



# EVS 5.2.1.0 CA Election Management System

California Use Procedures

Election Systems & Software, LLC  
Revision 6.0. November 2017  
EVS 5.2.1.0 CA Election Management System

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# Chapter 1: Introduction

The ES&S EVS 5.2.1.0 CA election management system is an integrated suite of products for conducting and reporting elections.

EVS 5.2.1.0 CA combines election management software with accessible voting and scanning equipment, providing end-to-end election support, from defining an election, to generating the final reports. EVS 5.2.1.0 CA enables jurisdictions to operate results and reporting software, and optional ballot printing software, on a Windows 7 operating system.

ES&S digital scanners use scanning technology similar to that of a copying machine to create two scanned images of the front and back of the ballot at the same time. These digital images are then processed by ES&S's image processing software, which creates a cast vote record (CVR). The CVR contains data from the front and back of the ballot and lists all vote selections made on the ballot. At the time of poll closing or data export, the CVRs are totaled to create aggregate results for that ballot scanning device. Results from individual scanning devices can be combined using ES&S's Election Reporting Manager (ERM) software.

## 1.1 About This Manual

This manual may have cross-references to other chapters or sections with information relevant to the current topic. If you are using the electronic version of this manual, click the blue cross-reference link to jump to that information. If you are using a printed version of this manual, the cross-reference tells you which section to consult.

### 1.1.1 Chapter and Section Numbers

Chapters are numbered in order. The headings of the topics within the chapter are also numbered in order, with the first number indicating the chapter, and subsequent numbers indicating that topic's position within the chapter. For example, heading number 3.2.3 indicates that this section is in chapter three, under the second major heading of chapter three, and under the third subheading below that heading.

## 1.1.2 Informational Symbols

The following symbols are used throughout the manual to call attention to specific types of information.

**Table 1-1: Symbols Used in this Manual**

<b>Caution</b> 	The Caution symbol appears next to information that could help avoid errors in your election.
<b>Important</b> 	The Important symbol appears next to information that could be critical to your election.
<b>Jurisdictional</b> 	The Jurisdictional symbol appears next to procedures that may require you to modify them according to the requirements of your jurisdiction.
<b>Note</b> 	The Note symbol appears next to information that is helpful but not necessarily critical to your election.
<b>Warning</b> 	The Warning symbol appears next to procedures that could cause damage to the election if improperly executed.

## 1.2 Contact ES&S for Technical Support

If you need additional assistance, ES&S technical support staff can provide advice and help you resolve the situation.

When you contact ES&S for technical support, have the equipment on hand and be prepared to provide the following information to the support representative:

- The version number of the product you are using (for example, Electionware version x.x.x.x).
- The exact wording of any messages that appeared.
- A description of what was happening when the problem occurred.

Support representatives are available Monday through Friday, between 7:00 a.m. and 7:00 p.m. Central Time.

Telephone: 877-377-8683 (USA & Canada)  
402-593-0101 (International)

Fax: 402-970-1285

Write: Election Systems & Software  
11208 John Galt Blvd.  
Omaha, NE 68137 USA

ES&S support services are subject to ES&S prices, terms, and conditions in place at the time the service is used.

## 1.3 System Components

ES&S supports central count voting systems and precinct count systems.

The following sections describe the functionality of the EVS 5.2.1.0 CA system components.

### 1.3.1 DS200 Precinct Ballot Scanner

Jurisdictions that use precinct count systems record election results at individual polling places as voters cast ballots.

The DS200 is a high-resolution, paper-based precinct tabulator that scans voter selections from both sides of the ballot simultaneously. It has a large touch screen for voter communication, an integrated thermal printer for limitless Election Day printing, an easy-to-use interface and an internal battery pack for reliable power in the event of a power outage.



**DS200 Precinct Scanner**  
(shown on attached secure  
ballot box)  
Firmware 2.12.1.0  
Hardware 1.3.5

Voters insert their ballots directly into the DS200 at the polling place. The touch-screen scanner tabulates votes and may be configured to drop the scanned ballot into an attached secure ballot box, which has an easy transport rolling case.

The DS200 can scan a variety of ballot sizes. It uses Intelligent Mark Recognition technology to determine what constitutes as a mark for a candidate. Scanned voter selections are stored to a USB memory device. The USB memory device is removable from the system for transport to a central election location where vote totals are consolidated for reporting.

### 1.3.2 DS850 Central Ballot Scanner

Jurisdictions with central count systems generally collect ballots at multiple polling places and transport them back to election headquarters for scanning after the polls close. During the voting process, the scanners record votes from each ballot and add results to an internal results total.

The DS850 central scanner and tabulator provides high-speed digital processing. It scans and automatically sorts ballots, separating them into one of three discrete bins without interrupting scanning. The DS850 can read ballots in all four orientations. The DS850 is designed with a series of rollers so ballots that were originally folded may be tabulated at the same rate of speed as standard ballots. The DS850 uses Intelligent Mark Recognition technology to determine what constitutes as a mark for a candidate.



**DS850 Central Scanner**  
**(shown w/ printer cart)**  
**Firmware 2.10.1.0**  
**Hardware 1.0**

### 1.3.3 ExpressVote Universal Vote Capture Device

The ExpressVote is a universal vote capture device designed for all voters, with independent voter-verifiable paper record that is digitally scanned for tabulation. This system combines paper-based voting with touch screen technology.

The ExpressVote includes a mandatory vote summary screen that requires voters to confirm or revise selections prior to printing the summary of ballot selections using the internal thermal printer. Once printed, ES&S ballot scanners process the vote summary card. The ExpressVote can serve all voters, including those with special needs, allowing voters to cast ballots autonomously. ES&S has fully integrated the ExpressVote with the existing suite of ES&S voting system products.



**ExpressVote Universal Vote  
Capture Device  
Firmware 1.4.1.0  
Hardware 1.0**

The ExpressVote unit can optionally be mounted on a rolling kiosk.

### 1.3.4 AutoMARK ADA Ballot Marking Device

The AutoMARK is an ADA-compliant ballot marking device. It provides autonomy and voting privacy to voters who are blind, visually impaired, or have a disability or condition that makes it difficult to traditionally mark a ballot. Voters navigate the ballot using the touch screen, physical keypad or an ADA support peripheral, such as a "sip and puff" device or two-position switch. The device visually guides the voter through the ballot-marking process with screen prompts and symbols.

The AutoMARK includes a summary verification screen that requires voters to confirm or revise selections prior to printing their ballots. The AutoMARK can be configured with AutoCAST, a feature that allows the voter to independently cast a verified ballot into a secure ballot box.



**AutoMARK Voting Assist  
Terminal  
Firmware 1.8.6.0  
Hardware 1.0  
1.1  
1.3.0  
1.3.1**

### 1.3.5 Electionware - Software Version 4.7.1.0

ElectionWare software is used for creating elections for the ES&S DS200®, DS850®, ExpressVote®, and AutoMARK® systems. Electionware comprises five software groups containing eleven modules.

Use ES&S software to create an election information database, format ballots, program ballot scanning equipment, and generate Election Day reports. Election Systems & Software products and services enable you to customize and scale election processes to meet the needs of your jurisdiction.

For complete and detailed instructions about using ElectionWare, refer to your *ElectionWare User Guides, Volumes 1-5*.

#### Note



Electionware require the user to have a good working knowledge of personal computers, the Microsoft® Windows 7 operating system, the election process, and election terminology.

#### 1.3.5.1 Electionware's Five Software Groups

The following is a brief description of the five software groups within Electionware and their respective modules:

**Define** – The Define group is used to input critical data for your election. The Define group modules are Home, Capture, and Element Library.



Use *Home* to create, edit, and manage your elections.



*Capture* is used for entering important election-based information into the election database. Use *Capture* to enter precincts, districts, contests, candidates, parties, and other information pertinent to creating an election.



*Element Library* is for storing graphics for the ES&S equipment and for managing system translations and audio.

**Design** – The Design group is for designing ballot and audio elements for your election. The Design group modules are Paper Ballot and Accessible Ballot.



*Paper Ballot* is opened in a separate window for designing paper ballots for use with the ES&S equipment.



*Accessible Ballot* is used to format ballot display options as they will appear, manage ADA audio settings, and validate data before the election files are generated.

**Deliver**The Deliver group is used to configure equipment, package election data, and print ballots on demand. The Deliver group modules are Configure Equipment, Package, and Print.



*Configure Equipment* enables you to set parameters and access codes for election equipment, and generate election files for use with the ES&S equipment.



*Package* is for creating the media (election files stored on a portable device) for use in the ES&S equipment, as well as the ballot file for the ES&S electronic poll book.



*Print* is for viewing and printing BOD (Ballot on Demand) ballots by precinct.

**Results**The Results group is used to import election results data generated by Election Reporting Manager (ERM) into Electionware, correlating results files with original tabulation media, generating individual audit logs for machines from the workstation, and producing basic results reports and ballot images. The Results group modules are Acquire and Produce.



After the election, *Acquire* is used to import machine logs, cast vote records, and ballot images collected by reading the election media into Election Reporting Manager (ERM). Additional Acquire functions are used to review, export, and report media device-related data.



*Produce* is used to filter, display, and export ballot data from loaded results data. Ballot records can be viewed and exported to file. The scan images or facsimiles of ballots associated with selected ballot records can be viewed and printed. In addition, scanned images of ballots and their Cast Vote Records (CVR) can be viewed, printed and saved. The Election Results Summary report, which includes the results of all loaded ballots, can be viewed, printed, or saved.

**Manage**The Manage group is used to manage users and jurisdictions in Electionware. The Manage group module is Setup.



The first time you use Electionware, *Setup* will be the first module used initially. Setup is used to add and edit users and jurisdictions, and to set the strength of election codes.

### 1.3.6 Election Reporting Manager - Software Version 8.12.1.0

Election Reporting Manager (ERM) is ES&S' election results reporting program. Use ERM to generate paper and electronic reports for poll workers, candidates, and the media. ERM is designed to display updated election totals on a monitor as ballot data is tabulated. Report editing features enable you to read data from a variety of ballot tabulators, customize your report formats, and generate accurate election results.

ERM is designed to support a wide range of ES&S ballot tabulating equipment and can produce reports for both central-count systems and precinct-count systems.

For complete and detailed instructions about using ERM, refer to your *Election Reporting Manager User's Guide*.

### 1.3.7 ES&S Supporting Applications

Product	Version	Description
Removable Media Service	1.4.5.0	Service supporting election media programming
VAT Preview	1.8.6.0	Ballot preview for accessible voting equipment.
ExpressVote Previewer	1.4.1.0	
Event Log Service (ELS)	1.5.5.0	Service supporting election media programming
Electionware-Server	4.7.1.0	EMS Server support
ExpressLink	1.3.0.0	ExpressVote activation card printing utility

### 1.3.8 Commercial Off-the-Shelf (COTS) Products

Product	Version	Description
Windows 7 Professional	64-bit, SP-1	Operating System for standalone and client workstations
Windows Server 2008 R2		Operating System for EMS and results servers
Microsoft Patches (WSUS Offline Utility)	8.8	Software updates (Update utility)
Adobe Acrobat	XI	Desktop publishing software
RM/Cobol Runtime	12.06	COBOL runtime
Symantec Endpoint Protection - Small Business Edition 2013	12.1.4 (64-bit)	Anti-Virus
Symantec Endpoint Protection - Intelligent Updater	6.5 Premium	Anti-Virus

## 1.4 Terms and Definitions

**Table 1-2: Abbreviations**

Term	Definition
BMD	Ballot Marking Device
BOD	Ballot on Demand
CBT	Central Ballot Tabulator
CVR	Cast Vote Record
ELS	Event Log Service
EMS	Election Management System
EQC	Election Qualification Code
EVS	ES&S Voting System
L&A	Logic and Accuracy (testing)
SFTP	Secure File Transfer Protocol
SOP	System Operations Procedures
VAT	Voter Assist Terminal
FMC	Flash Memory Card

**Table 1-3: Glossary of Terms**

Term	Definition
Acceptance Testing	Examination of a voting system and its components by the purchasing election authority (usually in a simulated-use environment) to validate performance of delivered units in accordance with procurement requirements, and to validate that the delivered system is, in fact, the certified system purchased.
Ballot on Demand® (BOD)	Ballot on Demand enables the printing of individual ballots from a personal computer on Election Day. Many jurisdictions order ballots based on voter turnout from the previous year instead of printing a ballot for each registered voter in the jurisdiction. If ballots run short, the jurisdiction uses Ballot on Demand to print extra ballots on site.
Ballot Set	Electionware users group ballot information for different political parties in a primary or data for ballots that use different scanning equipment into individual ballot databases called ballot sets. When a user generates final election files from Electionware, the program merges all of the ballot sets created for an election into output files.
Canvassing Board	A group of county officials who are responsible for making sure that the number of ballots cast on Election Day is equal to the number of ballots that are counted on election night. The canvassing board is also responsible for certifying the results of an election, certifying final canvass reports and signing off results reports from precinct and central scanners.
Code Channel	The column of numbered black boxes on the left side of a ballot immediately right of the timing track. The scanner reads the combinations of boxes in this area to determine the precinct, split, type and style of the ballot.
Election Assistance Commission (EAC)	Upon the commission's activation, the Election Assistance Commission (EAC) will serve as a national clearinghouse for the compilation of information and review of procedures with respect to the administration of Federal elections. The EAC carries out duties related to the testing, certification, decertification and recertification of voting system hardware and software.
Election Definition	Jurisdictional, contest, and candidate data loaded into voting and scanner/tabulator machines for an individual election.
Election Media	A portable flash media device containing the election definition in encrypted form, used to transfer data to and from ES&S equipment.

**Table 1-3: Glossary of Terms (Continued)**

<b>Term</b>	<b>Definition</b>
Logic and Accuracy Test (L&A Testing)	A public test performed prior to Election Day to demonstrate that the election system counts and reports election results correctly.
Zero Report / Zero Tape	A zero report is a version of the results report that is only available when no results are on the machine. It is used to verify that any prior vote data has been cleared.

# Chapter 2: Paper Ballot Specifications

## 2.1 Electionware Paper Ballot

Electionware ballots are one or two-sided.

Machine-readable components are areas of the ballot that scanners recognize to record marks. Each ballot has four machine-readable components:

**Voter Targets (Ovals)** – A voting target is an oval that appears next to each candidate name (or referendum response). Voting targets are marked by the voter to indicate selection. Properly printed voting targets are invisible to optical sensors. Place ballot text, tint, or ruling lines no closer than 0.20 inches (0.508 cm) from the oval voting mark. The oval line thickness is configured in Electionware. This value must be within the range of 0.004 inches to 0.006 inches. Measure the printed oval line to verify proper thickness.

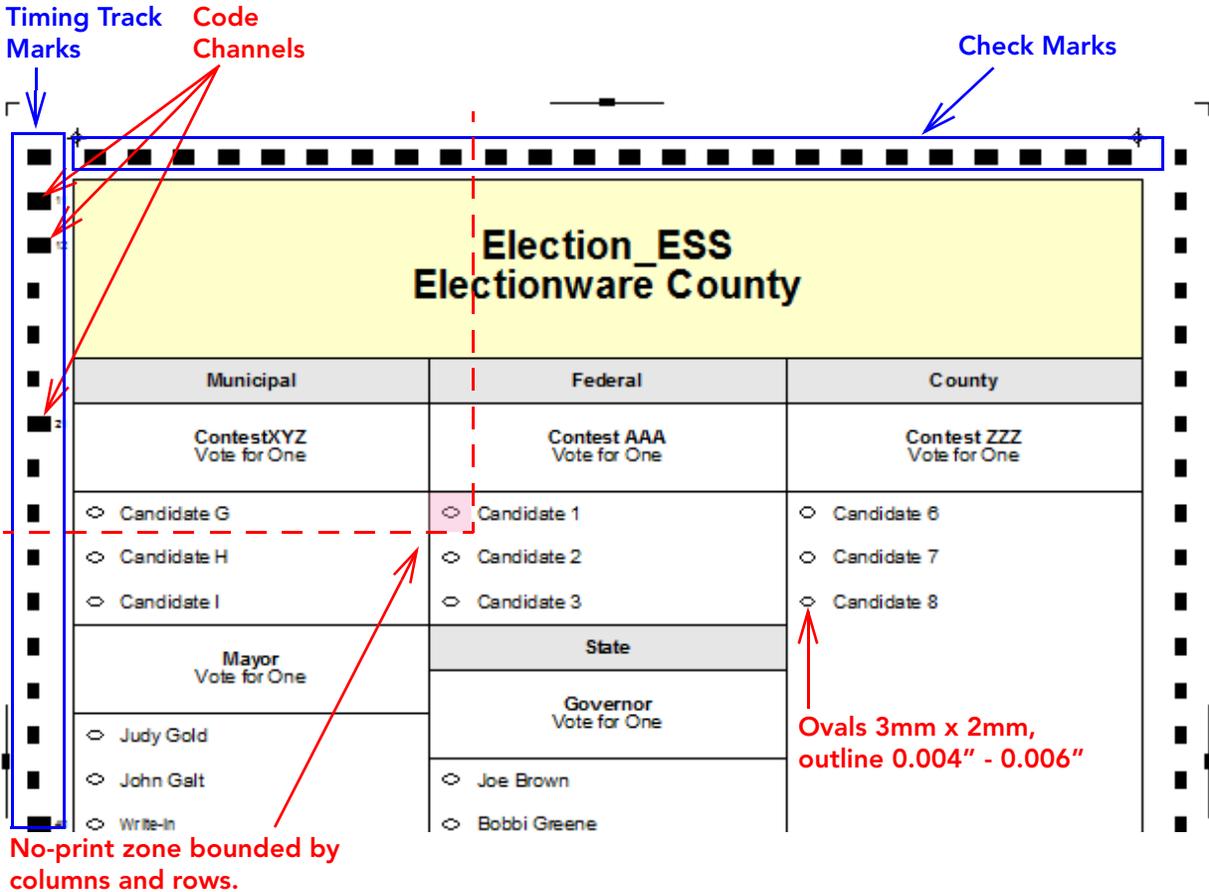
**Timing Track** – The timing tracks are the vertical columns of black squares on the long edges of the ballot. Each timing track mark represents a row. Each ballot can contain up to 91 rows, depending on the ballot length.

**Code Channels** – The code channel is an extension of the left timing track on the front of the ballot. The scanner reads the code channel to identify the precinct, split, and style of the ballot.

### 2.1.1 Timing Track and Check Mark Alignment

The timing track marks and check marks create a virtual grid over the ballot. Each voting target position on the ballot is aligned within the intersection of a row and column.

The scanner uses the timing tracks to compensate for any image distortion and accurately locate the voting targets.



*Electionware Paper Ballot*

## 2.1.2 Timing Track Mark Spacing

The timing track mark spacing (also referred to as density) varies according to ballot length and number of voting targets per inch, allowing for different row counts for each size. When checking the ballot, be sure to use the correct overlay for ballot size and timing track mark spacing.

**Table 2-1: Column Widths According to Ballot Length & Ovals/Inch**

Length	5mm 0.20" (5 ovals per inch)	6.5mm 0.26" (3 ovals per inch)	8mm 0.31" (3 ovals per inch)
11"	50	38	N/A
14"	65	50	41
17"	81	62	50
19"	91	70	56

## 2.2 ES&S CountRight Ballot Stock

ES&S CountRight™ Ballot Stock has been specially engineered to run on ES&S tabulators and meets all ES&S specifications for the ES&S tabulators.

### Important



The use of CountRight Ballot Stock is highly recommended when printing for ES&S equipment.

As the manufacturer of the scanning equipment, ES&S understands the critical synergy required between the ballot paper, the ink on the paper, and the tabulator logic. As a result, CountRight Ballot Stock was designed with specific consideration regarding the following measurements:

**Caliper** – Thickness of the paper

**Opacity** – Amount of light absorbed vs. reflected by the paper

**Brightness** – Reflectance of the paper when measured under a calibrated wave of light

**Smoothness** – Measurement of surface “roughness” of the paper

**Basis Weight** – Mass (expressed as weight) per number of sheets

ES&S tabulators are designed to use digital CountRight Ballot Stock, which is blank with no pre-printing for the DS200 and DS850.

### 2.2.1 Ordering CountRight Ballot Stock

When ordering stock, it is critical to tell ES&S what type of tabulator(s) you are using in order to ensure that correct stock is ordered. CountRight is available from two sources:

- As the only authorized distributor of CountRight, Veritiv offers parent sheets and rolls in several sizes and formats.
- ES&S stocks and markets CountRight Ballot Stock in several sizes and formats.

Contact ES&S Customer Service at 1-877-377-8683 with any questions or orders. Allow four weeks for delivery.

## 2.2.2 CountRight Specifications

**Table 2-2: Ballot Specifications**

Grain Direction on Finished Ballot	Long
Basis Weight	80# text weight (36.2874 kg)
Thickness	0.0061 in. (0.015494 cm)
Smoothness	130 Sheffields
Moisture	5.5 percent
Opacity	97.0
Brightness	92 to 94
PPI	338

**Table 2-3: Tolerances**

Band Width	8.5 in. (+.027, -.02)
Ballot Length	11, 14, 17, 19 in. (+/- 0.03)
Ink Density	1.15 to 1.25 wet ink density; 1.10 to 1.15 dry ink density
Oval Thickness	The printed oval line thickness must be within the range of 0.004 inches to 0.006 inches.

**Important**



The DS200 and DS850 can accommodate ExpressVote activation cards.

The DS200 and DS850 cannot read colored ballot stock.

Avoid using adhesive stickers or labels and avoid embossing or embellishing when printing ballots. Any technique that changes the caliper of the ballot stock will cause read errors during scanning.

## 2.3 Color Strip Identification

To assist with correct ballot distribution at the polling place, ES&S ballots can use a color strip instead of full color tinting.

### 2.3.1 Color Strip Specifications

The strip can be any color and darkness, as it is placed on a part of the ballot that the scanner does not read, and can be horizontal or vertical.

**Note**  Text or ballot art can appear within the color strip. However, because the scanned image will be black and white, the strip may appear black, rendering dark text unreadable. Check with your jurisdiction to see if white text can be used against a particular color strip.

These specifications are valid for any ballot length for the ES&S AutoMARK.

### 2.3.2 Horizontal Color Strip

The color strip can be flush with the vertical borders of the inner frame, along the long edge of the ballot. The strip must be 0.10 inch from the horizontal borders of the inner frame, along the short edge of the ballot.

The maximum width of the horizontal strip cannot exceed the width of the inner frame.

The height of the strip is limited by the fact that the strip is considered ballot art, and must be 0.20 inch away from the nearest voting target.

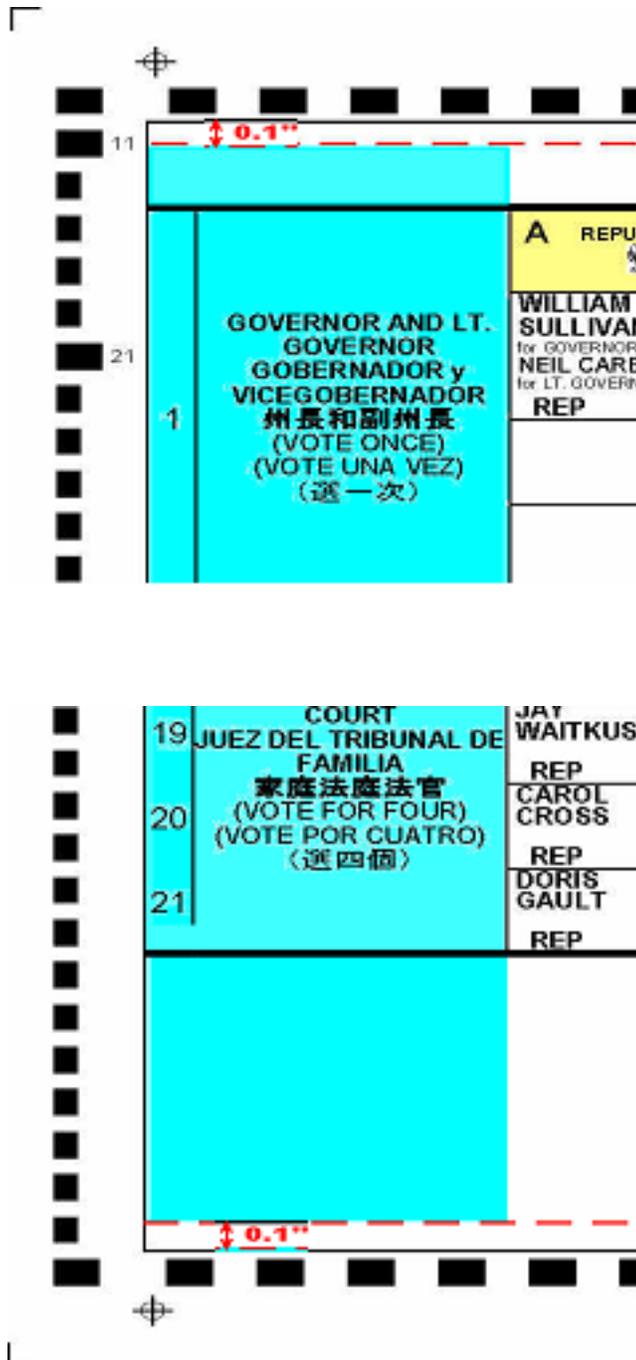


*Example of horizontal color strip layout*

### 2.3.3 Vertical Color Strip

The color strip can be flush with the vertical borders of the inner frame, along the long edge of the ballot. The strip must be 0.10 inch from the horizontal borders of the inner frame, along the short edge of the ballot. This requirement restricts the maximum height of the strip.

The width of the strip is limited by the fact that the strip is considered ballot art, and must be 0.20 inch away from the nearest voting target.



### 2.3.4 Color Rendering

Because the DS200 and DS850 scanners render images in black and white (no gray), the color strip will be rendered as either black or white.

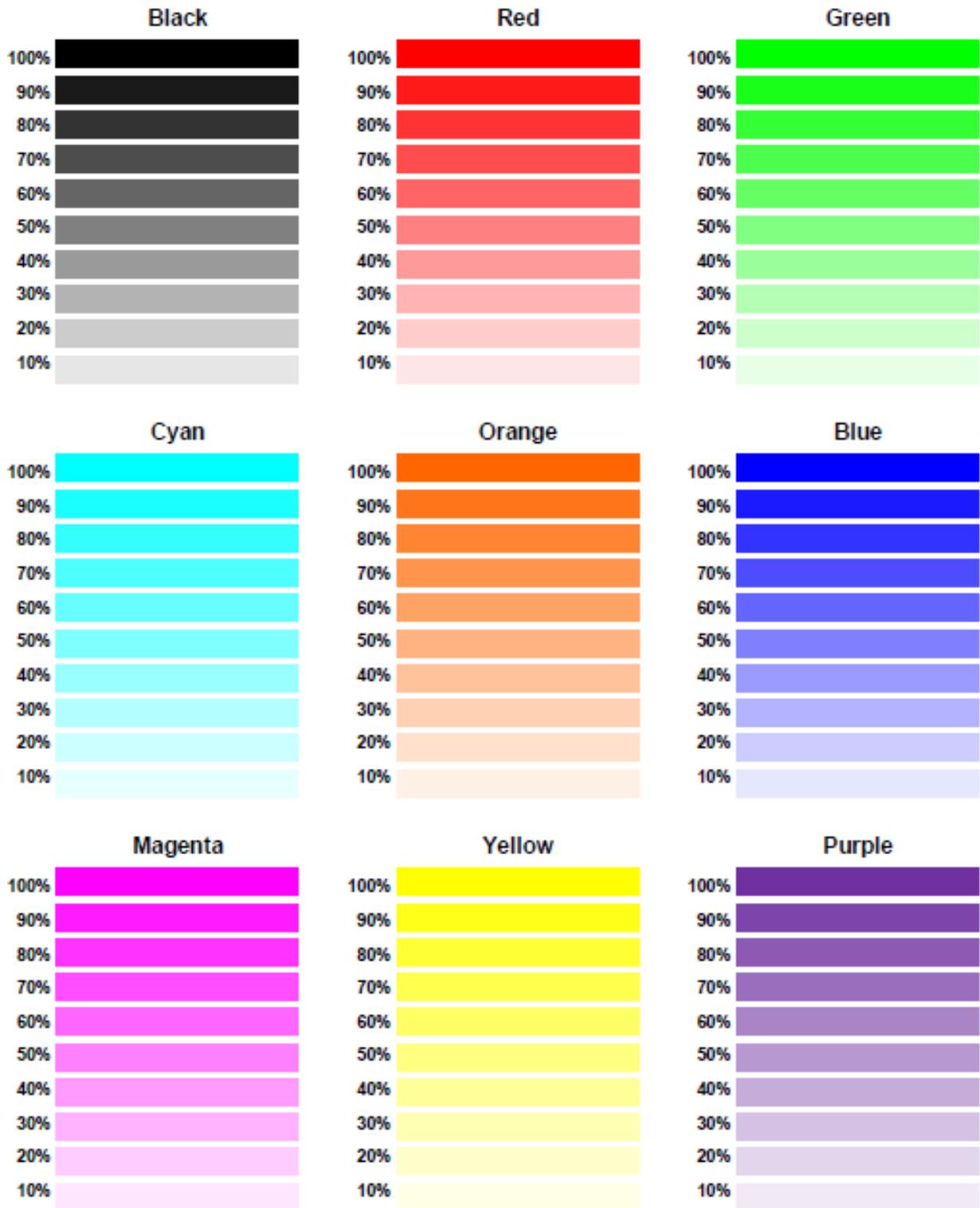
Refer to the color chart and table on the following pages when selecting color for use on the ballot.

**Note**



This table is provided as a reference only. Colors may be rendered differently depending on different parameters, including ink (dye quality) and printer manufacturer.

### Color Scan Test Ballot



**Table 2-4: Ballot Layout Color Guidelines<sup>a</sup>**

Color	Threshold for White	Threshold for Black
Black	< 30%	> 40%
Red	< 30%	> 40%
Green	< 50%	*
Cyan	< 50%	*
Orange	< 35%	> 50%
Blue	< 30%	> 40%
Magenta	< 30%	> 40%
Yellow	< 50%	*
Purple	< 40%	> 55%

a. Colors with an asterisk (\*) are usually rendered as white by the DS200 due to the green light it uses for scanning.

## 2.4 ExpressVote Card Stock

The ExpressVote<sup>®</sup> uses specially manufactured thermal paper to record printed images such as bar codes and contest selections. The unit's thermal printer selectively heats the paper on one side to activate the dye(s) in the paper. The paper stock is processed to prevent moisture from causing the paper to curl.

Approved grades are PTI's "PTI 351 14N," and Appleton's "Resiste 800-5.3."

ExpressVote card stock is only available from ES&S. Contact ES&S Customer Service at 1-877-377-8683 with any questions or orders. Allow four weeks for delivery.

ExpressVote paper specifications are provided in the table below and illustrated on the following pages.

**Table 2-5: ExpressVote Paper Specifications**

Type	Thermal heat-sensitive paper
Color	White
Thickness	134 Microns $\pm$ 6 Microns (0.005275" $\pm$ 0.000236")
Lengths Available	11, 14, 17, and 19-inches $\pm$ 0.015" tolerance for all lengths
Width Available	4.260 $\pm$ 0.015" tolerance for all paper lengths
Die-cut Corner	0.750 $\pm$ 0.015" tolerance on two sides (see the figures on the following pages)

### 2.4.1 Storage and Shelf Life Recommendations

**Shelf Life** – Store ExpressVote thermal card stock in a dark place at a relative humidity between 45% and 65% and a temperature below 77°F (25°C). Adhering to these recommendations will ensure satisfactory performance for at least three years from the date of manufacture.

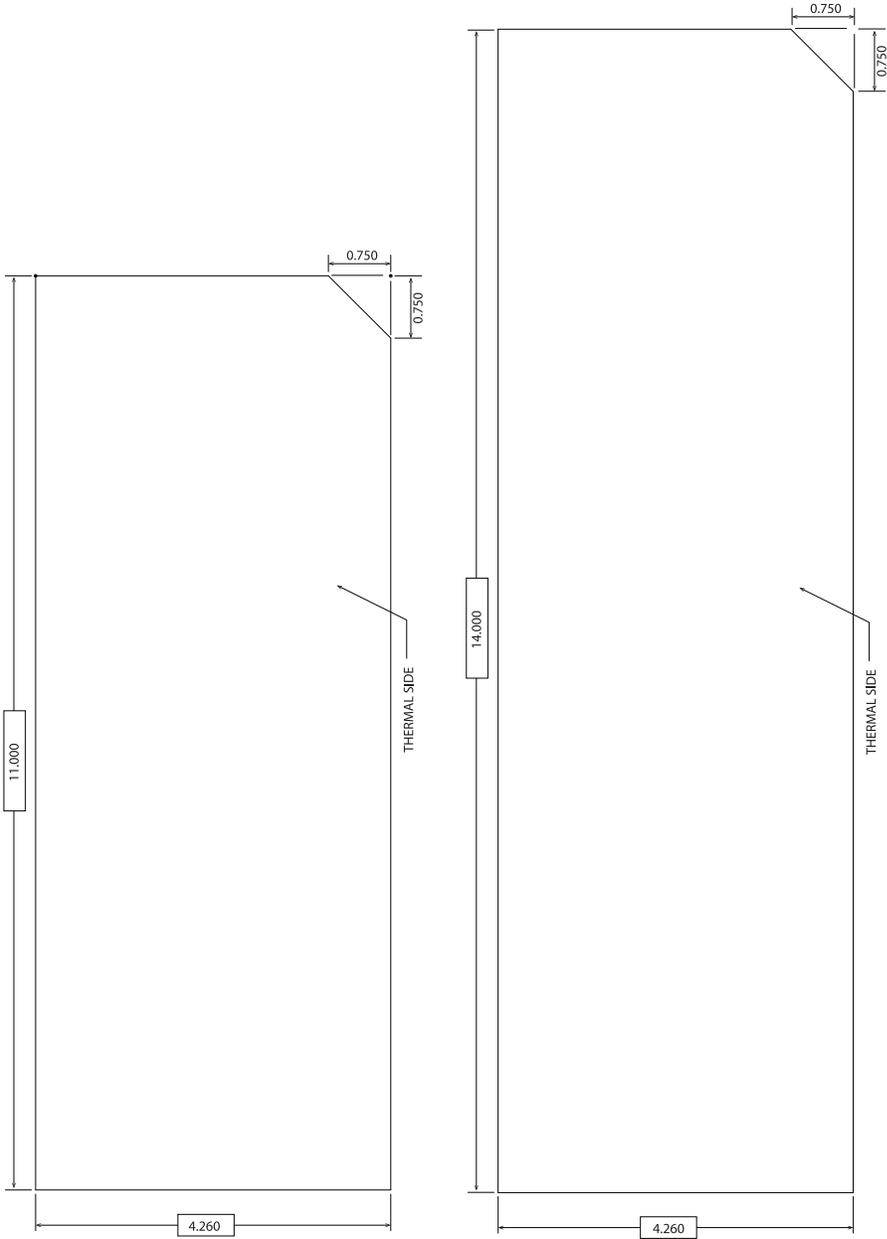
**Image Life** – Once an ExpressVote vote summary card has been imaged, the image is expected to remain completely legible for at least seven years, assuming the documents are properly stored with compatible materials under normal filing conditions, with a relative humidity between 45% and 65%, as well as a temperature below 77°F (25°C).

After seven years, the image may begin to deteriorate. After twenty years, the image may no longer be visible.

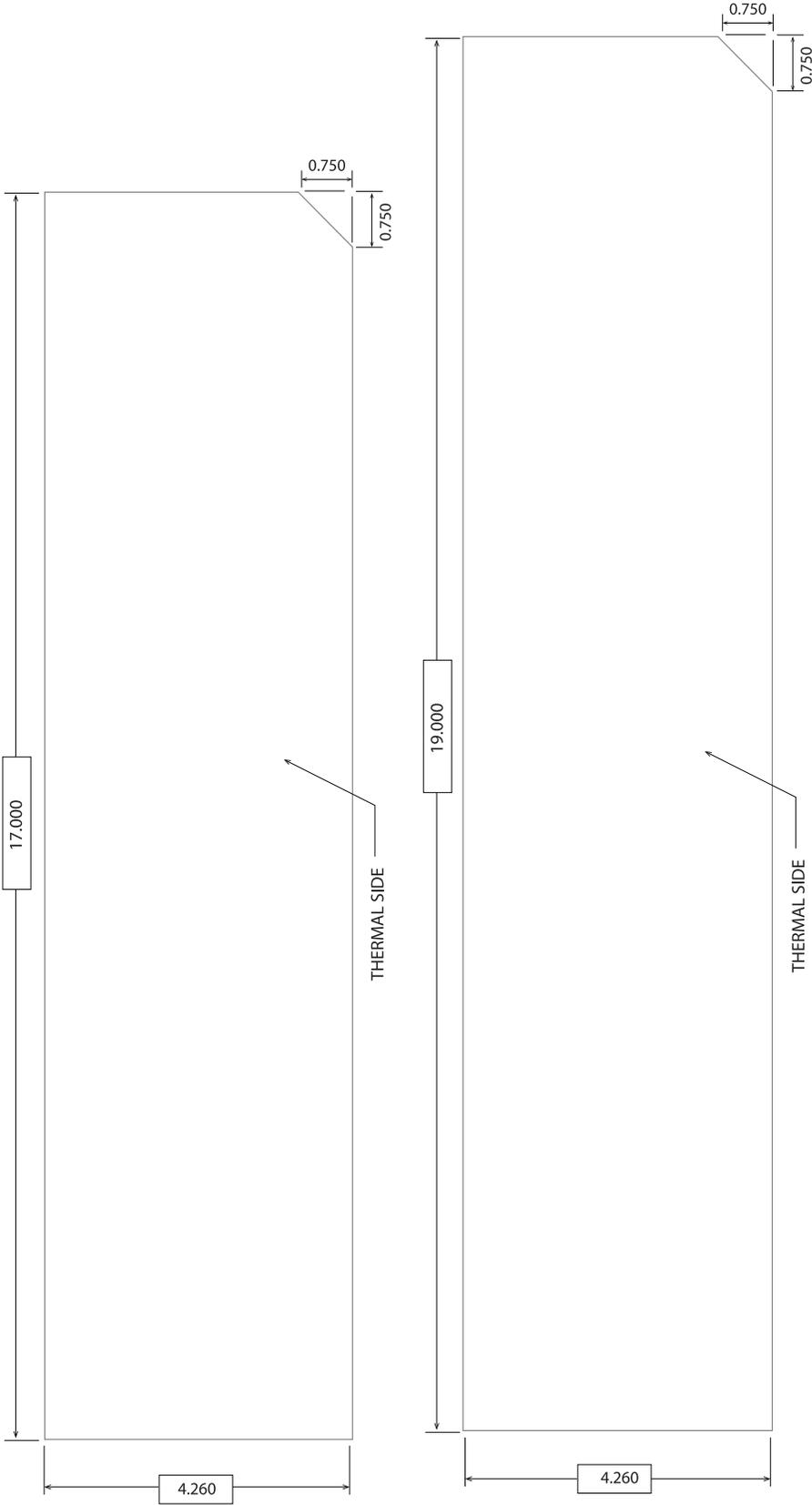
**Caution**



Exposure to heat renders the card stock black and unusable.



*ExpressVote thermal paper stock: 11 inch & 14 inch*



*ExpressVote thermal paper stock: 17 inch & 19 inch*

## 2.5 Offset Production

### 2.5.1 Ballot Ink for Offset Production

Print all of the machine-readable components with high quality, commercially available black ink (extra or double-black) and note the following guidelines:

- Use inks with high tack.
- Only use readable black ink to print ballot components.
- Make sure that all offset is solid and dense without voids, breakthroughs, dirt, foreign particles, white hickies in the timing track, or gray lines.
- Print with a minimum density of 0.95 and a maximum density of 1.50. Test at the press using a densitometer.
- For best results, use a density of 1.15.
- Do not use powder or varnish.
- Do not smear, smudge, or spray the ink when handling the ballots.
- Do not print text in the active voting tracks.

### 2.5.2 Offset Pre-Press Preparation

Before going to press, use the instructions that follow to prepare the ballot layout for mass printing.

In offset printing, use diazo-coated aluminum or high quality vinyl plates to preserve the integrity of the film image. (Paper plates do not maintain the side-to-side dimensions of the ballot image.)

1. Image the PDF file to film negatives or direct to plate at 100%. A PDF file can vary as much as 0.5%, depending upon how the software is handled by the output devices. Overlays are required due to the potential for variation.
2. Use the registration overlays obtained from ES&S to verify that the PDF is sized correctly, that all machine-readable components are aligned, and that all cut marks and score marks appear on the ballot.
3. Inspect the ballot for accuracy with master registration overlays, hard copy laser prints (if one is sent) and a visual inspection of the document image.

Check the ballot for wrapping, overprinting, dropping lines, text outside the text areas, or other signs of a corrupt file.

**Note**



Contact ES&S Print Services to obtain the registration overlays, or for additional assistance.

### 2.5.3 Prepare Ballot Stock

Only use ES&S CountRight Ballot Stock and ballot ink that adheres to the specifications in this manual. Refer to *Chapter 3: Ballot Paper* for paper stock specifications. Refer to [2.5.1 Ballot Ink for Offset Production](#) for ballot ink specifications.

Square the stock before sending it to the press.

#### 2.5.3.1 Offset Preparation, Printing, and Proofing

1. Print 150 make-ready sheets and cut to the final size. Check the following:
  - Ballots are square.
  - Front-to-Back registration is accurate by holding ballot to the light.
  - Width is accurate by using a Go/No-Go Gauge.
  - Any visible spots or scratches on the ballot or printing plate.

**Note**



Contact ES&S Print Services to obtain the correct Go/No-Go Gauge.

2. Turn the ballot over and do the tests again on the back of the ballot. If all four tests on each side fall within tolerances, the scanner will be able to read the ballot.
3. After performing registration checks, print and inspect the ballots. Allow the ballots to dry.
4. For every 500 sheets printed on the main production run, check the following and initial accordingly:

- Ink density with a densitometer.
- Overall print quality – visible flaws, spots, or marks on the ballot or printing plate.
- Make any corrections/adjustments necessary to the printer. Reprint, and replace ballots as needed.

### 2.5.3.2 Offset Cutting

The first few sheets should be taken to the cutter immediately to determine if all is square. Stack ballots in lift sizes of 3 to 5 inches (7.62 to 12.7 cm). The weight of the ballot stock may cause offset during the drying process if placed in stacks higher than 5 inches (12.7 cm).

#### Note



Keep ballot stock clean before, during, and after printing. Avoid grease, water, ink splatter or spray, and dirt. Always wash hands before handling ballot stock.

### 2.5.3.3 Cutting

To ensure that ballots are the proper width, ES&S has created a Go/No-Go Gauge that will easily measure whether or not a ballot is the right width.

ES&S CountRight Ballot stock is already cut to size; however, check the ballot stock with a Go/No-Go Gauge to ensure that it is properly cut.

If printing from a roll-fed machine, check with the Go/No-Go Gauge to make sure the ballots are cut to the correct width.

### 2.5.3.4 Scoring and Folding Ballots

Scoring the ballots before folding them is *not* recommended. A folding machine should be used to expedite the process. In addition, roller pressures should be reduced to about 2 – 3X thickness of ballot stock.

#### Caution



Do not fold across timing marks, ovals, or arrows, as this may cause tabulation errors. Scoring followed by folding may result in the ballot separating at the score/fold line.

### 2.5.3.5 Perforating and Numbering Ballot Stubs

A ballot stub is a non-readable portion of the ballot that election workers remove at the polling place for auditing purposes. Stubs usually contain at least one identification number (such as a precinct identification number or sequence code number) and a sequentially printed number that matches the number on the ballot, used to audit ballots that have been cast. Ballots should be perforated for easy separation. Use a micro-perfing wheel to place perforations on the ballot for one 3-inch (7.62-cm) stub or two 1.5-inch (3.81-cm) stubs.

## 2.6 Digital Printing and Packaging

When printing, use the tools listed below to check the following:

- Registration Overlay:
  - Registration
  - Ballot width
  - Ballot length
- Go/No-Go Gauge:
  - Ballot width
- Densitometer:
  - Ink/toner density
- Micro-ruler:
  - Oval line thickness

On every ballot inspected, check the following:

- Overall print quality - any visible flaws, spots or marks
- Front-to-back registration
- Proper toner/ink adhesion

#### Note



Contact ES&S Print Services to obtain the registration overlay and correct Go/No-Go Gauge.

**Important**  If any of the measurements do not align with ES&S specifications, make any corrections / adjustments necessary to the printer, reprint and replace ballots as needed.

## 2.6.1 Preparation and Proofing

After receiving the files, all ballot sequences must be proofed to ensure that information on the ballot is correct.

### 2.6.1.1 Pre-Production

Before printing, verify that the following components on the ballot PDF match those on the ballot order form (also referred to as the BQRL), and record the results on the form:

- Correct party or ballot style
- Stub, sequential numbering, or color requests
- Scoring/folding, stapling, gluing, or any special finishing requests
- Type/sequence/split or style number

### 2.6.1.2 Overlays and Registration

A PDF can change, depending upon the software used, and although the change may not be visible (about 0.5%), it could be enough to cause read errors or ballot rejection on ES&S equipment. Use the registration overlays provided by ES&S to ensure that the ballots being produced are within ES&S specifications.

#### Using Registration Overlays

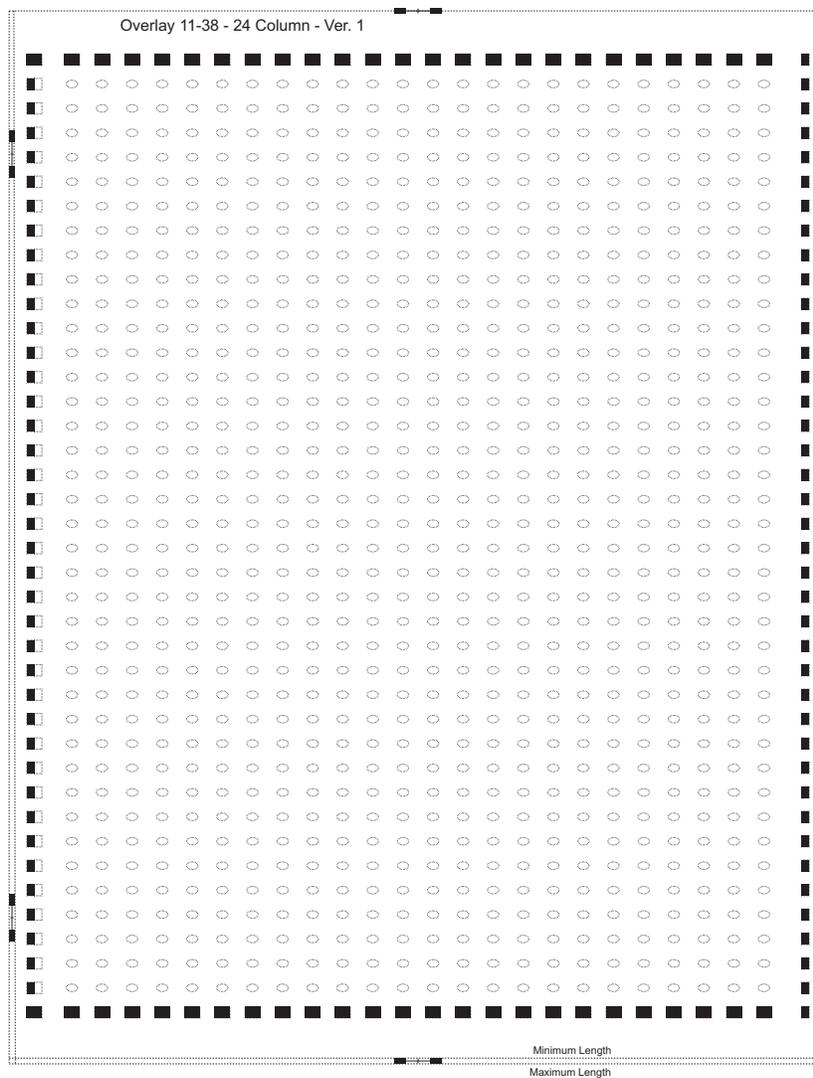
- Ensure that you have a “front” and a “back” overlay.
- Align the top and right edges of the ballot with the “edge of paper” lines on the overlay, and inspect the printed ovals. The ovals must be printed entirely inside the boxes. If any part of the oval is outside the box, the ballot is not within registration. The PDF or printer must be adjusted, and the ballots reprinted, until the sizing and registration are correct.
- Verify that the black check boxes at the top and bottom of the ballot, and the timing tracks and code channels along the left side of the ballot,

are within the boxes printed on the overlay. The left and bottom edges of the ballot must fall between the Min. and Max. lines when the top and right edges are on the "edge of paper" line. If any part of the boxes is outside the box, the ballot is not in registration. The PDF or printer must be adjusted, and the ballots reprinted, until the sizing and registration are correct.

**Note**



Check front-to-back registration on the ballot by holding it up to a light. The timing track must line up evenly.



*Example: EVS Registration Overlay*

### **2.6.1.3 Print Inspections**

For every **250** ballots run, check and initial the following:

- Check registration, width, and length using the registration overlay.
- Check front-to-back registration on the ballot by holding it up to a light. The timing track should line up evenly.
- Measure oval line thickness with the micro-ruler.
- Check overall print quality (any visible flaws, spots, or marks).

Make any necessary corrections/adjustments to the printer. Reprint and replace ballots as needed.

For every **1,000** ballots run, check and initial the following:

- Measure width using the Go/No-Go Gauge.
- Measure ink density using the densitometer.
- Check overall print quality (any visible flaws, spots, or marks).
- Check proper toner adhesion.

Make any necessary corrections/adjustments to the printer. Reprint and replace ballots as needed.

## **2.6.2 Preparation for Transport**

### **2.6.2.1 Packaging**

Before shrink-wrapping and shipping the ballots, perform these final tasks:

- Fan through the pages (both front and back) to visually identify any visible errors or marks. Reprint and replace ballots as necessary.
- Use chipboard when shrink-wrapping quantities of fewer than 50 ballots.
- Do not shrink-wrap quantities greater than 250.
- Include a packing list or label each ballot box to clearly indicate which ballots are in each specific box for easy customer recognition.

### 2.6.2.2 Binding and Shipping

- Bind, number, and box the ballots for shipping. If the ballots are to be glued or stitched, do so at the bottom of the ballot stub.
- Do not bind ballots at the top.
- Ship the exact number of ballots that have been requested in shrink-wrapped packaging.
- Package ballots with a backer to provide support and prevent damage.
- Ship ballots in containers large enough to hold in the ballots and strong enough to withstand damage that may occur during normal shipping and handling.
- Label the outside of the cartons "ELECTION MATERIALS" and include a shipping manifest unless directed to do otherwise.

#### Note



Call ES&S or the client for labels or for further assistance.

