer containers and storage boxes. Label cards carefully with date, time, election title, and scanner number.
- Secure one copy of the election definition on the PCMCIA card in vault.

**Idaho Procedures 2009 Revision**  
**M100 Optical Scan Precinct Tabulator**

**BEST PRACTICES**

*Continued Best Practices*

- Before testing assign each M100 an identifying number.
- Zero all tabulators before testing. Print and verify Poll Report and Zero Totals report.
- Perform logic and accuracy test with actual election ballots to confirm tabulation coding, ballot printing accuracy and report functions.
- Print the Poll Report from the M100 to confirm expected results.
- Set up and record results data in county spread sheet. Print reports, verify data, reporting procedure and backup procedure.
- Zero the tabulator(s) to clear test results and produce a Zero Totals Report to verify scanner has no votes in memory after testing is complete.
- Check public reporting procedure and displays. Make sure all public reports and displays are stamped or labeled “Unofficial Election Results”.
- Practice election night reporting to the Secretary of State.
- Save all test data and results in special folders on the election reporting computer.
- Verify and sign off on all reports and store for 22 months with ballots.
- Store counted ballots separately from duplications (if any) and write-ins (if any). Color code boxes, pre-print labels for each precinct with date, time, election title, M100 number.
- Develop a spread sheet for all M100s to track county procedures for security, documentation, maintenance, testing and performance of each tabulator.

**ESS Recommended Marking Devices**

Attached is a list of ES&S approved marking devices also available on the information web site <http://www.sos.idaho.gov/elect/Clerk/clerkinfo.htm>.