# Chapter 3: System Configuration and Acceptance Testing

EVS 5.2.1.0 CA EMS installation and configuration procedures are provided in the following accompanying documents:

- EVS 5210 CA Installation Client
- EVS 5210 CA Installation Server
- EVS 5210 CA Installation Standalone ERM only
- EVS 5210 CA Installation Standalone Full

## 3.1 Upgrading Firmware

### 3.1.1 DS200 Firmware Update

To install new firmware on the DS200, first obtain an official DS200 firmware update USB flash drive from the Secretary of State.

1. Power off the DS200 unit.

#### Note



The DS200 must be powered off before the firmware USB is inserted.

2. Unlock and open the access door on the unit.
3. Insert the USB flash drive containing the firmware update into one of the USB ports. Do not force the flash drive into the port.
4. Turn the DS200 on, and the firmware update will be automatically loaded.

#### Note



Do not remove the USB flash drive during this process.

When the firmware update is complete, a confirmation message will appear.

**Note**



When the DS200 is switched on, the firmware version will appear on the initial state report.

5. Per the on-screen instructions, remove the flash drive, then turn off the DS200 unit.

**Note**



If the firmware update is unsuccessful, update the DS200's internal compact flash (CF) card with a new prod.release.image file, then repeat the steps in this section.

### 3.1.2 DS850 Firmware Update

The DS850 firmware is updated using two programmed cards:

- Auto Hard Drive Erase DF card
- CF card programmed with the new DS850 firmware

**Warning**



Be aware that loading new firmware onto the DS850 will clear everything off the hard disk. Before starting this process, ensure that you have retrieved all needed data from the hard drive.

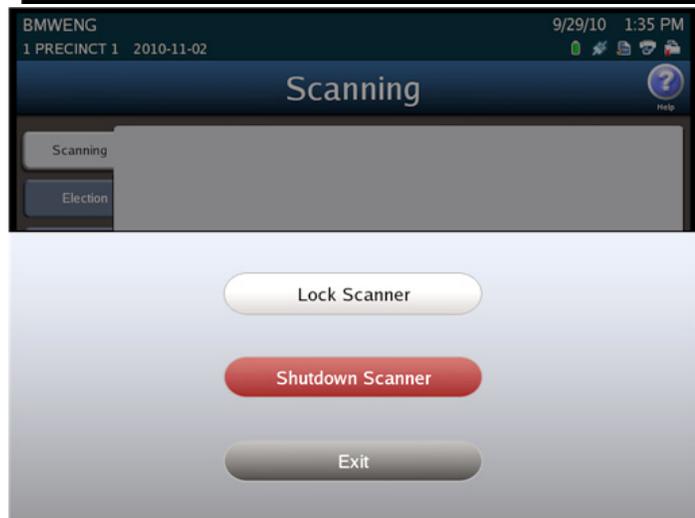
After you load new firmware onto the DS850, you must calibrate the touchscreen and the camera.

1. Touch **Exit** in the lower left corner of the screen.

If you are on a screen that does not display the **Exit** icon, touch **Menu** to navigate to a screen displaying that icon.



2. Touch **Shutdown Scanner**.
3. Unlock and open the access door on the left side of the DS850.



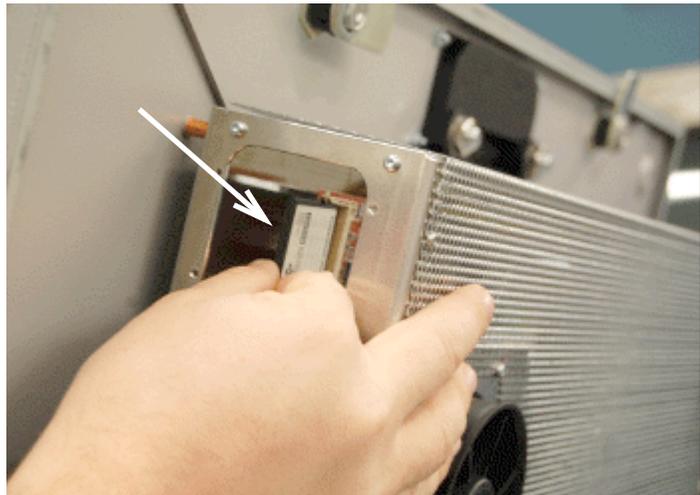
4. When the screen indicates it is safe to power off the machine, flip the switch on the left side of the DS850 to **OFF**.
5. Unlock and open the rear panel on the DS850. You do not need to remove the screen.

### 3.1.2.1 Remove Current CF Card

1. Locate the CF card access panel.
2. Unscrew the four thumb screws holding the access panel in place, remove the thumb screws, and remove the panel.



3. Remove the old CF card.



### 3.1.2.2 Erase Hard Drive and Load New Firmware

1. Insert the Auto Hard Drive Erase CF card, with the tab on the card facing out.

#### Note



Do not force the CF card into the slot. Ensure that the card is oriented correctly.

2. Flip the power switch to **ON**.

#### Warning



Turning on the DS850 at this point will start the process of erasing all data from the hard drive. Ensure that all necessary data has been retrieved.

After you start this process, you will have 60 seconds in which to shut down the unit if you decide you do not want to clear the hard drive.

Once the DS850 unit boots up, the touch screen displays a 60-second countdown message. When the countdown is complete, the formatting process begins and takes 7 to 10 minutes. An incrementing counter on the touch screen indicates the status of this process. When the formatting is complete, the DS850 automatically partitions the hard drive.

When the hard drive has been cleared, formatted, and partitioned, the touch screen displays the following message:

*Your Hard Drive is Wiped  
Please turn off your DS850 and Replace the CF card*

3. Turn off the DS850.
4. Remove the Auto Hard Drive Erase CF card.
5. Install the new firmware CF card and reinstall the CF access cover and its four thumbscrews.
6. Close and lock the rear panel of the scanner.

7. Flip the power switch to **ON**.

**Note**



After loading the new firmware, you must calibrate the screen and camera, and clear and initialize the DS850.

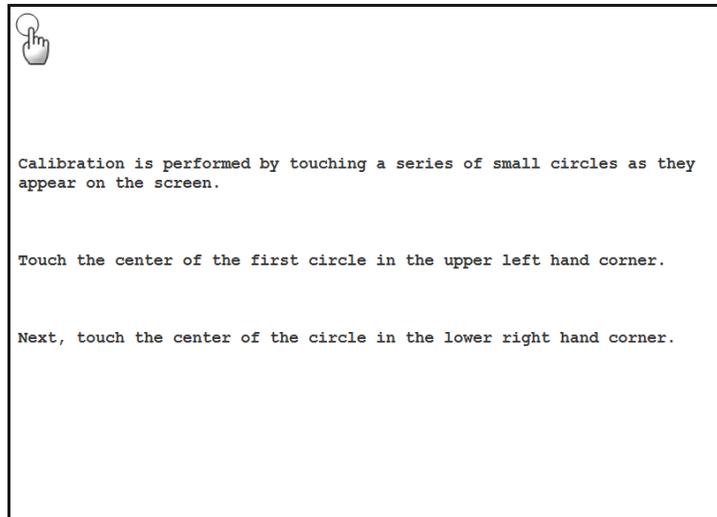
### 3.1.2.3 Calibrate Touch Screen

As the DS850 boots up, it will prompt you to calibrate the touch screen.

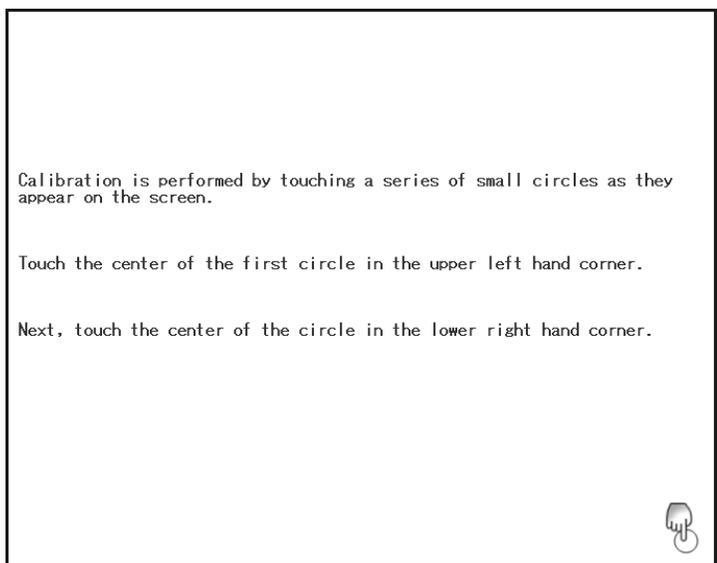
1. On the Hardware menu, touch **Screen Calibration**.



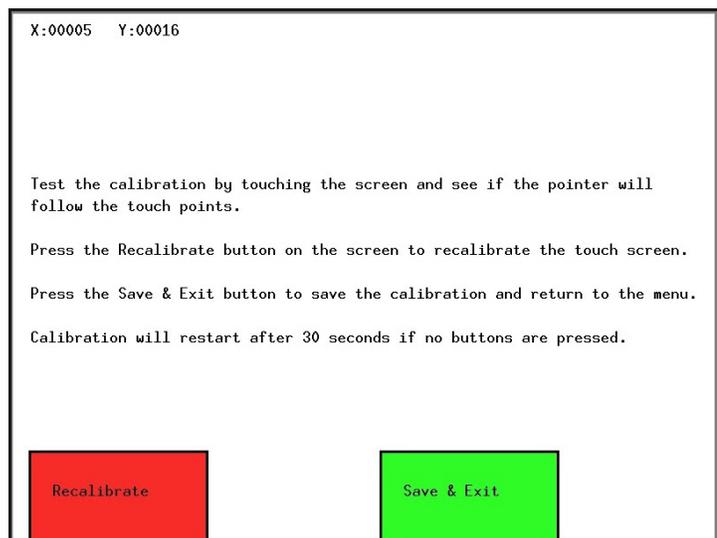
2. When the Calibrate Touch Screen screen appears, touch **Continue**. The following screen appears.
3. Touch the circle in the upper left-hand corner of the screen.



After you touch the circle in the upper left-hand corner of the screen, a circle will appear in the lower right-hand corner of the screen.



4. Touch the circle in the lower right-hand corner of the screen.
5. When the screen shown below appears, touch it in multiple places to verify that the pointer (x) will follow the touch points.
6. Touch **Save & Exit** to save the calibration settings, or touch **Recalibrate** to recalibrate the touch screen.



**Note**



If you do not touch either **Recalibrate** or **Save & Exit** within 30 seconds, the screen that appeared in Step 3 will appear, and you will need to repeat steps 3 through 6.

### 3.1.2.4 Calibrate Camera

You must do this extended camera calibration after upgrading the DS850 firmware to ensure the camera is properly calibrated to work with the new firmware.

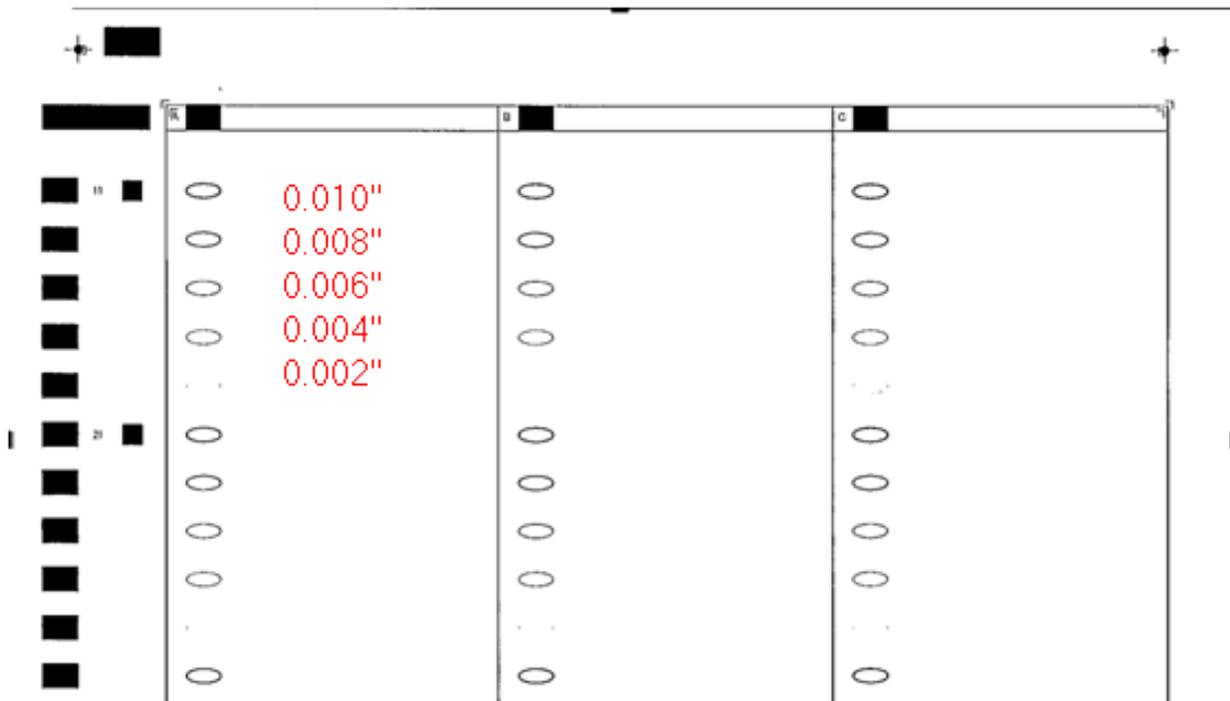
1. Load an election that has been coded for the new DS850 firmware. If you do not load an election at this time, you will be unable to properly calibrate the camera.
2. Set the output trays for 17-inch ballots.
3. On the Scanning menu, touch **Scan Ballots**.
4. Load the oval check sheet into the input hopper.
5. Touch **Start**. The DS850 will scan the oval check sheet and out stack it to the top tray.
6. Touch **Save**.
7. Touch **Save** a second time.
8. Touch **Done**.
9. Go to the Hardware tab located at the bottom left of the screen.
10. Touch **Transport**.
11. Enter the administration password for the current election.
12. Touch **Tests**.
13. Touch **Display Ballot**.
14. View the front and back of the ballot on the touch screen, using the navigation commands to move the image around on the screen so you can view the entire image. The ovals displayed on the screen should look consistent from one side of the image to the other.

The ovals printed on the oval check sheet appear from top to bottom of the page in a repeating pattern of the following thicknesses:

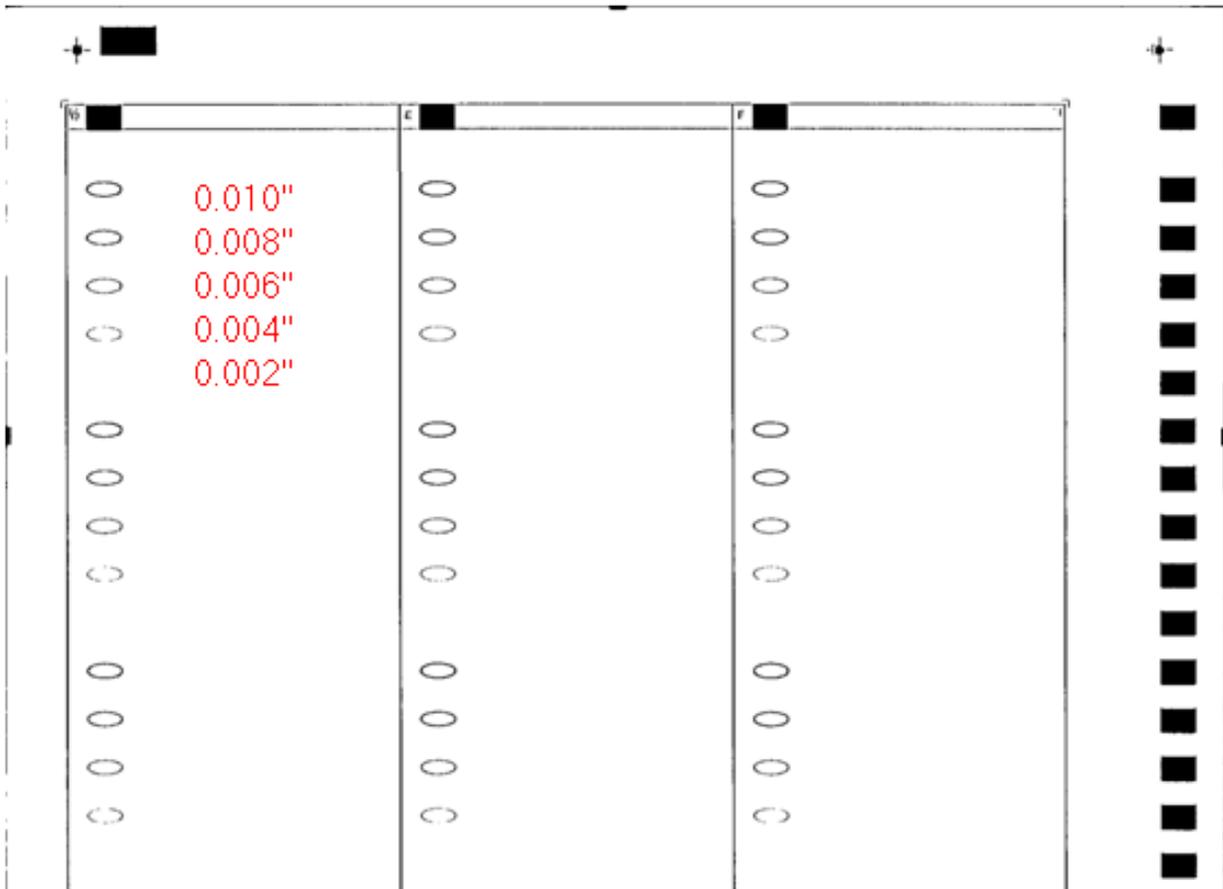
- 0.010 inch
- 0.008 inch
- 0.006 inch
- 0.004 inch
- 0.002 inch

The 0.002 inch ovals will be broken up or not visible. Ovals of all other thicknesses should appear intact.

The following is a sample of a good ballot image. Notice that only the ovals of 0.002 inch thickness are broken or not visible.



The following is a sample of a bad ballot image. Notice that the ovals of 0.004 inch thickness, as well as those of 0.002 inch thickness, are broken or not visible.



15. If the oval check sheet looks good, clear the counts from the machine. The DS850 is now ready for counting.

If the oval check sheet does not look good, repeat the camera calibration.

16. Return to the Hardware tab.

17. Touch **Camera**.

18. Enter the administration password.

19. Touch **Camera Calibration**.

20. Adjust the output trays for 14-inch ballots.

21. Clean the cameras with a lint-free cloth and isopropyl alcohol.

22. Load the input tray with 10 sheets of blank 14-inch ballot stock.
23. Touch **Calibrate**. The DS850 will feed the blank ballot stock, four times.
24. Touch **Shutdown** when prompted to do so. Wait for the touch screen to display a message that it is safe to shutdown the machine.
25. Turn off the power to the DS850. After 30 seconds, turn it back on.
26. Repeat the camera calibration.
27. When camera calibration is complete, close and lock the access door on the left side of the DS850.

### Contact



If the ballot images remain unsatisfactory after two attempts to calibrate the cameras, contact ES&S technical support for assistance.

### 3.1.3 ExpressVote Firmware Update

When ES&S makes improvements to the ExpressVote firmware, ES&S issues a firmware update media device (USB flash drive) you can use to upgrade your ExpressVote units. Significant updates may require a reformatted internal solid-state drive (SSD), sometimes referred to as the Innodisk.

### Note



For more information about updating and reinstalling the ExpressVote's SSD, contact ES&S personnel or the SOS office.

A firmware upgrade may involve enhancements to the ExpressVote application GUI (Graphical User Interface), the SPE (Scanner Printer Engine), or the IOB (Input Output Board). You can upgrade the SPE and the IOB simultaneously.

Use the Upload Software function to perform an ExpressVote firmware update either from an external update media device or from the internal SSD.

### 3.1.4 Uploading Software from an External Device

Complete the following steps to upload software using a USB update media device.



**Note** If your update includes enhancements to the Application firmware as well as the SPE and/or IOB firmware, ES&S recommends that you perform the SPE/IOB update(s) first, then perform the Application update separately.

1. Set the ExpressVote unit to Official mode.
2. Insert the media device with the new firmware into any USB port in the media device compartment.
3. Enter the System Maintenance Menu by selecting **System Maintenance** and then entering the Admin password.
4. Select **Upload from Update Stick**.
5. Select **Upload All Items**.
6. Touch **Begin Upload Firmware**.

The uploading process continues automatically. Green, yellow and white status bars indicate the upload progress.

If an error occurs during the upload process, touch **EXIT**, then repeat steps 1 - 5.

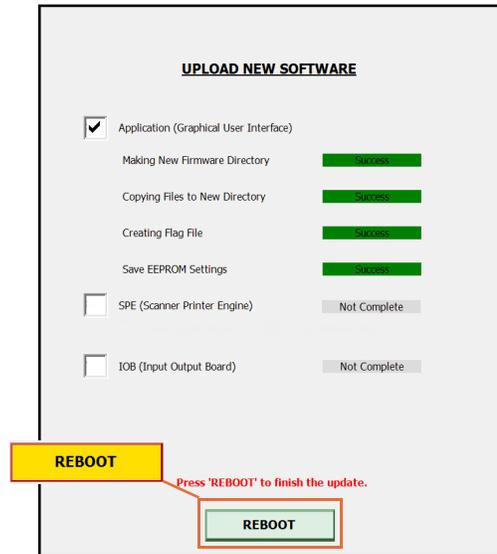
Copying Startup File	Success
Making New Firmware Directory	Success
Copying Files to New Directory	In Progress
Creating Flag File	Not Complete
Reset System Maintenance Passcode	Not Complete

The ExpressVote may require rebooting as part of the upgrade process. The unit may appear inactive during the reboot cycle, which may take several minutes to complete. This state is normal. The reboot process is dictated by the following conditions:

- If you upgrade only the SPE, rebooting the unit is not necessary.
- If you upgrade the IOB, either alone or in combination with the SPE, the ExpressVote will reboot automatically.

- If you upgrade the Application (GUI), the screen displays the **REBOOT** button. Touch **REBOOT** to initiate the reboot process.

The **REBOOT** button changes to yellow to indicate that the reboot is in process.



7. After the upload is complete, use the Software Versions function of the ExpressVote Main Menu to verify that the updated firmware versions are successfully installed.

**Important**



ES&S recommends that you use the Scanner Calibration function via the System Administration Menu to recalibrate the ExpressVote's scanner after uploading new software. You may also consider recalibrating the unit's touch screen at this time. For more information, contact ES&S personnel or the SOS office.

### 3.1.5 AutoMARK Firmware Update

#### Important



Whenever the AutoMARK is turned off and then powered back on, wait for a long beep to sound before proceeding.

#### 3.1.5.1 VAT Firmware Compact Flash for Full Install

1. Locate the trusted firmware for performing a full install of the VAT. (These files can be found on the Product Installs DVD, or have been provided from the trusted source).
2. Insert a blank Compact Flash card into the card reader.
3. In the ManufacturingInstalls folder, open the correct firmware version folder. Copy the \firmware\ folder and its contents to the root of the Compact Flash card.

#### Note



The card must contain an election, along with the firmware. Any election files will work as long as they have been created for the version of firmware being loaded.

4. Copy the \ElectionData\ folder and its contents to the root of the Compact Flash card.

#### Note



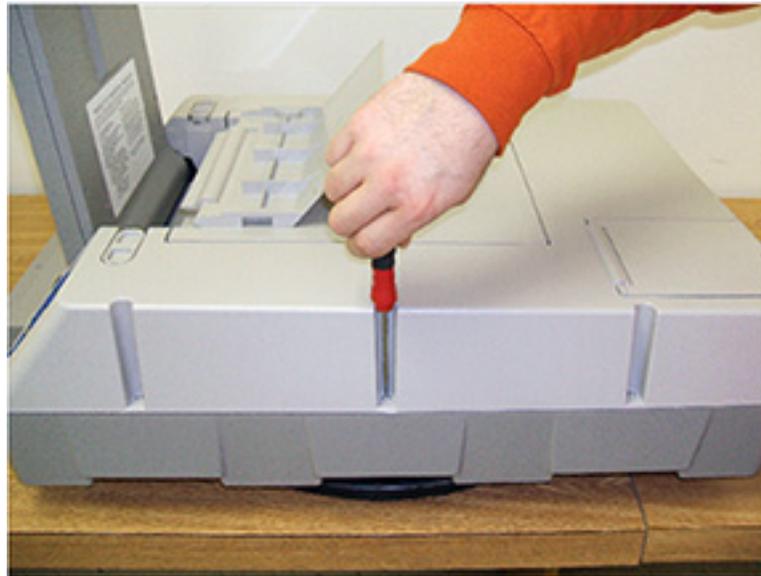
If the AutoMARK is being upgraded from Unity to Electionware, a new Operating System must be loaded on the system.

5. Locate the AutoMARK OS 5.00.19 and copy the following files to the root of the Compact Flash card:
  - nk.nb0
  - ADSApiDll.dll
  - FSHDRV.dll
  - sysUpgrade.exe
  - SysUpgrade.zip
6. Eject and label the Compact Flash card.

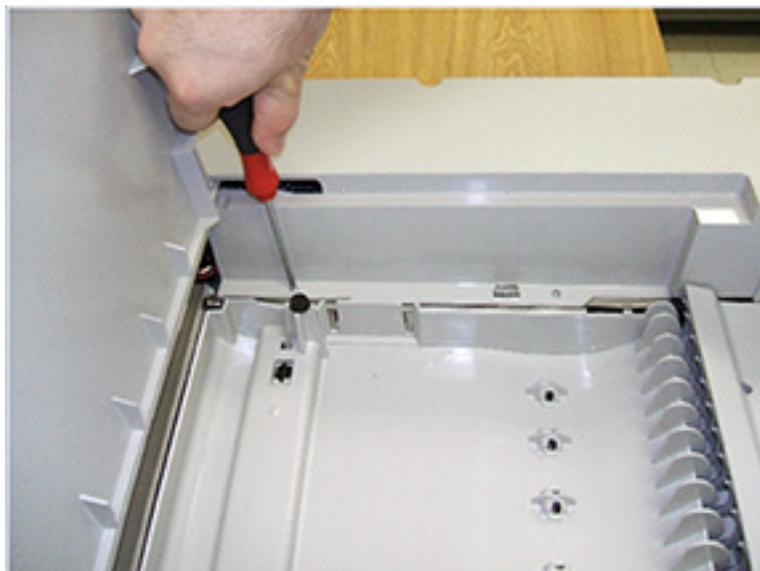
### 3.1.5.2 Remove AutoMARK Cover

**Electrical**  Unplug the AutoMARK from the wall outlet before performing these steps. Be careful whenever accessing the inside of the unit, as high voltages may be present.

1. With a Torx 10 screwdriver, remove the six screws on the outer edge of the unit, three to a side. These screws may be left in their holes after they are loosened.



2. Remove the four screws on the inner edge of the top cover. There are two on each side.



3. Lift the rear panel. Remove the screw holding the plastic battery cover, and remove battery cover. Slide out and remove the diaper tray. (The diaper tray holds the foam pad underneath the ink cartridge.)
4. Remove the top cover, lifting the back end first.



### 3.1.5.3 Full Installation of AutoMARK Firmware

1. Plug the unit into a wall outlet.

#### Important



During this process, there must not be any loss of power. Do not turn off the key except when instructed to do so.

2. With the unit powered off, make note of the current DIP switch settings. From left to right, the switch should be set in the following order:

Down, Down, Up, Down

3. Change the DIP switch order to:

Up, Down, Up, Down

#### Note



For the AutoMARK 1.0, the dip switch pattern is not the same. The starting positions are: Down, Down, Down Down. Change the order to: Up, Down, Down, Down.

4. Turn the AutoMARK key to **TEST** and hold down the **Screen** button until there is a beep to turn on the backlight.  
After a brief wait, the Windows CE desktop will appear.
5. Turn off the AutoMARK.
6. With the AutoMARK *fully* powered off, flip switch **1** back to the Down position, so that the DIP switch is set back to:  
  
Down, Down, Up, Down
7. Turn the AutoMARK key to **TEST** and hold down the **Screen** button until there is a beep to turn on the backlight.  
After a brief wait, the Windows CE desktop will appear.
8. With a USB and mouse plugged into the AutoMARK, double-click on **My Device**. Go to the Control Panel and select **Storage Manager**.  
The Storage Properties dialog box will appear.



9. Click **Dismount**.
10. Click **Format**.
11. On the Format the Selected Store? dialog box, click **YES**.
12. On the Format stored succeeded? dialog box, click **OK**.

13. On the Storage Properties dialog box, click **NEW**.
14. On the Create New Partition dialog box, type the name "automark" in the Name field. (The actual name of the partition does not matter.)
15. Verify that the Storage Properties dialog box displays the following information:  
  
The statement: Unallocated: 0.00  
  
The partitions: Table lists "automark"

**Note**



There must be an asterisk following the partition name. If either of these is incorrect, repeat the previous steps (8-15).

16. Click **OK**.
17. Turn the key to **OFF** and wait for the indicator light to turn red, signaling the machine is off.
18. Insert the compact flash card.
19. Turn the AutoMARK key to **TEST**. Hold down the **Screen** button until there is a beep.  
After a brief wait, the Windows CE desktop will appear.
20. Double-click **My Device**, then the **Storage Card** icon, to navigate to the Storage card folder.
21. Double-click **SysUpgrade.exe** to start the OS upgrade application.
22. Click the **EXEC** button to begin the Operating System writing process.

**Caution**



Do not interrupt power to the unit while the upgrade process is taking place or the machine will become unbootable.

23. Once the progress bar is at 100% and the screen shows successful completion, click **EXIT** to close the application.

24. Turn the key to **OFF** and wait for the indicator light to turn red, signaling the machine is off.
25. Turn the key to **TEST** and hold down the **Screen** button until there is a beep. The Windows CE desktop will appear.
26. Double-click **My Device > Storage Card**.
27. In the Storage Card folder, double-click **FIRMWARE**.
28. Right-click the **Firmware** folder and set the view to **Details**.
29. Open the AutoMARKService.THUMB file.
30. In the Install AutoMARK Tech AutoMARKS... dialog box, press **OK**. A progress message will flash on the screen. After it disappears, the process is complete.
31. Turn the key to **OFF**. After the red light appears behind the OFF position, turn the key to **ON**.
32. Hold down the **Screen** button on the keypad until you hear the beep.

Following the reboot, the Calibrate Touch Screen appears.

33. Follow the on-screen calibration instructions. After completing the calibration, touch the screen to save the calibration.  
(Or repeat the calibration if necessary).
34. On the *Please set up AutoMARK parameters* screen, verify that the serial number displayed matches the one on the back of the AutoMARK.

**Note**



If the Maintenance Password field is blank, enter the password **VOGUE** into the field.

35. Enter the remaining parameters (if known), or leave the default values as-is.

**Note**



If you have a 1.3.x hardware revision, select **enable spit n wipe**.

36. Press **Save Parameters**.
37. Wait for the message *Parameters have been saved* to appear. Then press the **Install AutoMARK** button.

The *Uploading Firmware* screen appears.

Wait for the *Please set up AutoMARK parameters* screen to reappear. The installation can take up to ten minutes.

38. When the *Please set up AutoMARK parameters* screen reappears, turn the key to **OFF** and wait for the indicator light to turn red, signaling the machine is off.

#### **3.1.5.4 Calibrate AutoMARK Scanner**

This procedure requires the Unlock Compact Flash code. This code is created when the election files are created from Electionware. (If used, the code for the Test Election is typically **Election1**.)

This procedure requires the System Maintenance password (**VOGUE**). This password was displayed on the *Please set up AutoMARK parameters* screen during the full firmware load.

1. Turn the key to **TEST**.
2. When prompted, enter the election code to unlock the flash card.
3. Press **System Maintenance**, then enter the password. Press **OK**.

The AutoMARK System Maintenance Menu appears.

4. Press **Set Date/Time**.
5. If the date and time are incorrect, enter the correct date and time.
6. Press **DONE** to return to the AutoMARK System Maintenance Menu.
7. Press **DONE** to return to the AutoMARK Main Menu.
8. Press **Printer Calibration**.
9. In the Printer Calibration Utility, set the X: and Y: values. Press the white field for the X: value, press **CLEAR** and then key **-16**, then press **DONE**. Press the white field for the Y: value press clear and then key **24**, then press **DONE**.

10. Press **SAVE VALUES** and wait for the message: "The values have been saved."
11. Press **DONE** to return to the AutoMARK Main Menu.
12. Turn the key to **OFF**.

### 3.1.5.5 Replace AutoMARK Cover

**Electrical**  Unplug the AutoMARK from the wall outlet before performing these steps. Be careful whenever accessing the inside of the unit, as high voltages may be present.

If no additional hardware installations are required, put the cover back on the AutoMARK by reversing the steps in [3.1.5.2 Remove AutoMARK Cover](#).

## 3.2 Acceptance Testing

State and/or local jurisdiction election purchasing authorities are responsible for acceptance testing of the voting system and components. Authorities are also responsible for validating the performance of delivered units based on procurement requirements and for verifying that the delivered system is the certified system originally purchased.

Acceptance tests are usually completed on-site at the jurisdiction's acceptance location. The acceptance test requires the tester (jurisdictional representative) to acknowledge the performance of the requisite steps, then sign and date the acceptance form.

Acceptance testing is required to confirm the proper installation and operation of the EMS system and the election definition (the set of variables that define the specific election). The election definition media can be programmed by ES&S with client election data, or it can be created on-site by the client, using the EMS.

### Inspect Shipping Containers and Packaging

Inspect the shipping container for signs of damage or mishandling before opening and unpacking. If damage is evident, do not open and unpack without first notifying the vendor.

### 3.2.1 Software Pre-Test Procedures: Electionware

Perform the following steps to complete acceptance testing of Electionware for EVS 5.2.1.0 CA.

#### Note



For additional information about Electionware software, refer to *EVS 5210 CA Election Program Guide*.

1. Open and log into Electionware.
2. Click **Help**, then select **About Electionware**.
3. Verify that the software version in the upper left corner of the dialog box is **4.7.1.0**.
4. Click **OK**.
5. In Setup, add a State and County.
6. In Home, create a new Election.
7. In Capture, either import the election data, or:
  - a. Add Languages.
  - b. Add Parties.
  - c. Add Precincts.
  - d. Add District Types and Districts.
  - e. Assign Precincts to Districts.
  - f. Add Office Headings
  - g. Add Contests and Candidates.
  - h. Add Polling Places.
  - i. Assign Precincts to Polling Places.
  - j. Generate Ballot Styles.
8. In Element Library, import any system translations and/or audio files needed for the election.
9. In Paper Ballot:

- a. Create and save a Ballot Layout.
  - b. Finalize the Ballot Layout.
  - c. Generate BOD Data.
10. In Accessible ballot:
- a. Import any ballot audio files needed for the election.
  - b. Validate the election data.
  - c. Preview the accessible ballots.
11. In Configure Equipment:
- a. Set Equipment Security Codes.
  - b. Configure the Equipment Settings.
  - c. Generate the Election Data.
12. In Package, create the Qualification, Equipment, and Reporting Key Media on their respective storage devices.
13. In Print, print BOD Ballots.

### **3.2.2 Hardware Acceptance Testing**

To confirm the proper functionality of the hardware, users should follow and complete the steps detailed in the Acceptance Testing section provided for each hardware device. These steps contain product-specific inspection of each device. Performing the procedures outlined in the hardware sections verifies that the hardware is functioning properly and has not been damaged in transport. ES&S recommends performing acceptance tests upon initial receipt of the device. Acceptance tests are also recommended prior to each election. To perform acceptance testing, the jurisdictional representative must complete the steps detailed in each section.

#### **3.2.2.1 DS200 Acceptance Testing**

1. Unpack the DS200 and all supplies.
2. Check the contents of the accessory box against the included checklist.
3. Inspect unit for scratches or other signs of damage.
4. Record the serial number.
5. Install the DS200 onto ballot box if separated.

6. Plug in the Power cord from ballot box to the rear of the DS200.
7. Plug in the power cord to AC power source.
8. Unlock and lift the DS200 LED screen.
9. Unlock the USB port door.
10. Install the paper roll.
11. Verify firmware version on the configuration report.
12. Verify the power icon shows AC power plugged in.
13. Unplug the unit form AC power source.
14. Verify power icon shows AC power unplugged report prints on battery power.
15. Plug the cord back into AC power source.
16. Verify report prints on switched to AC power.
17. Press **Close Polls** button to calibrate the screen.
18. Press the circle in the top left of screen.
19. Press the circle in the bottom right of screen.
20. Press **Save** and **Exit**.
21. Insert USB EQC media if needed, then insert USB Election media.
22. Check/Set Zone, Date, Time through Admin Menu and System Settings.
23. Open Polls.
24. Verify all information on DS200 report tape.
25. Check multi-sheet that 2 sheets rejected in all orientations.
26. Inset Ballots provided for Acceptance test.
27. Press **Close Polls** button.
28. Verify results and information on the DS200 results report.

29. Press the **Shutdown** button.
30. Press the **Continue to Power Down** button.
31. Remove the USB election media.

### 3.2.2.2 DS850 Acceptance Testing

1. Unpack supplies.
2. Check the contents of the accessory box against the included checklist.
3. Inspect unit for scratches or other signs of damage.
4. Record the serial number.
5. Connect printers and Uninterruptible Power Supply (UPS), if not already connected.
6. Load paper into printers in not already loaded.
7. Plug printers and DS850 into the UPS if not already connected.
8. Plug UPS into AC power source.
9. Turn on printers and DS850.
10. Turn on the UPS.
11. Press the **Setup** button and verify the firmware version.
12. Insert the Qualification Media into a USB port.
13. Press **Clear and Initialize**.
14. Enter the Qualification Password.
15. Press **Yes**.
16. Press **Done**.
17. Remove Qualification Media.
18. Insert the Election Media into a USB port.
19. Press **Load Election**.

20. Enter the Election Password.
21. Press **Yes**.
22. Press **Done**.
23. Remove Election Media.
24. Check/Set Zone, Date, Time.
25. Print a zero report.
26. Run ballots provided for acceptance test.
27. Save Results.
28. Print a Results report.
29. Insert blank formatted USB media.
30. Export Results to USB media.
31. Remove USB media.
32. Exit and shut down.

### 3.2.2.3 AutoMARK Acceptance Testing

#### Note



Even if you used the AutoMARK Previewer in Electionware to ensure that each ballot style displays the correct contests and candidates, and to verify that the audio and language support functions properly for the election, ES&S recommends that you perform thorough readiness testing on the physical AutoMARK unit(s) to be used for the election.

1. Unpack the unit and all supplies.
2. Check the contents of the accessory box against the included checklist.
3. Inspect unit for scratches or other signs of damage.
4. Record the serial number.
5. Install the power cord.
6. Install the printer cartridge.

7. Install the preprogrammed Compact Flash card w/ test data.
8. Configure the LCD screen and paper tray for service.
9. Turn the key to **TEST** mode.
10. Enter the security code.
11. Calibrate the touch screen.
12. Set the date and time.
13. Turn the AutoMARK to **ON**.
14. Insert a ballot.
15. Verify audio and video operation.
16. If applicable, verify the operation of the ADA devices.
17. Print the ballot and verify the marked selections.

It is possible to test the internal scanners without disassembling the AutoMARK. This test would generally only be performed at the factory and by qualified service personnel if the AutoMARK is having pre-mark detection difficulties. The AutoMARK should have a compact flash card loaded with test ballot election data. For best results the election data loaded should have many ovals in the horizontal direction, in order to test as much of the scanner area as possible.

1. Turn the key to TEST mode.
2. Select **Test Ballot Print**.
3. Select **Enable Intensity Measurements**.
4. Insert a blank ballot. A test print will begin.

During the test print, the PV scanner results are reported. This value should be 75% or higher.

5. If the ballot has been accurately marked, feed the ballot back into the AutoMARK to test the top and bottom scanners.

The values for both must be 75% or higher.

If any of the scores were below 75%, rerun the entire test to confirm your results. If the scanner(s) fail consistently, replace the scanner and repeat the entire test.

Repeat this test for every ballot style.

### 3.2.2.4 ExpressVote Acceptance Testing

#### Unpack ExpressVote

To remove the ExpressVote from a shipping container:

1. Lift the unit from its container, and place it on a level surface, facing up.

#### Caution



Opening the casing upside down may result in damage to the unit.

2. Remove the clear protective bag and use it to store and protect the unit from dust and moisture.
3. Inventory the accessories and immediately notify your vendor if anything is missing.

#### Inspect ExpressVote

- Look for scratches or other signs of damage.
- Verify that all housing screws are securely in place.
- Verify the left compartment access door (where the election definition media device will be inserted) is in place.
- Verify that the front access door is in place.
- Verify that the right compartment access door (the compartment for the paper path) is in place.

- Record the serial number from the label on the front top left of the unit or on the equipment label on the rear of the enclosure. The rear label also displays a model number and power requirements.
- If there is evidence of tampering (for example, missing covers or screws), or if the warranty seal on the right side of the unit (picture here) is missing, refuse and return the unit to ES&S.



Election officials conduct voting equipment and voting system readiness tests before the start of an election to ensure that the voting system functions properly, to confirm that voting equipment has been properly integrated, and to obtain equipment status reports.

**Note**



Even if you used the ExpressVote Previewer in Electionware to ensure that each ballot style displays the correct contests and candidates, and to verify that the audio and language support functions properly for the election, ES&S recommends that you perform thorough readiness testing on the physical ExpressVote unit(s) to be used for the election.

1. Place the unit on a level surface and connect to AC power.
2. Unlock the left access door and switch to ON.
3. Connect the keypad to the RJ port near the power switch.
4. Verify that the battery is fully charged.
5. Verify that the firmware version is correct.
6. Clear and initialize the unit.
7. Insert the flash drive containing the EQC data and enter the code when prompted.

## USB Ports

Use the following steps to test the USB ports located in the left-side media device compartment of the ExpressVote.

In this example, you have opened the access door to the left-side media device compartment and installed the election qualification code (EQC).

1. Insert a flash drive loaded with the election definition into one of the two available USB ports.

The unit should display a prompt for a password.

2. Remove the flash drive and insert it into the other USB port.

The unit should display the same prompt for a password.

If the password prompt screen appears for both steps 1 and 2, the USB ports are functioning properly.



## Audio

Plug headphones or amplified speakers into the audio jack on the front of the unit. Switch on the ExpressVote. You should hear the following message: "Please insert your activation card." If the headphones or amplified speakers have a volume control, turn up the volume setting.



## Keypad

There are eleven control buttons on the audio-tactile keypad, including two buttons each for Volume and Tempo. Press each button and confirm that a change occurs on the screen or through the audio component of the system. The Volume and Tempo controls may require multiple individual presses of each button before the effect becomes audible.



## Print Test

1. Insert an activation card and vote the card.
2. Review the printed card for complete, dark printing.
3. Reinsert the voted card and review the summary to confirm the unit is working properly.
4. Test each ballot configuration in the election in the same manner.

## Calibration and Language Validation

If the ExpressVote touch screen requires calibration, switch the unit to Admin mode and calibrate the touch screen.

Validate multiple language support.

### 3.2.3 Software Post-Test Procedures: ERM

1. Open Election Reporting Manager.
2. Verify the version listed on the About Screen is **8.12.1.0**.
3. Click **OK**.
4. Select **Change to a Different Election**.
5. Select the election.
6. Click **Continue with Current Election**.
7. Create ERM from Results XML files.
8. Create Reporting Groups.
9. Format Reports and Report Titles.
10. Print all Zero Reports.
11. Load Election Results.
12. Print all Results reports.
13. Close Election Reporting Manager.

## Chapter 4: Election Setup and Definition

The election definition media can be programmed the ES&S with client election data, or it can be created on-site by the client, using the EMS.

Election setup and definition programming procedures are provided in the following accompanying document:

- *EVS 5210 CA Election Program Guide*

# Chapter 5: Logic and Accuracy Testing

## 5.1 Overview

Logic and Accuracy (L&A) testing is conducted prior to Election Day to verify that the ballot counting system is correctly reading and tabulating votes.

L&A testing consists of processing a test deck. A test deck is a stack of sample ballots already marked and scanned, with known results totals. In addition to predetermined totals, the test deck will also contain examples of ballot errors that can occur. All contests in all ballot types and/or ballot styles are tested in this manner. Any deviation from the predetermined results must be rectified before the tabulating equipment can be certified for processing that specific election.

If ES&S is coding the election, ES&S will provide a hand-counted test deck for each election.

If your jurisdiction programs its own election definitions, create a test deck that includes a sequential number of votes for each office on that ballot starting with 1 vote for the first candidate. For example, in an Office with 5 candidates the first candidate on that ballot will receive 1 vote, the second candidate 2, the third 3 and so on. Also include at least one completely blank ballot, and an overvoted ballot (mark more candidates than the number specified). Complete this process for all ballot types in your election and maintain accurate records of your test ballot selections.

## 5.2 AutoMARK Logic and Accuracy Testing

Group AutoMARKs by the combination of ballot styles that will be programmed into the units so that all AutoMARKs in the group will have the *identical* programming. Designate one AutoMARK unit in each group as the **Master** unit. All others in the group are **Clones**.

Each printed ballot must be visually inspected to verify all votes were accurately recorded and printed correctly.

The test must be repeated on each AutoMARK used in the election.

## 5.2.1 Test Master Units

For each ballot style programmed into the AutoMARK:

- Insert, vote and print sufficient ballots so that every valid voting position on the ballot, including write-ins, is voted at least once
- For each contest, attempt to overvote to verify overvoting is prohibited.
- Vote and print an entirely blank ballot to verify that the undervote warning is active for each contest and that no vote positions are marked on the ballot.

## 5.2.2 Test Clone Units

Upon completion of the Master units testing, the remaining Clone units in the group that have identical programming as the Master shall be tested as follows:

- AutoMARK to be in "Test" mode
- Insert, print and visually inspect a "test mode" ballot style programmed into an AutoMARK unit.
- AutoMARK to be in "On" mode
- Insert, vote and print a randomly selected programmed ballot style so that every valid voting position on that ballot style, including write-ins, is voted a least once.
- For each contest, attempt to overvote to verify overvoting is prohibited
- Select a contest, attempt to skip the contest to verify that the undervote warning is active and that no vote positions are marked on the ballot.

## 5.3 ExpressVote Cards for L&A

Complete logic and accuracy testing requires DS200 and/or DS850 tabulators to verify that your ExpressVote cards can be scanned and tabulated correctly. After using the ExpressVote to generate printed vote summary cards that match the voting pattern for your logic and accuracy testing, use the DS200 and/or DS850 to tabulate those cards and verify that the voting results match the expected results for your test voting pattern.

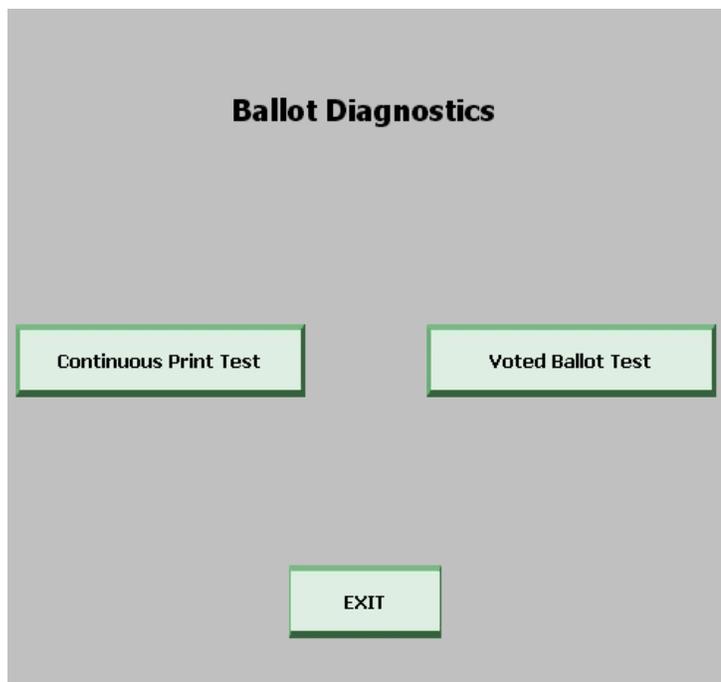
To create a supply of printed vote summary cards for your logic and accuracy testing, you can manually vote each card individually, or you can use the **Voted Ballot Test** to print multiple vote summary cards from a single voting session.

### 5.3.1 Voted Ballot Test

The Voted Ballot Test allows a user to vote a sample ballot summary card for the loaded election, verify/redo their sample, and then print a specified number of identical ballot summary cards from blank election-specific sized, activation cards.

Only ES&S ExpressVote certified technicians should perform diagnostic tests. This option is available only if an election definition media device is in the ExpressVote.

Access the **Ballot Diagnostics** menu screen from the **System Maintenance Menu** screen. From the **Ballot Diagnostics** menu screen, select the **Voted Ballot Test**.



## 5.4 DS200 Logic and Accuracy Testing

Test the scanner only after you install the election definition and configure the DS200.

### 5.4.1 Clear and Initialize the DS200

Before loading the election definition, clear the DS200. This will remove any voting totals still left on the machine from the last election or from any testing performed on the machine. Clear the DS200 by inserting the USB flash drive containing the election qualification code (EQC) into the DS200. The machine will prompt you to enter a security code. After verifying the security code, the DS200 takes the following actions.

1. Lift the access door on the front left of the scanner to access the USB ports.
2. Insert the EQC flash drive into one of the USB ports. Do not force it into the port.
3. Click **Continue** to clear and initialize the DS200.
4. Enter the Qualification code set up in the Configure Module in Electionware.
5. Press **Accept**.
6. When prompted, remove the EQC flash drive.

### 5.4.2 Load Election Definition

DS200 precinct tabulators use the election definition created in Electionware and saved to USB flash drives to recognize ballot marks and tabulate results. Once you load the election definition, calibrate the DS200.

1. Insert the flash drive into USB ports A or B. Do not force it into the port.

#### Note



The flash drive has a slot on top for a wire seal. If you use a wire seal to secure the flash drive, route the wire through this slot and through the associated seal hole on the tabs next to the USB ports.

2. Enter the Election Code set up in the Configure Module in Electionware.
3. If you wish to perform L&A testing now, select **Open Polls**. If you wish to perform L&A at a later time, select **Finish** and turn off the unit.

### 5.4.3 Check the Election Definition for Accuracy

The DS200 automatically generates an Initial State report when you start the scanner. Check the report for the following information:

- **System Values:** Make sure the date and time appear correctly on the report. If the information is not correct, change date and time from the System Setting screen.
- **Election Information:** Make sure that the jurisdiction name, polling place, and the number of precincts listed on the report are correct.

### 5.4.4 Test the Election

Use the following instructions to open the polls, scan test ballots, and close the polls as you will do on election day.

1. When the message "Election Definition found" appears on the screen, press **Open Polls**.

The scanner checks available memory and scans the election definition for errors. Depending on options selected for the election definition, the scanner may also print a Status Report and/or a Zero Certification Report.

2. Close and lock the access panel to secure the election definition USB media device.

The Welcome screen appears and the scanner is now ready for voting.

3. Insert the ballots into the scanner. The DS200 can scan ballots inserted in any orientation. As ballots are scanned, the public count will increase by one for each ballot inserted.
4. After you finish scanning test ballots, open the DS200 access door. Press and hold down the **Close Polls** button for about four seconds, then release.
5. Depending on your election definition, the DS200 may automatically print one or more of the following reports:

- Status Report
- Race Results Report
- Certification Report
- Audit Log

6. Verify the reports that are automatically printed match against your hand-counted test deck.
7. On the DS200 screen, touch **Shutdown**.
8. When prompted, touch **Continue Power Down** to turn off the DS200.
9. Remove the USB media device from the DS200.

## 5.5 DS850 Logic and Accuracy Testing

DS850 central tabulators use the election definition created in Electionware and saved to USB flash drives to recognize ballot marks and tabulate results.

Use the test deck to verify your election definition and to test scanner operation. Be sure to follow the California Elections Code. To test the election you will zero totals on the scanner and turn off the sort options, then run your test deck and check the result reports.

### 5.5.1 Load the Election Definition

Before loading the election definition, you must clear and initialize the DS850. The clear and initialize process clears all data from the machine and loads the necessary encryption keys to load and run the election.

1. Verify the scanner has been correctly connected to the printers, the uninterruptible power supply (UPS), and an external power source.
2. Turn on the scanner, then press **Login**.
3. Enter your login credentials.
4. Clear and initialize the scanner by taking the following steps:
  - a. Press **Election** to display the Election menu.
  - b. On the Election Menu, press **Setup**.
  - c. On the Setup screen, press **Clear and Initialize**.
  - d. Insert the election qualification code (EQC) flash drive into one of the DS850's USB ports.
  - e. When prompted to do so, enter the qualification code, then press **Accept**.

- f. When the screen displays a message that a valid EQC flash drive was found, press **Yes** to continue the clear and initialize process.
  - g. When the screen displays a message that the process is complete, remove the EQC flash drive from the USB port and press **Done**.
5. Load the election definition by taking the following steps:
- a. Press **Election** to display the Election menu.
  - b. On the Election Menu, press **Setup**.
  - c. On the Setup screen, press **Load Election**.
  - d. Insert a valid election definition flash drive into one of the DS850's USB ports.
  - e. When prompted to do so, enter the election code, then press **Accept**.
  - f. When the screen displays a message that a valid election definition has been found, press **Yes** to continue loading the election.
  - g. When the screen displays a message that the process is complete, remove the election definition flash drive, then press **Done**. Store the election definition media device in a safe place.

### 5.5.2 Scan the Test Deck and Check Reports

Test each ballot type in this election using either your test deck or one that was provided to you from ES&S. After loading the election, take the following steps:

1. Print the Zero Report to verify that all voting results have been cleared from the scanner.
2. Press **Scanning** to display the Scanning menu.
3. On the Scanning menu, press **Scan Ballots**.
4. Load the ballots into the input tray, as follows:
  - a. Adjust the length of the input and output trays to fit the length of your ballots.
  - b. Slide the ballot guide out of the curved opening into the input tray.
  - c. Place the ballots in the input tray.

**Note**



ES&S recommends using a jogger to separate the ballots and align the ballot stack before you load them into the input tray. If the ballot stack is slightly curved, place it in the tray with the convex side up (so the stack looks like a frown).

- d. Slide the ballot guide back into the opening in the input tray until the guide rests gently against the ballot stack.
  - e. If necessary, select the precinct to which the ballots belong.
5. When the Scan Ballots screen displays the message Ready to Scan, press **Start**. The DS850 outstacks any ballots with conditions specified in the election definition (such as ballots with overvotes or write-in votes). Ballots with readable marks are also outstacked.
  6. When the ballots have been scanned, the **Save** button on the Scan Ballots screen is enabled. Press **Save** to save the current batch. When prompted to confirm the request, press **Save** again. A popup screen displays counts of the ballots in each bin. On the Scan Ballots screen, bin counts in the Saved column will be updated with the counts from the Current column.
  7. Press **Done** if you are finished scanning, or press **Scan** to load more ballots into the input tray and continue scanning.
  8. When you have finished scanning all test ballots, generate the Results Report and verify the counts on the report match the expected counts.

### 5.5.3 Export Data

Data saved to the scanner's internal memory can be exported to the election definition flash drive or to a blank flash drive. However, if a blank flash drive is used, it should be first fully formatted.

To export results, take the following steps:

1. Press **Election** to display the election menu.
2. From the Election menu, press **Results** to display the Results screen.
3. From the Results screen, press **Export Results**.
4. Insert a blank, formatted flash drive into one of the scanner's USB ports.
5. When prompted to do so, enter the election code then press **Accept**.

6. On the Export Results selection screen, select the export location (USB flash drive or Network Server Folder), then press **Export**.
7. On the Export Results confirmation screen, press **Confirm** to initiate the export process.
8. When the screen displays the message "The results were successfully exported," press **Done** to return to the Results screen.
9. Remove the flash drive and transfer your test results to ERM.

## 5.6 ERM Accuracy Testing

To test the Election Management System, you must set up Election Reporting Manager (ERM) to accumulate election results.

Follow the instructions in your *EVS 5210 CA Election Programming Guide*, Chapter 10, to create the database and set up the reports.

For Logic and Accuracy testing purposes, on the Headings tab of the report window, for the Canvass Right Edge Heading, enter **L&A Report - Zero**.

The screenshot shows a software window with a tabbed interface. The 'Headings' tab is selected. At the top, there are five tabs: 'Selection', 'Headings', 'Options', 'Reporting Group', and 'Print Which Groups'. Below the tabs, the 'Canvass Center Heading' section contains three text input fields with the following text: 'ANY COUNTY, USA', 'GENERAL ELECTION', and 'NOVEMBER 8, 2011'. Below this, there are three columns: 'Canvass Left Edge Heading' (empty), 'Line No.' (containing '1'), and 'Canvass Right Edge Heading' (containing 'L&A Report - Zero'). At the bottom of the window, there are three buttons: 'Reset', 'Use For This Run Only', and 'Apply'. At the very bottom, there are two buttons: 'OK' and 'Cancel'.

Process the tabulated results and generate the required reports as detailed in [10.1 ERM Results Processing](#) and [10.2 Precinct and Election Report Options](#).

## 5.7 Backing Up Logic and Accuracy Testing

### 5.7.1 Backing Up Media

Back up all election media storage devices to an external storage device such as a USB flash drive or CD.

### 5.7.2 Backing Up EMS

Back up your election data files in Windows after you configure your election and generate output files from Electionware. Back up your election files to an external storage device such as a USB flash drive, compact flash card, or CD.

1. Right-click the **Start** button in Windows and select **Explore**. An Explorer window appears.
2. Type **c:\electionware** in the Address bar and press **Enter**.
3. Select your election folder and drag it to the corresponding drive letter of your storage device to copy your election database.

#### Note



Disk space may also be saved by using a file compression application such as WinZip.

## 5.8 Retention of Election Material

No operation or activity that results in a revision to voting data produced by the semiofficial canvass shall be performed without the presence of a properly constituted Election Observer Panel, Logic and Accuracy Board, or an equivalent administrative and technical control body authorized to verify the correctness of the operations and responsible for maintaining accurate and complete audit records.

### 5.8.1 Precinct Tabulator Election Material

Upon the certification of the election results, the guidelines in the California Elections Code apply to the handling, security, and disposition of unused ballots and other election materials. Memory cards are not deemed to fall within the purview of these Elections Code sections.

### **5.8.1.1 Checking Unused Ballots**

Unused ballots will be processed in accordance with the California Elections Code.

Precinct officers will seal or deface unused precinct ballots, and election personnel in the office of the elections official will seal or deface unused vote-by-mail ballots. The elections official may inspect and count unused ballots as necessary to reconcile the ballot count during the official canvass.

### **5.8.1.2 Post Official Canvass Period Disposition of Election Materials**

Following certification of the election results and upon expiration of the period for recount requests, the ballots may be moved to secure storage for the required ballot retention period, during which time, the ballot containers remain sealed. The elections official shall not open any ballot containers or permit any ballot containers to be opened except as permitted in the California Elections Code, or in the event of a mandated recount. Seals used for the foregoing purposes shall be numbered, destructible seals.

### **5.8.1.3 Certification by Unescorted Personnel**

All unescorted persons present within the security area, including visitors, media representatives, and standby personnel, shall be clearly identified by a badge or other means, and a log of their arrival and departure times. All unescorted personnel shall be subject to restrictions established by the responsible elections official to ensure the efficiency and integrity of the vote tallying process.

## **5.8.2 Retention of Central Tabulator Election Materials**

Consult the California Elections Code for guidelines on retaining election materials. The retention period for ballots and related election materials is six months for all elections if no federal elections are involved. The federal election retention period is 22 months. Extend retention periods in the case of a court challenge.

# Chapter 6: Election Preparation

## 6.1 L&A Backup

Before the logic and accuracy results are cleared from the equipment, back up the results and send them, as well as the final vote count program files, to the Secretary of State.

## 6.2 Clear Logic and Accuracy Results

Clear election totals before and after running your test decks to ensure that your results are not corrupted on Election Day. You must clear your election totals before every election.

### 6.2.1 Clear Results from the DS200

After completing your logic and accuracy testing, you must clear the test results from the election definition USB flash drives before using them on Election Day.

1. Insert the flash drive into the DS200.
2. The Polls Closed screen appears. Press **Reopen Polls**.
3. The password entry screen appears. Use the screen keyboard to enter your override password and press **ENTER**.

#### Note



If you did not program the election, contact your election administrator or ES&S technical support for the scanner password.

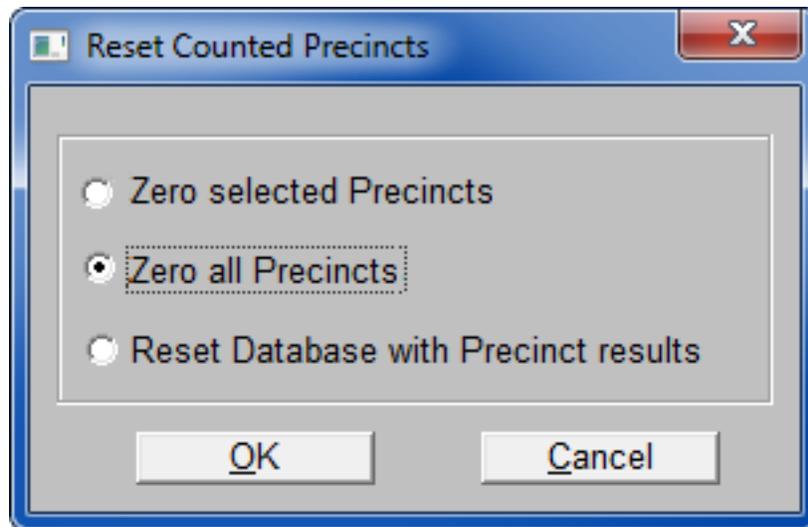
4. The Reopen Polls screen appears. Press **Clear Counts** to remove all test vote results from the machine.
5. The Clear Counts screen appears. Press **Yes** to confirm that you want to clear all results.
6. When results have been cleared, the scanner is ready for polls to be opened for live voting.

## 6.2.2 Clear Results from the DS850

1. Press **Election** to access the Election menu.
2. From the Election menu, press **Results**.
3. From the Results screen, press **Clear All Results**.
4. When prompted to do so, enter the override code and press **Accept**.
5. The Clear All Results screen appears. Press **Confirm** to begin the process of clearing all results from the scanner.
6. A confirmation message appears when the process is complete. Press **OK**.

## 6.2.3 Clear Results from ERM

1. On the **Update** menu, select **Reset Counted Precincts**.



2. In the Reset Counted Precincts window, select **Zero all Precincts** to set all precincts to zero.

### Note



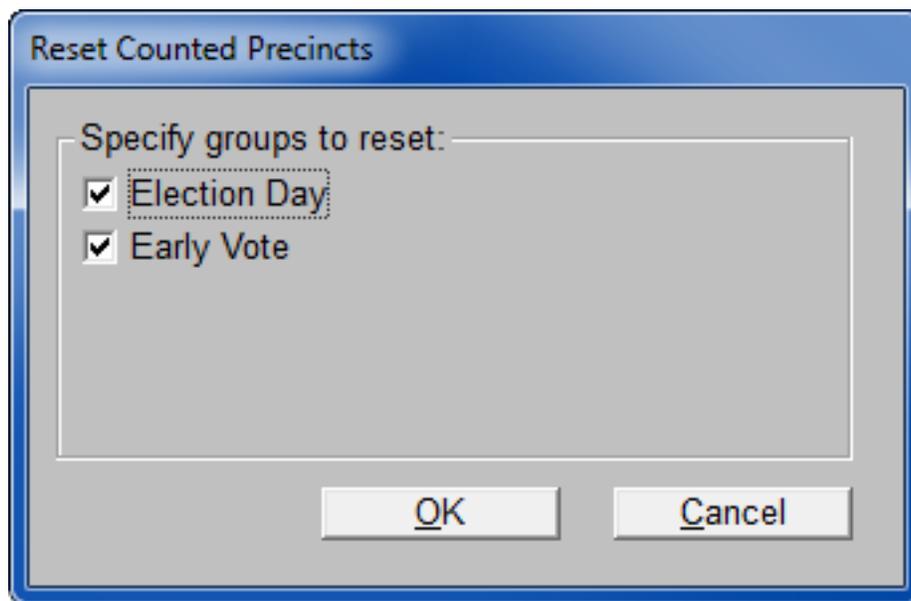
This option does not clear the log file.

**Warning**  Select Reset Database with Precinct Results only if you are instructed to do so by ES&S. The Reset Database with Precinct Results option will refresh the Election Totals group with all group totals.

---

**Note**  The following instructions do not apply to the Reset Database with Precinct Results option.

3. Click **OK**.



4. Select the group(s) to reset, then click **OK**.

You have now cleared the results from all the precincts for the selected groups. Reload election data from your scanners if the results are not as expected.

5. Generate a Zero (Election Summary) report after your election totals are erased to make sure that the results database is clear.

## 6.3 Hardware Preparation

### 6.3.1 Recommended Supplies

ES&S recommends maintaining a supply of the following items for each piece of ES&S equipment used in your jurisdiction. All of the listed items are available for order from ES&S. Contact Customer Service at (877) 377-8683 with any questions or orders. Allow four weeks for delivery.

#### 6.3.1.1 DS200 Supplies

##### Paper Rolls

NRC 3.13" by 80' thermal paper rolls

Part number: 2200

Recommended Quantity: 1 full roll per scanner

##### USB Flash Drive

FAT32 formatted drives

Stores the scanner's election definition, ballot count, and ballot images.

Quantity: 1 per DS200/ 1 per EQC device

\*Use only certified USB flash drives supplied by ES&S

##### Ballot Marking Devices

VL Ballot Pen (ES&S part # 6100)

BIC Grip roller ball with black ink and 0.7 mm tip

##### Pressurized air cans

For cleaning the scanner

Recommended Quantity: 2 cans per DS200

##### Lint-free cloth

For general cleaning purposes.

##### Cleaning pad and isopropyl alcohol

For cleaning the scanner rollers, CIS sensors, and LCD screen.

Alcohol swipes are preferable to bottled isopropyl alcohol.

ES&S part identifier: ES-Cleaner

To clean the scanner rollers, pour the cleaner into a spray bottle and dampen the cleaning pad. Never spray cleaner directly on the scanner.

Recommended Quantity: 1 bottle per DS200

### **6.3.1.2 DS850 Supplies**

#### **8.5" x 11" Continuous feed, one-part paper**

Used in audit log printer

ES&S recommends that the printer paper be carbonless to avoid smearing.

If you will be using ERM, the same type of one-part paper can be used for both the ERM and DS850 continuous-feed printers.

Quantity: two boxes

#### **8.5" x 11", standard laser printer paper**

For the laser printer

Quantity: two boxes

#### **Pressurized air cans**

Used to clean the sensors

Quantity: two

#### **Lint-free cloth and isopropyl alcohol**

Used to clean the rollers

Quantity: one bottle

#### **Small white adhesive labels, ½ inch wide**

Used to cover stray marks on the ballots  
Only use labels from ES&S.

Quantity: 12 sheets

### USB flash drives

FAT32 formatted drives

Quantity: 1 per DS850

\*Use only certified USB flash drives supplied by ES&S

Depending on the number of ballots processed, you may need multiple drives to transfer all of the ballot image data.

Election results data will fit on a single drive.

- Minimum size 512K
- Maximum size 8 GB
- Quantity: 6

**Warning**  USB flash drives used with the DS850 must be used for the election process only. Using them for any purpose outside the election process violates security practices.

### Ballot Marking Devices

Although the DS850 reads a wide variety of marking devices, ES&S recommends that you use the following devices:

VL Ballot Pen (ES&S part # 6100)  
BIC Grip roller ball with black ink and 0.7 mm tip

Absentee Pen (ES&S part #00500)  
Easily fits into an envelope for mailing

### Audit log printer ribbon

ES&S part # 4778

Quantity: 1 per printer

### Report Printer Toner Cartridge

ES&S part # 6826

Quantity: 1 per printer

### **Touch screen cleaning kit**

ES&S part # 6500

Specially formulated cleaning solution

Soft microfiber cloth

### **6.3.1.3 ExpressVote Supplies**

#### **Anti-static cleaning wipes**

Fellows 100 anti-static cleaning wipes

Quantity: 1 pack

#### **Isopropyl alcohol**

To clean the scanner rollers, pour the cleanser into a spray bottle and dampen a lint-free cloth. Never spray cleanser directly on the scanner. You can also use isopropyl alcohol wipes to clean the scanner.

Used to clear the card rollers, CIS sensors, and LCD screen

Quantity: 1 bottle

#### **Lint-free cloth**

Used for general cleaning

#### **Pressurized air**

Used to clear away paper dust

Quantity: 2 cans

#### **Seals**

Wire and tamper-evident seals used to secure the ExpressVote and card containers

Quantity: Determined by your jurisdiction's security requirements

### **USB Flash Drive**

FAT32 formatted drive

Stores the election definition

Quantity: 1 per ExpressVote/ 1 per EQC device

\*Use only certified USB flash drives supplied by ES&S

### **6.3.1.4 AutoMARK Supplies**

#### **Headphones**

Quantity: 2-3 pairs

#### **Print cartridges**

Quantity: 1-2

#### **Brick battery charger**

Quantity: 1

#### **Anti-static cleaning wipes**

Quantity: 1 pack

#### **Pressurized air**

Used to clear away paper dust

Quantity: 2 cans

### **6.3.2 DS200 Preparation**

#### **6.3.2.1 Tools for DS200 Maintenance**

- Isopropyl alcohol 70% - 16 fl oz. bottle minimum
- Compressed air - 10 oz. can minimum
- Lint-free cloth
- #1 Phillips screwdriver
- #2 Phillips screwdriver

- T-10 Screwdriver with security center pin

### Note



Magnetized screwdrivers are recommended.

### 6.3.2.2 Clean the DS200

Clean your scanner before and after each election.

1. Turn off the scanner and unplug the power cord.

### Electrical



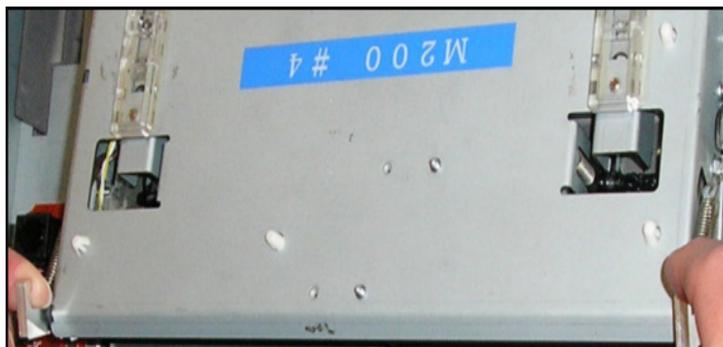
Always unplug the AC power cord and turn the scanner off before you clean a DS200 scanner.

2. Clean the ballot entry and exit slots with a can of pressurized clean, dry air or inert gas, which is available for order from ES&S. Aim the air can's spray tube into the ballot entry slot and blow out all the debris. Clean the ballot exit slot in the same way. Repeat the entire procedure and inspect the entrance and exit slots with a flashlight.
3. Use pressurized air to remove dust and debris from around the menu display.
4. Use a soft, lint-free cloth and water, or isopropyl alcohol (70%), to wipe down the scanner. Dampen, do not soak, the cloth with the cleaning solution. Do not spray cleaning solution directly onto the scanner.
5. Clean the LCD display window with the damp cloth. Be careful not to scratch the display panel.
6. Use the cloth and cleaning solution to clean the scanner's outer case. Start at the top and work down to the base.
7. Clean the scanner's stainless steel base plate with the cleaning solution. Wipe all traces of the cleaning solution off the scanner after you finish cleaning.

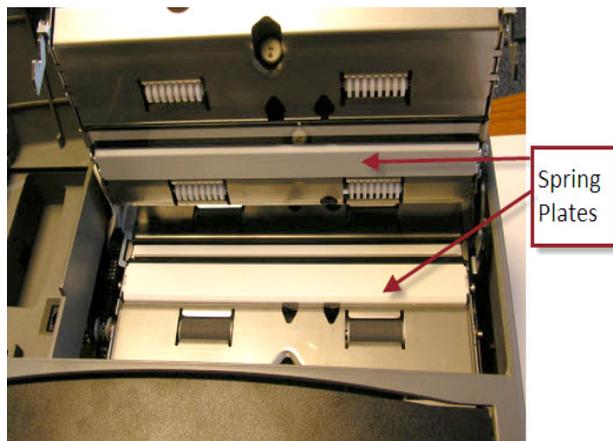
8. Unlock the rear access door on the back cover of the DS200.
9. Once this door is unlocked and back cover of the DS200 is raised, the ballot transport mechanism can be opened.



10. Lift up the latches on the left and right side of the ballot transport.
11. Lift up the top cover to access the ballot transport.



12. Use a lint-free cloth and isopropyl alcohol to clean the spring plates opposite the contact image sensors.
13. Clean the rubber rollers on the bottom surface of the ballot transport.



### 6.3.2.3 Clean the DS200 Ballot Box

Clean your DS200 ballot boxes either before or after each election. The ballot box requires no disassembly.

1. Use a cloth dampened with cleaning solution to clear dust and debris from the ballot box.
2. Remove the divider from the lower ballot bin before you clean the bottom section of the ballot box. Clean the inside of the bin first and then the

outside. Wipe down the interior ballot divider and the box cover.  
Remember to periodically rinse the cleaning cloth.

3. Stand the ballot box upright to clean the recessed, scanner housing.

### Warning



Make sure the power cord and the diverter motor connector are not damaged or dirty.

4. Turn the mounting pedestal upside down and clean the inside of the box. Use a soft cleaning brush or feather duster to clear dust and debris. Use a brush to clean the diverter vane, the diverter motor and the controller circuit board for the ballot diverter. Do not to bend or damage any of the sensitive components contained in the diverter motor assembly.
5. Use a brush to clean debris and dust from the ballot chute assembly. Do not use liquids to clean the inside of scanner mounting pedestal. Re-assemble the unit after you finish cleaning.

### 6.3.2.4 Replace the Paper Roll

Check the DS200 printer and change the paper roll, if necessary, for Election Day.

### Note

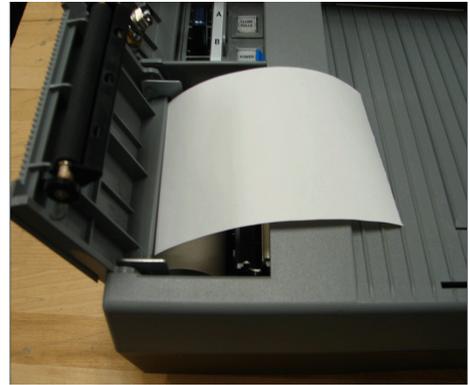


A warning message may appear if the internal printer is out of paper.

1. Unlock the access door, located above the printer. This will provide access to the printer release lever.
2. Press the lever to unlock the printer door.



3. Open the printer door.
4. Drop the paper into the printer paper compartment.



**Important**



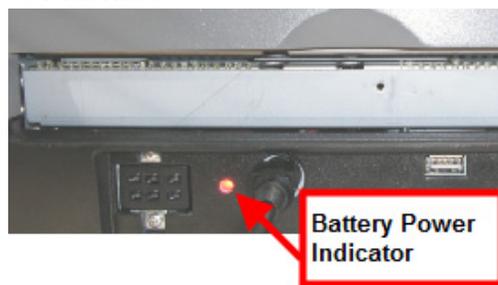
Make sure the glossy side of the thermal paper is facing the thermal printer.

5. Pull the end of the paper roll out toward the input tray of the DS200.
6. Close the printer door and press firmly on the door to make sure it locks into place.
7. Lock the access door above the printer.

### 6.3.2.5 Maintain the DS200 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 up to two hours and an “idle” scanner for up to three hours. The machine is “active” when counting ballots or printing reports. Estimated battery life is five years.

To check the charge for your backup battery, look at the light indicator on the back of your DS200 machine.



- If the light is flashing **green**, the battery is charged.

- If the light is green and not flashing, the DS200 is plugged in and the battery is fully charged.
- If the light is flashing at a slow rate, the DS200 is operating on battery power and the battery has 75 percent or more of its charge remaining.
- If the light is flashing at a medium rate, the DS200 is operating on battery power and the battery has 50 percent of its charge remaining.
- If the light is flashing at a fast rate, the DS200 is operating on battery power and the battery has 25 percent of its charge remaining.
- If the light is **amber**, the battery is charging. If the light is amber, allow the DS200 to charge until the light turns green. If the battery is not charged, it will take up to six hours to charge the battery.
  - If the light is flashing at a slow rate, the battery is 75 percent charged.
  - If the light is flashing at a medium rate, the battery is 50 percent charged.
  - If the light is flashing at a fast rate, the battery is 25 percent charged.
- If the light is **flashing red**, the battery is not taking a charge. This could be caused by:
  - A dead battery.
  - A bad connection to the battery.
  - No battery is in the DS200.

**Note**



If the DS200 has not operated on battery power and was stored with a full battery charge, the charge time required to fully recharge the battery will be minimal.

**Warning**



Removing the battery from the scanner exposes it to risks that are not present under normal operating conditions.

Shorting the battery terminals together is especially hazardous even if the battery is "discharged" or "dead." Shorting the terminals can create sparks, melt wires, and possibly start a fire. Use extreme caution when handling the backup battery.

**Note**



The DS200 battery may be recycled. Please dispose of the battery properly.

**Check Battery Charge**

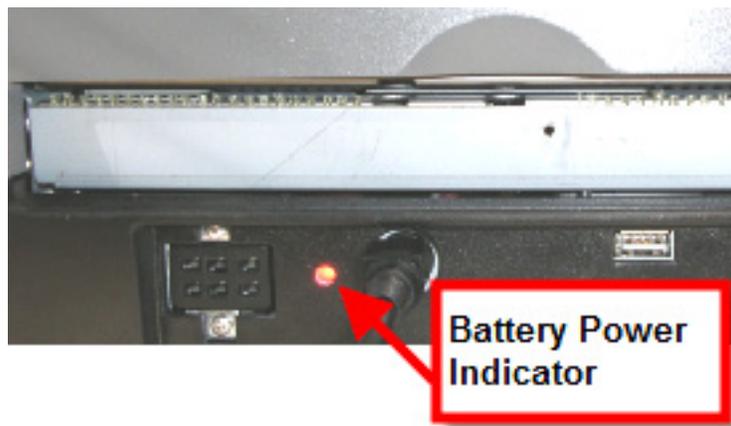
Turn on the DS200.

The battery power icon, located in the upper right area of the screen, displays the battery charge. The battery is charging whenever the power cord is plugged into the unit. If the battery does not show a full charge, continue to supply power to the unit until it reaches a full charge. The length of charge time required to fully charge the battery depends on the current status of the battery icon. Use the following charge guidelines to estimate charge time:

	<b>Full battery charge</b>	If the battery shows a full charge, the DS200 does not need charging.
	<b>75 percent charge</b>	It should take about 2 to 3 hours to fully charge the battery.
	<b>50 percent charge</b>	It should take about 3 to 4 hours to fully charge the battery.
	<b>25 percent charge</b>	It should take 5 to 7 hours to fully charge the battery.
	<b>No charge</b>	It should take 5 to 7 hours to fully charge the battery.

If the battery icon is blinking, the battery is disconnected.

You can also check the battery charge by looking at the light indicator on the back of the DS200.



Refer to the following table for light indicator state definitions.

Light Indicator State	Battery Status
Flashing green	Fully charged
Solid green	DS200 plugged in, battery fully charged
Flashing slowly	DS200 operating on battery power, 75% or more charge remaining
Flashing medium pace	DS200 operating on battery power, battery has 50% charge remaining
Flashing rapidly	DS200 operating on battery power, battery has 25% charge remaining
Amber	Battery is charging. Allow to charge until light turns green before operation.
Flashing slowly	75% charged
Flashing medium pace	50% charged
Flashing rapidly	25% charged
Flashing red	Dead battery Bad connection to battery No battery connected

### 6.3.3 DS850 Preparation

To keep the scanner in working order, ES&S trained staff must perform routine maintenance before each election. Before performing these tasks, unplug the scanner and raise the read head to avoid damaging the control panel.

**Warning**  Route /install the power cord to protect it from being walked on or pinched. Power the unit down completely before connecting or disconnecting the power cord. Remove the power cord before moving the unit. Place the power cord near an easily accessible outlet.

#### 6.3.3.1 Tools for DS850 Maintenance

- Compressed air - 10 oz. can minimum
- Anti-Static lint-free cleaning wipes
- Isopropyl alcohol 70%
- Mild detergent solution
- Straight screwdriver

#### 6.3.3.2 Clean the Rollers

The rollers move each ballot, picked from the input tray, over the transport path, through the scan area (upper and lower camera housing), and into one of the three output bins (the top, middle, or bottom bin). If the surfaces of the rollers are dirty or discolored, clean them.

To clean the rollers, apply isopropyl alcohol to a cotton cloth and clean the visible surfaces of the rollers, turning them as you clean to expose most of the surface area of the rollers.

#### Caution



Keep fingers, hands, and loose clothing clear of the rollers.

### 6.3.3.3 Clean the Cameras

To clean the cameras, wipe them with a dry, cotton cloth, or use a pressurized air can to clean out any debris or paper dust collected during scanner operation. It is important to hold the can upright so you do not expel propellant onto the sensors.

### 6.3.3.4 Clean the Scanner Case

**Warning**  Before cleaning the scanner case, disconnect the unit from its power source. Do not use full strength or harsh detergents, liquid cleaners, aerosols, abrasive pads, scouring powders, or solvents, such as benzene or alcohol. Liquids should never be applied directly to the scanner. Use a soft cotton cloth lightly moistened with a mild detergent solution. Ensure that the surface cleaned is fully dry before reconnecting the power.

### 6.3.3.5 Clean the Touch Screen

Spray the cloth with the cleaning solution and gently wipe the screen until clean. Then use a dry section of the cloth to dry any remaining cleaning solution from the screen.

### 6.3.3.6 Replace DS850 Log Printer Ribbons

#### Caution



Switch the printer off before opening or removing the access cover.

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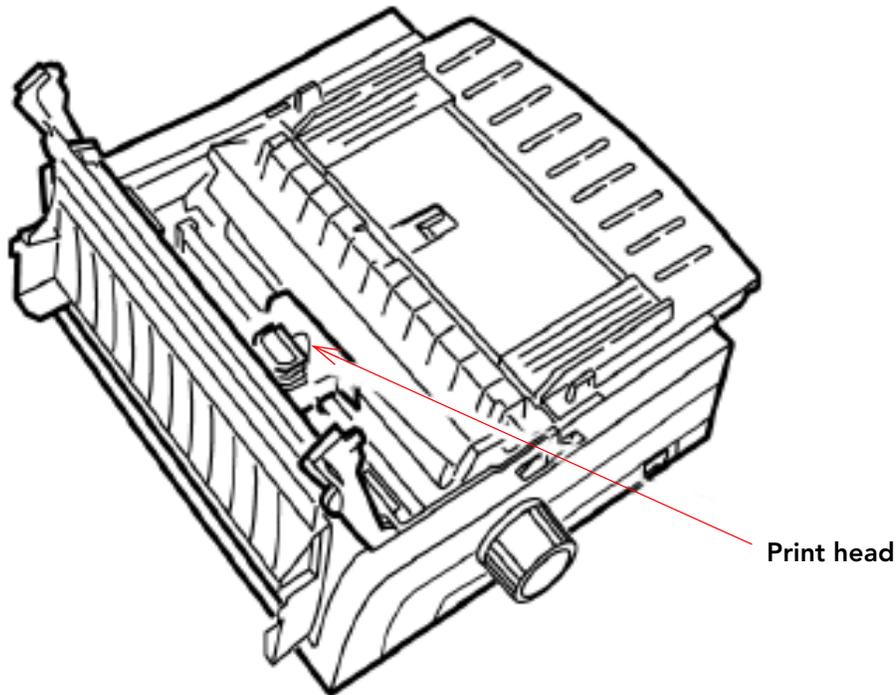
#### Caution



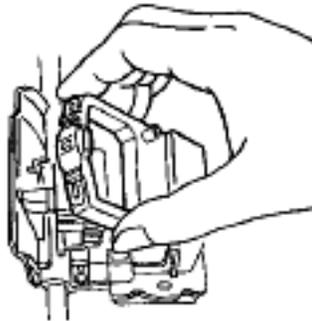
If you are replacing the ribbon, the print head may be hot.

Use only ribbons specifically designated for your printer model.

1. Open the access cover, then slide the print head to the center of the platen.



2. Lift the old ribbon cartridge at the end nearest the platen, then remove and discard it.



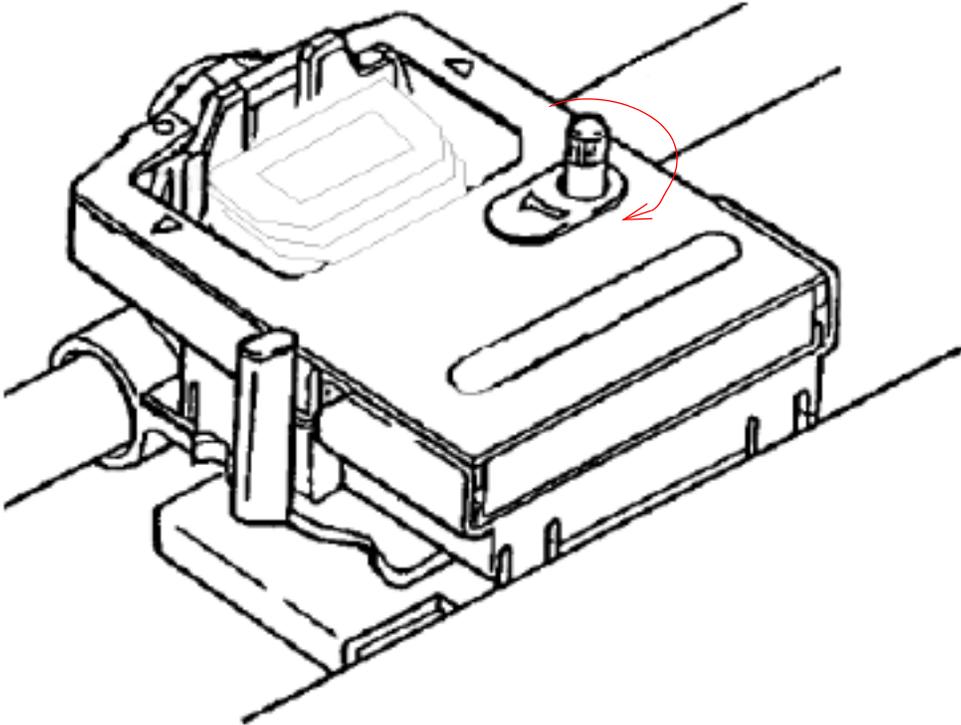
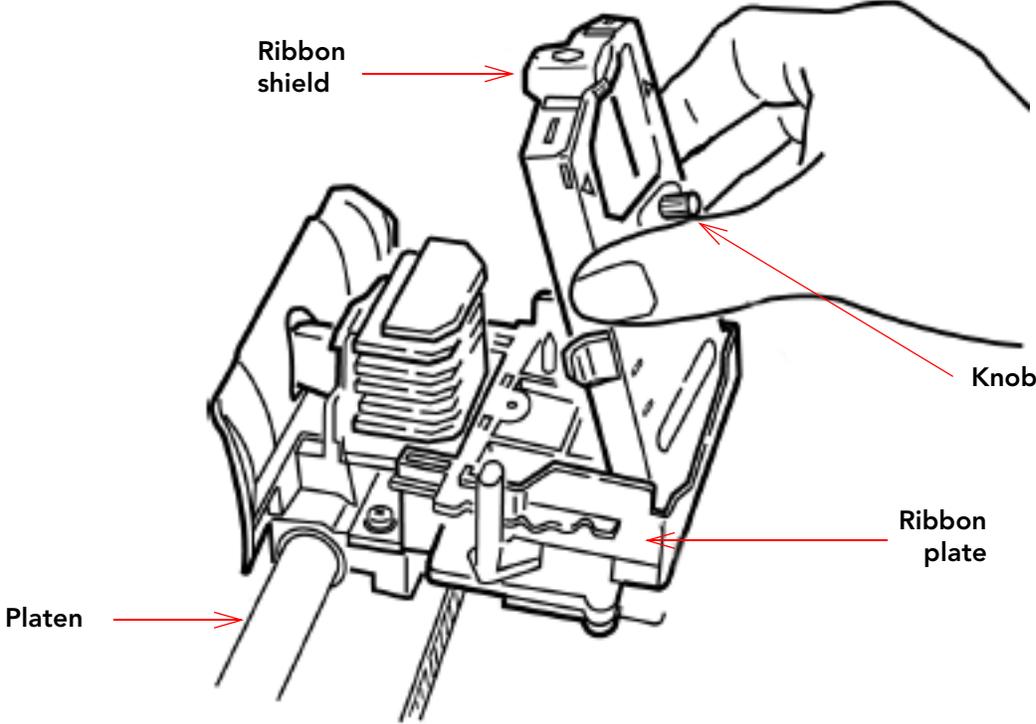
3. Remove the new cartridge from its packaging.

**Important**



Leave the ribbon shield on the cartridge.

- 4. Lower the front of the cartridge over the print head until it snaps into place, then turn the knob clockwise to take up the ribbon slack.



### 6.3.3.7 Replace DS850 Report Printer Paper

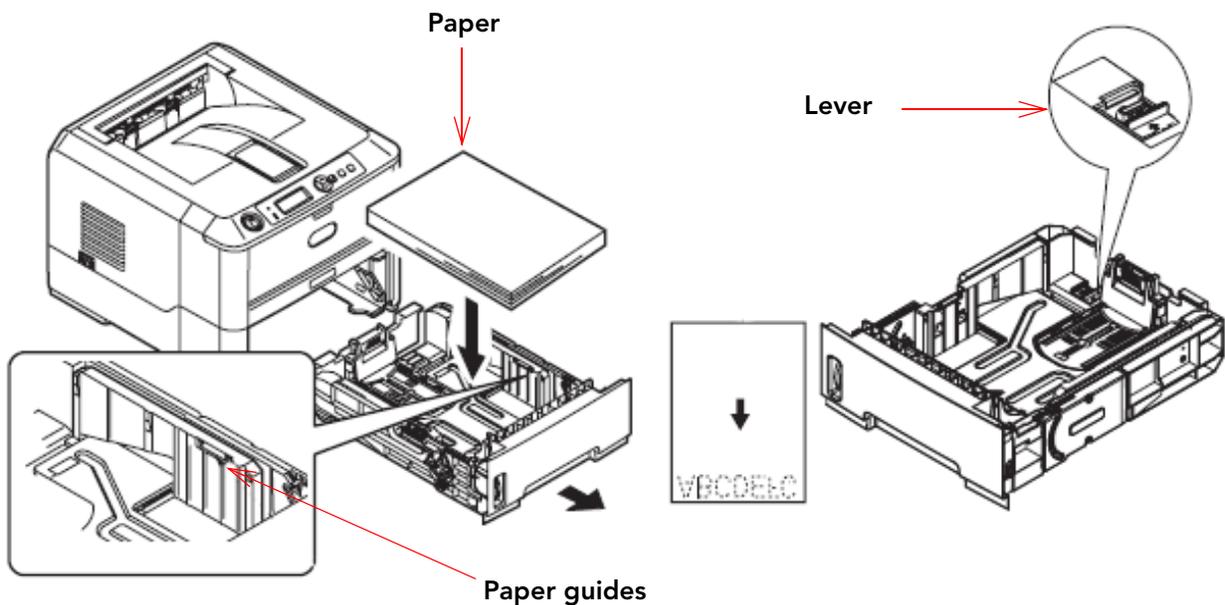
**Note**



If you are topping up the paper in a paper tray, it is recommended that you remove the remaining paper from the tray first, then add the new paper stock followed by the paper you removed. This ensures that the oldest paper is used first to help prevent paper jams.

1. Remove the paper tray from the bottom of the printer and place plain paper in the tray, keeping the level of the paper in the tray below the arrowheads on the paper guides.

For loading A4 or Legal size paper, push the lever in the direction of the arrow, then extend the paper tray using the rear paper support.

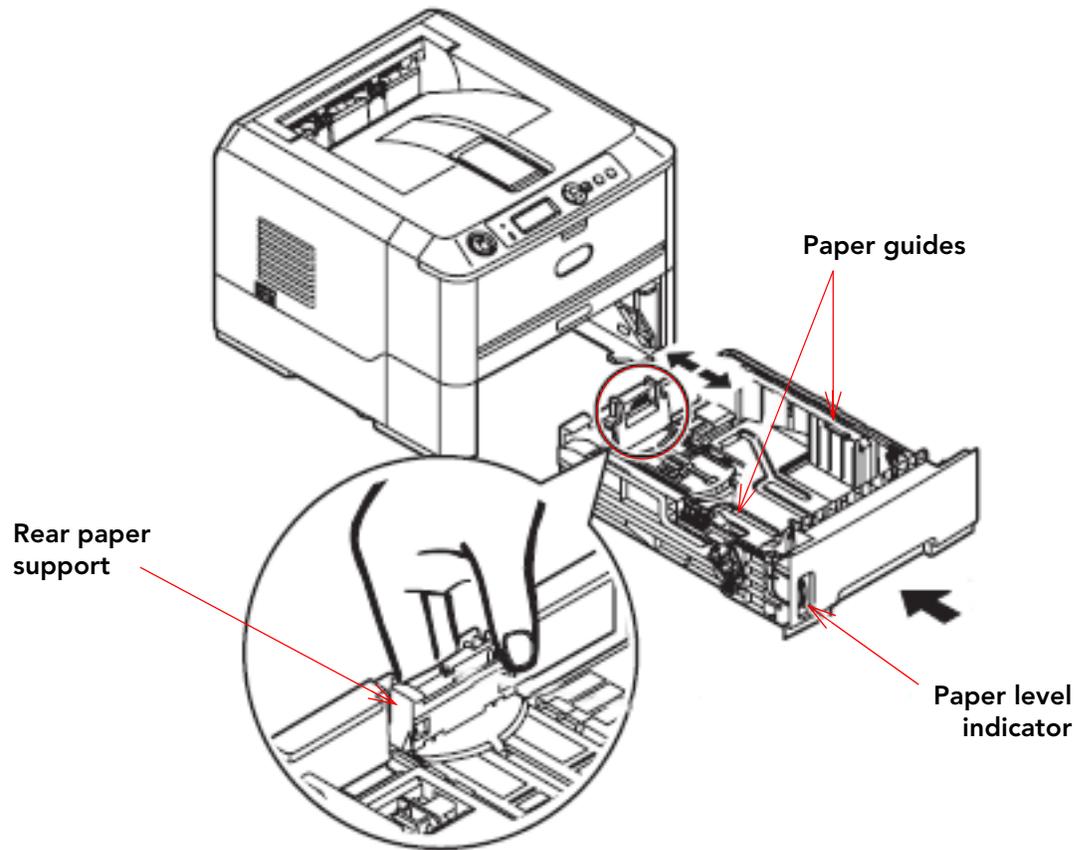


**Note**



Load letterhead paper facedown and top edge toward the front of the tray.

2. Adjust the rear paper support to the size of paper you are using by gripping the lugs, tilting and sliding the support forward or backward as necessary.



3. Adjust the paper guides. It is important to adjust the paper guides correctly to ensure that the paper is not skewed in the print process. Paper jams may occur if this operation is not carried out correctly.
4. Replace the tray in the printer. The paper level indicator provides a visual indication of how much paper is left in the tray.

**Note**



If you have the optional second paper tray (Tray 2) and you are printing from the first (upper) tray (Tray 1), you can pull out the second (lower) tray to reload it. However, if printing from the second (lower) tray, do not pull out the first (upper) tray, as this will cause a paper jam.

### Face-Up and Face-Down Printing

For face-down printing, make sure the rear cover is closed (the paper exits from the top of the printer). The output stacker on the top of the printer stacks printed pages face-down. Pages printed in reading order (page 1 first) will be sorted in reading order (last page on top, facing down).

For face-up printing, make sure the rear cover is open. In this condition, paper will exit via this path, regardless of driver settings.

Always use this tray in conjunction with the manual feed tray, multipurpose tray, or for heavyweight stocks, to reduce the possibility of paper jams.

### 6.3.3.8 Replace DS850 Report Printer Toner

When the toner is running low, TONER LOW is displayed in the LCD. After Toner Low appears, the printer will print about 100 more pages, then display Toner Empty and stop printing. Printing will resume after a new toner cartridge has been installed.

#### Warning



Never expose a toner cartridge to an open flame. It can cause an explosion and you can be burned.

Be sure to switch off and unplug the machine before accessing the interior of a machine for cleaning, maintenance or fault clearance. Access to a live machine's interior can cause electric shock.

It is recommended that you clean the LED array at the same time you change the toner cartridge.

The toner used in this printer is a very fine dry powder contained in the toner cartridge.

Have a sheet of paper on hand to place the used cartridge on while you install the new one.

Dispose of the old cartridge responsibly, inside the pack the new one came in. Follow any regulations, recommendations, etc., that may be in force concerning waste recycling.

If you spill any toner powder, lightly brush it off. If this is not enough, use a cool, damp cloth to remove any residue.

#### Caution



Do not use hot water, and never use solvents of any kind. They will make stains permanent.

**Warning**



If you inhale any toner or get it in your eyes, drink a little water or bathe your eyes liberally in cold water. Seek medical attention immediately.

If the printer has been powered on, the fuser may be hot. This area is clearly labeled.

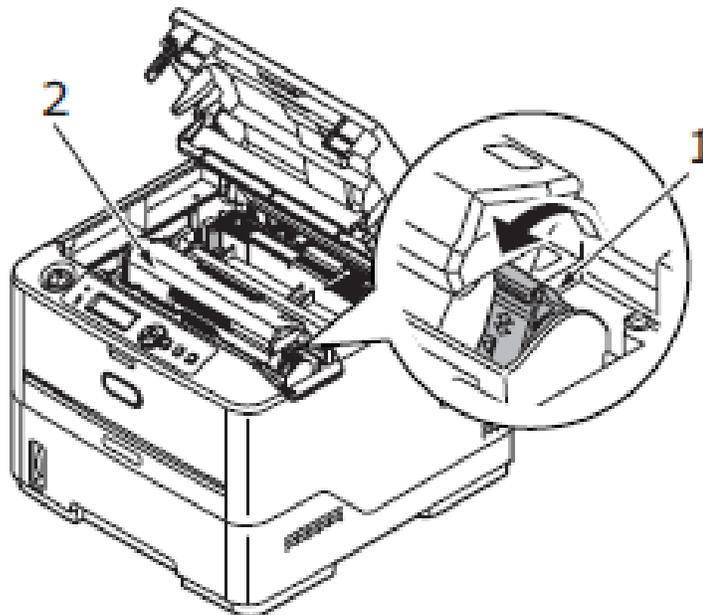
1. Switch off the printer and allow the fuser to cool for about 10 minutes before opening the top cover.
2. Press the top cover release button and open the printer's top cover fully.

**Note**



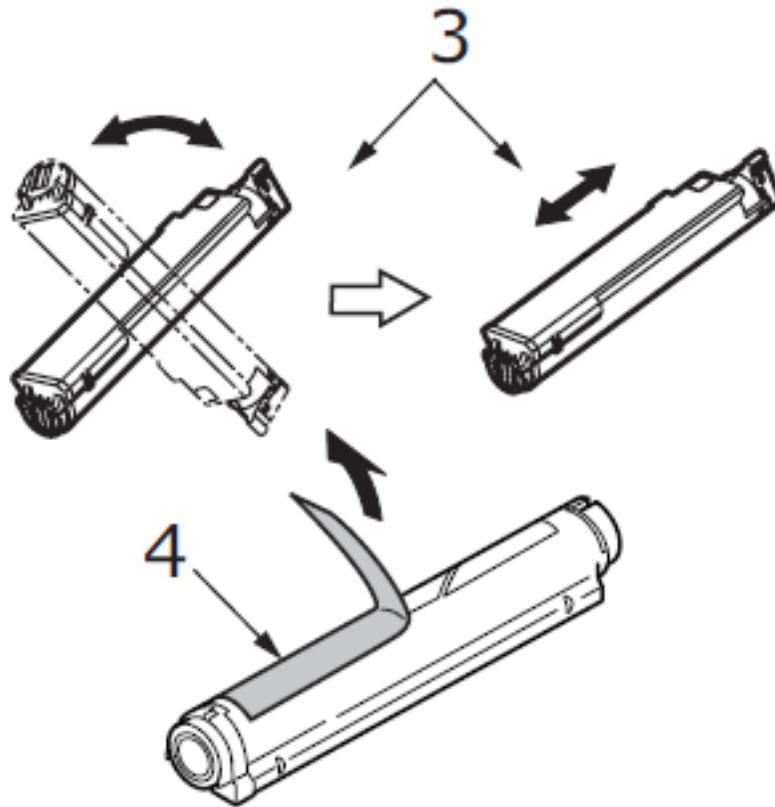
The model B430dn appears in the figure above. The principles are the same for all models of this printer.

3. Pull the colored lever (1) on the right side of the toner cartridge toward the front of the printer to close the cartridge then remove the used toner cartridge (2).



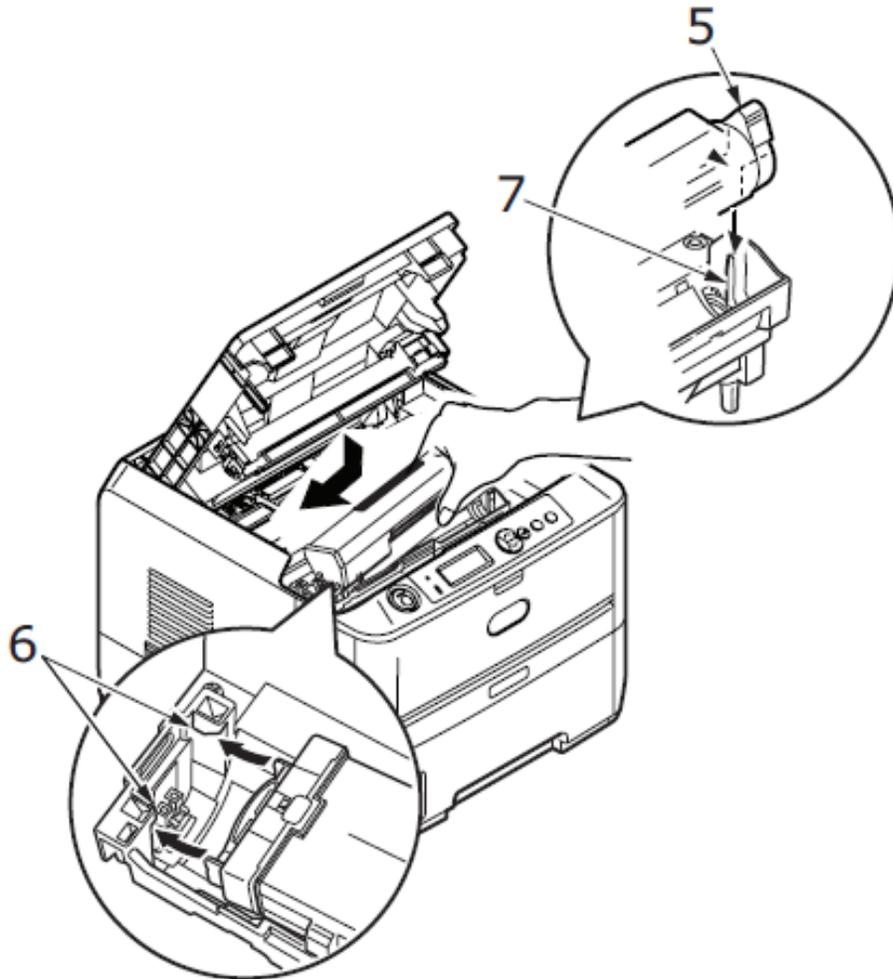
4. Clean the top of the ID unit with a clean, lint free cloth.
5. Put the cartridge down gently onto a piece of paper to prevent toner from marking your furniture.

6. Remove the new cartridge from its box but leave its wrapping material in place for the moment.
7. Gently shake the cartridge (3) from end to end several times to loosen and distribute the toner evenly inside the cartridge.

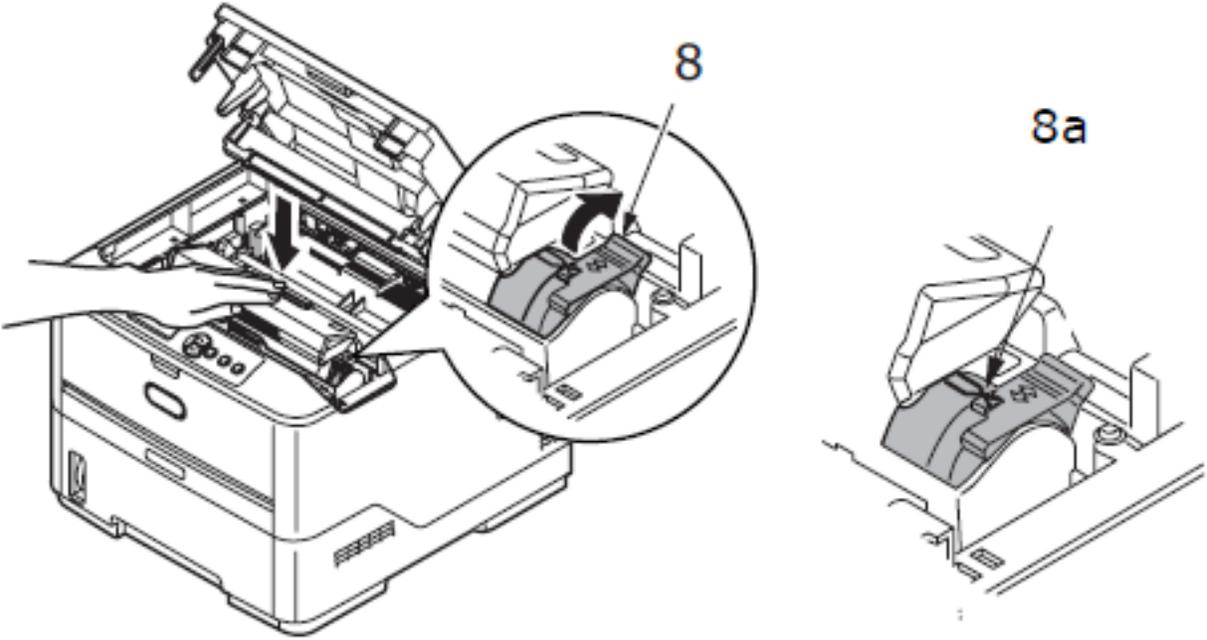


8. Remove the wrapping material and peel off the adhesive tape from the underside of the cartridge (4).
9. Holding the cartridge by its top center with the colored lever to the right (5), lower it into the printer over the image drum unit from which the old cartridge was removed.

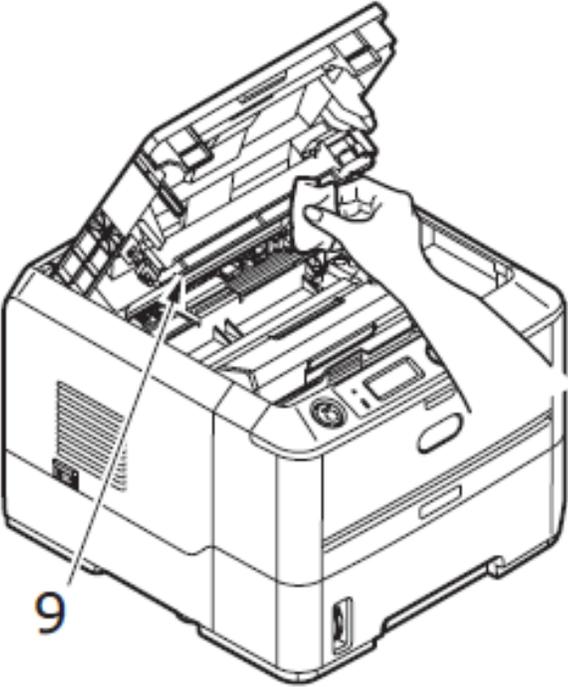
10. Insert the left end of the cartridge into the image drum unit first. Align it under the tabs (6), and push it against the shiny pins in the drum unit. Then lower the right end of the cartridge down into the image drum unit (7).



11. Pressing gently down on the cartridge to ensure that it is firmly seated, push the colored lever toward the rear of the printer (8). Push the lever all the way forward until the pointers on the drum and the toner are aligned (8a). This will lock the cartridge into place and release toner into the image drum unit.



12. Gently wipe the LED array surface (9) with a soft tissue.



13. Close the top cover and press it down to latch it closed.

### 6.3.3.9 Install the UPS

Installation of the UPS involves connecting the bottom battery connector to the top battery connector.

1. Move the UPS so that the front panel of the UPS hangs over the edge of the table as shown in the picture on the right.



2. Press down on the front panel and then slide it off as shown in the picture on the right.



3. Insert the bottom battery connector into the top battery connector. The picture below on the left shows the two connectors before they are connected; the picture below on the right shows the two connectors after they have been connected.
4. Replace the front panel.
5. Move the UPS to the spot where you want it to be when the scanner is operating.
6. Plug the UPS into a power outlet.



### **Connect the Scanner to the UPS**

Plug one end of the scanner's power cord into the scanner, just below the power switch. Plug the other end of the power cord into one of the bottom receptacles on the UPS that provides battery backup. Connect the data communication cable to the UPS and one of the USB ports on the scanner. The data communication cable is used by the UPS to let the scanner know when the UPS is operating on battery power.

### 6.3.4 ExpressVote Preparation

ExpressVote maintenance should be performed only by an ES&S-certified technician.

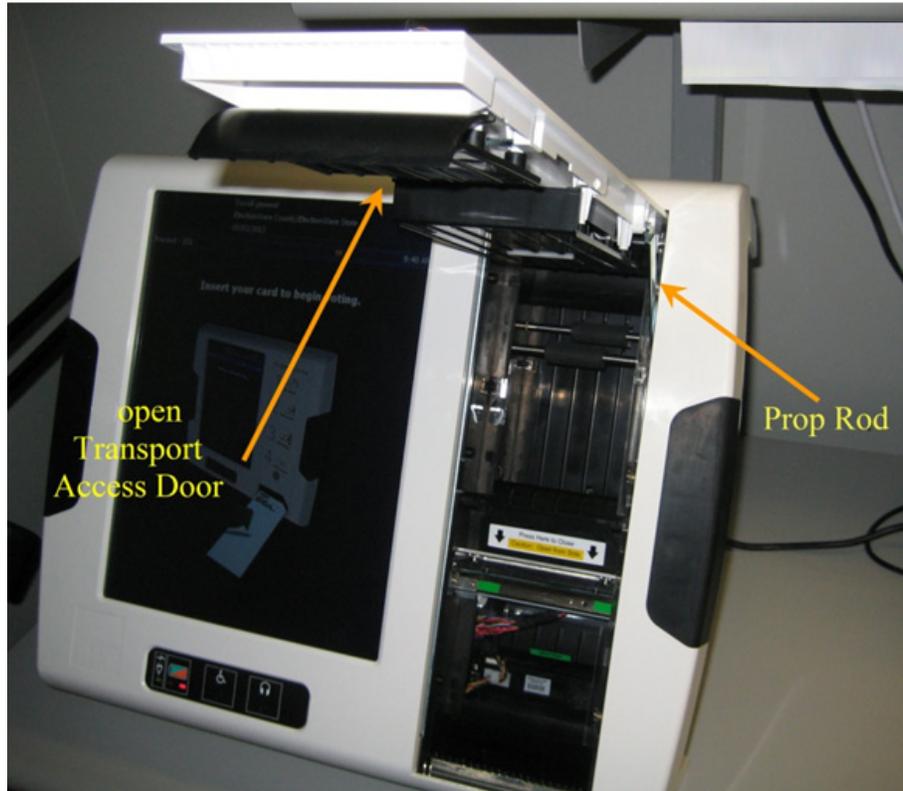
#### 6.3.4.1 Contact Image Sensor (CIS)

<b>Required Tools:</b>	Key, isopropyl alcohol, lint free cloth
------------------------	---

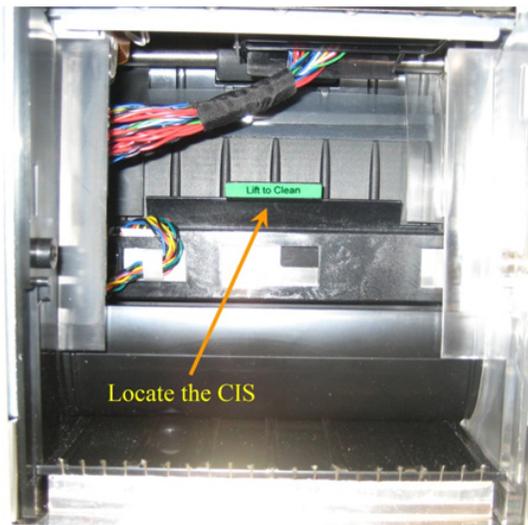
1. Unlock the transport access door.



2. Open the transport access door. The prop rod supports the door in the open position.



3. Carefully open the CIS (it will rotate toward you).



4. Clean the CIS with a fresh, unused cloth.

5. Close the CIS after inspection and cleaning.

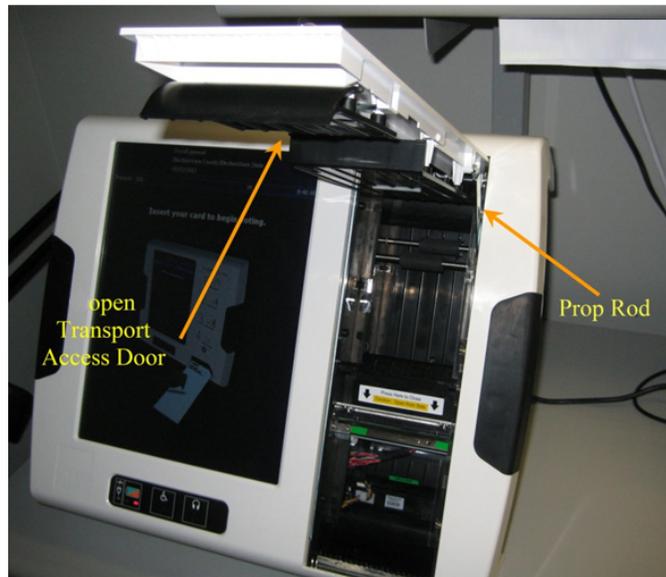
### 6.3.4.2 Print Head

<b>Required Tools:</b>	Key, isopropyl alcohol, lint-free cloth
------------------------	---

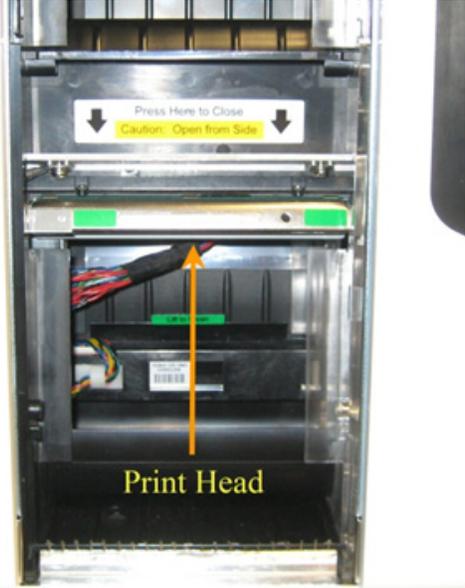
1. Unlock the transport access door.



2. Open the transport access door. The prop rod supports the door in the open position.



3. Locate the print head.



4. Open the transport side access door.



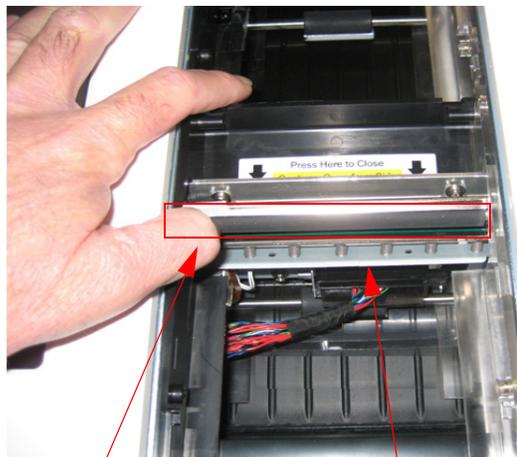
5. Locate and activate the platen release switch.



6. Raise the platen and clean the thermal print head with isopropyl alcohol and a lint-free cloth.

Allow the alcohol to dissipate for at least 5 minutes before closing the platen and printing.

**Important** Do not apply alcohol to the platen roller. Wipe down the platen roller with a dry, lint-free cloth.



Platen roller

Print head

7. Close the platen head.

**Caution** Place pressure on only the two green labels to avoid bending the platen.



### 6.3.4.3 Paper Path and Paper Sensors

<b>Required Tools:</b>	Key, compressed air
------------------------	---------------------

To clean the paper path and sensors, take the following steps:

1. Open the front access door to expose the paper path.
2. Using compressed air and using short bursts, blow out the paper path to remove any paper dust or small fragments of ballots.

3. If there are larger pieces of the ballot left behind, gently remove them. Do not use any extraction tools as this may damage paper path sensors.

#### 6.3.4.4 Transport Drive Rollers

<b>Required Tools:</b>	Key, Phillips screwdriver, T10 security driver, lint-free cloth, alcohol
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To clean the transport drive rollers, use isopropyl alcohol and a soft, lint-free cloth. Slightly dampen the cloth. Use the top roller to turn the other two drive rollers while wiping them with the cloth.

To clean the pinch rollers, remove the back cover and remove the two screws that hold each pinch roller to the paper path.

### 6.3.5 AutoMARK Preparation

#### 6.3.5.1 Tools for AutoMARK Maintenance

- #10 TORX Screwdriver (4" min. length)
- #10 TORX Right-Angle Screwdriver (2" min. length)
- Compressed air - 10 oz. can minimum
- Anti-Static lint-free cleaning wipes
- Isopropyl alcohol 70%
- Conductive, no-resistive white lithium grease
- Small art paintbrush

#### 6.3.5.2 Cleaning the AutoMARK

Before storing the AutoMARK use alcohol and wipes to clean the outside panels of the AutoMARK unit.

#### 6.3.5.3 Install the Flash Memory Card

The FMC must be correctly programmed in Electionware before it is inserted into the AutoMARK.

1. Verify the key switch is in the OFF position.



2. Use the security key to open the security panel.
3. Touch the key switch with one hand to discharge any static buildup.
4. With the label facing left, insert the card with the connector end (with 50 tiny holes) into the unit.
5. Gently line up the card so the pins insert into the FMC holes and touch the card into place.



**Note**



Do not force the card into the terminal. This could result in bent pins inside the slot. If this happens, the AutoMARK must be repaired because the card will no longer work in the terminal.

6. Lock the security panel.

Security Panel



# Chapter 7: Central Tabulation: Absentee and Mail Ballot Procedures

## 7.1 Ballot Handling and Folding

Many considerations go into properly folding ballots to be mailed to voters. The 5 main folding methods are depicted and discussed in [Folding Methods \(7.1.8\)](#), in this document. Refer to this section to ensure that your jurisdiction takes every measure to fold the ballots for optimum final ballot scanning.

Care in preparing folded ballots for high-speed scanning can greatly improve scanning productivity by reducing misfeeds, read errors, and jams in the transport or output hopper.

Ballot handling and preparation consists of the following steps:

1. Opening the envelopes
2. Removing the ballots from the envelope and unfold them
3. Inspecting the ballots
4. Back-bending the ballots

The following sections discuss each of these steps.

### 7.1.1 Opening Envelopes

Whether slicing envelopes open by hand or using an automatic letter-opening machine, care must be taken not to slice or otherwise damage the ballots.

Always slice the envelope **completely** so the ballot is not crumpled when it is removed from the envelope.

Open the ballots as early as jurisdictional rules permit to allow time to inspect and prepare the ballots.

## 7.1.2 Removal and Unfolding of Ballots

Take care to remove the ballots from the envelope without crumpling the ballot by catching it on an incompletely opened envelope. If an envelope is not completely open, then open it completely in order to remove the ballot without obstruction.

Jurisdictions that are new to this type of ballot prep for central count scanning, or wish to improve the performance of their scanning, should perform the back-bending procedure covered in [Back-Bending Individual Ballots \(7.1.4\)](#) on each ballot as it is opened. As jurisdictions become proficient in preparing ballots in this way (as measured by the successful, jam-free scanning of ballots), they may find it faster to unfold the ballots into stacks and then back-bend the stacks.

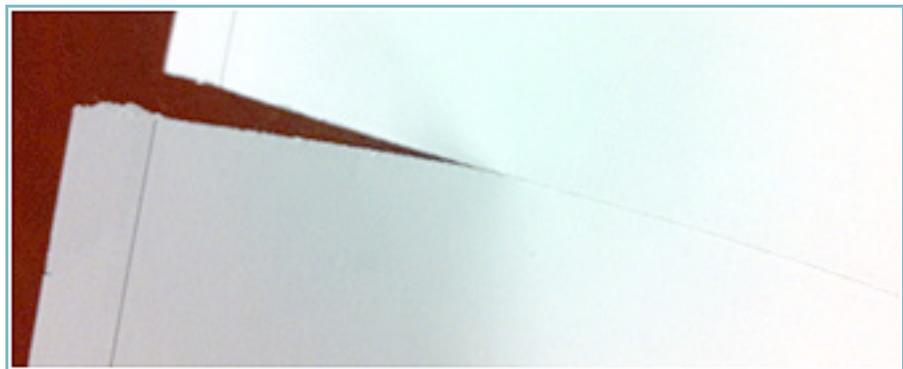
## 7.1.3 Ballot Inspection

As ballots are opened and unfolded, they should be carefully inspected for the following issues:

### 7.1.3.1 Tears and slices

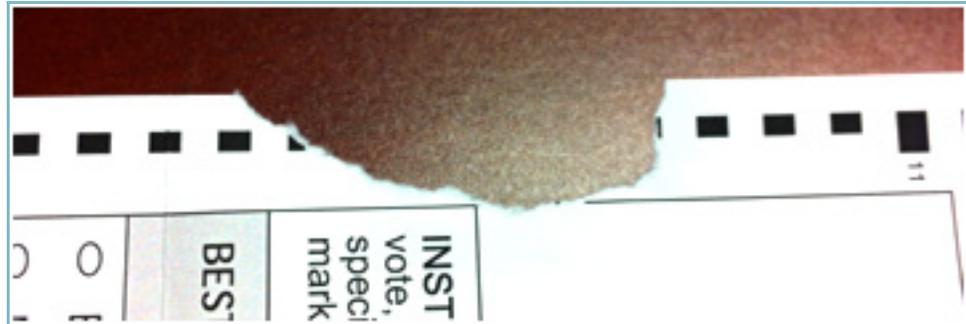
Whether damaged by the voter or letter opening process, **all** torn or sliced ballots should be repaired, remade, or hand-counted per your jurisdiction's rules and procedures. Scanning ballots with tears or slices can cause jams, further damaging the ballots and greatly decreasing scanning throughput.

Torn or sliced ballots that are not missing any of the paper can usually be taped, if allowed.



### 7.1.3.2 Damaged or missing timing or code channel marks

Such ballots should be repaired, remade, or hand-counted per your jurisdiction's rules and procedures.



### 7.1.3.3 Smudges, smears, stains or foreign material

Such damage can cause pick errors, double feeds, and jams, greatly decreasing scanning throughput.

Ballots that are damaged or soiled enough to risk scanning or feed problems should be repaired, remade, or hand-counted per your jurisdiction's rules and procedures.

## 7.1.4 Back-Bending Individual Ballots

Each fold on each ballot must be bent back in the opposite direction of the original fold to break the grain of the paper evenly in both directions. If done properly, the ballot will lie flat on a table and will not bend in either direction.

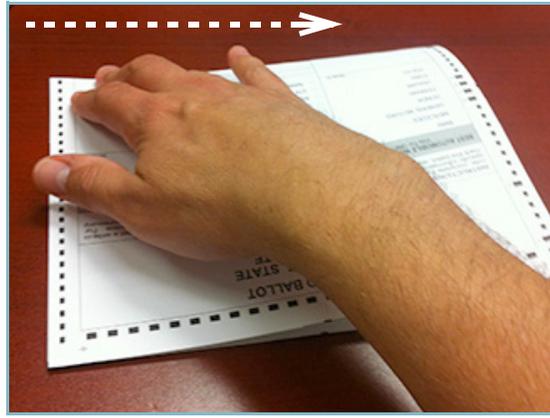
To quickly accomplish this, hold the ballot as shown on the following page, and bend it back with your thumbs and forefingers until the fold "breaks" across the entire fold.

This can also be accomplished by back-bending the ballot on the table top and gently running your fingers along the fold to break the fold.

#### Caution



Do not over-bend the ballot or crease it aggressively, as this will cause it to bend in the opposite direction or create an additional fold line that can lead to the "stair-step."



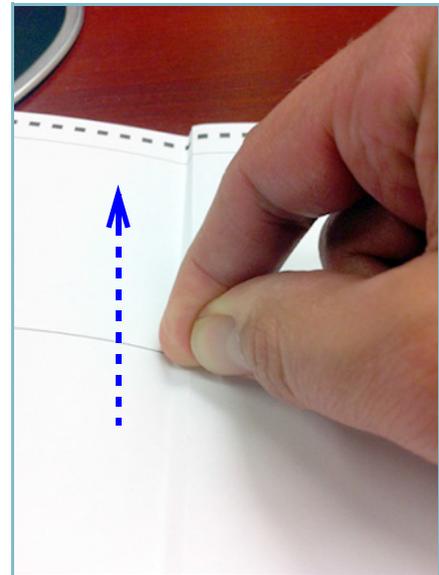
#### **7.1.4.1 Crimps, stair-steps, or irregular folds**

These include any large bump or feature that could cause a ballot to catch on another, resulting in a jam or misfeed. These ballots should be separated and repaired as follows.

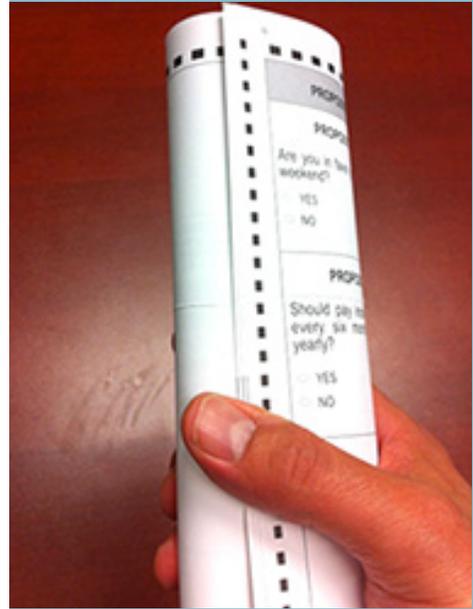
The “stair-step” occurs when a second fold is made near the original fold. This can be caused by the voter improperly refolding the ballot(s) or by incorrect unfolding and back-bending (discussed later in this document).



Stair-steps can be resolved by running a flat, dull object like the top of a fingernail or a coin along the unwanted fold. Take care not to scuff or mark the ballot by using too much force.



Additionally, the ballots can be carefully rolled lengthwise forward and then backward to reduce the step. This works best when a group of ballots is rolled together, as shown. When rolling the ballots, roll them equally in both directions to make sure ballots are flat and not curved.



#### 7.1.4.2 Crimped top or bottom edge

A crumpled or damaged top or bottom edge can cause a jam when the ballot enters or travels through a scanner. Such damage should be smoothed out by rolling or smoothing as much as possible.



When such ballots are scanned with a DS850, they should be run with the undamaged edge leading and the damaged edge trailing.

When such ballots are scanned with a DS200, they should be run with the damaged edge leading and the undamaged edge trailing.

If a ballot cannot be scanned without catching or jamming, it must be further smoothed, remade, or hand-counted per your jurisdiction's rules and procedures.

#### 7.1.4.3 Orienting Ballots in Stacks

The DS850 can read ballots in any orientation, but it is generally recommended that ballots be laid in the same orientation as they are opened. A skilled DS850 operator will quickly determine the best orientation in which to process ballots, based on length, folds, and condition.

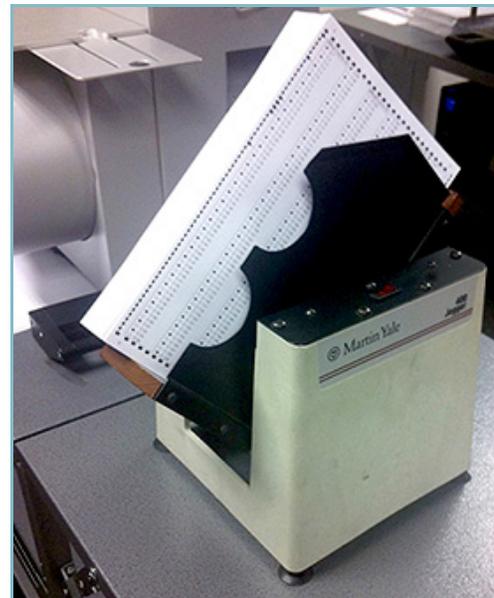
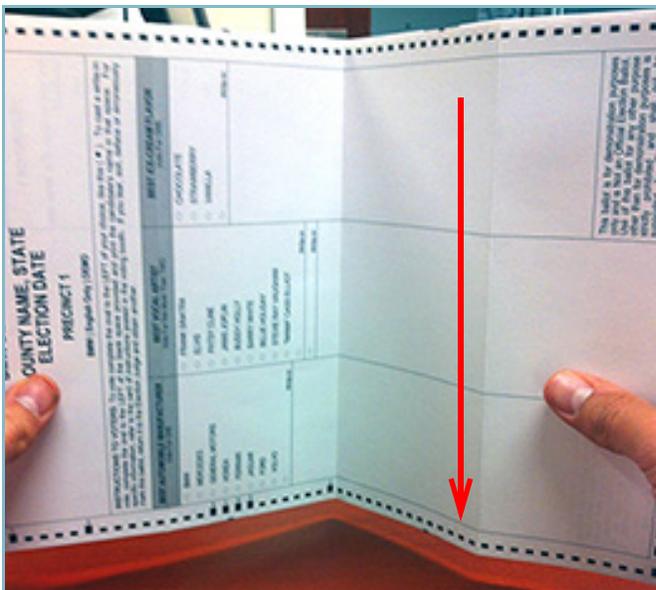
Orienting all of the ballots allows the operator to run them in the desired orientation and makes it easier to visually determine whether or not a stack of ballots has been sufficiently prepared. Ballot stacks that do not lie flat will require additional back-bending or rolling lengthwise until they are flat.

### 7.1.5 Back-Bending Stacks of Ballots

Ballots will generally be staged in stacks near the input hopper of the DS850. As the ballots rest in stacks, a skilled operator can judge how well they have been prepared by how flat the ballots lie in the stack. If there is a significant bend in the ballots in the stack, a quick back-bend is suggested.

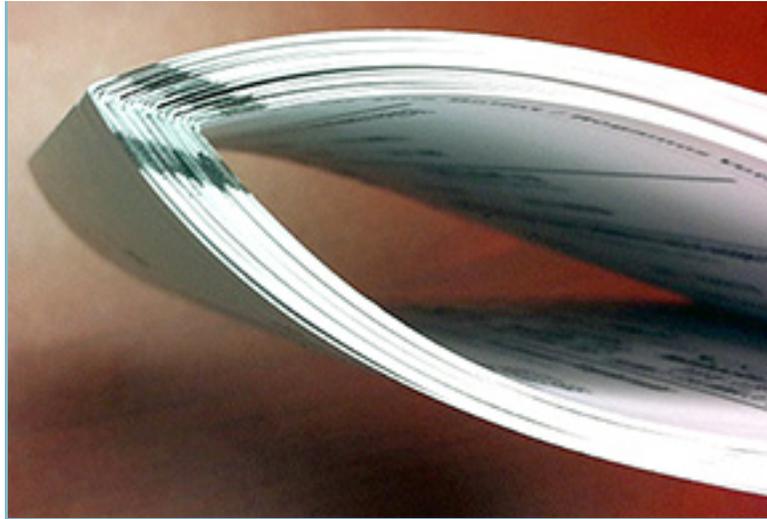
However, care must be taken when back-bending a stack of ballots. Ballot prep staff should begin with smaller stacks of 10 or fewer ballots. With experience, staff should gain the skill to back-bend larger stacks of 25 to 50 ballots.

The ballots should be carefully jogged manually on a table top or with a powered jogger.



While back-bending the ballots, ensure that the folds line up (see “Correct” image below), and that the outer ballot does not wrap around the stack (see “Incorrect”). Bending the stack harshly with the ballots wrapping can introduce an additional fold and the unwanted “stair-step.”

**Correct**



**Incorrect**



### **7.1.5.1 Inspecting stacks**

The operator or person staging ballots for scanning should always inspect the stack of ballots for issues that were not caught by those opening and preparing ballots.

#### **Lead & Trail Edge Inspection**

Damaged or “crimped” ballots edges:

These are easily seen by inspecting the top and bottom edges of the stack.

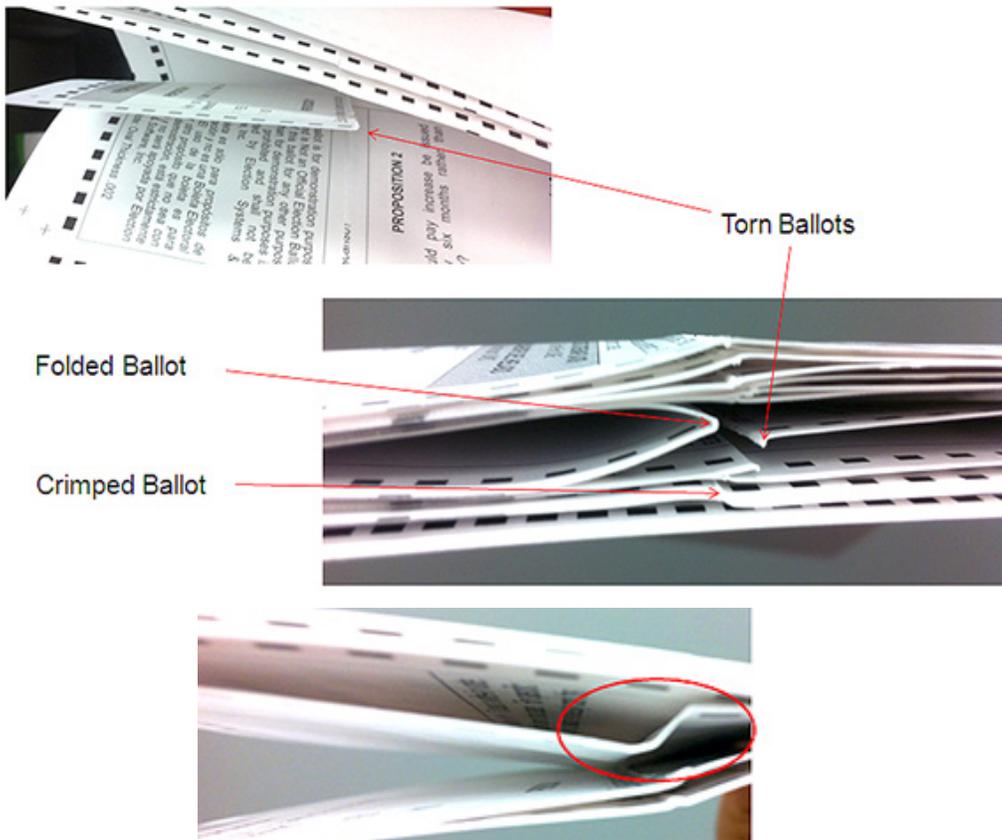
Bent corners:

Bent corners, especially on the leading edge of the ballot as it travels through the scanner, can catch and cause jams. Straighten the edge and consider running this end on the trailing edge.

## Side Edge Inspection

Either look at the ballots or flip through the stack as one would with copy paper being inserted into a copy machine. In this inspection, look for the issues previously described in [Ballot Inspection \(7.1.3\)](#). Remember to inspect or flip through both sides of the ballot stack.

Below are pictures of these issues, as seen in the stack.



A stair-step is easy to spot. If left in the stack, this step can cause a subsequent ballot to catch as it passes into the output bin.

The ballot should be turned end-wise so the step faces the other way, allowing the next ballot to pass down the step. An operator can also run a fingernail or smooth coin along the step to flatten it out.



### **7.1.6 Avoiding Jams**

Once ballots are properly unfolded and inspected, they should always be straightened and aligned using a ballot jogger so they can be read. Smaller stacks of ballots can be jogged by hand.

On the DS850, begin with smaller stacks of about 50 ballots, then work up to 100-150 ballots. A skilled operator will find an optimum number of folded ballots that can be consistently run without jamming. This number will depend on factors such as the length of the ballot, the number of folds, the condition of the ballots, and the quality of the ballot preparation.

If jams become frequent, reduce the number of ballots in the stacks and carefully evaluate the ballot prep to eliminate the causes of the jams. Review the procedures and experiment with the proper amount of back-bending, rolling lengthwise, and number of ballots in a run.

When jams occur, stop to identify and remove the offending ballot, to avoid repeated jams. If the ballot must be run, put in a run by itself, or in small batches of problem ballots.

### **7.1.7 Scanning Damaged Ballots**

If a large number of ballots are crumpled or rippled from prior exposure to liquid, once they are dried and cleared of all foreign material, they can be run through the DS850. They should be run in small batches. The pick delay can also be set to 1-2 seconds to run them more slowly, allowing time to remove a ballot from the output tray that would otherwise cause a jam with the next ballot.

## 7.1.8 Folding Methods

There are numerous types of folds that can be used for ballots that will be mailed to voters. These fold types, combined with the different lengths of ballots, can give jurisdictions a number of options. The most common ballot folds are below.



**Description:** 1 fold, 2 panels

**Names:** Single-Fold, Half-Fold, 2-Panel, V-Fold



**Description:** 2 folds, 3 panels

**Names:** Z-Fold, Accordion Fold, Map Fold



**Description:** 2 folds, 3 panels

**Names:** C-Fold, Letter Fold



**Description:** 3 folds, 4 panels

**Names:** Double-Fold, Parallel Double-Fold



**Description:** 3 folds, 4 panels

**Names:** Accordion Fold, Concertina Fold

The choice of a folding method is generally determined by cost and previous practice. Cost is often driven by the size of the envelope. A jurisdiction's equipment for handling a particular size of envelope can also be a factor.

Two rules can help when selecting folds for high-speed scanning.

**Rule 1: Choose the least number of folds possible.**

Most importantly: Fewer folds are best. A single fold is easier to handle than a double fold; a double fold is easier than 3 folds, and so on.

**Rule 2: For multi-page elections, avoid double-fold and "C" folds.**

It is important to avoid making additional folds or bends beyond those made in the initial fold process. Voters have to unfold the "by mail" ballots, mark their votes, and then refold them. When a voter refolds multiple ballots together, certain types of folds can create additional folds or creases, resulting in a "stair-step."

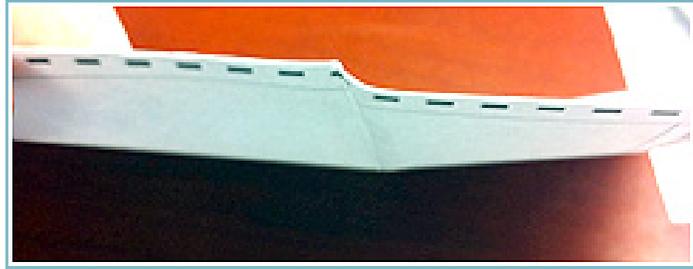
Generally, the ballots are folded and inserted individually into the envelope, and the folds are crisp and even.



However, in the case of a double-fold, if the voter folds the ballots together, one of the folds can be rounded over the other ballot folds.



When this fold is opened, the result is a crimp or stair-step.



Alternately, ballots folded together in a Z or Map fold pattern have significantly fewer issues with rounded bends.



A single fold or any of the "Z" or accordion folds can greatly reduce the creation of this stair-step. Additionally, instructions on the ballots to refold and insert the ballots into the envelope one at a time would also reduce the frequency of ballots being folded over each other improperly.

Additionally, those performing the folding must be completely versed in the requirements from the *EVS Ballot Production Guide*. Important points from this guide include:

- Coordination is necessary between those doing the ballot layout and those doing the folder setup to ensure that folders never go through a timing track on the ballot and risk going through a voter response (oval) area.
- The roller pressure for the folder should be reduced to about 2–3 times the thickness of the ballot stock.
- Scoring the ballot is not recommended.

Consult ES&S Ballot Management Services for ballot stock, printing, and folding considerations.

## 7.2 Battery Backup

Use an external Uninterruptible Power Supply (UPS) to protect against data loss. The UPS will provide continuous power to the machine, preventing it and any attached printers from being damaged in case of a power surge. A UPS must be used for compliance with EAC electrical testing requirements.

### Caution



Route the power cord for this product to protect it from being walked on or pinched. Power down the unit completely before connecting or disconnecting the power cord. Remove the power cord before moving the unit. Place the power cord near an easily accessible wall outlet.

### 7.2.1 Install the UPS

Installation of the UPS involves connecting the bottom battery connector to the top battery connector.

1. Move the UPS so that the front panel of the UPS hangs over the edge of the table as shown in the picture on the right.



2. Press down on the front panel and then slide it off as shown in the picture on the right.



3. Insert the bottom battery connector into the top battery connector. The picture below on the left shows the two connectors before they are connected; the picture below on the right shows the two connectors after they have been connected.



4. Replace the front panel.
5. Move the UPS to the spot where you want it to be when the scanner is operating.
6. Plug the UPS into a power outlet.

#### **Connect the DS850 to the UPS**

7. Plug one end of the scanner's power cord into the scanner, just below the power switch. Plug the other end of the power cord into one of the bottom receptacles on the UPS that provides battery backup. Connect the data communication cable to the UPS and one of the USB ports on the scanner. The data communication cable is used by the UPS to let the scanner know when the UPS is operating on battery power.

## 7.2.2 Turn On the UPS

Before turning on the UPS, make sure it is plugged into a power outlet. Then press the power switch. The green light visible at the top of this unit indicates that the UPS is powered on and that utility power is powering battery backup outlets.

### Note



The first time the UPS is powered up, it will take eight hours for it to reach its full charge.



## 7.3 Operating the DS850

### 7.3.1 Loading an Election Onto the DS850

You must clear and initialize the DS850 prior to loading the election definition. The clear and initialize process clears all data from the machine and loads the necessary encryption keys to load and run the election.

1. Press **Election** to access the Election menu.
2. From the Election menu, press **Setup** to access the Setup screen.
3. On the Setup screen, press **Load Election**.  
This displays the Searching for Election Definition Media Device pop-up screen.
4. Insert the election definition media flash drive into one of the scanner's USB ports. The previous pop-up screen is temporarily replaced by a Detecting inserted device pop-up screen. Then, the Election Code screen appears.
5. Enter the Election Code, then press **Accept**.
6. When the message "A valid Election Definition was found" appears, press **Yes** to start the election definition load process.
7. When the message "The Election Definition was successfully loaded" appears, remove the flash drive and store it in a safe place.  
Then press **Done**.

### 7.3.2 Producing a Zero Report

Use the Zero Report to ensure all of your contests have zero votes before you begin scanning ballots. The report displays zeros for all contests, indicating that no ballots have been scanned. You cannot print this report after ballots have been scanned on the DS850.

To preview or print the Zero Report:

From the Reports menu, in the Report Type field, press **Zero Report**.

Press **Preview** to view the report on the touch screen, or press **Print** to print the report on the laser printer.

### 7.3.3 Scanning the Ballots

**Warning**  The ballot scanning process assumes that the scanner has been powered on, all pre-Election Day tasks have been completed, the election definition has been loaded, the user has the authority to scan ballots, and the scanner has been calibrated.

---

**Note**  Before you attempt to scan ballots make sure that the camera lid and rear panel are closed. The scanner does not allow functions that engage the motors to be performed when the camera lid or rear panel is open.

1. Press **Scanning**.
2. Press **Scan Ballots**. The *Load Ballots* screen appears. In Mixed Precinct mode, the buttons at the bottom of the screen are dimmed. In By Style and Single Precinct modes, the Select Precinct button would be active.
3. Load the ballots.
  - a. Adjust the length of the input and output trays to accommodate the ballots.
  - b. Slide the ballot guide out of the curved opening in the input tray, as shown in the picture on the right.
  - c. Place the ballots in the input tray. The ballots can be in any orientation.

**Note**  ES&S recommends using a jogger to separate the ballots and to align the ballot stack before you place the ballots in the input hopper. If the ballot stack is slightly curved, place the stack in the input hopper with the convex side up. If the scanner cannot read a ballot because of its condition or because of the way in which it is fed into the scanner, the scanner will not process the ballot and will out stack the ballot to the Not Processed (top) bin.

- d. Slide the ballot guide back toward the opening until it rests gently against the ballot stack.
4. Once the ballots have been loaded, the *Scan Ballots* screen appears. Press **Start** to begin scanning.

**Note**



If you are required to select a precinct and have not yet done so, the **Start** button will be dimmed. The only button you will be able to use is the **Select Precinct** button. Press **Select Precinct** to search for and select a precinct. After you have selected a precinct, you will be able to scan ballots.

While the ballots are being scanned, the *Scanning* screen is displayed. Only the **Stop** button is available on this screen. If you need to stop the machine before the input tray is empty, press **Stop** to stop scanning. The number of ballots that have been scanned will be displayed in the Current column.

After the ballots have been scanned, the *Scan Ballots* screen reappears. This time, only the **Save** button is active. The Current column on the screen indicates the number of ballots in each bin, as well as the total number of ballots scanned.

At this point, you can do any of the following:

- Save the current batch.

**Note**



If ballots have been out-stacked to the top (not processed) bin, you have the option of generating the Not Processed Ballots report. You can also remove the ballots from the bin and reset the top bin quantity to zero, before you save the batch. The removed ballots can later be reviewed or re-scanned.

- Delete the current batch.
- Load more ballots into the input tray. The *Scan Ballots* screen will be displayed. Press **Start** to scan the additional ballots. When the ballots have been scanned, the *Scan Ballots* screen will be displayed again, and the numbers in the Current column will be updated.

**Warning**



If any of the output hoppers are full or nearly full and you wish to scan more ballots into the batch, make sure you keep any ballots you remove from the output bins segregated from other batches. Ballots removed but not yet saved as part of a batch must all be segregated by the bin from which the ballots were removed.

### 7.3.3.1 Save the Current Batch

1. On the *Scan Ballots* screen, press **Save**.
2. When you are prompted to confirm, press **Save**.
3. After the data has been saved, press **Done** or **Scan**. If you press **Done**, the Scanning menu is displayed. If you press **Scan**, the *Scan Ballots* screen is displayed, allowing you to scan another batch of ballots.

#### Note



If you press **Scan**, when the *Scan Ballots* screen opens, the quantities in the Current column will be all zeros, and the quantities in the Saved column will have been updated to include the quantities in the saved batch.

### 7.3.3.2 Out-Stacked Ballots

The Current column on the scan ballots screens shows ballots out-stacked to the top (not processed) bin.

Current	
Top Bin	7
Middle Bin	65
Bottom Bin	85
 Total	157

#### Note



The red "X" at the bottom of the column is used to delete the entire batch.

Press the button to the left of the top red "X" to generate and display the Not Processed Ballots report.

To either review or re-scan the ballots out-stacked to the top bin, remove them and reset the count for the top bin to zero. To reset the count for the top bin, press the top red "X". If you select **Continue**, the Top Bin count is zeroed out.

#### Note



Ballots outstacked for "Image Unreadable" or "Ballot Long" conditions and that fail to be read after a second scan should be reviewed and processed using the adjudication procedures established by your jurisdiction.

### 7.3.4 Bin Sorting

There are two options on the Bin Sorting screen: Sort Settings and Scan Screen Sort Options.

#### Sort Settings

The Sort Settings option allows you to specify which output bin the ballots will be diverted to. It also allows you to specify whether undervotes, overvotes, crossovers, blank ballots, and ballots with unclear marks are to be processed.

To use settings that are different from those in the Election Definition, you can use the bin sorting screens to change the settings on the scanner.

If the Sorting on/off feature is enabled, you can override the default settings for bin sorting in the Election Definition, as well as any changes that have been made using the Bin Sorting screens, by turning sorting off from the Scan Ballots screens. When the Sorting on/off feature is enabled, there is a button on the scan ballots screens that allows the user to turn sorting on or off.

<b>Write-In</b>	A write-in space appears on the ballot as a voting target next to a blank line that a voter uses to fill in the name of a write-in candidate. To vote for a write-in candidate, a voter writes the name of the candidate on the write-in line and marks the ballot target that corresponds to the line.
<b>Overvote</b>	Ballots having more than the allowed number of votes cast for one or more contests
<b>Undervote</b>	The election definition can designate one or more contests as an "undervote-contest". This option out-stacks any scanned ballot that has a designated undervote contest that was undervoted. This option does not out-stack blank ballots
<b>Blank Ballots</b>	This option out-stacks ballots that do not contain any votes, have been marked with a non-standard marking device for the DS850, or have been marked improperly (for example, the voter circled the candidate's name instead of filling in the appropriate oval).
<b>Unclear Marks</b>	Unable to interpret a mark in an oval position on the ballot.
<b>Cross Over</b>	In an Open Primary, this option out-stacks ballots with votes for any multiple party candidate.
<b>Invalid ID</b>	Sorts ballot that are not associated with the current election or a ballot style that is not associated with any of the election precincts.
<b>Unreadable</b>	Not able to read or interpret the ballot. Marks on the code channel, torn ballot

When the DS850 scans a ballot, it gathers two images (front and back) and a cast vote record from the ballot. A ballot is normally scanned within a batch of ballots. The cast vote records of ballots diverted to the bins that have been processed are selected for inclusion in the collection process. The cast vote records of ballots diverted to the Not Processed bin are selected for exclusion from the collection process. These ballot images and cast vote records are then saved to the scanner's internal memory when the batch is saved.

1. Press **Bin Sorting** on the Configuration screen. The Bin Sorting options screen opens.
2. On the Bin Sorting options screen, press **Sort Settings**.
3. The Sort Settings screen will show the current settings from HPM for each bin. Press **Edit** to change the settings for each bin.
4. When prompted, enter the Election Code, then press **Accept**.
5. To change the options for the bin sorting, press the **Option** button under each ballot exception to sort the ballots to the bin of your choice. You can only choose one bin per ballot exception. Press **Save** to save the settings and return to the Sort Setting View screen.

#### Note



The Cross Over option is only applicable for an open primary election.

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#### Note



For Logic and Accuracy Testing, you may be required to turn off bin sorting prior to scanning the test deck. Bin sorting is turned off when all the ballot the **Write-ins** option is set to Process and none of the ballot types for the **Ballots Not Processed** option are selected. When logic and accuracy testing has been completed, make certain the bin sorting options are set as required for your election.

### Scan Screen Sort Options

The Sort Option allows you to enable or disable the Sorting on/off feature. When the Sorting on/off feature is enabled, the Sorting on/off button is displayed in the top portion of the main scan ballots screen with Sorting On. When the Sorting on/off feature is disabled, the Sorting on/off button is not displayed on the main scan ballots screen, however Sorting remains on. By default, the Sort Option is disabled.

1. Press **Bin Sorting** on the Configuration screen.
2. On the Bin Sorting options screen, press **Scan Screen Sort Options**. The Scan Screen Sort Options settings screen is displayed.
3. On the Sort Option settings screen, press **Edit**.
4. When prompted, enter the Administration code and then press **Accept**. The Sort Option selection screen is displayed.
5. On the Sort Option selection screen, press the desired option (**Disabled** or **Enabled**) to highlight it. Then press **Save** to save the new setting.

### 7.3.5 Clear Election Results

You can choose to clear all election results, or the election results for only a specified precinct. The Clear Results functions are accessed from the Results menu.

#### Clear All Results

1. Press **Election** to access the Election menu.
2. On the Election menu, press **Results**.
3. On the Results menu, press **Clear All Results**.
4. When prompted, enter the Override Code and then press **Accept**.
5. When the Clear All Results confirmation screen appears, press **Confirm** to clear all election results.
6. A pop-up screen will appear briefly to indicate that the results are being cleared. When the results have been cleared successfully, press **OK** to close the pop-up screen.

All counts displayed on the Main Scan Ballot screen (including the Last Export Total) are now zeroed out.

#### Clear a Precinct's Results

1. Press **Election** to access the Election menu.
2. From the Election menu, press **Results** to display the Results screen.
3. On the Results screen, press **Clear A Precinct**.

4. When prompted, enter the Override Code and then press **Accept**. The initial Select Precinct screen is displayed.
5. From the sequence of Select Precinct screens, search for and select the precinct whose election results to clear.
6. When the Clear A Precinct's Results screen appears, press **Clear Results** to clear the election results for the selected precinct.
7. If you press **Clear Results**, a pop-up screen will appear briefly to indicate that the precinct's results are being cleared. When the results for the specified precinct have been cleared successfully, the Clear A Precinct's Results screen is displayed with a message indicating that the results for the specified precinct have been cleared. Press **Done** to close the screen.

In the "Saved" column on the Main Scan Ballots screen, any Middle or Bottom Bin ballot counts specifically for the cleared precincts are subtracted from their respective bin counts and added to Top Bin (Not Processed) count.

### 7.3.6 Exporting Data

Data saved to the scanner's internal memory can be exported to the Election Definition Media Device flash drive or to a blank USB flash drive. However, if a blank USB flash drive is used, it should be first fully formatted. Described below are the export functions that can be performed from the scanner.

#### Note



If you choose to use USB media device, it is strongly recommended you use fully-formatted USB media device flash drives rather than the Quick-formatted or cleared (all files deleted) flash drives. Fully formatted flash drives work faster and are more reliable.

The Export Data functions are accessed from the Results menu.

- **Export Results** copies the poll place collection data, the election definition, and the audit log to the Election Definition Media Device flash drive or a fully-formatted ES&S Media Device flash drive. All of the copied data, except for the audit log, is encrypted. The data can be pulled into the Election Reporting Manager (ERM) to be consolidated with vote data from other devices (e.g., DS200) to generate the election results. The data can also be used in ERM to generate reports.
- **Export Files** copies the poll place collection data, the election definition, the gathered ballot data (including ballot images) of any scanned ballot that was not out-stacked and the audit log to a fully-

formatted ES&S Media Device. All of the copied data, except for the audit log, is encrypted.

- **Backup** copies the gathered ballot images if selected, the cast vote records, the election definition, and the audit log to the USB media device. All of the copied data, except for the audit log, is encrypted.
- **Export Audit Log** copies the audit log to the Election Definition Media Device or a fully-formatted ES&S Media Device. The audit log is not encrypted. If a problem occurs, or if there is a question about the exact sequence of events, the audit log copied to the media device can be examined on a PC.

### **Export Results**

1. Press **Election** to display the Election menu.
2. From the Election menu, press **Results**.
3. From the Results screen, press **Export Results**. This displays the *Searching for ES&S Media Device* pop-up screen.
4. Insert the Election Definition Media Device flash drive or a blank ES&S Media Device flash drive into one of the scanner's USB ports. The previous pop-up screen is temporarily replaced by a *Detecting inserted device* pop-up screen. Then, the Election Code screen appears.
5. Enter the Election Code and then press **Accept**.
6. Select where to export the files.
  - USB Media Device
  - Network Server Folder - folder located on server
7. Press **Export**.
8. Press **Confirm** to confirm to export the data.

The DS850 clears any existing data from the media device. Then it collects the saved cast vote records that were marked for inclusion in the collection process, generates the vote results, and exports those results to the USB flash drive, along with the election definition and the audit log. While this process is occurring, a pop-up screen will display indicating that the batch data is being collected and exported.

**Note**



The saved cast vote records for ballots that are diverted to the Processed bins (bottom and middle bins) are marked for inclusion in the collection process. The saved cast vote records for ballots that are diverted to the Not Processed bin (top bin) are marked for exclusion from the collection process.

9. The Export for Results screen will indicate when the data has been successfully exported. Remove the flash drive. Then press **Done** to return to the Results screen.

### **Export Files**

1. Press **Election** to display the Election menu.
2. From the Election menu, press **Results** to display the Results screen.
3. From the Results screen, press **Export Files** This displays the *Searching for ES&S Media Device* pop-up screen.
4. Insert the Election Definition Media Device flash drive or a blank ES&S Media Device flash drive into one of the scanner's USB ports. The previous pop-up screen is temporarily replaced by a *Detecting inserted device* pop-up screen. Then, the Election Code screen appears.
5. Enter the Election Code, then press **Accept**.
6. Select where to export the files.
  - USB Media Device
  - Network Server Folder - folder located on server
7. Press **Export**.
8. When the Export Files confirmation screen appears, press **Confirm** to confirm to export the data.

The DS850 clears any existing data from the media device. Then it collects the saved cast vote records that were marked for inclusion in the collection process, generates the vote results, and exports those results to the USB flash drive, along with the election definition, gathered ballot data (including ballot images) of any scanned ballot that was not out-stacked,

and the audit log. While this process is occurring, a pop-up screen will display indicating that the batch data is being collected and exported.

**Note**



The saved cast vote records for ballots that are diverted to the Processed bin (bottom bin) and to the Ballots with Write-ins bin (middle bin) are marked for inclusion in the collection process. The saved cast vote records for ballots that are diverted to the Not Processed bin (top bin) are marked for exclusion from the collection process.

9. The Export Files screen will indicate when the data has been successfully exported. Remove the flash drive. Press **Done** to return to the Results screen.

### **Backup**

1. Press **Election** to display the Election menu.
2. From the Election menu, press **Results** to display the Results screen.
3. From the Results screen, press **Backup**. The Election Code screen appears.
4. Enter the Election Code and then press **Accept**.
5. When you have successfully entered the Election Code, the Backup selection screen appears.
6. Select from one of the following options:
  - Export
  - Collect
7. Insert the Election Definition Media Device flash drive or a blank ES&S Media Device flash drive to use as the target media device. The *Detecting inserted device* pop-up screen is displayed briefly. The message in red on the Archive Data selection screen disappears, and the inserted flash drive is listed in the Media Devices field.
8. Select the target device from the list in the Media Devices field, by pressing it. When you press your selection, it is highlighted in blue, as shown below.
9. If you press **Confirm**, the Backup confirmation screen appears.

10. The Archive Data screen will indicate when the data has been archived successfully. Remove the flash drive. Press **Done** to return to the Results screen.

### 7.3.7 Producing a Results Report

The Results Report contains detailed election results and is available in multiple report levels.

- **Election Detail** - The report displays detailed contest totals for the whole election.
- **Election Public** - The report displays contest totals for the whole election without including overvote and undervote information.
- **Precinct by Precinct Detail** - The report displays detailed contest totals for the selected precinct.
- **Precinct by Precinct Public** - The report displays contest totals for the selected precinct without including overvote and undervote information.

You must specify a precinct if you select the **Precinct by Precinct Detail** or **Precinct by Precinct Public** report level.

To preview or print the Results Report:

1. From the **Reports** menu, press **Results Report** in the **Report Type** field.
2. Select the desired report level by pressing the option button to the left of the selection in the **Report Level** field.
3. If you selected the **Election Detail** or **Election Public** report level, skip to Step 4. If you selected the **Precinct by Precinct Detail** or **Precinct by Precinct Public** report level, a **Select Precinct** button is displayed. Press the **Select Precinct** button to select a precinct.
4. Press **Preview** to view the report on the touch screen, or press **Print** to print the report on the laser printer.

### 7.3.8 Shutting Down the DS850

After the post-election day maintenance has been completed, shut down and power off the DS850, and then prepare the machine for physical storage.

1. Press **Exit** in the lower left-hand corner of the screen to display the Exit screen.
2. From the Exit screen, press **Shutdown Scanner** to access the Shutdown Scanner screen.
3. On the Shutdown Scanner screen, press **Shutdown** to shut down the scanner.
4. A message will confirm when it is safe to turn off the machine. Flip the power switch to the off position. The power switch is located on the left side of the machine.
5. After you have shut down and powered off the scanner, press the power switch on the UPS to turn it off.

# Chapter 8: Early Voting Procedures: DS200 Scanner

## 8.1 Ballot Preparation

Many considerations go into properly folding ballots to be mailed to voters. Complete information about ballot handling and folding is provided in [7.1 Ballot Handling and Folding](#).

## 8.2 DS200 Procedures

### 8.2.1 Load the Election Definition

DS200 precinct tabulators use the election definition programmed on USB flash drives to recognize ballot marks and tabulate results. Once you load the election definition, you will need to calibrate the DS200.

#### Note



You must insert the election definition before you turn on the DS200.

If you do not have a definition loaded when you turn on the DS200, the message “Election Definition Not Found” appears.

1. Lift the access door on the front left of the scanner to access the USB flash drives.
2. If necessary, remove the protective plastic covering of the USB flash drive containing your election definition.
3. Insert the USB flash drive into one of the USB slots. Do not force the flash drive into the slot.



**Note**



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

4. Turn on the DS200.
5. Verify the Election Definition accuracy, then shut down the scanner.

### **8.2.1.1 Check the Election Definition for Accuracy**

The DS200 automatically generates an Initial State report when you start the scanner. Check the report for the following information:

- **System Values:** Make sure the date and the time appear correctly on the report. If the information is not correct, change date and time from the Systems Setting screen.
- **Election Information:** Make sure that the jurisdiction name, polling place, and the number of precincts listed on the report are correct.

### **8.2.2 Produce a Zero Report**

After you power up the DS200, press **Open Polls**.

Depending on options set for your election definition, the DS200 prints a Status Report and/or a Zero Certification Report on activation.

### **8.2.3 Scan Ballots**

The DS200 can scan ballots inserted in any direction or orientation. The DS200 emits two quick beeps when a ballot is accepted. Depending on the options set for your election definition, the DS200 will use one of the following methods for accepting or rejecting blank ballots, overvotes, and crossover votes:

- **Unconditional acceptance:** The scanner accepts and tabulates results for all ballots. Any contests that are blank, overvoted or cross voted will be logged as such and the remaining contests will be tabulated appropriately.
- **Unconditional rejection:** The DS200 automatically rejects crossover, overvoted or blank ballots. Voters must review and correct ballot selections before the scanner will accept the ballot.

- **Query the voter for correction:** The DS200 returns a questioned ballot to the voter and displays a screen message that describes the problem and prompts the voter to either review and edit the ballot or cast the ballot as it is. The voter presses **Correct Your Ballot** to correct the ballot or presses **Cast Your Ballot with Errors** to cast the ballot without editing selections. Once **Cast Your Ballot with Errors** is pressed, a thank you for voting message appears.

Poll workers should closely monitor system messages during voting.

## 8.2.4 Close Polls

Close your polling place for voting at the assigned time and then, use the DS200 **Close Polls** button to prepare scanner results for processing. You cannot print reports or process vote totals from the scanner's USB flash drive until you properly close the polls.

You can print election, event, and audit log reports after you close the scanner for voting.

1. Check the ballot auxiliary bin for uncounted ballots.

### Note



Study your jurisdiction's procedures for handling uncounted ballots before Election Day.

2. Unlock the DS200 access door.
3. Press and hold down the **CLOSE POLLS** button, located above the power button, for about four seconds and then release to officially close the polls. Depending on your election configuration, the scanner may automatically print one or more of the following reports: Status report, Race Results report, Certification report and/or Audit Log report. Press **CANCEL** to stop printing reports at any time.
4. Press **Shutdown** to turn off the DS200.
5. Remove the USB flash drive from the DS200.
6. Deliver the USB flash drive and any printed reports to election headquarters.

## 8.2.5 Results Report

The DS200 generates a variety of results reports after the polls close. Depending on the options configured for your election definition, the scanner may automatically print reports when you close the polls or you can manually select reports from the POLLS CLOSED screen.

1. Close the polls to access the POLLS CLOSED screen and press **RESULTS REPORT** to reprint any automatic reports generated when the polls are closed. The types of reports generated depend on your election definition settings.
2. To print additional reports, return to the **POLLS CLOSED** screen and select from one of the following report options:
  - Precinct Report Media
  - Precinct Report Summary
  - Audit Log Report
  - Poll Report Media
  - Poll Report Summary

### 8.2.5.1 Transfer Results

If your jurisdiction uses Election Reporting Manager to generate election reports, transfer election results from your precinct counters to the PC running the reporting software.

1. Unlock the access door.
2. Remove the USB flash drive from the scanner.
3. Deliver the USB flash drive to election headquarters



#### Note



Deliver all write-in ballots to your election administrator as soon as possible after the polls close. Separate all of the write-in ballots from regular ballots.

# Chapter 9: Election Day Procedures

## 9.1 Precinct Supplies, Equipment Delivery, and Inspection

A complete listing of precinct supplies can be found in [6.3.1 Recommended Supplies](#), under DS200 Supplies, ExpressVote Supplies, and AutoMARK Supplies.

### 9.1.1 Equipment Delivery

1. Perform a pre-election procedure to prepare the tabulators prior to shipment.
2. Complete the final inspection sheet (provided by the jurisdiction).
3. Log the equipment serial number and operating system version.
4. Place keys in an envelope with the final inspection sheet.
5. Remove the election testing media, then insert and secure the official election media devices. Verify that the media is coded for the correct location.
6. Check the printer paper and replace it if necessary.
7. Close the ES&S election equipment, securing the envelope containing final inspection sheet and keys.
8. Secure the equipment for transport to the polling places. Precinct tabulators must be mounted on their ballot bins.

### 9.1.2 Inspection

Instruct the appropriate precinct worker(s) to verify the delivery and condition of supplies to the polling places, prior to Election Day, as follows:

- Check all pads of ballots to ensure that ballot style, serial numbers, and precinct numbers (if used) are printed correctly.
- Ballots shall be in the quantity and manner required by Elections Code, and demonstrator ballots marked for demonstration use only will also be included.

- In elections that contain partisan offices, ballots may, as directed by the Secretary of State, be appropriately tinted to reflect which partisan office appears on a specific ballot.
- Demonstration placards, signs, and “vote here” indicators shall be appropriately positioned.
- Voting system precinct supplies shall include ballot privacy sleeves, ballot marking devices, two sample ballots of each ballot style in each language required to be voted on in the precinct, and security seals.
  - All voters voting on paper ballots in a polling place must be provided a privacy sleeve for the ballot and instructed on its use, in accordance with CA Elections Code.
- A Certificate of Packaging and Sealing, in duplicate, together with a self-addressed stamped business reply envelope, addressed to the responsible elections official shall be delivered to the polling place.
- The elections official shall verify that one sealed precinct scanner nested in its ballot box has been delivered to the polling place. If multiple precinct processing will occur at the polling place, the device shall be located so it is equally accessible to the voters and precinct officers of each precinct. Keys to the unit and the ballot box will be included in the precinct supply kits and marked as such.
- Anti-static envelopes or appropriate containers and seals to facilitate safe and secure transportation of memory cards and election results tapes shall be supplied.

If multiple precinct processing within a single polling place is to be implemented, the functions hereinafter described shall be performed by the board workers of each precinct acting jointly insofar as is practical. Where forms are to be completed, the elections official shall provide them in such a format and so written as to facilitate notations by each precinct staff. Surrendered and delivered vote by mail ballots, spoiled ballots and provisional ballots shall be maintained separately by precinct.

## 9.2 Prepare the ExpressVote

If the terminal touch screen was locked with an override code to prevent unauthorized use, an election worker can unlock the terminal by entering the same override code. Open the media device compartment on the left side of the unit. Turn the mode switch to Voter.

1. Turn the power switch to on to power up the terminal.

### Note



Ensure that all peripheral devices are connected to the appropriate USB port before powering on the ExpressVote unit.

Near the end of the powering up sequence, an on-screen calibration message appears, giving you a 10-second window to initiate calibration of the touch screen. If calibration is needed, touch any part of the screen to begin calibration. If not, simply wait for the countdown to end.

Before allowing voters to use the ExpressVote, you can use the System Readiness report to verify that the terminal has been loaded with the correct election definition.

2. On the Enter Election Code screen, enter the election code that was defined in the Electionware Configure module.

### Note

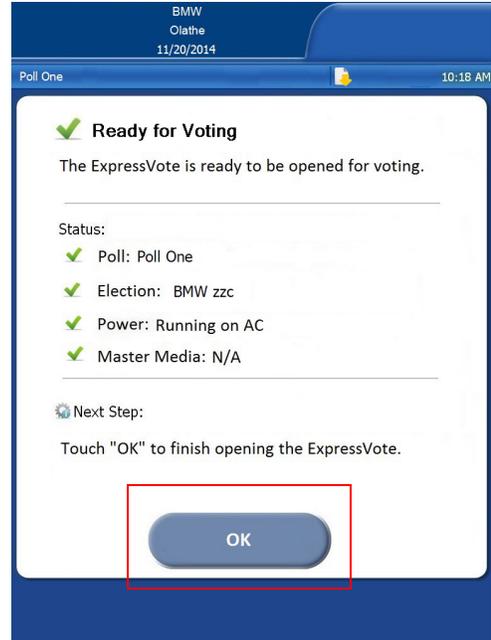


If the code is entered incorrectly, an error message will appear. After three failed attempts, another message appears and instructs you to remove the media device. Wait 10 seconds, then reinsert the device and try again.

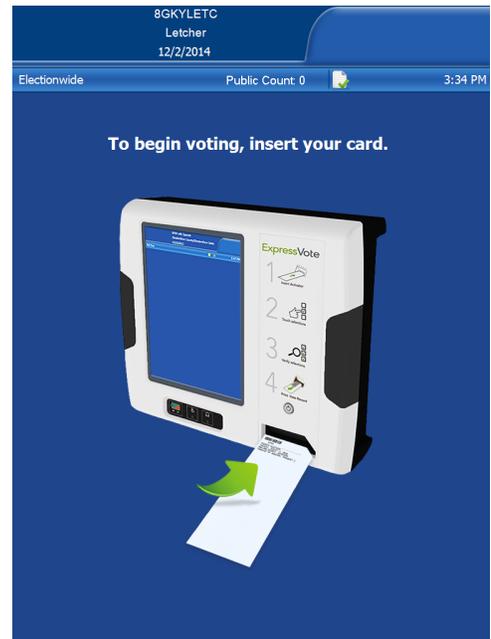
If verification succeeds, a Loading Election screen will appear.

When the election has successfully loaded, the Election Loaded screen appears.

3. Touch **OK**.



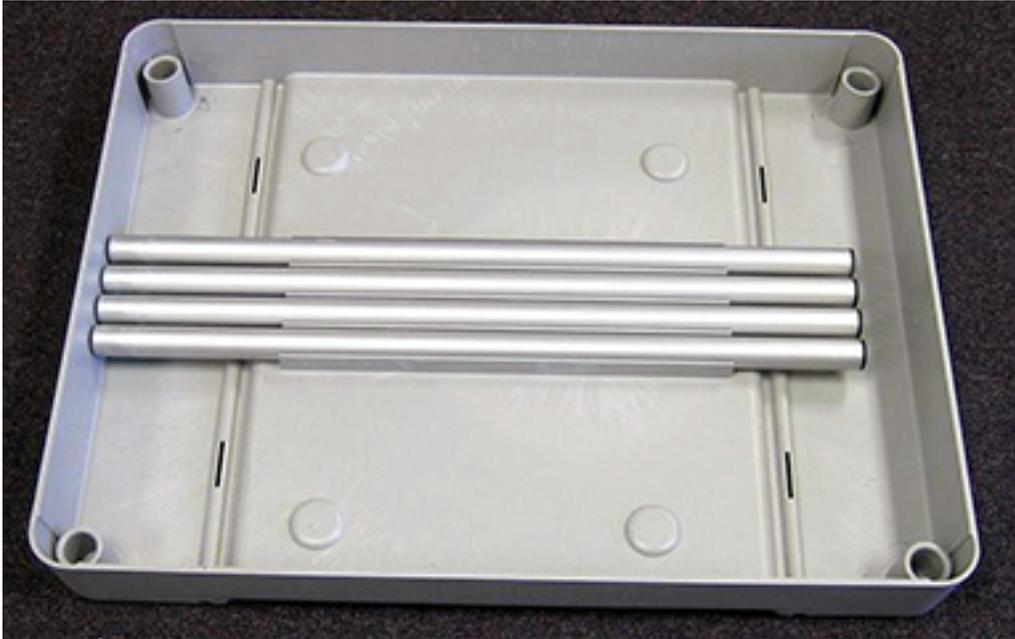
The card insertion screen indicates that the terminal is now ready for voting.



### 9.3 Prepare the AutoMARK

To meet the above standards, your precinct may have purchased an AutoMARK Table and privacy shield. If you need more information about obtaining the AutoMARK Table please contact your sales representative.

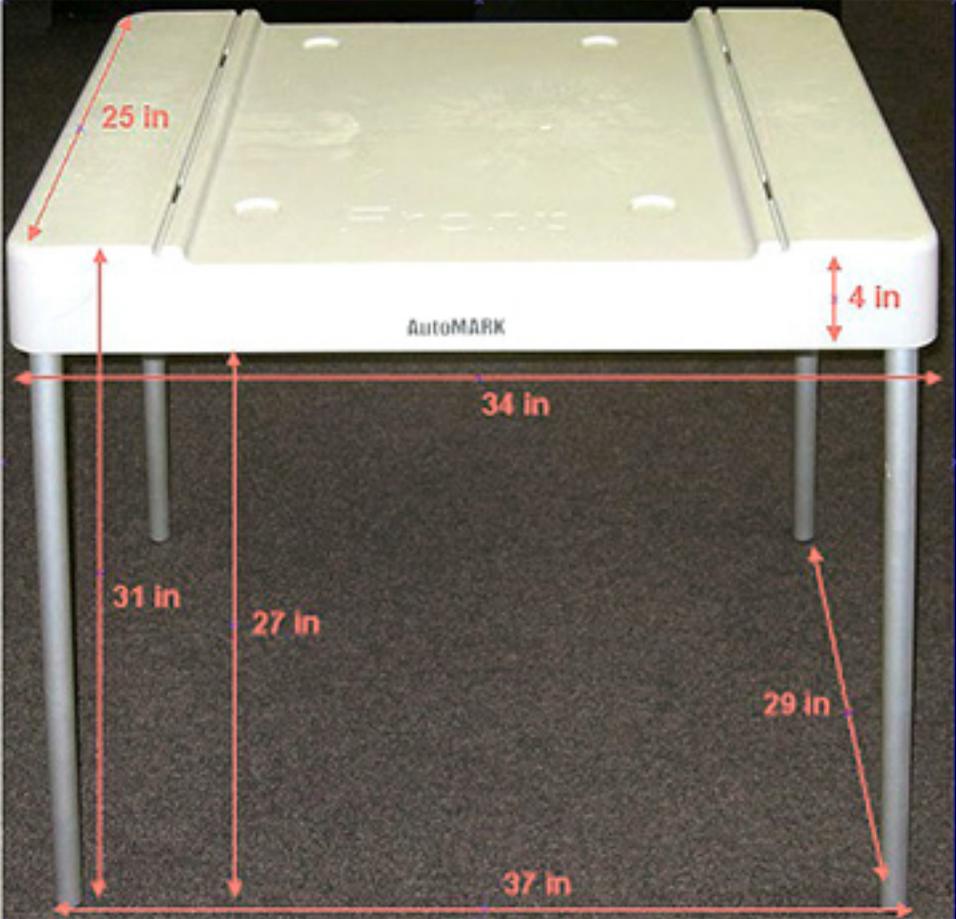
The AutoMARK Table comes in 5 pieces.



It is assembled by inserting the legs into the plastic cylinders located at each corner of the table. The rubber end caps should be pointed toward the floor.

**Table P1-1: AutoMARK Table Dimensions**

Top of table surface	33" wide by 25" deep
Bottom of table surface	34" wide by 26" deep
Leg span	37" wide by 29" deep
Height of table bottom	27"
Height of table top	31"





*Table shown with privacy shield inserted into slots on table*

When placed appropriately on a standard table the AutoMARK VAT meets the following standards:

- Where clear floor space only allows forward approach to an object, the maximum high forward reach shall be 48 inches. The minimum low forward reach shall be 15 inches.
- Where forward reach over an obstruction with knee space below, the maximum level forward reach is 25 inches. When the obstruction is less than 20 inches deep, the maximum high forward reach is 48 inches. When the obstruction projects 20 to 25 inches, the maximum high forward reach is 44 inches.
- The position of any operable control is determined with respect to a vertical plane that is 48 inches in length, centered on the operational control, and at the maximum protrusion of the product within the 48-inch length.
- Where any operational control is 10 inches or less behind the reference plane, have a height that is between 15 inches and 54 inches above the floor.

- Where any operational control is more than 10 inches and not more than 24 inches behind the reference plane, have a height between 15 inches and 46 inches above the floor.
- Have operational controls that are not more than 24 inches behind the reference plane.

### **9.3.1 Set Up AutoMARK for Voters**

1. If headphones are being supplied by the polling place, plug the headphones into the audio jack.
2. If the voter needs to use a Puff-Sip device, plug the Puff-Sip device into the Assistive Technology (AT) access port.
3. For a blind voter, direct him to the AutoMARK, and assist him while he inserts his ballot for scanning. Tell him that the scanning process will take around 30 seconds, and that the AutoMARK will be silent during the scanning process. When the scanning process is complete, the AutoMARK will give him audio instructions for completing his ballot.

The AutoMARK VAT is designed for use in conjunction with the AutoMARK Table which provides the voter with a privacy shield, complies with all AT accessibility requirements, and ensures stability against movement, or overturning during entry occupancy or exit by a voter. Alternatively, the AutoMARK may be used in conjunction with any AT compliant table that provides adequate structural stability for unit of the AutoMARK's size and weight and a privacy screen. Both of these items are commercially available from a number of sources.

## 9.4 Opening the Polls

Before the polls are open, the precinct workers will perform the following tasks.

1. Complete Oath of Office and Declaration of Intention forms pursuant to CA Elections Code.
2. Assemble voting booths and in each booth display a copy of the required materials.
3. Ensure that a pad of demonstration ballots, markers and suitable demonstration materials are available at the point of ballot issue.
4. Before the polls are open, the precinct board shall verify that the serial number on the scanner is the same number listed on the Voting Device Report. The board shall also verify that all seals have not been tampered with and the serial numbers match what is recorded by the County office.
5. Check that the memory card plate is secure.
6. Verify that no ballots remain in any of the ballot box bins from testing or previous elections.
7. Verify that the ballot slot cover on the auxiliary bin is closed and the bin is locked.
8. Close and lock all ballot box doors.
9. Ensure that the scanner is nested into the ballot box or bin, and that the power cord is properly routed.
10. When the power cord is plugged into a 120V AC outlet and the unit is keyed on, all vote totals for all candidates must be zero. The public counter will display zero ballots cast.

### Important



If the scanner does not print the Zero Tape, this must be reported to the elections official. Voting may commence, but ballots are to be deposited in the front auxiliary bin until corrective action is taken. Such action must be logged.

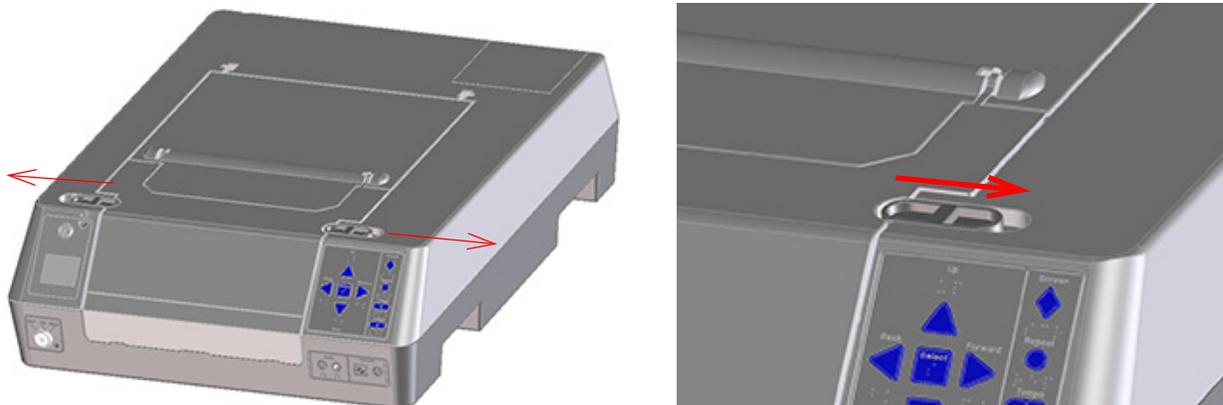
11. Verify that all offices and propositions appear on the Zero Tape. The tape is signed by two board members; it can be rolled up and placed in a secure place or posted in the polling place for public display. This process is repeated at the closing of the polls. This tape becomes a permanent record of the election as it was conducted at the precinct.

12. Observe the poll opening time. If the recorded time is different from the actual time, note the time that the poll had opened and initial the marked time.

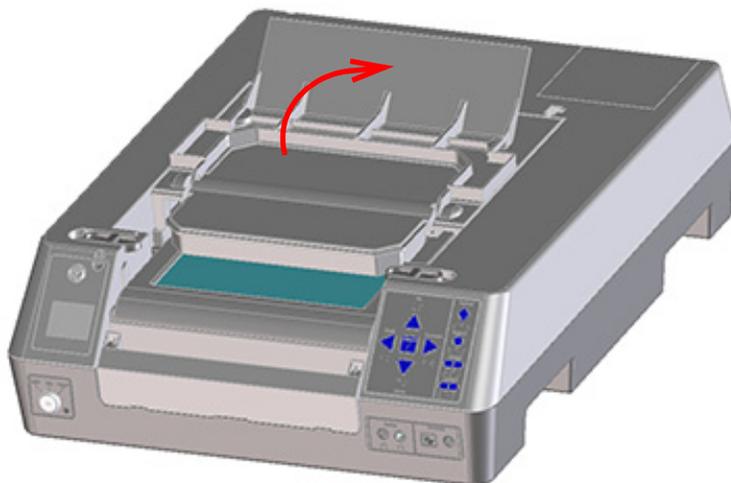
## 9.4.1 Open Polls on AutoMARK

### 9.4.1.1 Open the LCD for Use

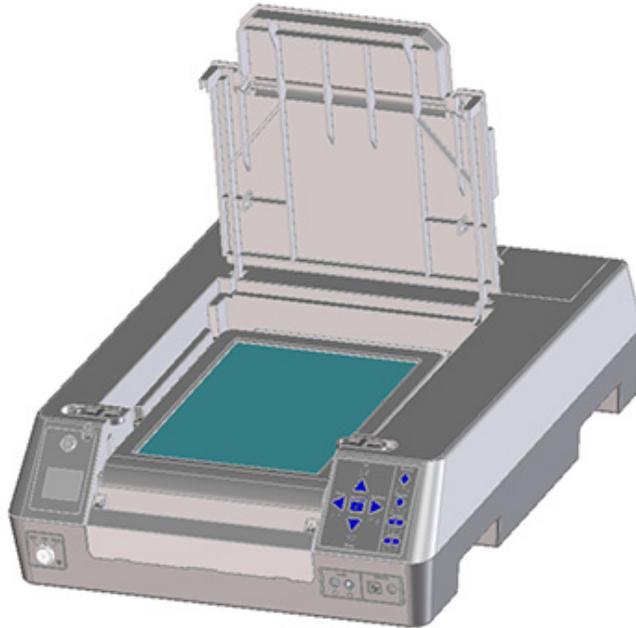
1. Move the left and right sliding latches outward to unlatch the lid.



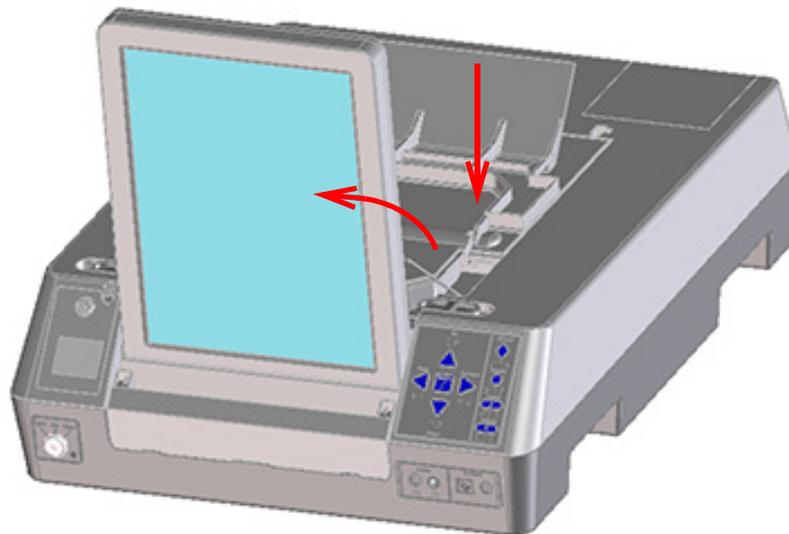
2. Fold the front portion of the lid back.



3. Rotate the lid assembly to vertical.



4. With the LCD rotated to the vertical position, close the lid leaving the front lid section rotated back.



5. Lower the ballot feed tray.



#### **9.4.1.2 Start Up Procedure**

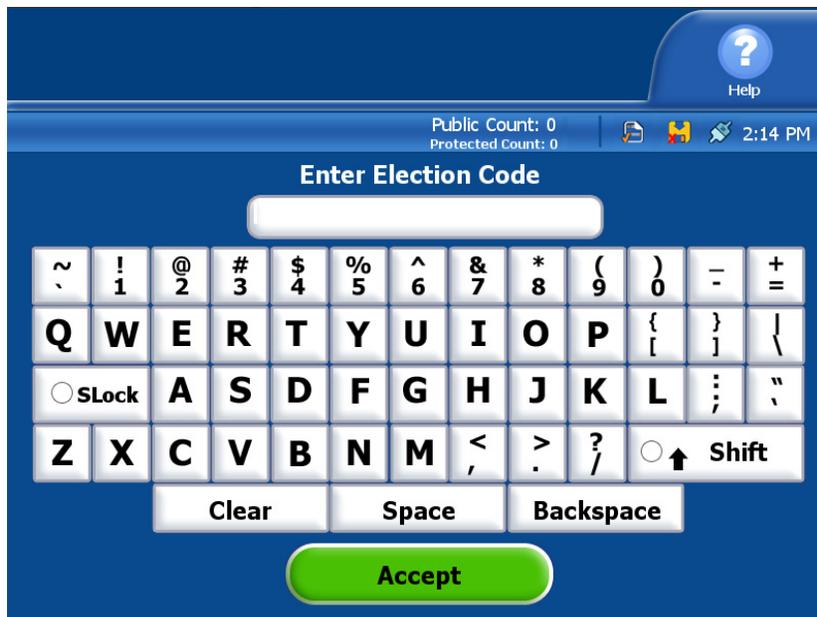
1. Open the AutoMARK unit and position the display.
2. Locate the audio headphone jack on the front lower-right panel (below the keypad) and plug in the headphones.
3. Plug the power cord into a power connection in the back of the unit and the other end of the cord into a nearby AC power source. Make sure the cord is not in a position where it would be hazardous to anyone walking nearby.
4. Turn the security key located in the front of the unit to the ON position and remove the key before voters are allowed to use the AutoMARK.
5. To shutdown the unit when the polls are closed, insert the security key located in the front of the unit and turn it to the OFF position, to turn off the electrical power.

## 9.4.2 Open Polls on DS200

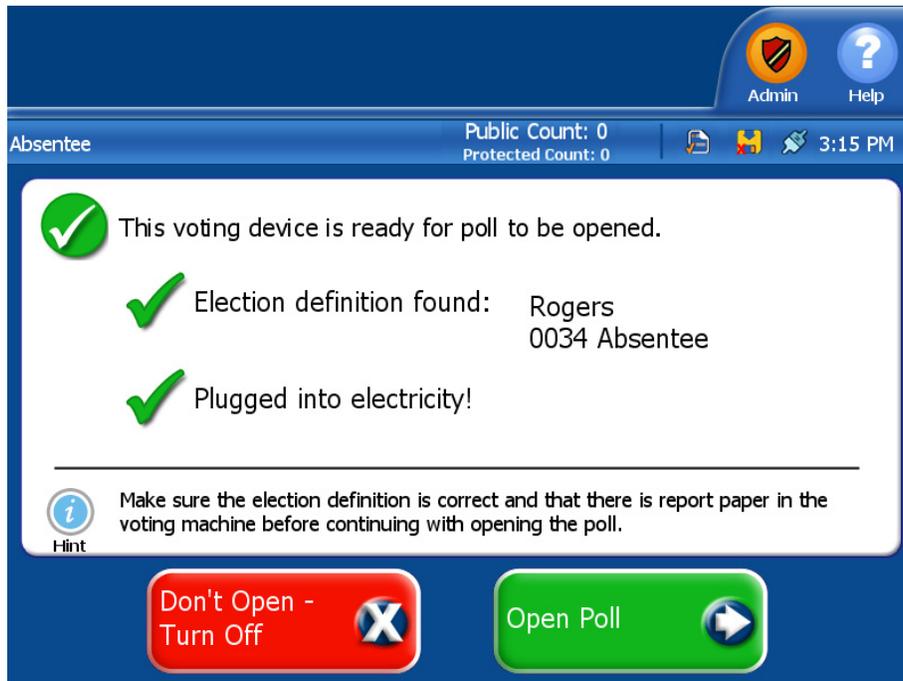
Before your polling location opens for voting, retest and check the system configuration for each of your scanners.

After you have configured, tested and loaded the election definition, and turned on the DS200, you are ready to open the poll for voting.

1. Enter the election code and touch **Accept**.



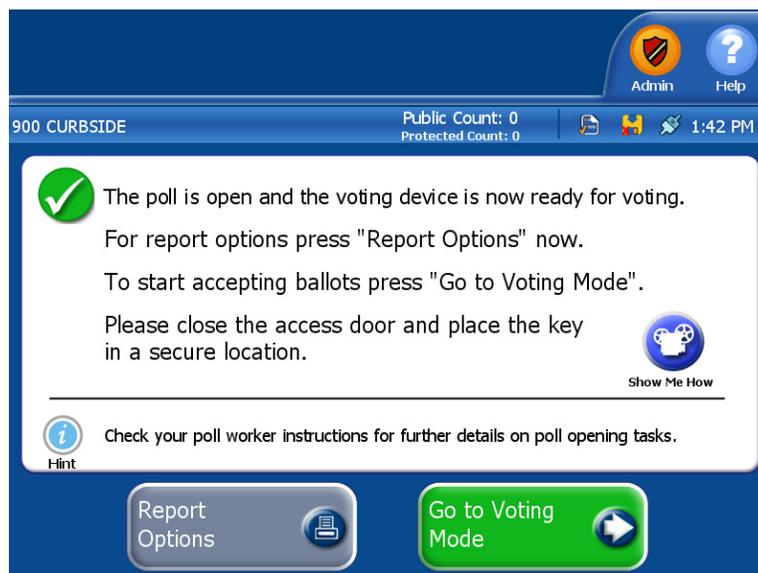
After the election code is accepted and the election is validated the following screen appears, confirming that the election has been loaded on the machine.



2. Touch **Open Poll** to open the polls for voting.

After you touch **Open Poll**, the DS200 performs the following functions:

- The unit checks available memory and examines the election definition for errors.
- The DS200 prints the startup reports (Ballot Status Accounting, Configuration, and Zero Totals reports).



3. After the DS200 finishes printing the startup reports, press **Report Options** if you need to print additional reports. Refer to Chapter 7 in the *DS200 Operator's Guide* for more information.
4. Press **Go to Voting Mode**.
5. Close and lock the access panel.

After you remove the key, the DS200 is ready for live voting. Make sure that the public counter on the screen increases by one with the first page of each ballot cast, but do not make any further adjustments to the DS200 unless a system message appears.

## 9.5 Polling Place Procedures

A warning must be posted in each voting booth stating that, pursuant to CA Elections Code, tampering with voting equipment or altering vote results constitutes a felony, punishable by imprisonment.

Hourly, inspect the voting booths to ensure that there are no electioneering materials present, and that the booth/voting machine is otherwise suitable for voting.

Correct any defacement of the booth/voting machine according to jurisdictional practices and in conformance with California Election code.

Set up polling place voting devices with enough room for a voter in a wheelchair to approach the tabulator from the front as well as along the left and right sides of the voting device.

### Important

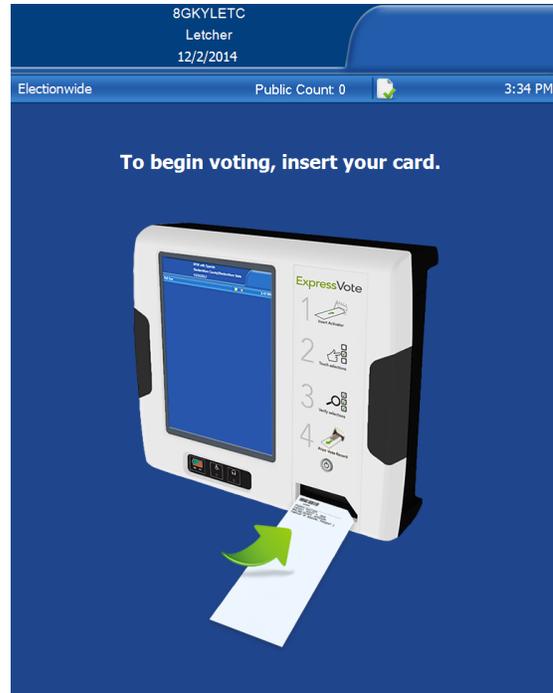


Arrange voting booths with the following considerations: traffic flow, voter privacy, safety and accessibility.

### 9.5.1 ExpressVote Voting

For complete and detailed voting instructions, refer to your *ExpressVote Operator's Guide*.

To begin voting, insert a blank activation card into the front card slot with the corner cut oriented to the front right. The ExpressVote scans the card.



The next steps are determined by the features included in this election.

#### **9.5.1.1 Printed Activation Barcodes**

If the inserted activation card has a printed activation barcode, the system automatically displays the correct ballot for the voter's precinct-ballot combination. The ExpressVote activation card printer can be used with an electronic poll book or the ExpressLink application to print activation barcodes.

#### **9.5.1.2 Select from Multiple Precincts or Ballot Styles**

If the election has multiple precincts and/or ballot styles, and the activation card does not have a printed activation barcode, the poll worker must select and confirm the correct precinct-ballot style combination to activate the correct ballot for the voter.

The poll worker can select the correct ballot at the ExpressVote, just before each voter votes. Or the poll worker can use an electronic poll book or the ExpressLink PC application to perform this task when the voter arrives at the registration table.

#### **9.5.1.3 Multiple Language Support**

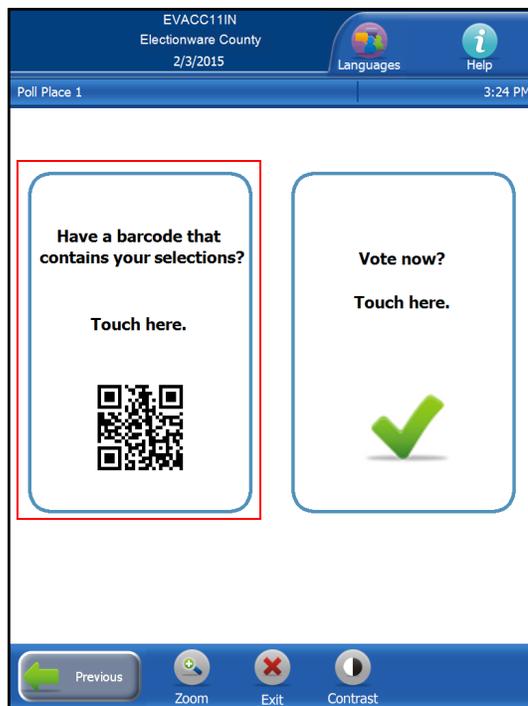
If the election supports multiple languages, the Select a Language screen appears. Voters can choose any of the supported languages by touching the desired button on the Select a Language screen. Based on language selection,

the ExpressVote plays the appropriate audio language during the voting process and displays screens in the selected language.

#### 9.5.1.4 Load Online Sample Ballot Selections with External Code Scanner

If the election supports Ballot Online (BOL) sample ballot voting and BOL scanning is enabled on this ExpressVote, the system displays the following screen before displaying the first contest screen.

- The **Have a barcode that contains your selections** option enables the voter to scan a printed QR code containing sample selections the voter made via the Ballot Online application before arriving at the polling place. The voter can review and/or change any of the sample selections via the ExpressVote terminal.

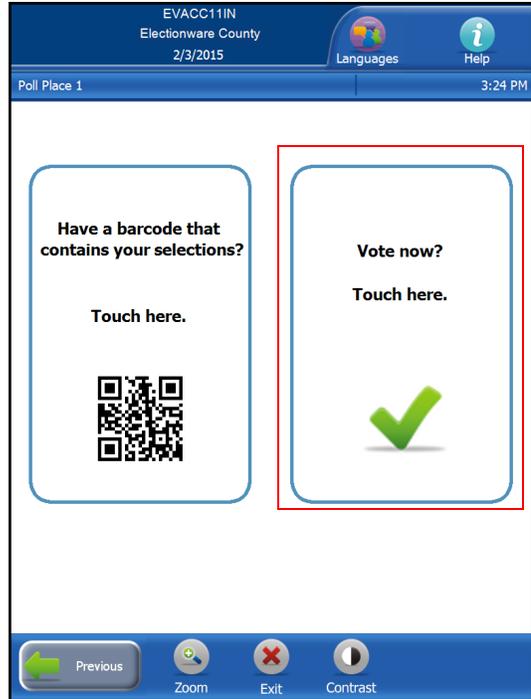


**Note** The Ballot Online application is not a required part of this certified voting system; however, this application can be used to facilitate testing and to demonstrate system interoperability.

If the voter touches the **Barcode** option, the system prompts the voter to scan the barcode printed on paper or displayed on a mobile device screen.

After the voter's BOL sample selections are loaded into the ExpressVote terminal, the system displays the Verify Selections screen.

- The **Vote Now** option enables the voter to proceed to the first contest screen without scanning a QR code.

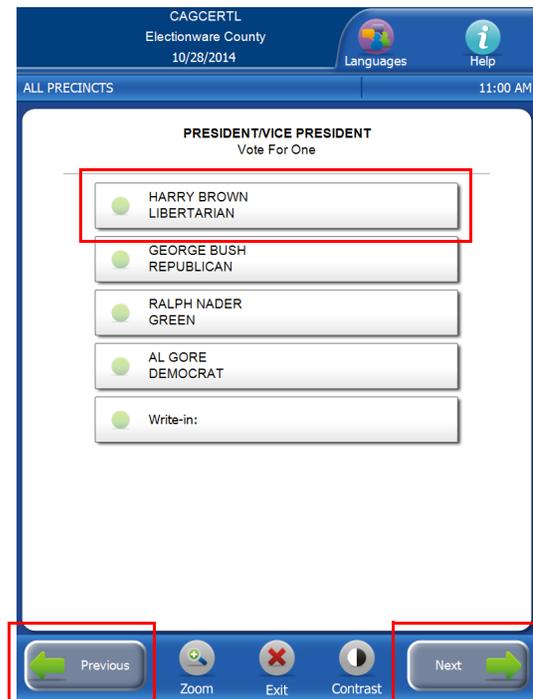


### 9.5.1.5 Vote Selections on ExpressVote Screen

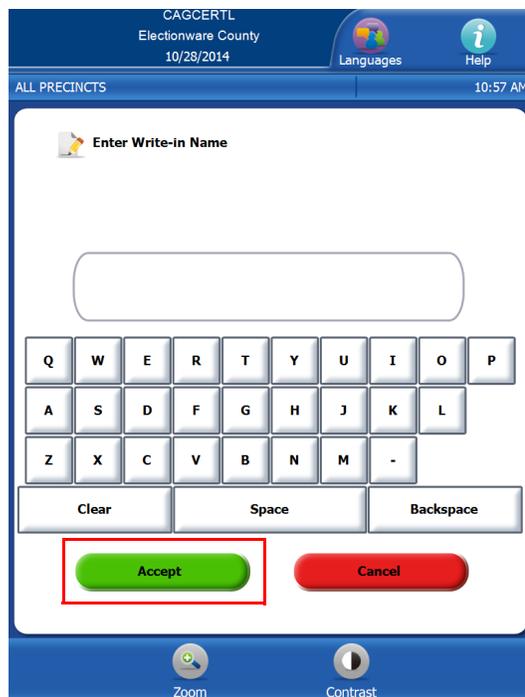
If the voter did not use the external scanner to load sample selections from the BOL application, the system displays the first contest screen after the precinct, ballot style, and language are selected, if applicable.

The voter completes the following steps to make selections via the ExpressVote touch screen.

1. Touch to select the name of the candidate or other contest choice. A check mark appears next to the selection.
2. To navigate forward to the next or previous page in the displayed ballot, touch **Next** or **Previous**.



3. For contests that allow write-in votes, touch the write-in selection on the contest screen. Use the on-screen keyboard to enter the write-in name, then touch **Accept**.
4. Continue voting until all contests in this election have been completed.



After all selections have been entered, and the last screen of the ballot has been viewed, the ExpressVote displays the Verify Selections screen.

The ExpressVote automatically prevents overvotes.

Depending on the election definition, the ExpressVote may require the voter to view all choices in a contest, or may alert voters to undervotes or prevent undervotes in selected contests.

Visual and audio messages alert the voter of a condition that requires attention, such as an undervote.

### 9.5.1.6 Verify Vote Selections

After all selections have been entered, and the last screen of the ballot has been viewed, the ExpressVote displays the Verify Selections screen.

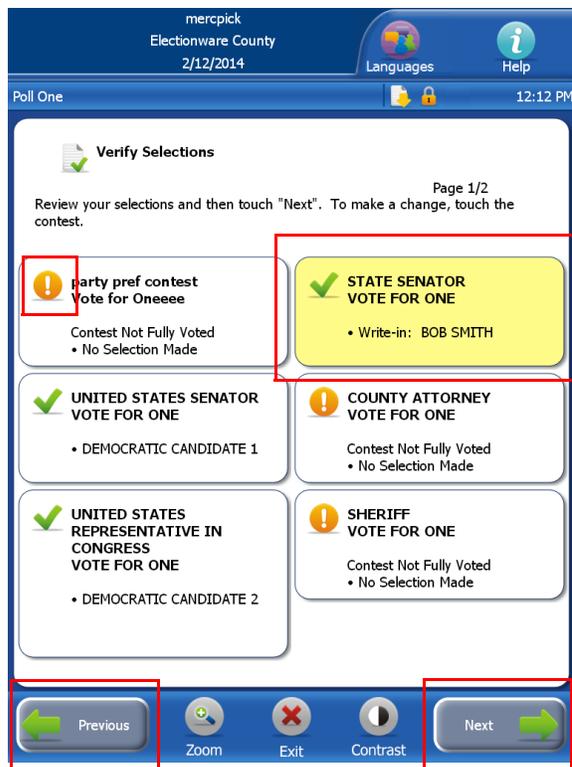
Voters can use the following steps screen to review, verify, and change their selections for each contest.

1. Touch **Next** and **Previous** as needed to review all selections.

**Note**  The system identifies undervoted contests with an exclamation mark (!) icon.

2. To change a selection, touch that contest listing. The system displays the vote selection screen for that contest.
3. If applicable, make the desired change to the contest selection.
4. After making any desired change(s), touch **Next** to return to the Verify Selections screen.

The system identifies changed selections with yellow highlighting.

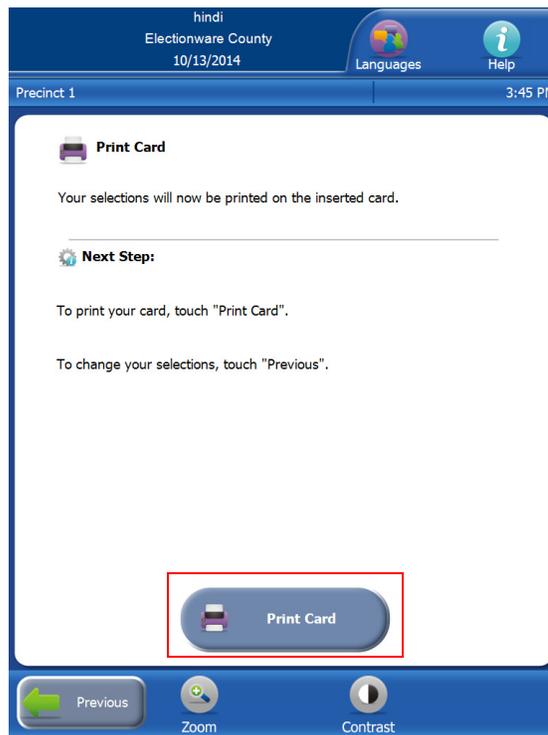


**Note**  The voter must complete all desired changes before printing the vote summary card.

### 9.5.1.7 Completing the ExpressVote Voting Session

When the voter is finished using the Verify Selections screen, the ExpressVote displays the Print Card screen.

1. To continue, touch **Print Card**.



The screen displays a print status screen while the terminal prints the vote summary card.

#### Note



The ExpressVote prints the voter's selections on the inserted activation card. After printing, the inserted card is no longer referred to as an *activation card*. The inserted card is now referred to as a *vote summary card*.

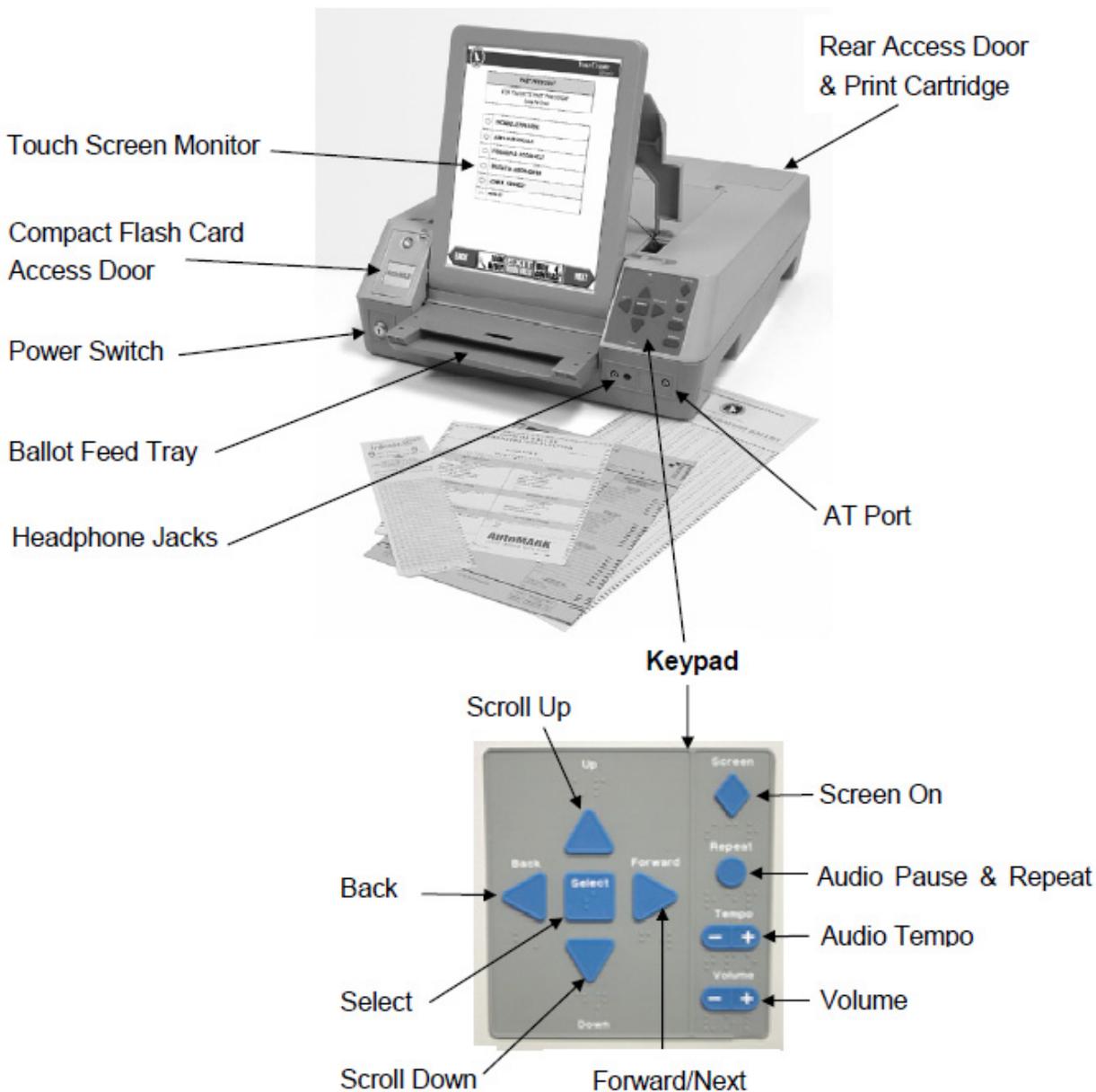
If your ExpressVote setting *disables* the Rear Eject option, the terminal returns the vote summary card to the voter after the card has been printed. The voter must then insert the card into a scanner/tabulator such as the DS200 or into a secure card storage case for later tabulation.

If your ExpressVote setting *enables* the Rear Eject option, after the vote summary card has been printed, the system displays the Printing Complete screen.

## 9.5.2 AutoMARK Voting

For complete and detailed voting instructions, refer to your *AutoMARK Operator's Guide*.

The AutoMARK physical features and controls are labeled in the figure below.



If needed, the poll worker shall assist the voter with connecting an assistive device to the input jack on the AutoMARK.

The AutoMARK is designed so that you can use either the keys on the keypad, an AT device, or touch displayed text and buttons on the screen to enter your selections.

The buttons at the bottom of the touch screen are used for navigating the displayed screens.



**BACK** – Displays the previous screen

**ZOOM IN/OUT** – Increases and decreases the size of the text displayed

**EXIT RETURN BALLOT** – displays the EXIT screen

**HIGH CONTRAST** – Lightens or darkens the screen contrast

**NEXT** – Enters your selection and displays the next screen.

If you want to listen to choices and instructions in the language of your choice and use the keys on the keypad to enter your selections, plug in your headphones, or use the headphones provided.

#### Note



Audio includes keypad instructions.

#### 9.5.2.1 Marking the Ballot

1. Insert an unmarked ballot into the ballot feed tray.
2. Select your language.
3. Read the voting instructions that appear.
4. Press **NEXT** to access the first contest screen.

5. Press the name of the desired candidate or choice to select it.

**Note**



If one of the choices includes a write-in and you select it, a write-in pop-up screen allows you to type in the name of the write-in. Press **OK** when done.

6. When all contests have been voted, the AutoMARK displays a summary of your selections.
  - a. To change a selection, touch the contest on the summary screen, touch the original selection to deselect it, then touch your new choice. Touch **NEXT** to return to the summary screen.
7. Touch the **Mark Ballot** button.

The AutoMARK will display the printing progress as a circle filling with color, indicating the time remaining.

When printing is complete, the AutoMARK displays the REMOVE BALLOT screen and ejects your marked ballot into the paper tray.

8. Remove your marked ballot from the tray and submit it for tabulation.

### 9.5.2.2 AutoMARK and AT Device

The AutoMARK provides an access port that allows voters with disabilities to plug in a sip-and-puff, rocker panel, or similar input device. The Dual Switch Access (DSA) port provides a 3.5mm (1/8") jack. A voter with disabilities who cannot use either the touch screen or the audio-style system with auxiliary switch panel, can plug an AT device into this port.

A voter with an AT device can perform all of the selections available on the key pad or touch screen. With an AT device, the system responds to a yes or no command. The AutoMARK allows you to complete a ballot entirely with the aid of an AT device.

When a screen is displayed, you may select **NO** to bypass that screen or **YES** to move to the first selectable choice on that screen.

When you are on a selectable item of the screen, the item will be highlighted in yellow. Selecting **NO** will move on to the next selectable item on the screen. Selecting **YES** will provide the same results as if you had touched that item on the screen.

**YES** will select or deselect a candidate.

On a scroll bar, **YES** will cause the screen to scroll up or down as indicated.

On a screen button, **YES** invokes that action. For example, entering **YES** when **ZOOM** is highlighted causes the screen to **ZOOM**. Entering **YES** again returns the screen to non-zoomed mode.

Pressing **NO** at any time will move to the next highlighted item.

As you enter **NO** repeatedly, the highlight will move down the screen, across the bottom from right to left, and then back to the top.

When you are done making selections on any given screen, enter **NO** repeatedly until the yellow highlight is on the **NEXT** button, then enter **YES** to move to the next screen.

If you encounter a problem operating the AutoMARK, please ask an election official for assistance.

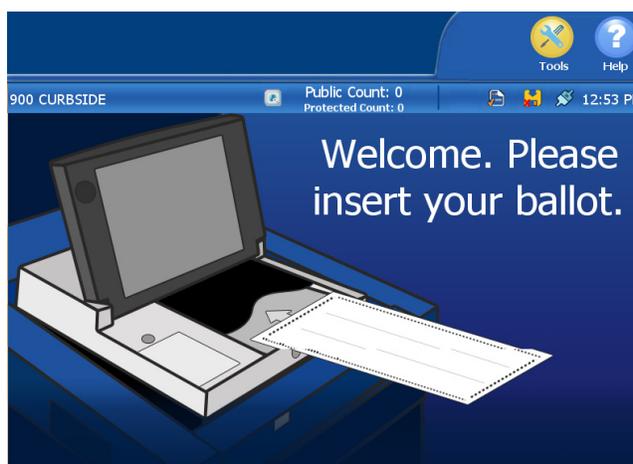
### 9.5.2.3 AutoMARK on Battery Power

An internal battery pack is provided with sufficient capacity to allow continuous operation after loss of AC power, for at least two hours. The power supply automatically switches from the 12VDC provided by the brick supply to battery power if AC power is lost.

### 9.5.3 DS200 Scanning

For complete and detailed scanning instructions, refer to your *DS200 Operator's Guide*.

Voters will mark their ballots and, if applicable, enter their write-in entries in private voting booths. Once a voter has marked a ballot, he or she will insert the ballot into the DS200. The ballot insertion screen animation shows voters where to insert the paper ballot or ExpressVote card. The DS200 can scan ballots inserted in any direction or orientation.



The DS200 can collect individual graphical ballot images of all ballots. Depending on the options set in Electionware, it will collect all ballot images, only those containing write-in votes, or none at all. These ballot images are stored with random names and timestamps assigned to each file to protect voter anonymity.

The DS200 does not divulge any information identifying how a voter marked a ballot when the ballot is cast. The only visible change in system status after a voter casts a ballot is the increment of the public count.

**Note**



The ballot box main compartment was designed to hold approximately 2,500 pieces of paper.

The auxiliary ballot compartment was designed to hold approximately 100 pieces of paper. To estimate the ballot capacity of the auxiliary compartment, divide this number by the number of pages per ballot.

From the ballot insertion screen, you can view the public count information. Touch the **Public Count** icon on the Public Count banner.



The system opens a pop-up window showing the number of paper ballots and ExpressVote cards that have been scanned.

**Public Count Information**

<b>DS200 Ballots:</b>	<b>3</b>
<b>ExpressVote Cards:</b>	<b>0</b>
<b>Total:</b>	<b>3</b>

Close

### 9.5.3.1 DS200 on Battery Power

An external DC power supply, which plugs into a standard 120-volt AC outlet, supplies power to the scanner. If a power outage occurs, the DS200 contains an internal backup battery that can run the scanner for a minimum of two hours, depending on scanner activity. If the DS200 is plugged into a power source, the backup battery will be charged.

Observe the rear LED, located next to the Wall Power Adapter Cord Connector, if the LED is amber and blinking slowly this indicates that the Battery Pack is charging. If the LED is a solid green, the Battery Pack is completely charged.

### 9.5.3.2 Assist ADA Voters with DS200

Poll workers may be required to assist ADA (Americans with Disabilities Act) voters with using the DS200. For example, a poll worker may be asked by the voter to insert the ballot into the DS200, correct ballot-handling exceptions (such as undervotes, overvotes, mistakes), or assist with casting a ballot after exceptions have been resolved or accepted by the voter who is unable to interact with the DS200 interface.

#### Note



AutoMARK and ExpressVote users can eject their ballot into a privacy sleeve, which can then be transported by the voter or assisting poll worker to the DS200 and inserted into the scanner. If there are no ballot handling exceptions, the DS200 deposits the ballot in the ballot box. If there are exceptions, the poll worker must confirm with the voter that the ballot is to be cast as is. For additional information about the assistance that the poll worker may be requested to provide, as well as the use of a privacy sleeve by the voter, see the *AutoMARK Operator's Guide* and/or the *ExpressVote Operator's Guide*.

### 9.5.4 Provisional Voting

Pursuant to California Elections Code, a Provisional Ballot shall be issued to a voter not appearing on the polling place roster but requesting to vote. These ballots will be clearly distinguished by the County and should be kept separate from normal ballots. When voted, the ballot will be sealed in a signed envelope, similar in process and design as a vote-by-mail envelope, then deposited into the auxiliary bin of the ballot box. At the close of polls, this ballot shall be placed with the voted ballots, in its sealed envelope, for transport back to the County. Follow County-specific instructions for further detailed processing.

Prior to tabulating, the County will follow verification procedures to determine that voter's eligibility to vote in that election.

ES&S does not provide specific procedures for the system to handle provisional voters. This is a manual process for which the jurisdiction is responsible.

### **Provisional Voters – In Precinct**

If the ballot was cast by a provisional voter registered to that precinct, the ballot shall be cast in its entirety and in its original form.

### **Provisional Voters – Out of Precinct**

If the ballot was cast by a provisional voter not registered in that precinct, the ballot will be duplicated to a ballot specific to that voter's precinct. The duplication will reflect only the offices and propositions in which the voter is entitled to vote.

## **9.6 Closing the Polls**

The following procedures and activities must be conducted in public view.

Close the polling place for voting at the assigned time.

### **Note**



You cannot print reports, or process vote totals from the memory device until you properly close the polls.

You can print election, event, and audit log reports after closing the tabulator for voting. You can also transfer results to combine the tabulator totals with the final vote tallies from other polling places at a central counting location.

### **9.6.1 Close Polls: ExpressVote**

To shut down the ExpressVote at the end of the voting period, press the power switch into the **Off** position and hold until the unit begins the power-down sequence.

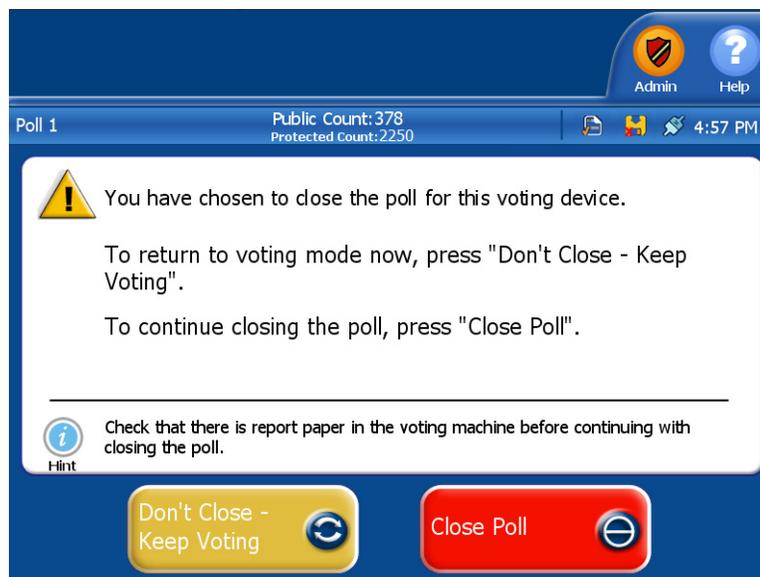


## 9.6.2 Close Polls: AutoMARK

1. Insert the security key in the front of the unit and turn it to **OFF**.
2. Unplug the headphones from the jack on the front lower-right panel (below the keypad).
3. Unplug the power cord from the back of the unit, and the other end of the cord from the AC power source.

## 9.6.3 Close Polls: DS200

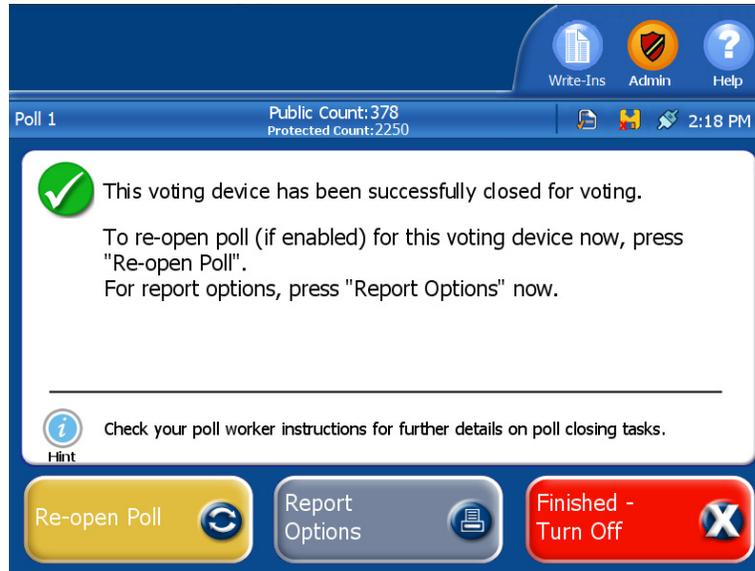
1. Check the ballot auxiliary bin for uncounted ballots.
2. Unlock the DS200 access door.
3. Press the **CLOSE POLL** button inside the access door and above the power button.



4. Press **Close Poll** to cease voting and close the polls.

Depending on your election configuration, the DS200 may automatically print one or more of the following reports: Ballot Status Accounting Report, Results report, Configuration Report and/or Audit Log report.

When the DS200 has finished printing any reports, the screen confirms that the poll has been closed.



- To reprint any additional reports, press **Report Options**.
  - To review write-in votes at this time, press **Write-Ins**.
5. Press **Finished - Turn Off** to turn off the DS200.
  6. After the Power button light goes off, remove the USB flash drive from the DS200 and deliver it, and any printed reports, to election headquarters.

#### Note



If the ERM Key Media is misplaced or damaged, the DS200 backup USB flash drive may be used to collect totals in ERM.

#### 9.6.3.1 Uncounted Ballots

Save any ballots that were not counted during voting in the temporary ballot storage bin. After closing the polls, remove and scan the uncounted ballots to add the totals to the tabulator's memory.

#### 9.6.3.2 Review Write-In Votes at Polling Place

After you close the polls, you can review the write-in votes that were cast on each DS200. You can use the screen to view the digitized images of ballot pages that contain write-in votes, or you can print the Write-in Review Report to view only the write-in portion of each of those digitized ballot images.

For complete and detailed instructions about write-in reviews, refer to Chapter 5 in your *DS200 Operator's Guide*.

# Chapter 10: Semi-Official Canvass Tabulation and Reporting

## 10.1 ERM Results Processing

### 10.1.1 Zero Report

Before processing election results, ensure that test results have been cleared.

Select this option to zero all precincts and groups for the election, under **Current Election Name**. This option is available only when you initially open ERM.

1. Click the radio button for **Zero out ballots cast**, then click **OK**.
2. Click **Yes** to zero out the ballots cast.

#### Note



This will clear all election results and all group folders. If you need to clear specific precincts without clearing the data in the group folders, use **Reset Counted Precincts**. Call ES&S Software Support if you have any questions about clearing results. Selecting **Zero out ballots cast** will not clear **Voter Registration** already entered.

#### Note



The following messages will appear on EL68A, System Log, indicating that any results have been cleared.

RESET RESULTS INITIATED BY STARTUP indicates that ERM is starting the process of clearing results

Messages will appear indicating that the results have been cleared for each type of equipment in your election

RESET RESULTS INITIATED BY STARTUP COMPLETED indicates that ERM has finished clearing all results.

3. From the ERM **Reports** menu, print the required precinct and election reports.

## 10.1.2 Import & Process Key Memory Device

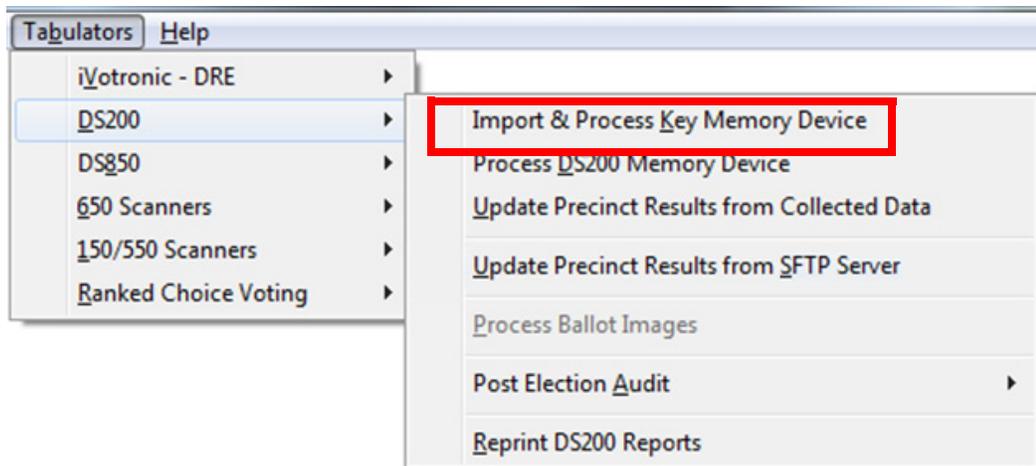
Before you can download results from the ES&S tabulators, you must perform the Import & Process Key Memory Device function from the Tabulators menu.

The Import & Process Key Memory Device function downloads the key and time stamp files created in Electionware. This process allows ERM to check the digital signatures on the results from your ES&S tabulators, and ensures that the ERM device and the poll place data come from the same election and generation.

**Note**  The ERM program uses the term *Key Memory Device* and the Electionware program uses the term *Reporting Key Media*, but both names refer to the same USB flash drive.

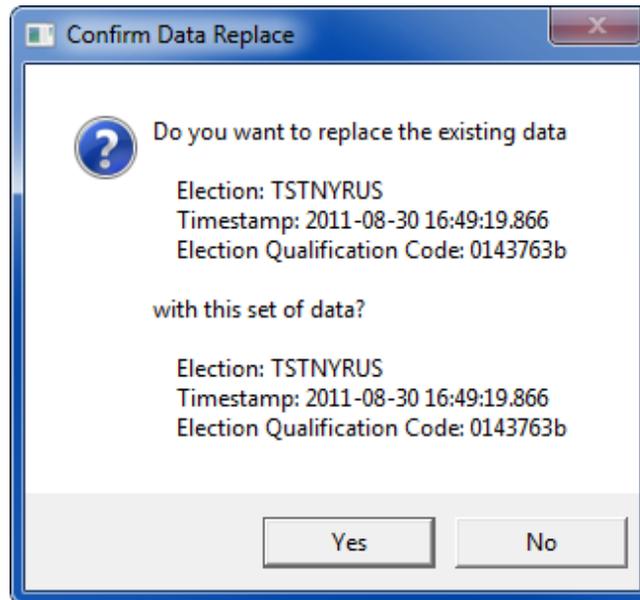
**Note**  The other functions on the Tabulators menu will not become available until after the Import & Process Key Memory Device step has been completed.

1. Insert the Reporting Key Media flash drive into a USB port in the ERM computer.
2. From the **Tabulators** menu, point to one of the tabulator types in use for this election (DS200, DS850) and select **Import & Process Key Memory Device**.

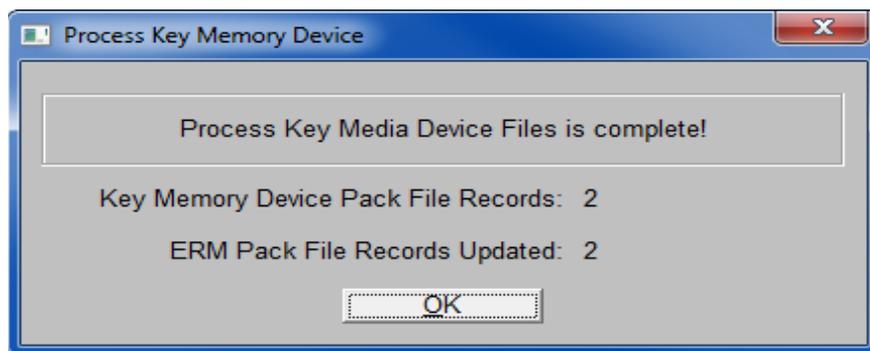


3. In the Import & Process Key Memory Device dialog box, click **OK**.

4. If data already exists the Confirm Data Replace dialog box will appear. Click **Yes** to replace the data.



5. In the Process Key Memory Device dialog box, click **OK**.

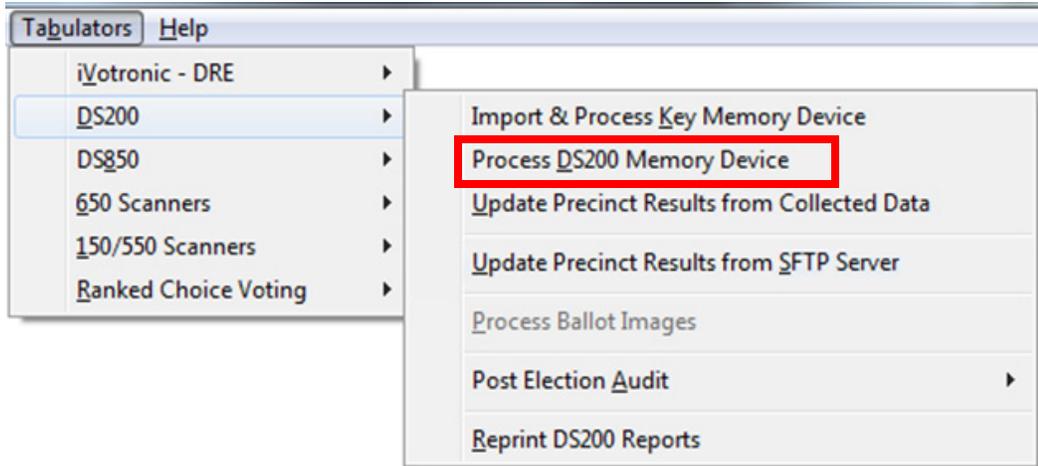


### 10.1.3 Process DS200 Memory Device

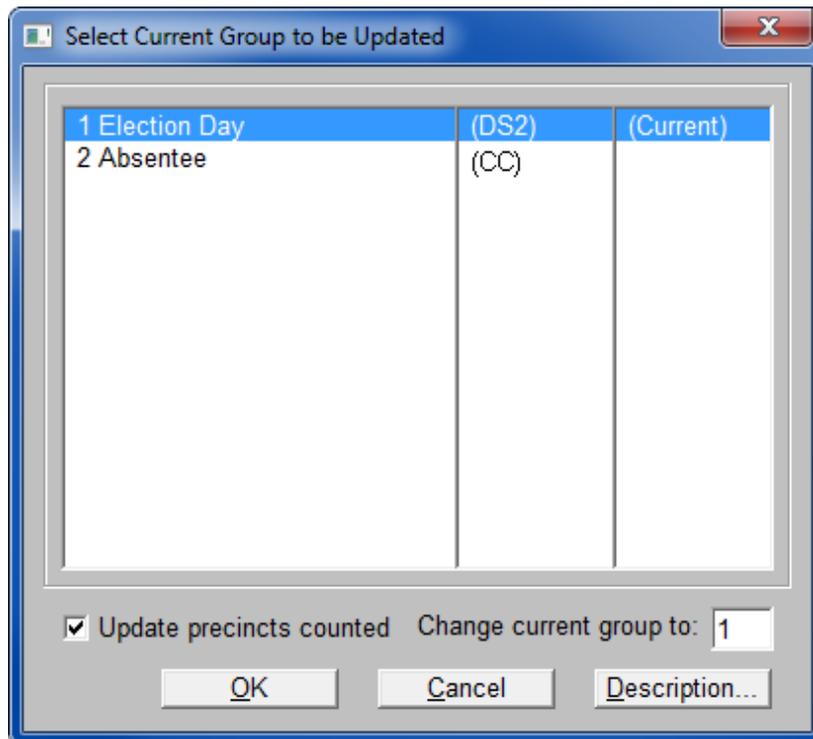
After processing the Key Memory Device, use the **Process DS200 Memory Device** option to download results to ERM. Results will be saved in the Group# folder in the c:\elecdata\

If you accidentally try to process the same USB flash drive again, ERM displays a message that the device has already been processed, and will not duplicate the results.

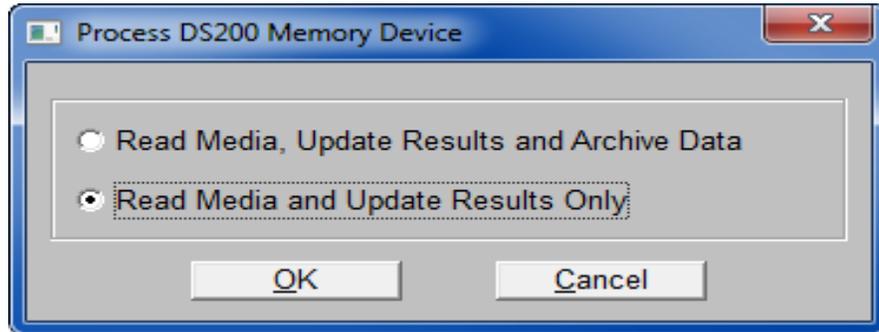
1. Insert the DS200 flash drive into a USB port in the ERM computer.
2. From the **Tabulators** menu, point to **DS200** and select **Process DS200 Memory Device**.



3. In the Select Current Group to be Updated dialog box, select the group to update and click **OK**.



4. In the Process DS200 Memory Device dialog box, select one of the following options:



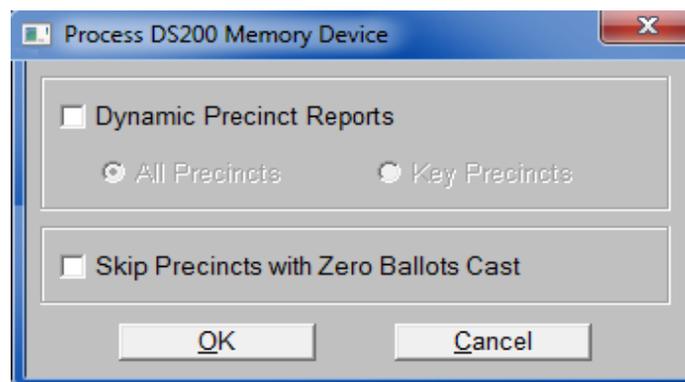
- **Read Media, Update Results and Archive Data** - allows you to process the flash drive, update your results, and archive data including the machine logs and any captured ballot images at one time. This step is necessary if you want to view images and results in the Acquire module of Electionware.
- **Read Media and Update Results Only** - this option will allow you to process the flash drive and update only the results. This is the faster option because it includes only the voting results.

**Note**



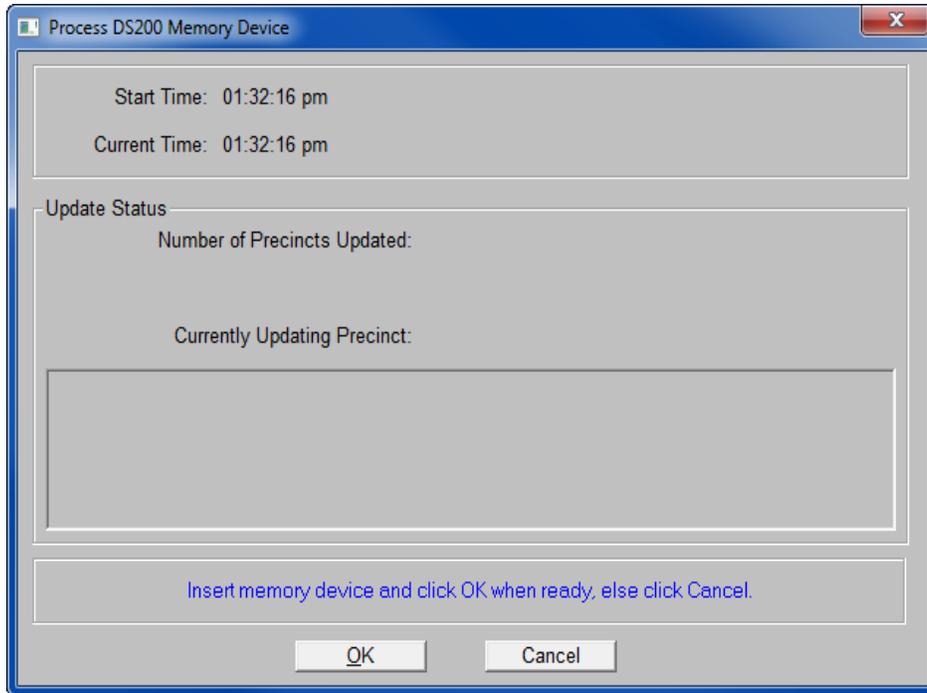
Many jurisdictions use the **Read Media and Update Results Only** option on election night, then use the **Read Media, Update Results and Archive Data** option the following day. This does not duplicate the results in ERM.

5. After you make your selection, click **OK**.

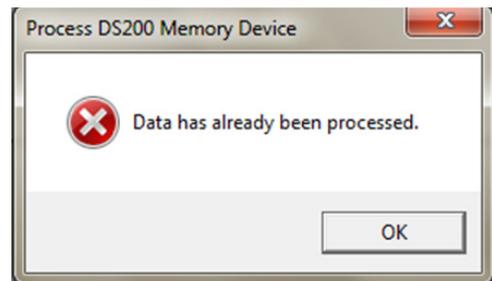


6. To print precinct reports automatically as they are updated, select **Dynamic Precinct Reports**.

7. To exclude precincts with zero ballots cast from the report, select **Skip Precincts with Zero Ballots Cast**.
8. Click **OK**.



9. Insert the DS200 election flash drive into the ERM computer, and click **OK** to update the ERM results database.
10. After ERM has processed the DS200 election flash drive, remove it. The screen displays which precincts have been updated.
  - If the data has already been processed, a dialog box will alert you. Click **OK**.



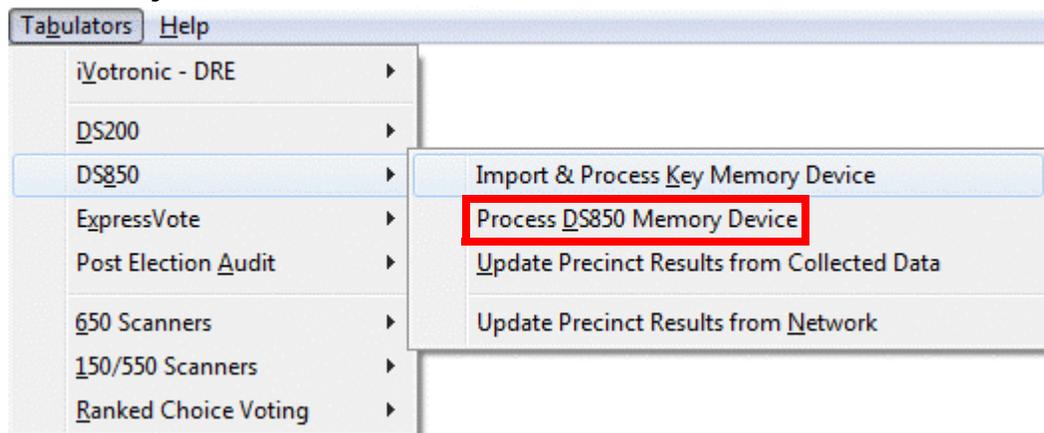
11. When you have processed all of the DS200 election flash drives, click **Cancel** to return to the main window.

### 10.1.4 Process DS850 Memory Device

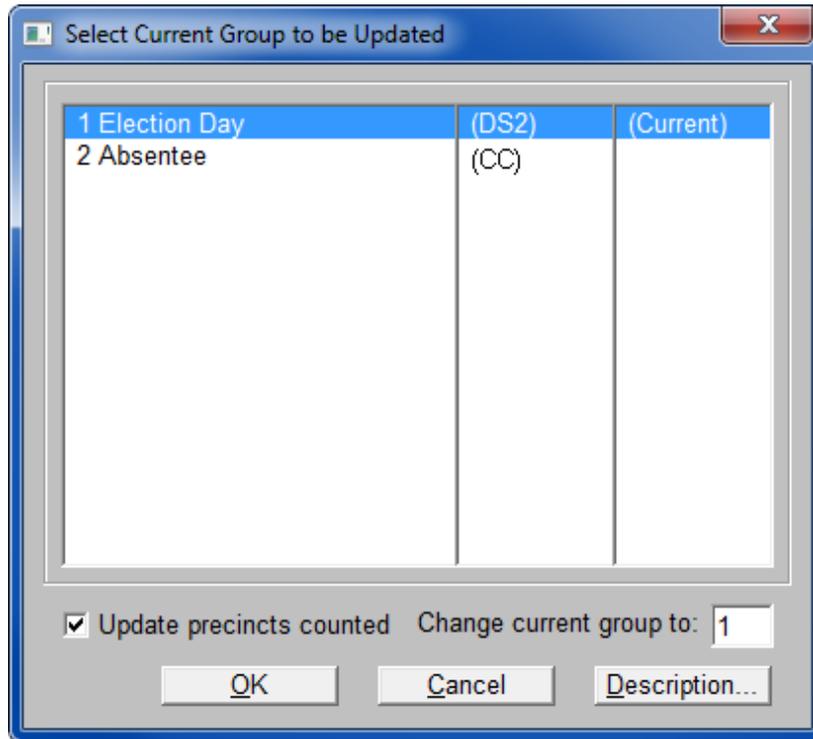
After processing the Key Memory Device, use the **Process DS850 Memory Device** option to download results to ERM. Results will be collected in the Group# folder in the c:\elecdata\

If you accidentally attempt to process the same flash drive more than once, ERM displays a message that the device has already been processed and does not duplicate the results.

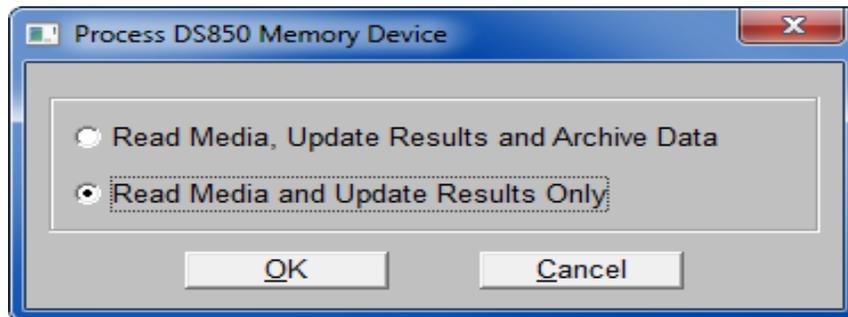
1. Insert the DS850 flash drive into a USB port in the ERM computer.
2. From the Tabulators menu, point to **DS850**, and select **Process DS850 Memory Device**.



3. In the Select Current Group to be Updated dialog box, select the group to update and click **OK**.



4. In the Process DS850 Memory Device dialog box, select one of the following options:



- **Read Media, Update Results and Archive Data** - allows you to process the flash drive, update your results, and archive data including the machine logs and any captured ballot images at one time. This step is necessary if you want to view images and results in the Acquire module of Electionware.

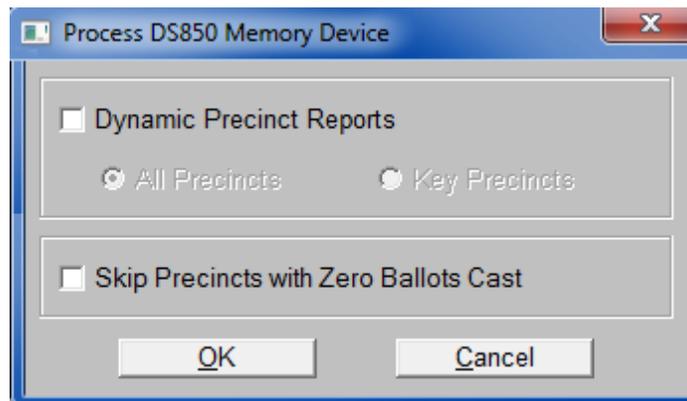
- **Read Media and Update Results Only** - this option will allow you to process the flash drive and update only the results. This is the faster option because it includes only the voting results.

**Note**



Many jurisdictions use the **Read Media and Update Results Only** option on election night, then use the **Read Media, Update Results and Archive Data** option the following day. This does not duplicate the results in ERM.

5. After you make your selection, click **OK**.



6. To print precinct reports automatically as they are updated, select **Dynamic Precinct Reports**.

7. To exclude precincts with zero ballots cast from the report, select **Skip Precincts with Zero Ballots Cast**.

**Important**



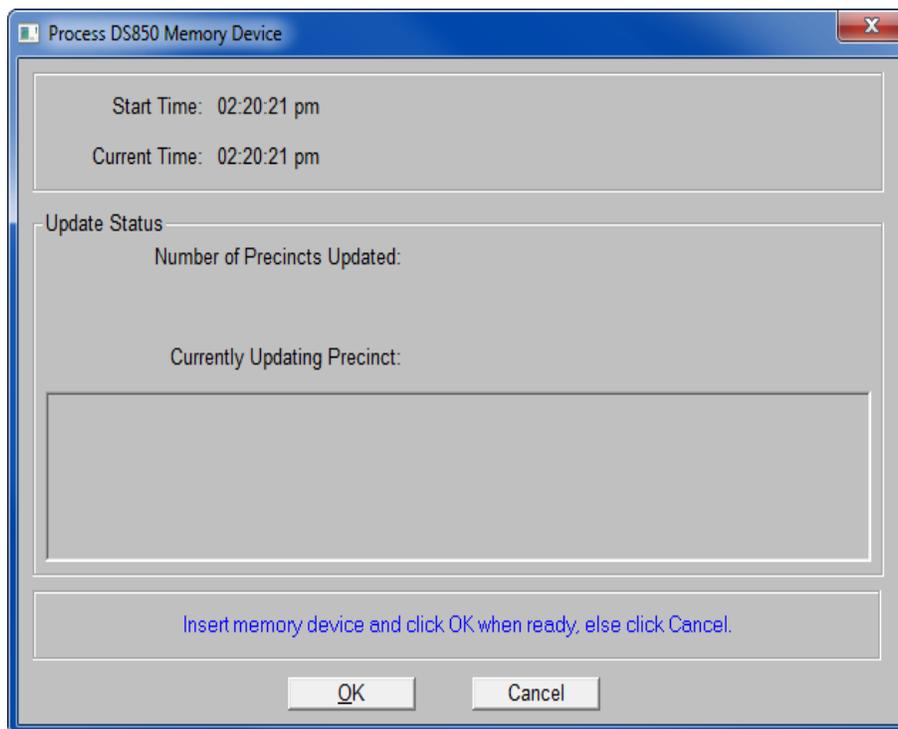
DO NOT use the **Skip Precincts with Zero Ballots Cast** option when you are updating from media in which a previously ERM-uploaded precinct has been cleared on the DS850. Using the **Skip Precincts with Zero Ballots Cast** option will prevent ERM from clearing out any previously uploaded results from that DS850-cleared precinct (assuming ballots for the cleared precinct have not been rerun on the DS850, before the (new) DS850 results collection).

For example, assume you:

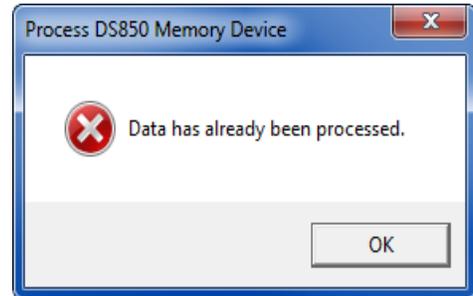
1. Exported DS850 results to a Flash Drive, which contained results for Precinct X, and
2. Uploaded the Flash Drive results into ERM, then
3. Cleared the results from Precinct X on the same DS850, and
4. Exported the DS850 results to a Flash Drive, then
5. Uploaded the Flash Drive results into ERM, with the Skip Precincts with Zero Ballots Cast option selected.

ERM will skip uploading the Flash Drive's Precinct X results and the previous uploaded DS850 Precinct X results (from step 2) will still be in the ERM results for Precinct X.

8. Click **OK**.



9. Insert the DS850 election flash drive into the ERM computer, and click **OK** to update the ERM results database.
10. After ERM has processed the DS850 election flash drive, remove it. The screen displays which precincts have been updated.
  - If the data has already been processed, a dialog box will alert you. Click **OK**.



11. When you have processed all of the DS850 election flash drives, click **Cancel** to return to the main window.

## 10.2 Precinct and Election Report Options

This section will explain the different report options.

1. From the **Reports** menu, click the report to generate.

### Precinct

**EL30, Precinct Report** – A Precinct Summary Report is a list of individual precincts and contest results. Customize the Precinct Summary Report by selecting the individual contests and precincts that are included. You can also print a Precinct Summary Report for individual reporting groups.

**EL30A, Prec Report–Group Detail** – The Precinct Summary Report with Group Detail is similar to the Precinct Summary report. You can use it to print totals for up to fourteen active reporting groups in addition to Election Totals.

### Election

**EL45, Election Summary Report** – An Election Summary Report lists the total number of votes received by each candidate/question and the percent of the total vote won by each candidate/question in your election.

**EL45A, Election Summary with Group Detail** – Generate an Election Summary with Group Detail to print totals for up to fourteen active reporting groups in addition to election totals.

This opens the window to select the options for the reports.

### 10.2.1 Selection Tab

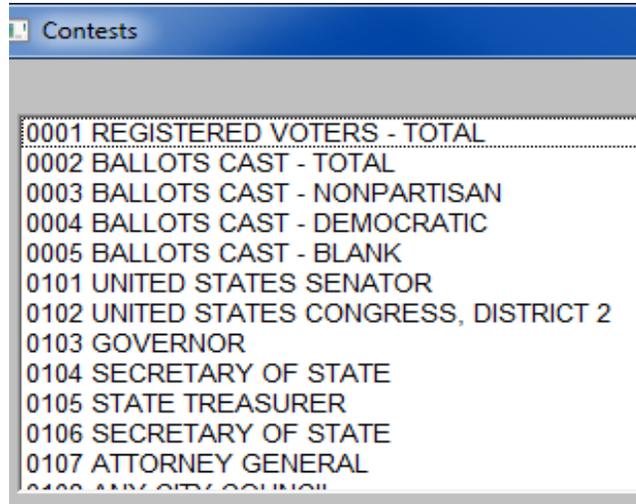
1. On the Selection tab, choose the contests and/or precincts to appear on your report.

The screenshot shows a dialog box with the following elements:

- Tabbed interface with tabs: Selection, Headings, Options, Reporting Group, Print Which Groups.
- Radio buttons for selection:  All,  Contest/Precinct,  File.
- Text boxes for 'Contest:' and 'Precincts:' with buttons 'Contests...' and 'Precincts...'.
- A dropdown menu and a 'New...' button.
- An 'Apply' button.
- 'Output Destination' section with radio buttons:  Disk,  Printer,  Internet, and an 'Apply' button.
- 'OK' and 'Cancel' buttons at the bottom.

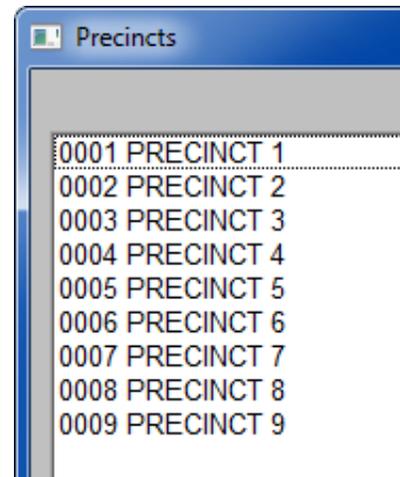
- Select **All** to print all contests and precincts
- Select **Contest/Precinct** to generate a report for specific contests or precincts. Take the following steps to select specific contests or precincts.

a. Type a contest sequence number in the **Contest** field or click **Contests** to open the Contest window



b. Select from the list of available contests. To select several contests, press and hold the Ctrl key while clicking the contests to select. There is a limit of 71 contests on this screen.

c. Type a precinct identification number in the **Precinct** field or click **Precincts** to open the Precincts window.



d. Select from the list of precincts. To select several precincts, press and hold **Ctrl** while clicking the precincts to select. There is a limit of 71 precincts on this screen.

- Select **File** to generate a report from an existing election file you have created. Select an available file from the list or create a new file.

## 10.2.2 Headings Tab

2. Click the **Headings** tab to enter the information to appear on your report headings.

The screenshot shows a software window titled "Headings" with the following fields and controls:

- Canvass Center Heading:** Three stacked text input fields.
- Canvass Left Edge Heading:** Text input field containing "SUMMARY REPORT".
- Line No.:** Text input field containing "1".
- Canvass Right Edge Heading:** Text input field.
- Buttons:** "Reset", "Use For This Run Only", "Apply", "OK", and "Cancel".

3. Enter up to three lines of identification text to appear at the top center of your report in the Canvass Center Heading fields.
4. Enter the text that appears at the top left of your report in the Canvass Left Edge Heading field.
5. Enter the line number on which you want this heading to print (1, 2, or 3) in the **Line No.** field.

### Note



If you choose to print something on line 3, the time/date stamp and the report number and page will print on the fifth line, instead of the fourth.

6. Enter the text that appears at the top right of your report in the Canvass Right Edge Heading.

- Click **Reset** to clear your settings. Click **Use For This Run Only** to only use your headings with the next report you print. Click **Apply** to use your headings for all reports of the same type.

### 10.2.3 Options Tab

- Click the **Options** tab, and choose the options to include on the report.

Option	Description	Active for
Include over/under reporting?	to include over-vote and under-vote totals in your report.	EL30, Precinct Report EL30A, Prec Report–Group Detail EL45, Election Summary Report EL45A, Election Summary with Group Detail
Include date/time stamp	Include the date and time your report was generated at the top left of the first page of your report	EL30, Precinct Report EL30A, Prec Report–Group Detail EL45, Election Summary Report EL45A, Election Summary with Group Detail

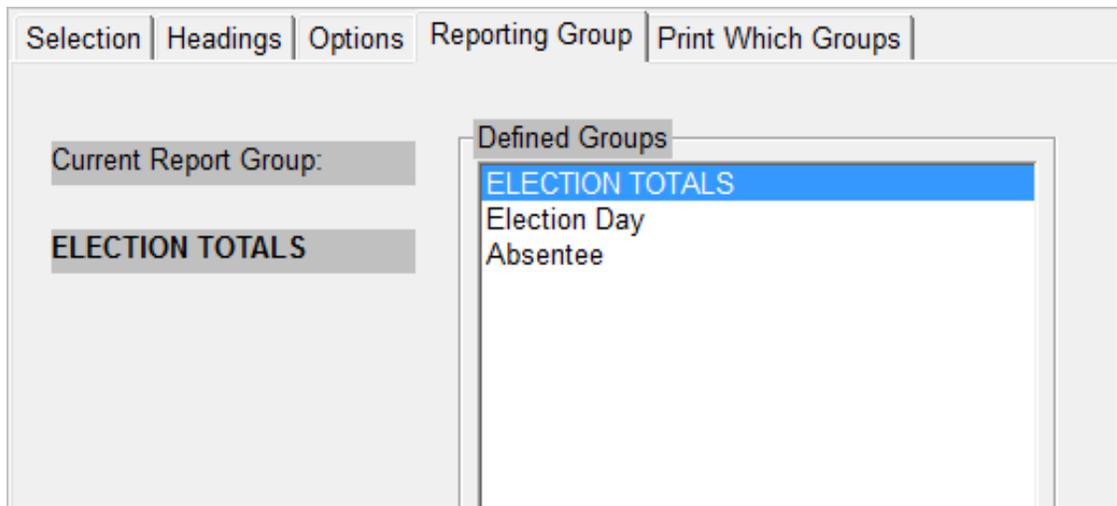
Option	Description	Active for
Include page number?	Includes page numbers	EL30, Precinct Report EL30A, Prec Report–Group Detail EL45, Election Summary Report EL45A, Election Summary with Group Detail
Include Precincts reported line	The number of precincts counted on your report. This will include a line for each contest and for example will show, (WITH 3 OF 9 PRECINCTS COUNTED)	EL45, Election Summary Report EL45A, Election Summary with Group Detail
Print totals only (no detail)	Displays election totals without including precinct details.	Not available
Summarize absentee precincts?	Combines the absentee numbers for each of your precincts into a single absentee total.	Not available
Use seq. page numbering?	Numbers your pages sequentially. If it is not selected, the number of the first contest on the page, the last contest on the page and the page number within the contest set, determines your page number.	Not available
Separate Reports by Party?	Organizes your results by party in precinct sequence order. When Separate Reports by Party is not selected, your results are organized by precinct in party sequence order	Not available
Always use R/V totals?	<b>Unchecked</b> - will only show the registered voter totals for precincts that have been counted. <b>Checked</b> - will show the registered voter totals on the report for all precincts in the election.	EL45, Election Summary Report EL45A, Election Summary with Group Detail
Include only counted precincts?	Includes only counted precincts in the report.	EL30, Precinct Report EL30A, Prec Report–Group Detail
Print contest totals?	Totals line for each contest in the report.	EL30, Precinct Report EL30A, Prec Report–Group Detail EL45, Election Summary Report EL45A, Election Summary with Group Detail

Option	Description	Active for
Print candidates in vote sequence?	Prints the candidates in vote sequence, listing candidates in order of the greatest vote tally first. If this option is not selected, the report will print in the same order that the candidates occur on the ballot (or in home rotation if candidates rotate).	EL45, Election Summary Report EL45A, Election Summary with Group Detail
Print 1 up Format?	If selected will print the report in one column format. If it is not selected it will print the contest in two columns.	EL30, Precinct Report EL45, Election Summary Report
Exclude local contests?	Excludes totals for local contests from the report	EL45, Election Summary Report EL45A, Election Summary with Group Detail
Percentages	<p><b>Select No Cand% ? No OV/UN%</b> - to omit all percentages from your report.</p> <p><b>Select Cand % Based on Votes Cast No. ov/uv %</b> - to print the candidate percentages based on the number of votes cast in that contest, not including over and under votes. If <b>Include over/under reporting?</b> is checked these additional options are able to be selected:</p> <p><b>Cand % based on votes cast-With ov/un %</b> - to print the candidate percentages based on the number of votes cast in that contest, including over and under votes.</p> <p><b>Cand % based on elig. votes-With ov/un %</b> - to print the candidate percentages based on the number of eligible votes cast in that contest, including over and under votes.</p>	EL30, Precinct Report EL30A, Prec Report-Group Detail EL45, Election Summary Report EL45A, Election Summary with Group Detail
Number of copies	Sets the number of reports you would like to generate.	EL30, Precinct Report EL30A, Prec Report-Group Detail EL45, Election Summary Report EL45A, Election Summary with Group Detail
District control file name	The District Control File is located in the \elecdata folder and has a DST extension.	Not available

Option	Description	Active for
Precinct terminology	Enter the term in the field used by the jurisdiction to describe precincts. Wards, Election Districts.	EL45, Election Summary Report EL45A, Election Summary with Group Detail
Prt. Cert	Controls how the certification message appears on the reports.	Not available
Print multiple conts on same pg	Controls how contests appear on your reports	Not available
Print Multiple Copies in what seq?	Controls the order in which reports are printed <b>N</b> ? Print one copy of the report <b>P</b> ? Print multiple copies of each precinct's results before printing results for the <b>R</b> ? Print a copy of the entire report and then repeat the process for the next	EL30, Precinct Report EL30A, Prec Report-Group Detail EL45, Election Summary Report EL45A, Election Summary with Group Detail

### 10.2.3.1 Reporting Group Tab

9. On the **Reporting Group** tab, select the group to print.



Select **ELECTION TOTALS** to print a total of all your reporting groups. Select one of the other groups you defined to print a total of only that group.

## 10.2.4 Print Which Groups Tab

In the **Report Column**, you can change the order of the groups. Put the number in the column in the order you would like it to show on your reports. Enter "0" if you do not want a column to appear on your report. In the **Column Heading**, to change the text you can type it here up to 9 characters.

The screenshot shows the 'Print Which Groups' tab with the following data:

Defined Groups	Report Column	Column Heading
1. Election Day	1	Elec Day
2. Absentee	2	ABS

### 10.2.4.1 Output Destination

1. Return to the **Selection** tab, and select an **Output Destination**.

The screenshot shows the 'Selection' tab with the following configuration:

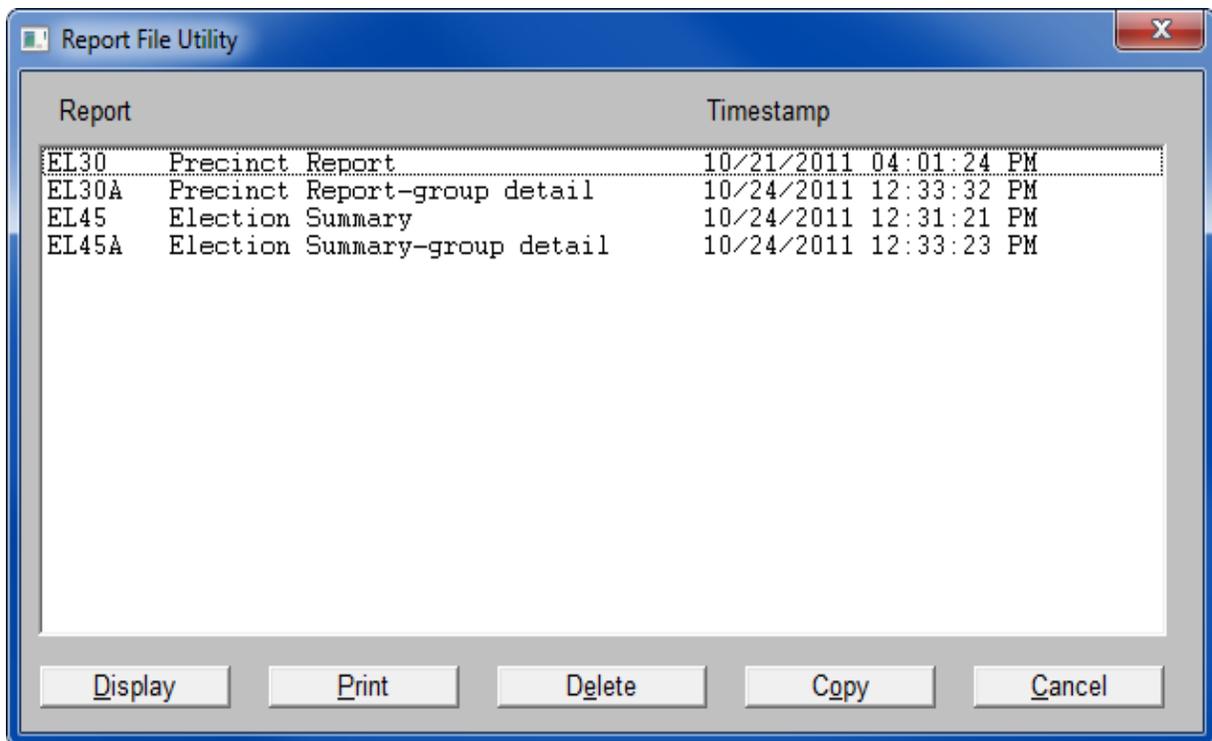
- All
- Contest/Precinct
  - Contest: [ ] [Contests...]
  - Precincts: [ ] [Precincts...]
- File [ ] [New...]
- [Apply]

**Output Destination**

- Disk
- Printer
- Internet
- [Apply]

[OK] [Cancel]

- Click **Disk** to view the report on your PC. You have the option to print the report after you view it.
  - Click **Printer** to send the report directly to a printer without viewing it.
  - Click **Internet** to print the report in HTML format.
2. If you selected **Printer** as an **Output Destination**, the report will automatically print when you click OK.
  3. If you selected **Disk**, the report file will load and will show the report file you have selected. Click **OK** to load the The Report File Utility window.
  4. Select your report from the Report File Utility.



- **EL30** - Precinct Report
  - **EL30A** Precinct Report-group detail
  - **EL45** - Election Report
  - **EL45A** - Election Report-group detail
5. Click the appropriate button to perform one of the following actions.
    - Click **Display** if you want the report to appear on your PC for immediate viewing.

- Click **Print** to send the report to the printer.

**Note**



The Print option only works with a printer connected to the PC through the LPT1 port. If you are using a USB printer, click **Copy** and save the report as a TXT file. Then, open the TXT file and print it.

- Click **Delete** to delete the selected report.
- Click **Copy** to copy the report to another location or media.

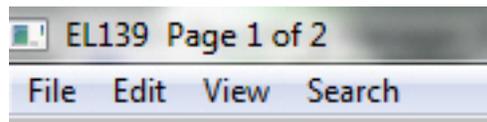
**Note**



When using the Copy option you must manually enter the file extension (TXT, LST, HTM) in the File name of the report you are copying. (For EL45.txt)

#### 10.2.4.2 Display the Report

When you display a report, the following menu appears at the top left of the report screen.



To change the font size, click **Edit**.

To navigate within the report, click **View**. Use the following commands:

- To go to the first page, select **First Page** or press Ctrl + F.
- To go to the last page, select **Last Page** or press Ctrl + L.
- To advance one page, select **Next Page** or press Ctrl + N.
- To go back one page, select **Previous Page** or press Ctrl + P.
- To go to a specific page, select **Go to Page** or press Ctrl + G, then enter the page number.

#### Search and Find

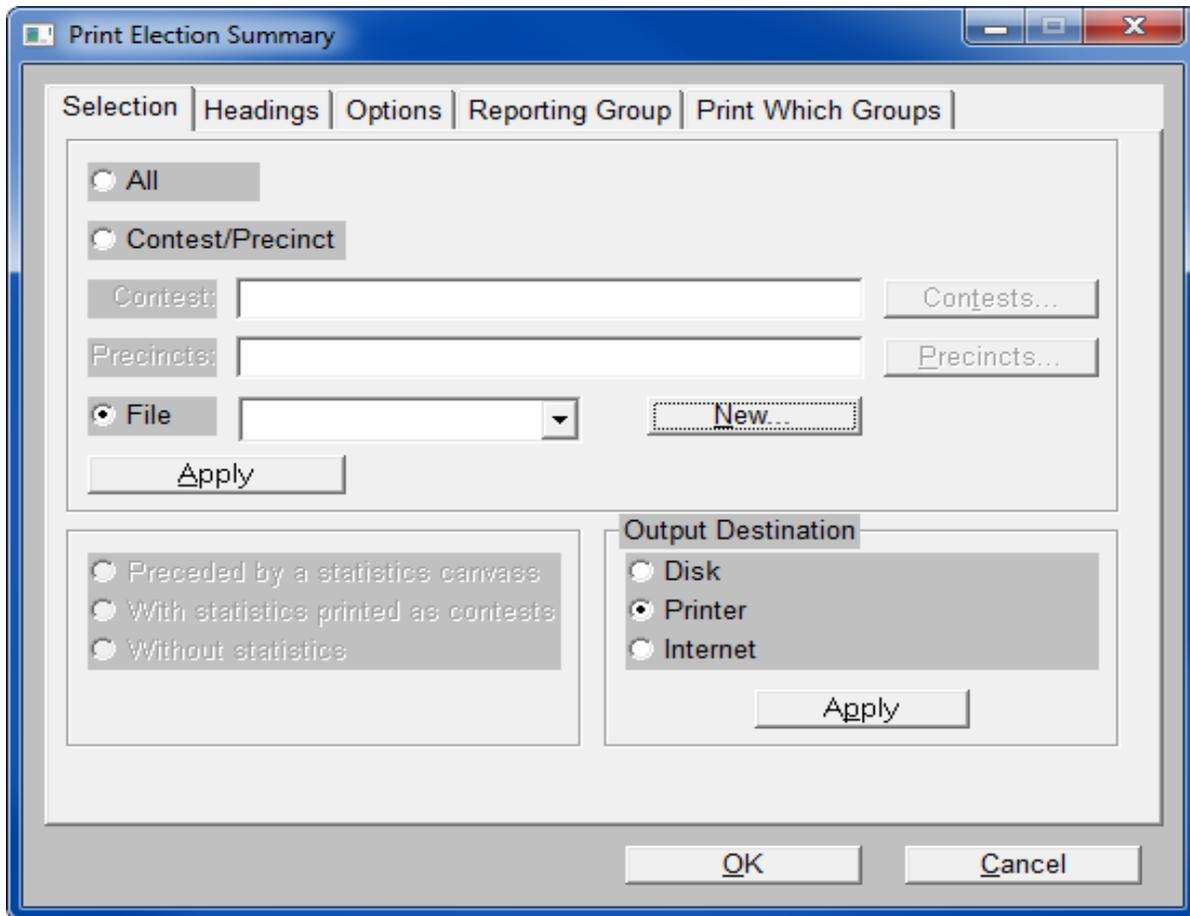
To locate a particular name or string of text, click **Search** and select **Find**.

The Find window appears.

Enter the text string and click **Find**. The program will find and highlight that string in the report. Click **Find Next** to find the next instance of that string.

#### 10.2.4.3 Set up an .A01 File from Which to Print

When generating a report by specific contests and/or precincts, there is a limit of 71 contests or precincts to be selected on the report screen. To select more than that number, create an .A01 text file from which to print.



1. On the **Selection** tab of the report, click **New** next to the **File** list to open the **Change Precinct/Contest Selection File** window.
2. Click **New** on the Change Precinct/Contest Selection File window.

3. The report option window will open to the Headings tab.

The screenshot shows a window titled "Print Election Canvass" with a close button (X) in the top right corner. The window has five tabs: "Headings", "Contests", "Precincts", "Total", and "Sequence". The "Headings" tab is selected. Inside the window, there are several text input fields. At the top center, there is a label "Canvass Center Heading" followed by three stacked text boxes containing the text "ANY COUNTY, USA", "GENERAL ELECTION", and "NOVEMBER 8, 2011". Below these, there are two columns of text input fields. The left column has a label "Canvass Left Edge Heading" and a text box containing "UNOFFICIAL". The right column has a label "Canvass Right Edge Heading" and an empty text box. At the bottom of the window, there are three buttons: "OK", "Cancel", and "Save As".

4. Enter up to three lines of identification text to appear at the top center of your report in the Canvass Center Heading fields.

Make any necessary changes and click **OK** to save them for each additional printing of this report. Any changes you make to the headings will not appear on other reports.

5. Enter the text that appears at the top left of your report in the Canvass Left Edge Heading field.

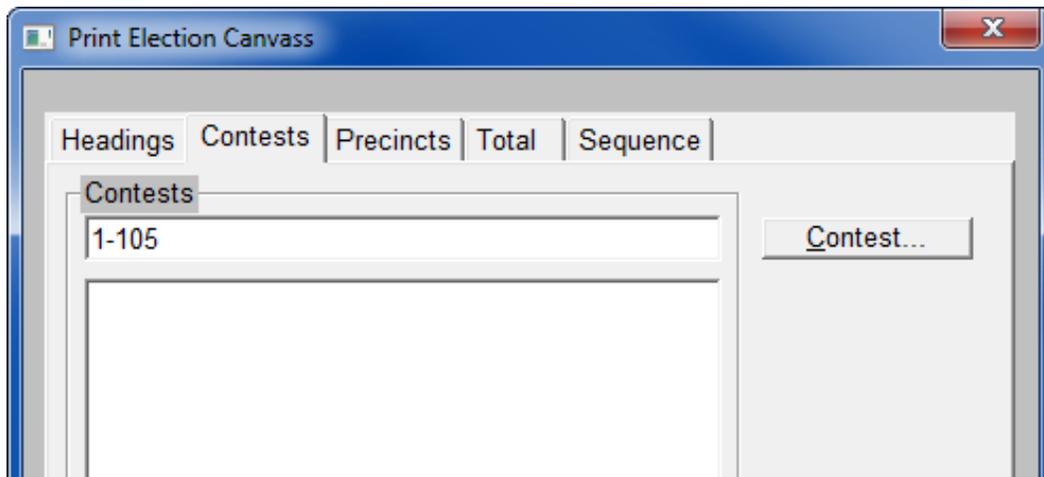
**Note**



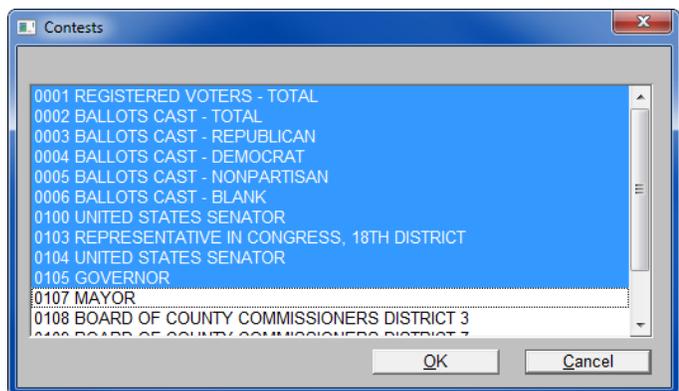
The Line No. field does not appear on the **Headings** tab for all reports.

6. Enter the text that appears at the top right of your report in the Canvass Right Edge Heading.

7. Click the Contests tab.

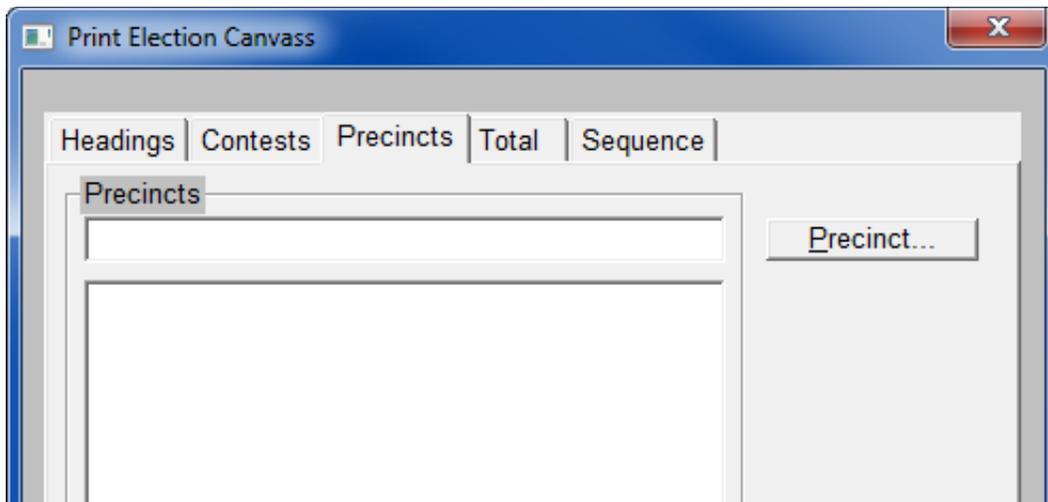


8. Select the contests to include in your report.



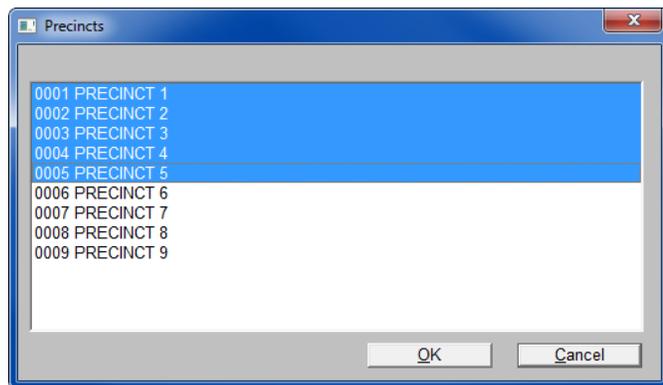
9. Click **OK** to continue. The Print Election Canvass window reappears with the selected contest numbers in the **Contests** field. Press **Enter** to save your selections and move the contests to the bottom window.

10. Click the Precinct tab.

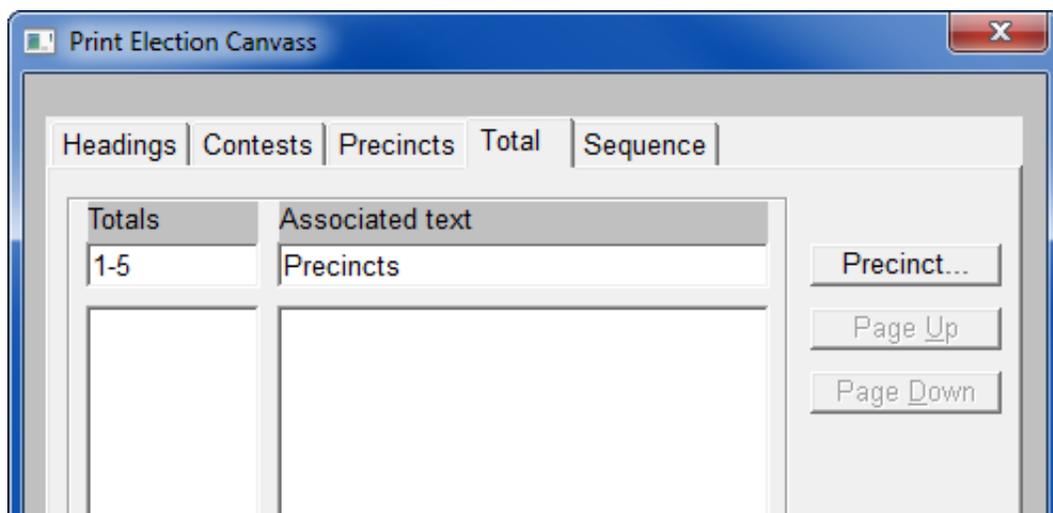


11. Select the precincts to include in your report.

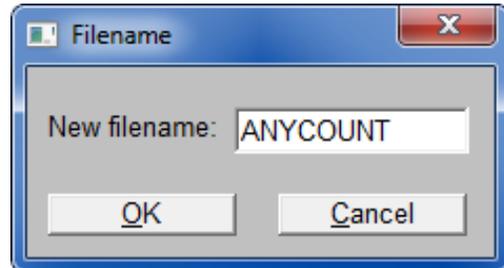
12. Click **OK** in the contest list to continue. The Print Election Canvass window reappears with the selected contest numbers in the **Precincts** field. Press **Enter** to save your selections and move the contests to the bottom window.



13. To create groups to view election results for groups of precincts, click the Total tab.



14. Press **TAB** to move to the Associated Text field and enter text that identifies your group ("Precincts 105-110," for example). Press **Enter** to save your selections and move the contests to the bottom window.
15. Click **OK** or **Save As** and enter a file name in the New filename field.
16. Enter your .A01 file name in the **New filename** field, and click **OK**. The file name will appear in the **File** field on the Selection tab.
17. Click **OK** to save your file and return to the report options window.



#### 10.2.4.4 Precinct and Election Report Examples

##### *EL30, Precinct Report*

PRECINCT REPORT		ANY COUNTY, US	UNOFFICIAL	
RUN DATE: 04/06/09		GENERAL ELECTION	REPORT-EL30 PAGE 0001-01	
RUN TIME: 03:50 PM		NOVEMBER 4, 2008		
0001 PRECINCT 1				
			VOTES	PERCENT
REGISTERED VOTERS - TOTAL	. . . . .		10000	
BALLOTS CAST - TOTAL	. . . . .		8500	
BALLOTS CAST - BLANK	. . . . .		0	
VOTER TURNOUT - TOTAL	. . . . .			85.00
VOTER TURNOUT - BLANK	. . . . .			
Governor				
(VOTE FOR) 1				
GEORGE WASHINGTON (REP)	. . . . .		3500	35.11
THOMAS JEFFERSON (DEM)	. . . . .		2500	25.00
BEN FRANKLIN (CON)	. . . . .		500	5.02
JOHN ADAMS (LIB)	. . . . .		250	2.51
TEDDY ROOSEVELT (SHK)	. . . . .		150	1.50
FRANKLIN ROOSEVELT (SLB)	. . . . .		200	2.01
ABRAHAM LINCOLN (LAB)	. . . . .		1400	14.04
ULYSSES S. GRANT (COM)	. . . . .		200	2.01
ANDREW JACKSON (COU)	. . . . .		700	7.02
ROBERT E. LEE (FRE)	. . . . .		550	5.52
Write-In	. . . . .		20	.20
Total	. . . . .		9970	
Over Votes	. . . . .		10	
Under Votes	. . . . .		20	



EL45A, Election Summary with Group Detail

SUMMARY REPT-GROUP DETAIL		ANY COUNTY, US		GENERAL ELECTION		REPOR
RUN DATE:04/07/09 10:19 AM		NOVEMBER 4, 2008				
	TOTAL VOTES	%	Election Day	Absentee		
PRECINCTS COUNTED (OF 2)	2	100.00				
REGISTERED VOTERS - TOTAL	10,000					
BALLOTS CAST - TOTAL	8,760		8,500	260		
BALLOTS CAST - BLANK	0		0	0		
VOTER TURNOUT - TOTAL		87.60				
VOTER TURNOUT - BLANK						
<b>Governor</b>						
<b>(VOTE FOR) 1</b>						
GEORGE WASHINGTON (REP)	3,600	35.19	3,500	100		
THOMAS JEFFERSON (DEM)	2,550	24.93	2,500	50		
BEN FRANKLIN (CON)	525	5.13	500	25		
JOHN ADAMS (LIB)	250	2.44	250	0		
TEDDY ROOSEVELT (SMK)	150	1.47	150	0		
FRANKLIN ROOSEVELT (SLB)	200	1.96	200	0		
ABRAHAM LINCOLN (LAB)	1,415	13.83	1,400	15		
ULYSSES S. GRANT (COM)	220	2.15	200	20		
ANDREW JACKSON (COU)	725	7.09	700	25		
ROBERT E. LEE (FRE)	570	5.57	550	20		
Write-In	25	.24	20	5		
<b>Total</b>	<b>10,230</b>		<b>9,970</b>	<b>260</b>		
<b>Comptroller</b>						
<b>(VOTE FOR) 1</b>						
CHESTER A. ARTHUR (REP)	2,050	20.08	2,000	50		
ADLAI E. STEVENSON (DEM)	3,100	30.36	3,000	100		
MARTIN VAN BUREN (CON)	1,020	9.99	1,000	20		
CALVIN COOLIDGE (LIB)	1,530	14.99	1,500	30		
SPIRO AGNEW (SMK)	1,040	10.19	1,000	40		
JOHN C. BRECKENRIDGE (LAB)	1,310	12.83	1,300	10		
Write-In	160	1.57	150	10		
<b>Total</b>	<b>10,210</b>		<b>9,950</b>	<b>260</b>		

## 10.3 Election Night Reporting

Verify that the ERM database was initialized with the Initialize State Cross Reference File option selected.

Load election totals as needed for your first report. When you have printed and verified the summary reports, you are ready to generate your electronic transfer file.

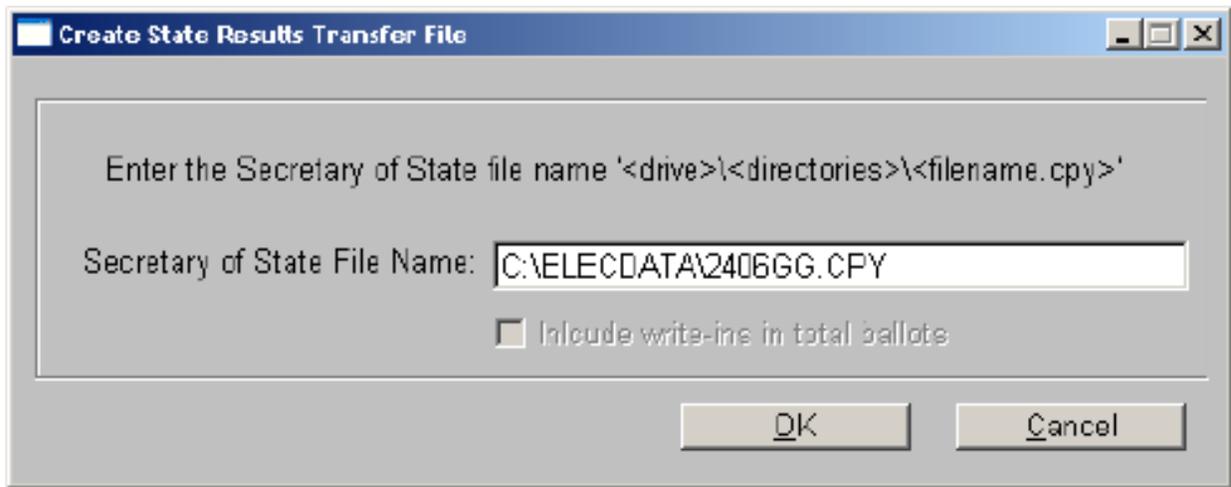
1. From the **State Transfer** menu, click **Create State Transfer File**.



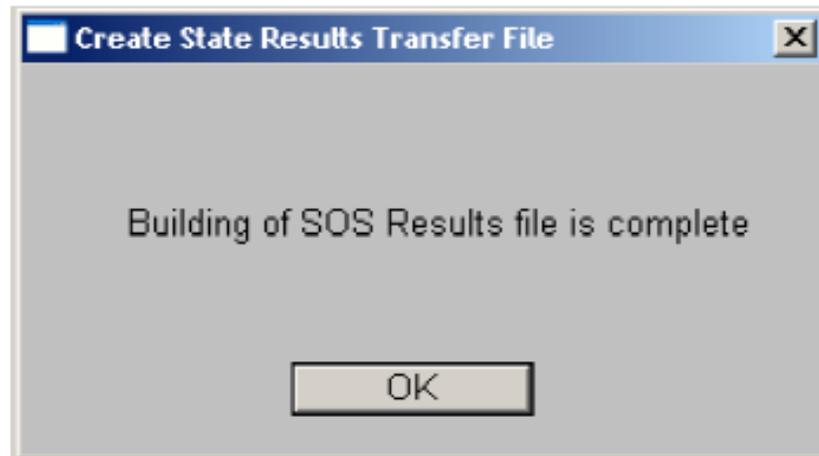
2. Select from the following report types.

- REGL - File used to generate all reports on election night except for the final election night report.
- FINL - Last report upload for election night reporting.
- UPDT - Any report that is uploaded after election night. This will include intermediate report ran after further processing of Vote By Mail ballots, provisional ballots and duplicated ballots.
- SOV - Final reporting for County including all verified write-ins.
- SSOV - Final reporting for County with specific breakdown of political subdivision.

3. Click **OK**.



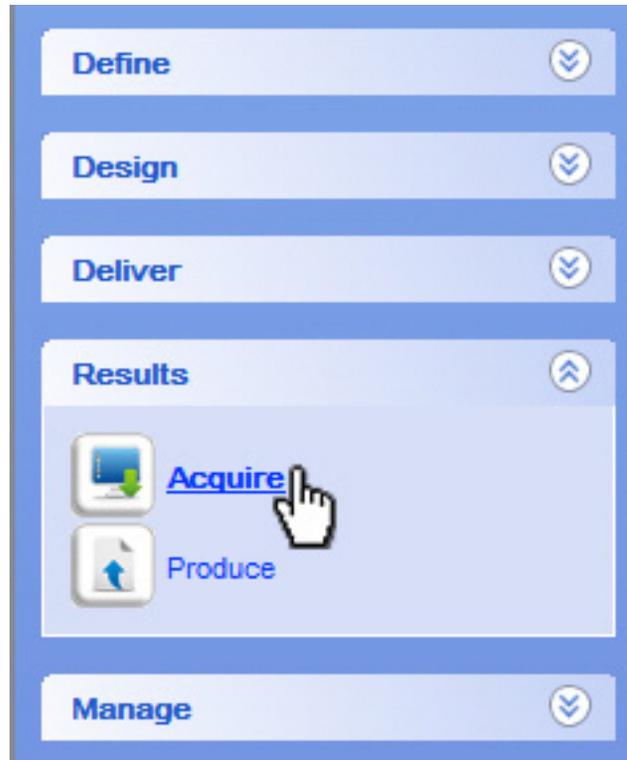
4. Type the SOS file name in the Secretary of State File Name field. This is the copy of the SOS template file that was generated earlier and has the extension CPY.
5. Click **OK**. The software will then run the totals through the update.



6. When the confirmation message appears, click **OK**.
7. In Windows Explorer, browse to the root folder of elecdata and locate the file that was initially used to generate the SOS template (for example, 2406GG.TXT).
8. Save that file to removable memory device and upload it to the CALVOTER system. A copy of the Election Summary report may also be requested for submission to ensure that results are transferred correctly.

## 10.4 Load Results into Electionware Acquire Module

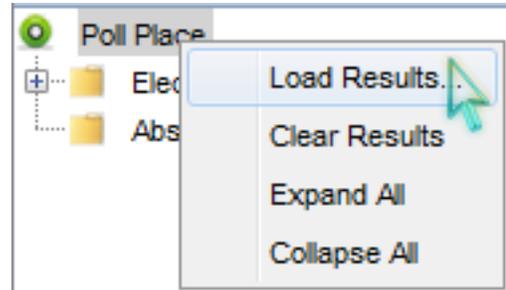
After the election, *Acquire* is used to import cast vote records and ballot images collected by reading the election media into ERM. Additional *Acquire* functions are used to review, export, and report media device-related data.



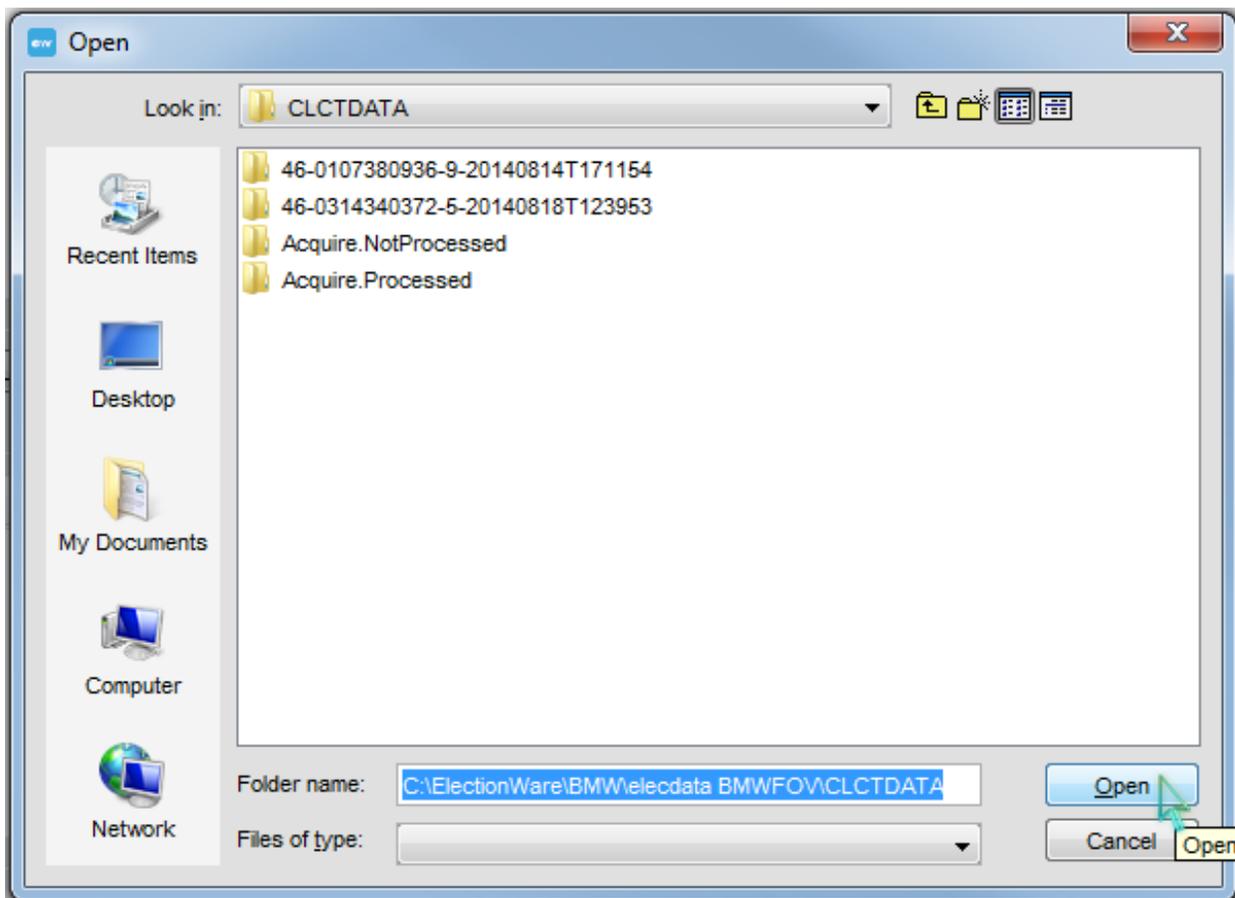
When ERM receives the raw election results data from media storage devices (ES&S flash drives) used in the election's DS200 and DS850 scanners, it allows this data to be stored on your workstation. If the data was archived in ERM, then these results files can be loaded into Electionware with the *Acquire* module. Results files may alternatively be loaded into Electionware directly from the election's media.

Before loading election results into Electionware, clear any test results that have been loaded, and print a summary report verifying that results totals are **zero**.

1. Select the **Load Results** tab.  
If the Load Results tab is not open, right-click **Poll Places** in the Navigator tree, then select **Load Results**.

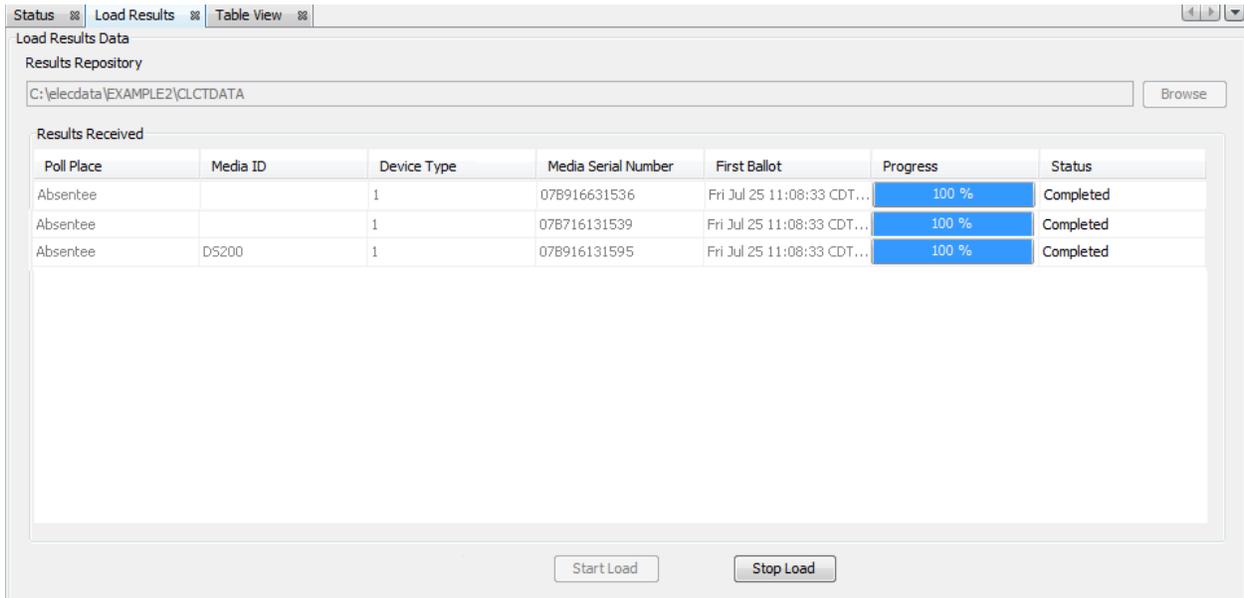


2. Click **Browse**. Navigate to the folder that contains the election results files. By default, ERM places the election results files in the folder C:\elecdata\\CLCTDATA.
3. In the Open window, click **Open**.



On the Load Results tab, the path to the specified CLCTDATA folder appears in the Results Repository field, and the Start Load button is enabled.

4. Click **Start Load** to load the results data.



The import progress of the election results will appear in the Progress column of the Load Results tab. When the import is complete, the word "Completed" appears in the Status Column. If the load is not manually stopped by the user, subsequent data loaded into ERM will automatically be loaded into Acquire. When loading is complete, click **Stop Load**.

If a problem occurs while loading data, click **Stop Load** to stop loading data. If an error occurs while loading the results data, a description of the error will appear in the Error Status Panel at the bottom of the Load Results tab. Use the vertical scroll bar to view this area of the Load Results tab. Click **Clear** to clear any descriptions in the Error Status panel.

Media storage device details loaded on the Load Results tab include:

**Poll Place** – Name of the selected poll place

**Media ID** – Electionware-assigned ID number associated with the encoded device. The Media ID number is unique for each piece of media encoded for a poll place.

**Device Type** – Type of scanner equipment used to process the acquired results: either DS200 or DS850

**Media Serial Number** – Number associated with the encoded media flash drive. Each flash drive in the election has a unique serial number.

**First Ballot** – Date and time of the first ballot cast for media storage devices whose results have been loaded

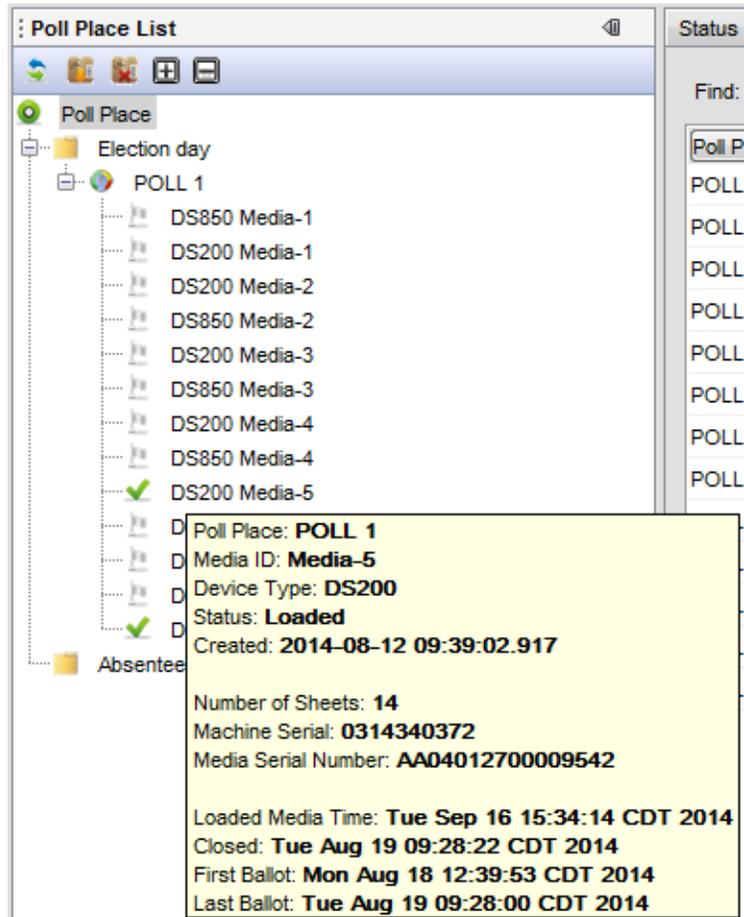
**Progress** – The percentage of load completion for each data type during the loading process

**Status** – Load status of the media storage device: Either *Completed* or *Not Loaded*

### 10.4.1 View Poll Place Media

The Poll Places List shows the media created for each polling place in the election database. Poll place types and poll places are listed by name. Media storage devices are listed by the Media ID number assigned by Electionware when the media was created.

Click the plus sign to the left of a poll place type to display the list of polling places of that type by Media ID number. Click the plus sign to the left of a poll place to view each piece of media associated with that poll.



Hover the mouse pointer over a poll place or piece of media to view related details in a tool-tip. The details will change, depending on if it is loaded or unloaded media, or DS200/DS850 media.

### 10.4.1.1 Media Status Indicators

In the Navigator tree, all media associated with a particular poll place is listed under that poll place.

#### Machine Media Icons:

Machine media that has been loaded will have a green checkmark icon.	
Machine media that has not been loaded will have a white flag icon.	

#### Poll Place Icons:

A poll place with no associated media loaded will have a white flag icon.	
A poll place with some but not all associated media loaded will have a colored ball icon.	
A poll place with all associated media loaded will have a green checkmark icon.	

### 10.4.1.2 Poll Place Table View

Select the **Poll Place Table View** tab to display details about the election media.

Select the **Poll Place** node in the Navigator tree to display the media encoded for all poll place types. Select one poll place type to display the media encoded for only poll places of the selected type.

Poll Place	Device Type	Media ID	Machine Serial	First Ballot	Media Serial Number	Status	Loaded Media T...
POLL 1	DS850	Media-1	n/a		AA04012700009399	Not Loaded	
POLL 1	DS200	Media-1	n/a		200524439204E8C12078	Not Loaded	
POLL 1	DS200	Media-2	n/a		AA04012700009832	Not Loaded	
POLL 1	DS850	Media-2	n/a		AA04012700009868	Not Loaded	
POLL 1	DS200	Media-3	n/a		AA04012700010605	Not Loaded	
POLL 1	DS850	Media-3	n/a		AA04012700010637	Not Loaded	
POLL 1	DS200	Media-4	n/a		AA04012700010588	Not Loaded	
POLL 1	DS850	Media-4	n/a		AA04012700010002	Not Loaded	

The name of the Poll Place Table View tab updates to reflect the selection.

Media storage device details displayed on this tab can include:

**Poll Place** – Name of the selected poll place

**Device Type** – Type of equipment used to process the acquired results: DS200 or DS850

**Media ID** – ID number associated with the encoded device. The Media ID number is unique for each piece of media encoded for a poll place.

**Machine Serial** – Serial number of the scanner that the device was installed on during the election

**First Ballot** – Date and time of the first ballot cast for media storage devices whose results have been loaded

**Media Serial Number** – Number associated with the encoded media. Each piece of media in the election has a unique serial number

**Status** – Load status of the media storage device: Either *Loaded* or *Not Loaded*

**Loaded Media Time** – Date and time results were loaded for each piece of media whose results have been loaded

**Number of Sheets** – Total number of sheets on the device, for media whose results have been loaded

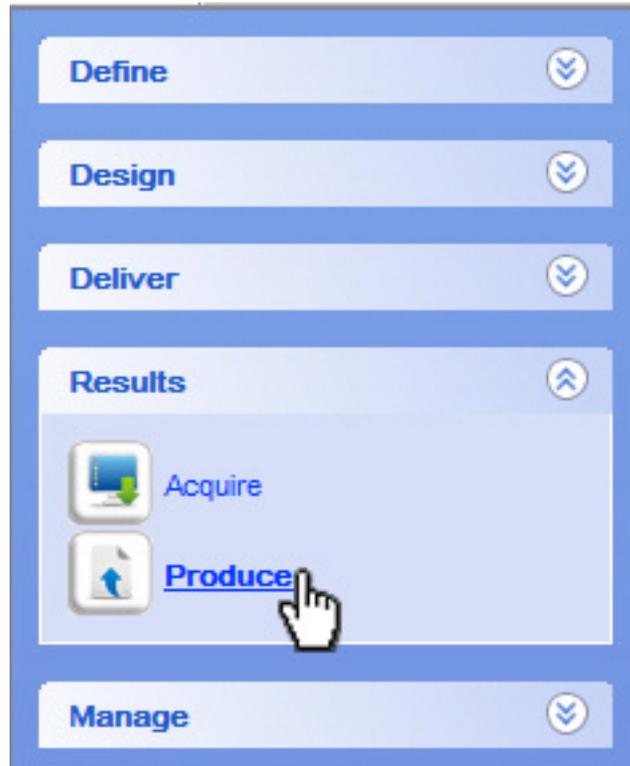
**Created** – Date and time the media was encoded

**Closed** – Date and time the polls were closed for the scanner in which the media was installed during the election

**Last Ballot** – Date and time of the last ballot cast for media whose results have been loaded

## 10.5 Export Ballot Records in Electionware Produce Module

After results have been loaded, in the Produce module, ballot records can be filtered and exported. Selected ballot images can be exported with or without their associated Cast Vote Records (CVRs). CVRs for selected contests can be exported with or without write-in images. Ballot scan images and CVRs can be viewed, printed and saved in the Ballot Viewer.



Procedures in this section assume that you have loaded results data from one or more media storage devices used in the election into Election Reporting Manager, and loaded the corresponding results data into Electionware Acquire.

## 10.5.1 Filtering the Ballot List

Specify Filter List options in the Navigator to identify which ballots in the uploaded results will appear in the [10.5.2 Ballots - Table View](#) tab.

**Filter List**

Precinct

Poll Place

Machine

---

Ballot Type

Write-in

Blank

Ballots Printed

Ballot Exception

---

Cast Vote Record

34 Items Displayed

**Filter**



**Note** The maximum number of ballot records that Produce can display is 30,000. If the uploaded results exceed this number of ballots, a message will say: "Too many Records to Display." Simply apply additional filters to display a manageable number of records.

Select from the following **Filter List** drop-down menus:

### **Precinct**

- All - Displays all ballots for all precincts
- <Precinct> - Displays all ballots associated with the precinct selected

### **Poll Place**

- All - Displays all ballots for all Polls
- <Poll> - Displays all ballots associated with the poll selected

### **Machine**

- All - Displays all ballots associated with all machine numbers
- <Machine> - Displays all ballots for the machine number that is selected

### **Ballot Type**

- All - Displays all Paper and ExpressVote ballots
- Paper - Displays Paper ballots only
- ExpressVote - Displays ExpressVote ballots only

### **Write-in**

- All - Displays all valid ballots that have marked write-ins, unmarked write-ins, both types of write-in marks, or no write-in marks on the ballot. The system will also load the ExpressVote ballots that have marked write-ins, if that equipment is valid for the election.
- No write-in - Displays all ballots with a contest with the write-in name area and vote position unmarked
- All write-ins - Displays all ballots and cards that have identified write-ins

- Marked write-in - Displays all ballots with a contest with a write-in vote position marked
- Unmarked write-in - Displays all ballots with a contest with a write-in name area marked, and the associated vote position unmarked

**Note**



This information is only available if the machines have been configured to report unmarked write-in votes.

**Blank**

- All - Displays all ballot sheets for all Blank Sheet and Not Blank ballots
- Not Blank - Displays all ballots that contain marked voting positions on any sheet of the ballot
- Blank Sheet - Displays all ballots that contain no marked voting position on any one sheet of the ballot

**Ballots Printed**

- All - Displays all printed and not printed ballots, both Facsimile and Official
- Printed (All) - Displays all printed ballots (both Paper and ExpressVote) that have been printed as Official and Facsimile
- Printed (Official) - Displays all valid ballots (both Paper and ExpressVote) that have been printed as Official
- Printed (Facsimile) - Displays all valid ballots (both Paper and ExpressVote) that have been printed as Facsimile
- Not Printed - Displays all valid ballots (both Paper and ExpressVote) that have not been printed

## Ballot Exception

- All - Displays all ballots
- No exceptions - Displays all ballots without exception conditions
- All exceptions - Displays all ballots with exception conditions
- No overvotes - Displays all ballots without overvoted races
- Has overvotes - Displays all ballots with overvoted races
- No undervotes - Displays all ballots without undervoted races
- Has undervotes - Displays all ballots with undervoted races
- No Double Votes - Displays all ballots without double votes
- Has Double Votes - Displays all ballots with double votes

### Note



Double-vote filter options are not available if this type of contest is not included in the election.

To display a specific CVR, enter the appropriate CVR number in the Cast Vote Record field.

Click **Apply Filter** to display the list of ballots that meet the filter's specifications in the Table View tab. The filter parameters are applied and the list of matching ballots is displayed in the Ballots - Table View tab. The number of ballots that meet the filter's specifications is displayed at the bottom of the Navigator pane.

**Filter List**

Precinct: 0001 AD: 65 ED: 001

Poll Place: All

Machine: All

Ballot Type: All

Write-in: All

Blank: All

Ballots Printed: All

Ballot Exception: All

Cast Vote Record:

Apply Filter    Reset

90 Items Displayed

**Ballots - Table View**

Find:    Find Next    Find Previous    Highlight all    Match case

Type	Poll Place	Poll Plac...	Precinct	Precinct ID	Ballot Style	Disposition	Cast Vol...	Serial Nu...	Machine
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141349	036948d014...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141353	0cb3272844...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141354	0d9db884fff7...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141356	0f070a735a6...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141357	1122571768...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141358	132a6beada...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141362	2613ca6fd39...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141363	26613b56f8b...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141366	292b9e8b14...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141367	2bde08a06e...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141368	2fa2c5b49c3...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141371	38ed989058...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141380	4f0da7dd206...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141381	56f13ee50fe...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141387	5b1f62b6766...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141389	5bdce92209...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141393	5e7e05befdc...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141394	6203a8adaa...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141397	68804cc4a0...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141400	75fd5f0cc2f9...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141403	7896226f0e...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141410	8ccb7c8953...	DS200 - 020...
Paper	11255	11255	AD: 65 ED: 0...	0001	Ballot Style 1	Valid	141412	8ed08f06b65...	DS200 - 020...

**Output - Events**

```

05/04/2016 12:46:06PM 10040006 electionware login attempt. User: admin
05/04/2016 12:46:07PM 10040007 admin logged in.
05/04/2016 12:46:08PM 10040002 Home module activated.
05/04/2016 12:46:13PM 10540001 Election Opened: NY large database
05/04/2016 12:46:16PM 11340001 Starting Acquire Server.
05/04/2016 12:46:22PM 10040002 Produce module activated.
05/04/2016 12:46:28PM 11740004 New results filter applied: Precinct - All, Poll Place - All, Machine - All,
05/04/2016 12:47:36PM 11740004 New results filter applied: Precinct - 0001 AD: 65 ED: 001, Poll Place - All,

```

## 10.5.2 Ballots - Table View

Ballot details displayed in the table may include:

**Type** – Type of ballot voted on the scanner, either Paper or ExpressVote

**Poll Place** – Location of the polling place associated with the ballot

**Poll Place ID** – ID number of the polling place

**Precinct** – Location of the polling place associated with the ballot

**Precinct ID** – ID number of the precinct associated with the ballot

**Ballot Style** – The name of the ballot

**Cast Vote Record** – The number of the CVR

**Serial Number** – The number of the ballot

**Machine** – The machine number associated with the ballot

**Write-in Type** – Type of write-in detected on the ballot, including Marked, Unmarked, or both marked and unmarked (Marked/Unmarked)

**Print Version (Official)** – The number of times the scan image of the ballot has been printed

**Print Version (Facsimile)** – The number of times a facsimile of the ballot has been printed

**Ballot Exception** – The type of voting exception found on a ballot. Shows the selected condition if the ballot sheet contains only that condition; shows all exception conditions, separated by a "/" if All Exceptions is selected, and shows all ballots with no exception conditions, if No Exceptions is selected.

### 10.5.3 Find Ballot Records

Use the ballot record Find tools at the top of the Ballots - Table View tab to quickly locate a record or collection of records in the table based on a keyword.

To locate a record, enter a value in the Find field.

The screenshot shows the 'Ballots - Table View' interface. At the top, there is a 'Find:' field containing the number '106'. To the right of the field are three buttons: 'Find Next', 'Find Previous', and 'Highlight all'. There is also a checkbox labeled 'Match case' which is currently unchecked. Below the search controls is a table with the following columns: Type, Poll Place, Precinct, Precinct ID, Ballot Style, Disposition, Cast Vote Record, Serial Nu..., Machine, and Wr. The table contains 12 rows of data. The second row is highlighted in blue, indicating it is the current record found by the search.

Type	Poll Place	Precinct	Precinct ID	Ballot Style	Disposition	Cast Vote Record	Serial Nu...	Machine	Wr
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		105	056648a689...	DS200 - 031... Ma
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		106	0c8dc1ad8a...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		107	1725620d1bf...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		108	175dde3d78...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		109	62015f81372...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		110	7137395da4...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		111	82a0eb49b7...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		112	82fc5c88d1c...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		113	8347211ca1...	DS200 - 031... Ma
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		114	a958baffe86...	DS200 - 031...
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		115	bd13ae798a...	DS200 - 031... Ma
ExpressVote	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		116	dd3c685de0...	DS200 - 031...

To restrict the search to values with a matching case, select **Match Case**. To locate the next record that matches the entered value, click **Find Next**. To locate the previous record that matches the entered value, click **Find Previous**.

To locate all records that match the entered value, click **Highlight all**.

The screenshot shows the 'Ballots - Table View' interface with the search field containing the word 'Marked'. The 'Highlight all' button is highlighted in blue. The table below shows 13 rows of data. The first, fourth, seventh, and tenth rows are highlighted in yellow, indicating they match the search criteria.

Type	Poll Place	Precinct	Precinct ID	Ballot Style	Disposition	Cast Vote Record	Serial... /	Machine	Write-in ...	P
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		119	0318dab804...	DS200 - 010...	Marked
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		105	056648a689...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		106	0c8dc1ad8a...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		120	155ea311b4...	DS200 - 010...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		121	15a29b46c7...	DS200 - 010...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		107	1725620d1bf...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		108	175dde3d78...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		122	25a32fea304...	DS200 - 010...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		123	41b8503476f...	DS200 - 010...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		124	49727b5cf85...	DS200 - 010...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		125	498a7899ef0...	DS200 - 010...	Marked
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		126	4f160d2b06a...	DS200 - 010...	Marked
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		127	4facd5a126b...	DS200 - 010...	Marked
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		128	502e01b251...	DS200 - 010...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		109	62015f81372...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		129	6cce0aa231...	DS200 - 010...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		110	7137395da4...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		111	82a0eb49b7...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		112	82fc5c88d1c...	DS200 - 031...	
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid		113	8347211ca1...	DS200 - 031...	Marked

## 10.5.4 Clear Results

Loaded results for media selected in Table view can be cleared (deleted from the database), in order to delete test data or to start the loading process over.

**Caution**  If results are cleared, they cannot be reloaded unless they are first regenerated from ERM. Do not clear any results files unless you are certain they will not be needed.

Right-click the media for which to reset loaded results, then select **Clear Results**.

**Note**  Use **Shift + click** to select multiple sequential media; use **Ctrl + click** to select multiple, non-sequential media.

You will be prompted to confirm the operation:



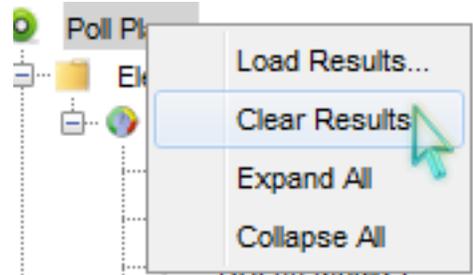
When results have been cleared, a dialog box confirms that the results have been successfully cleared. Click **OK**.

In the table, the Status column will update to Not Loaded for all cleared results.

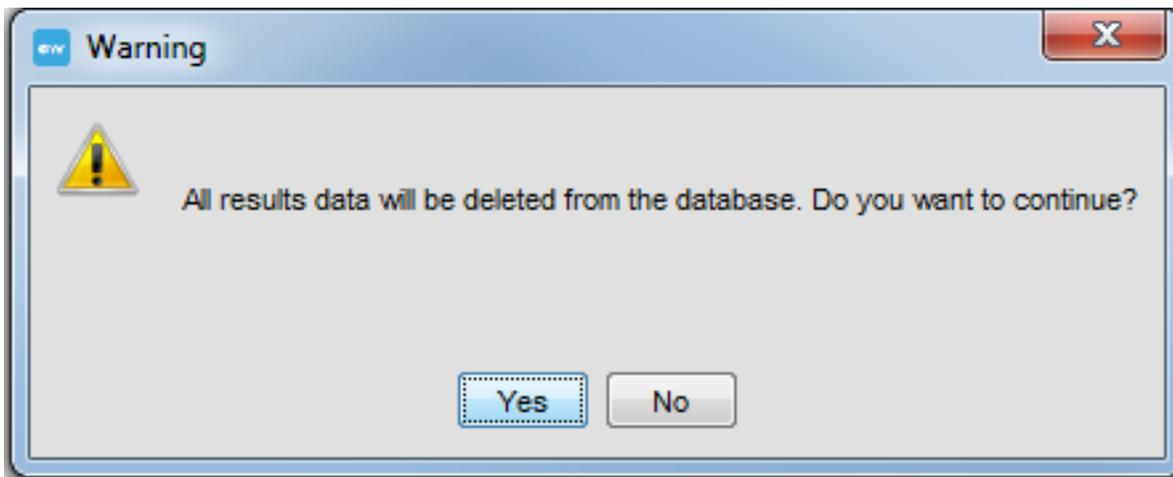
### 10.5.4.1 Clearing All Loaded Results

All results data loaded with the Acquire module can be cleared from the From the **Manage** menu, select **Clear Results**.

Or, in the Navigator tree, right-click the **Poll Places** node, then select **Clear Results** from the drop-down menu.



You will be prompted to confirm the operation:



Click **Yes** to clear all results data, including log files, ballot images, and provisional ballots from the database.

When results have been cleared, a dialog box confirms that the results have been successfully cleared. Click **OK**.

## 10.5.5 Ballot Viewer

In the Produce module, scanned images of paper ballots and ExpressVote ballots included with uploaded results can be viewed in the Ballot Viewer, along with the CVR associated with each ballot record.

On the Ballots - Table View tab, select the ballot(s) to be displayed.

### Note



Use Shift + click to select multiple, sequential ballots in the list; use Ctrl + click to select multiple, non-sequential ballots in the list.

### Note

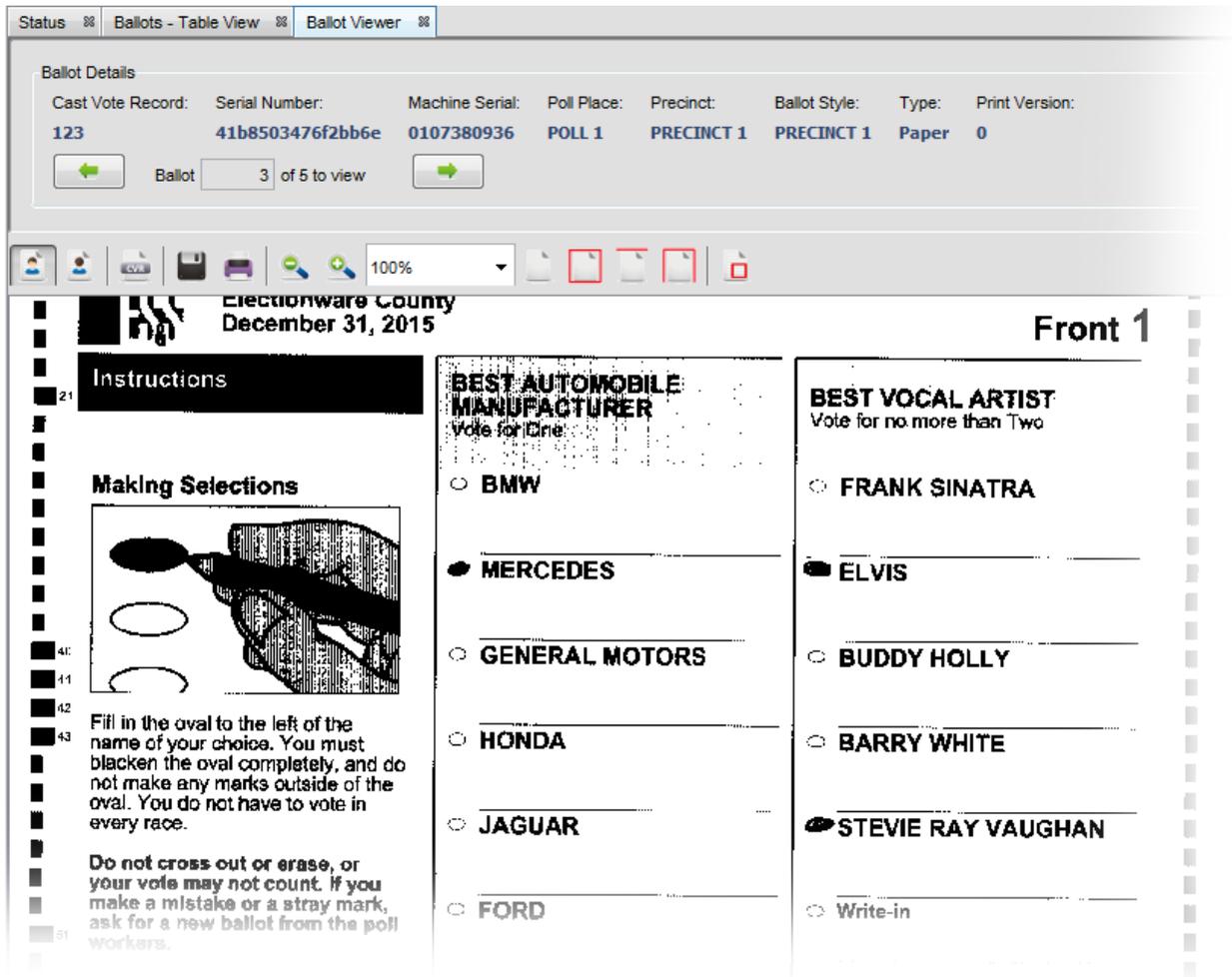


Regardless of the direction and orientation in which ballots were inserted into the DS200 and Central Count tabulators, the scanned ballot images are automatically saved and imported face up, top up.

Right-click and select **View Ballot** to display the selected ballot(s) in the Ballot Viewer tab. Or, to view all ballots (regardless of filter), select **View All Ballots**.

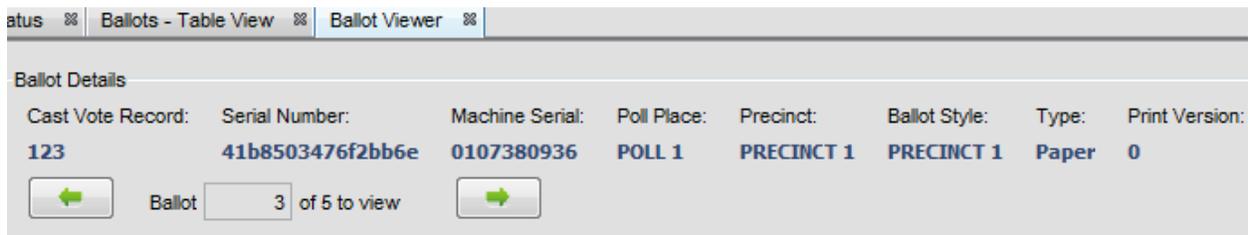
Type	Poll Place	Precinct	Precinct ID	Ballot Style	Disposition	Cast ...	Serial Nu...	Machine	Write-in ...	Provision...	Pri
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	119	0318dab804...	DS200 - 010...	Marked		0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	105	056648a689...	DS200 - 031...	Marked		0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	106	0c8dc1ad8a...	DS200 - 031...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	120	155ea311b4...	DS200 - 010...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	121	15a29b46c7...	DS200 - 010...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	107	1725620d1bf...	DS200 - 031...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	108	175dde3d78...	DS200 - 031...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	122	25a32fea304...	DS200 - 010...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	123	41b8503476f...	DS200 - 010...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	124	49727b5cf85...	DS200 - 010...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	125	498a7899ef0...	DS200 - 010...	Marked		0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	126	4f160d2b06a...	DS200 - 010...	Marked		0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	127	4fac5a126b...	DS200 - 010...	Marked		0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	128	502e01b251...	DS200 - 010...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	109	62015f81372...	DS200 - 031...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	129	6cce0aa231...	DS200 - 010...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	110	7137395da4...	DS200 - 031...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	111	82a0eb49b7...	DS200 - 031...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	112	82fc5c88d1c...	DS200 - 031...			0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	113	8347211ca1...	DS200 - 031...	Marked		0
Paper	POLL 1	PRECINCT 1	0001	PRECINCT ...	Valid	130	8ed2b9f4920...	DS200 - 010...			0

The selected ballot(s) appear in the Ballot Viewer.



Note that ballot images must be included with uploaded results in order to appear in the Ballot Viewer. If the scan image is not available for a record, when you attempt to display it in the viewer, the message "Image is not available" will appear.

### 10.5.5.1 Ballot Details



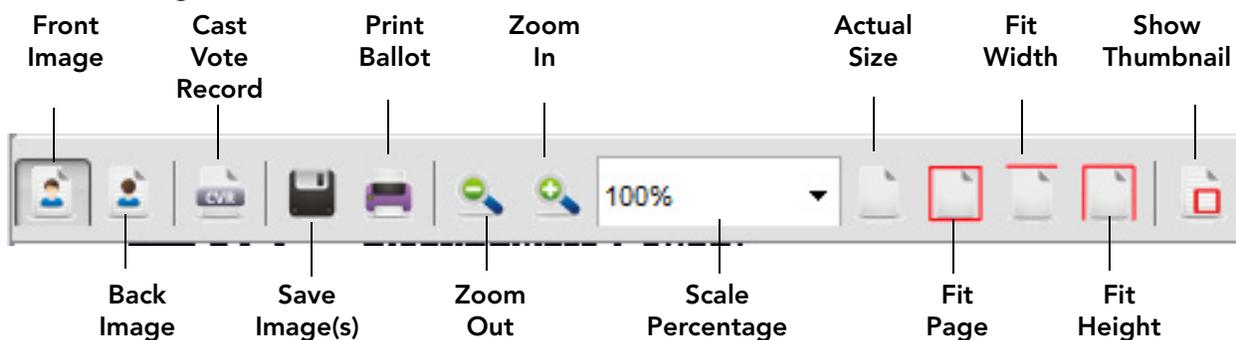
Details about the displayed ballot appear in the Ballot Details box above the ballot image. The details include the ballot's CVR number and serial number,

the serial number of the scanner that recorded the ballot (Machine Serial), the Poll Place and Precinct associated with the ballot, the ballot style number, ballot type (Paper), and the number of times the ballot (either official or facsimile) has been printed (Print Version).

Also in the Ballot Details box are ballot display controls that indicate the sequence number of the currently displayed ballot, the total number of ballots selected for viewing, and arrow buttons for paging forward and backward.

### 10.5.6 View, Save, or Print Ballot

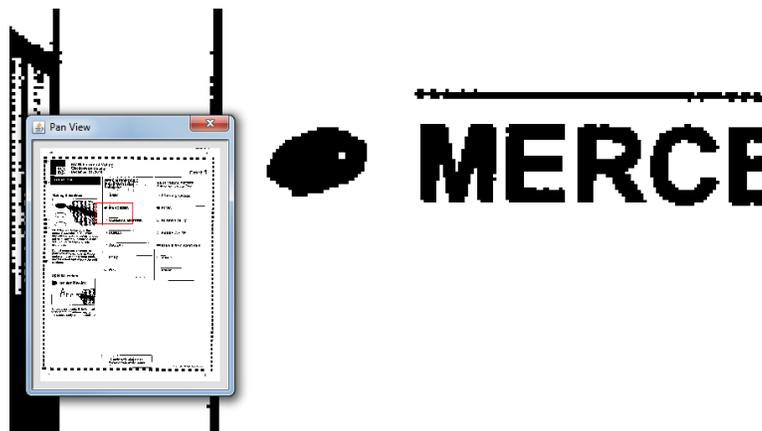
Tools for saving, printing, and adjusting the ballot display are above the ballot image, below the Ballot Details box.



Use the **Cast Vote Record** button to generate and display the CVR associated with the currently displayed ballot in the View Ballots window.

Click and drag the ballot image to reposition the display within the viewing frame.

To examine a specific location on the ballot image in detail, select a high zoom percentage from the **Scale Percentage** drop-down menu, then click **Show Thumbnail**. A thumbnail of the ballot's scan image appears in the Pan View window. Click and drag the red focus box in this window to the area of the ballot you wish to examine.



### 10.5.6.1 Cast Vote Record Report

A ballot's Cast Vote Record summarizes where and how the votes were tabulated, as well as other ballot-specific data such as ballot style, party, serial number, machine number, and whether the ballot was blank.

To generate and display the ballot's corresponding Cast Vote Record report, click the **Cast Vote Record** button.

Use the Report Screen Toolbar to save, print, or change the view of the displayed report.

The screenshot shows a software window titled "Report: CVR Report". The window has a toolbar with icons for save, print, and zoom. The main content area displays the following information:

**Cast Vote Record: 130**

Poll Place: **POLL 1**  
Precinct: **PRECINCT 1**  
Ballot Style: **PRECINCT 1 [ Sheet Number 1 ]**  
Party: **NONPARTISAN**  
Serial Number: **8ed2b9f492062fb0**  
Machine Serial: **0107380936**  
Blank Ballot: **NO**

**Contests:**

Contest Name	Vote For	Count	Status
<b>BEST AUTOMOBILE MANUFACTURER (9)</b>	1		
	<b>FORD (32)</b>		<b>Counted</b>
<b>BEST VOCAL ARTIST (12)</b>	2		
	<b>ELVIS (35)</b>		<b>Counted</b>
	<b>Undervoted</b>		<b>Undervoted</b>
<b>BEST ICE-CREAM FLAVOR (16)</b>	1		
	<b>CHOCOLATE (43)</b>		<b>Counted</b>
<b>PROPOSITION 1 (19)</b>	1		
	<b>Yes (20)</b>		<b>Counted</b>
<b>PROPOSITION 2 (23)</b>	1		
	<b>Yes (24)</b>		<b>Overvoted</b>
	<b>No (25)</b>		<b>Overvoted</b>

## 10.5.7 Print Ballots

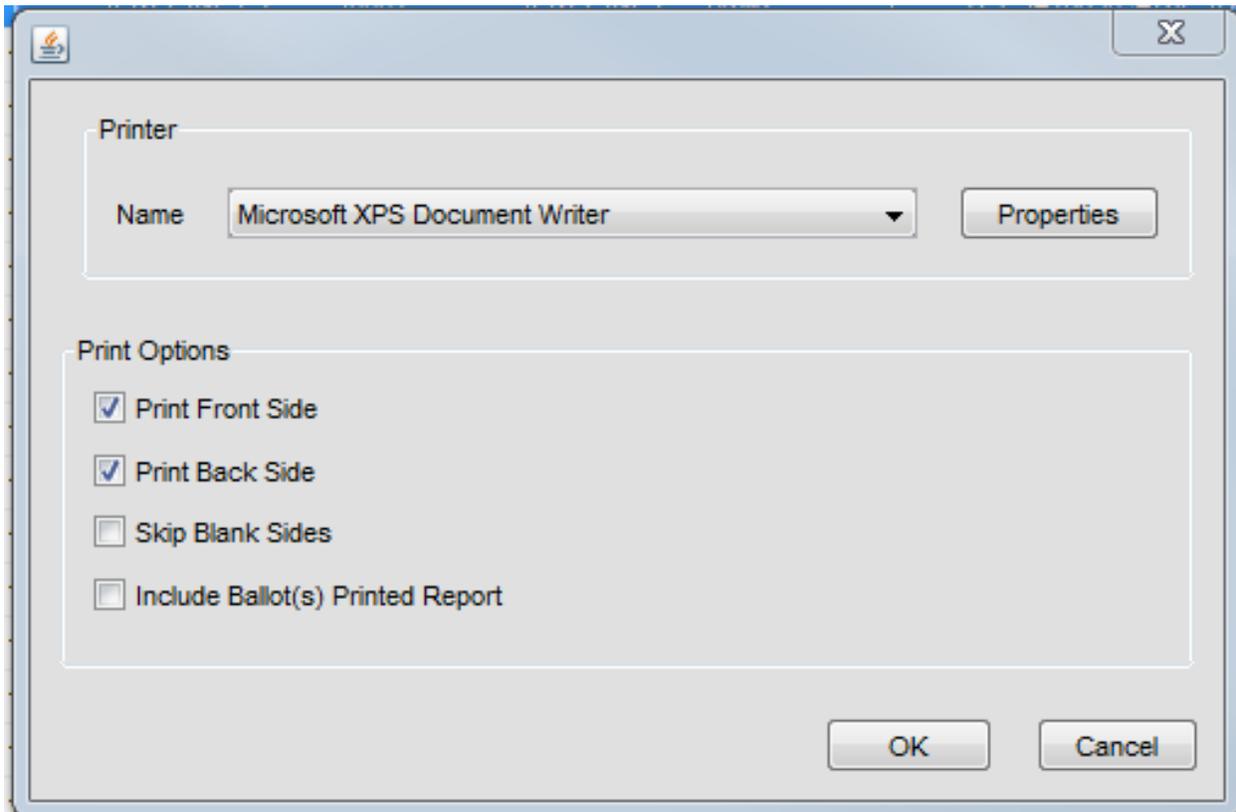
In the Produce module, an official voted ballot or facsimile of a ballot can be printed from the Ballots - Table View tab. A facsimile is a reduced-scale, digital rendering of the ballot.

In the Ballots - Table View tab, right-click on a ballot, then select **Print Ballot Official...** or **Print Ballot Facsimile...** Or, to print all of the ballots, select **Print All Ballots (Official)...** or **Print All Ballots (Facsimile)...**

### Note



Use Shift + click to select multiple sequential ballots to be printed; use Ctrl + click to select multiple non-sequential ballots to be printed.



In the Printer dialog, specify print options:

- From the **Name** drop-down menu, select the printer to be used.
- **Print Front Side** - prints the front sides of the ballots
- **Print Back Side** - prints the back sides of the ballots
- **Skip Blank Sides** - skips blank sides of ballots
- **Include Ballot(s) Printed Report** - prints ballots printed report with the print job
- Click **Properties** to specify any additional printer properties.

Sample Official Paper Ballot Image:

STATE OF MINNESOTA	FEBRUARY 14, 2012	CITY OF MINNEAPOLIS
<b>OFFICIAL BALLOT</b>		
<b>CITY GENERAL ELECTION BALLOT</b>		
Judge _____ Judge _____		
<b>Ranked Choice Voting Demonstration</b>		
<b>Instructions</b>		
<p><b>How to make your candidate choice</b></p> <p>1. Pick your first choice candidate and completely fill in the oval next to that candidate under First Choice, like this:</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Correct: Choose different candidates in different columns.</p> </div> <div style="text-align: center;"> <p>Wrong: Voter chose the same candidate more than once.</p> </div> <div style="text-align: center;"> <p>Wrong: Vote chose more than one candidate in the same column.</p> </div> </div> <p>2. If you have a second choice candidate, completely fill in the oval next to that candidate under Second Choice.</p> <p>3. Your third choice candidates, if you have one, works the same way.</p> <p><b>! All three choices (if you choose to have three) must be different from each other.</b></p> <p><b>! If you make a mistake - or cross out or make a stray mark - ask for a new ballot. Otherwise your vote may not count.</b></p>		
<b>CITY OFFICES</b>		
<b>MAYOR</b>		
Mark your first, second and third choice candidates in the columns below. One to be elected.		
<b>1 First Choice</b>	<b>2 Second Choice</b>	<b>3 Third Choice</b>
<b>Fill in one oval completely.</b>	<b>Make your second choice here.</b>	<b>Make your third choice here.</b>
<input type="radio"/> JOEY LOMBARD R. American <input type="radio"/> BOB GARNNEY JR. Moderate Progressive <input type="radio"/> BILL MCSAUGHNEY New Dignity Party <input type="radio"/> TOM FISKE Social Workers Party <input type="radio"/> R.T. RYBAK Democratic Farmer-Labor <input type="radio"/> JAMES R. EVERETT Social Progressives <input type="radio"/> AL FLOWERS Democratic Farmer-Labor <input type="radio"/> DICK FRANSON Democratic Farmer-Labor <input type="radio"/> CHRISTOPHER CLARK Liberal <input type="radio"/> PAPA JOHN KULSTAD Independent CML La <input type="radio"/> JOHN CHARLES WILSON Edgemoor National <input type="radio"/> write in, if any	<input type="radio"/> JOEY LOMBARD R. American <input type="radio"/> BOB GARNNEY JR. Moderate Progressive <input type="radio"/> BILL MCSAUGHNEY New Dignity Party <input type="radio"/> TOM FISKE Social Workers Party <input type="radio"/> R.T. RYBAK Democratic Farmer-Labor <input type="radio"/> JAMES R. EVERETT Social Progressives <input type="radio"/> AL FLOWERS Democratic Farmer-Labor <input type="radio"/> DICK FRANSON Democratic Farmer-Labor <input type="radio"/> CHRISTOPHER CLARK Liberal <input type="radio"/> PAPA JOHN KULSTAD Independent CML La <input type="radio"/> JOHN CHARLES WILSON Edgemoor National <input type="radio"/> write in, if any	<input type="radio"/> JOEY LOMBARD R. American <input type="radio"/> BOB GARNNEY JR. Moderate Progressive <input type="radio"/> BILL MCSAUGHNEY New Dignity Party <input type="radio"/> TOM FISKE Social Workers Party <input type="radio"/> R.T. RYBAK Democratic Farmer-Labor <input type="radio"/> JAMES R. EVERETT Social Progressives <input type="radio"/> AL FLOWERS Democratic Farmer-Labor <input type="radio"/> DICK FRANSON Democratic Farmer-Labor <input type="radio"/> CHRISTOPHER CLARK Liberal <input type="radio"/> PAPA JOHN KULSTAD Independent CML La <input type="radio"/> JOHN CHARLES WILSON Edgemoor National <input type="radio"/> write in, if any
<b>COUNCIL MEMBER WARD EIGHT</b>		
Mark your first, second and third choice candidates in the columns below. One to be elected.		
<b>1 First Choice</b>	<b>2 Second Choice</b>	<b>3 Third Choice</b>
<b>Fill in one oval completely.</b>	<b>Make your second choice here.</b>	<b>Make your third choice here.</b>
<input type="radio"/> ELIZABETH GLIDDEN Democratic-Farmer-Labor <input type="radio"/> DAVID REBAN Republican <input type="radio"/> MICHAEL J. CAMAN Local Progressive <input type="radio"/> GREGORY McDONALD Independent <input type="radio"/> JEANINE ESTIME Dem <input type="radio"/> write in, if any	<input type="radio"/> ELIZABETH GLIDDEN Democratic-Farmer-Labor <input type="radio"/> DAVID REBAN Republican <input type="radio"/> MICHAEL J. CAMAN Local Progressive <input type="radio"/> GREGORY McDONALD Independent <input type="radio"/> JEANINE ESTIME Dem <input type="radio"/> write in, if any	<input type="radio"/> ELIZABETH GLIDDEN Democratic-Farmer-Labor <input type="radio"/> DAVID REBAN Republican <input type="radio"/> MICHAEL J. CAMAN Local Progressive <input type="radio"/> GREGORY McDONALD Independent <input type="radio"/> JEANINE ESTIME Dem <input type="radio"/> write in, if any
Continue voting on next side		
17MNRCV1 <span style="float:right;">VOTE FRONT AND BACK OF BALLOT</span> <span style="float:right;">W8 P6 / 1725</span>		

Sample Official ExpressVote Ballot Image:

-----  
ELECTIONWARE COUNTY/ELECTIONWARE STATE  
MERC PICK  
08/08/2013  
PRECINCT 1, PRECINCT 1  
-----  
[Barcode]  
-----  
PARTY PREFERENCE-----  
REPUBLICAN  
  
REP UNITED STATES SENATOR-----  
W/I: JOHN DOE ←  
  
REP UNITED STATES REPRESENTATIVE IN CONGRESS-----  
REPUBLICAN CANDIDATE 1  
  
REP STATE SENATOR-----  
REPUBLICAN CANDIDATE 2  
  
REP COUNTY ATTORNEY-----  
REPUBLICAN CANDIDATE 1  
  
REP SHERIFF-----  
W/I: SALLY SMITH ←  
  
JUDGE OF THE COURT-----  
JUDICIAL CANDIDATE 1  
W/I: PETER CAVANAUGH ←  
-----

Sample Facsimile of a Paper Ballot:

Facsimile Valid-Paper
Version 2.1  
Printed: 03/15/2013 04:40PM

---

**OFFICIAL BALLOT**  
**CITY GENERAL ELECTION BALLOT**

Judge                      Judge

**Ranked Choice Voting Demonstration**

**Instructions**

**How to make your candidate choice**

1. Pick your first choice candidate and completely fill in the oval next to that candidate under First Choice, like this:

● **CANDIDATE NAME**

2. If you have a second choice candidate, completely fill in the oval next to that candidate under Second Choice.

3. Your third choice candidates, if you have one, works the same way.

**!** All three choices (if you choose to have three) must be different from each other.

**!** If you make a mistake - or cross out or make a stray mark - ask for a new ballot. Otherwise your vote may not count.

**Correct:**  
Correct: Choose different candidates in different columns.

**Wrong:**  
Wrong: Voter chose the same candidate more than once.

**Wrong:**  
Wrong: Vote chose more than one candidate in the same column.

---

**CITY OFFICES**

**MAYOR** Mark your first, second and third choice candidates in the columns below. One to be elected.

1 First Choice	2 Second Choice	3 Third Choice
Fill in one oval completely.	Make your second choice here.	Make your third choice here.
<input checked="" type="radio"/> JOEY LOWBEARD <small>St. Francisco</small>	<input type="radio"/> JOEY LOWBEARD <small>St. Francisco</small>	<input type="radio"/> JOEY LOWBEARD <small>St. Francisco</small>
<input type="radio"/> BOB CARNEY JR. <small>Multiple Progressives</small>	<input type="radio"/> BOB CARNEY JR. <small>Multiple Progressives</small>	<input type="radio"/> BOB CARNEY JR. <small>Multiple Progressives</small>
<input type="radio"/> BILL MCGAUGHNEY <small>New Dignity Party</small>	<input type="radio"/> BILL MCGAUGHNEY <small>New Dignity Party</small>	<input type="radio"/> BILL MCGAUGHNEY <small>New Dignity Party</small>
<input type="radio"/> TOM FIRRE <small>Second Workers Party</small>	<input type="radio"/> TOM FIRRE <small>Second Workers Party</small>	<input type="radio"/> TOM FIRRE <small>Second Workers Party</small>
<input type="radio"/> R.T. RYBAK <small>Democratic Farmer Labor</small>	<input type="radio"/> R.T. RYBAK <small>Democratic Farmer Labor</small>	<input type="radio"/> R.T. RYBAK <small>Democratic Farmer Labor</small>
<input type="radio"/> JAMES R. EVERETT <small>Social Entrepreneurs</small>	<input type="radio"/> JAMES R. EVERETT <small>Social Entrepreneurs</small>	<input type="radio"/> JAMES R. EVERETT <small>Social Entrepreneurs</small>
<input type="radio"/> AL FLOWERS <small>Democratic Farmer Labor</small>	<input type="radio"/> AL FLOWERS <small>Democratic Farmer Labor</small>	<input type="radio"/> AL FLOWERS <small>Democratic Farmer Labor</small>
<input type="radio"/> DICK FRANSON <small>Democratic Farmer Labor</small>	<input type="radio"/> DICK FRANSON <small>Democratic Farmer Labor</small>	<input type="radio"/> DICK FRANSON <small>Democratic Farmer Labor</small>
<input type="radio"/> CHRISTOPHER CLARK <small>Libertarian</small>	<input type="radio"/> CHRISTOPHER CLARK <small>Libertarian</small>	<input type="radio"/> CHRISTOPHER CLARK <small>Libertarian</small>
<input type="radio"/> PAPA JOHN KOLSTAD <small>Independent Civil Le</small>	<input type="radio"/> PAPA JOHN KOLSTAD <small>Independent Civil Le</small>	<input type="radio"/> PAPA JOHN KOLSTAD <small>Independent Civil Le</small>
<input type="radio"/> JOHN CHARLES WILSON <small>Edgemonite National</small>	<input type="radio"/> JOHN CHARLES WILSON <small>Edgemonite National</small>	<input type="radio"/> JOHN CHARLES WILSON <small>Edgemonite National</small>
<input type="radio"/> write-in, if any	<input type="radio"/> write-in, if any	<input type="radio"/> write-in, if any

---

**COUNCIL MEMBER WARD EIGHT** Mark your first, second and third choice candidates in the columns below. One to be elected.

1 First Choice	2 Second Choice	3 Third Choice
Fill in one oval completely.	Make your second choice here.	Make your third choice here.
<input checked="" type="radio"/> ELIZABETH GLIDDEN <small>Democratic Farmer Labor</small>	<input type="radio"/> ELIZABETH GLIDDEN <small>Democratic Farmer Labor</small>	<input type="radio"/> ELIZABETH GLIDDEN <small>Democratic Farmer Labor</small>
<input type="radio"/> DAVID REGAR <small>Republican</small>	<input type="radio"/> DAVID REGAR <small>Republican</small>	<input type="radio"/> DAVID REGAR <small>Republican</small>
<input type="radio"/> MICHAEL J. CAVLAN <small>Open Progressives</small>	<input type="radio"/> MICHAEL J. CAVLAN <small>Open Progressives</small>	<input type="radio"/> MICHAEL J. CAVLAN <small>Open Progressives</small>
<input type="radio"/> GREGORY McDONALD <small>Independent</small>	<input type="radio"/> GREGORY McDONALD <small>Independent</small>	<input type="radio"/> GREGORY McDONALD <small>Independent</small>
<input type="radio"/> JEANNE ESTIME <small>Green</small>	<input type="radio"/> JEANNE ESTIME <small>Green</small>	<input type="radio"/> JEANNE ESTIME <small>Green</small>
<input type="radio"/> write-in, if any	<input type="radio"/> write-in, if any	<input type="radio"/> write-in, if any

Continue voting on next side

17MNR0V1
VOTE FRONT AND BACK OF BALLOT
W8 P6 / 1725

### 10.5.7.1 Ballot(s) Printed Report

When the Include Ballot(s) Printed Report print option is selected, each ballot print job is printed with a Ballot(s) Printed Report.

Sample Ballot(s) Printed Report:

<b>Ballot(s) Printed Report</b>	09/23/2014 04:35PM	Electionware County BMW_2 December 31, 2015
---------------------------------	--------------------	---

#### Filter Summary

**Total ballots printed**     34

**Filter Criteria**

- Precinct - All
- Poll Place - All
- Machine - All
- Ballot Type - All
- Write-in - All
- Blank - All
- Ballots Printed - All
- Ballot Exception - All
- Cast Vote Record -

#### Ballot(s) Printed List

Cast Vote Record	Serial Number	Ballot Type	Write-In Type	Print Version
119	0318dab8046f2e20	Paper	Marked	1
105	056648a6899527e5	Paper	Marked	1
106	0c8dc1ad8a12e3e6	Paper		1
120	155ea311b476321a	Paper		1
121	15a29b46c736dfff	Paper		1
107	1725620d1bfb50e3	Paper		1
108	175dde3d783a3591	Paper		1
122	25a32fea304b2027	Paper		1
123	41b8503476f2bb6e	Paper		2
124	49727b5cf85c3013	Paper		1
125	498a7899ef0dca8e	Paper	Marked	1
126	4f160d2b06ad97a8	Paper	Marked	1
127	4facd5a126b2b5f7	Paper	Marked	1
128	502e01b251971074	Paper		1
109	62015f8137280e2b	Paper		1

The header and footer include the name of the report and the time and date the report was generated. The footer also includes the name of the election and the election date.

The Filter Summary lists the total number of ballots printed in the print job (Total ballots printed), and the Ballots - Table view filter criteria in use when the ballots were printed.

The Ballot(s) Printed List provides details about the printed ballot(s), including: Cast Vote Record number, serial number, ballot type, write-in type and print version number.

Use the Report Screen Toolbar to save, print, or change the view of the displayed report.

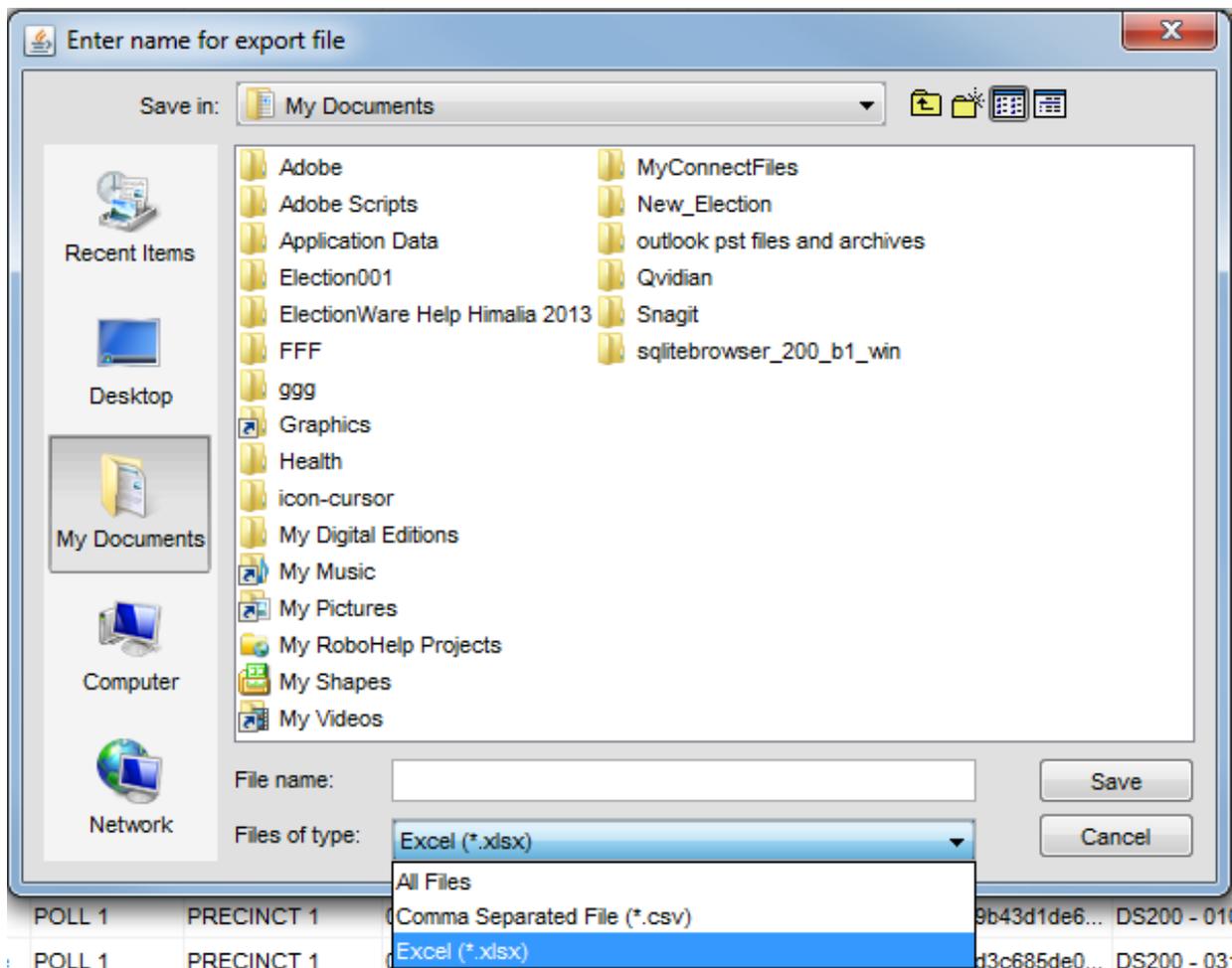
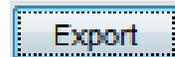
## 10.5.8 Export Ballot Table, Images, and CVRs

From the Produce Module, the ballot table, ballot images, and CVRs can all be exported to a directory of your choice.

### 10.5.8.1 Export Ballot Table

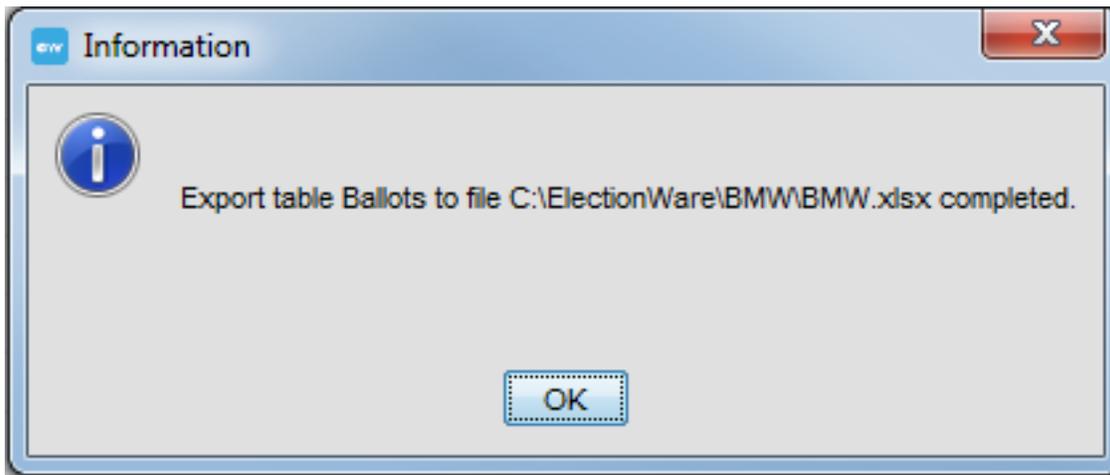
The table on the Ballots - Table View tab can be exported as a .csv or .xlsx file. The ballot records included in a ballot table export file are determined by the filter(s) applied in the Navigator.

1. To export the ballot table, click **Export** at the top of the Ballots Table view tab.



2. In the export window, browse to the target folder. Enter a filename for the file in the File name: field. Select the preferred file format from the **Files of type:** menu. Click **Save** to export the file.

- When the export is complete, a confirmation dialog will display the location and name of the new file. Click **OK**.



To view the exported data, browse to the new file and open the file. It will appear in the form of a spreadsheet.

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Ballots</b>										
2	BMW_2										
3	Electionware County,Electionware State										
4	September 24, 2014										
5											
6	Type	Poll Place	Precinct	Precinct ID	Ballot Style	Disposition	Cast Vote Record	Serial Number	Machine	Write-in Type	Provid
7	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	119	0318dab8046f2e20	DS200 - 0107380936	Marked	
8	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	105	056648a6899527e5	DS200 - 0314340372	Marked	
9	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	106	0c8dc1ad8a12e3e6	DS200 - 0314340372		
10	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	120	155ea311b476321a	DS200 - 0107380936		
11	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	121	15a29b46c736dff	DS200 - 0107380936		
12	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	107	1725620d1bfb50e3	DS200 - 0314340372		
13	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	108	175dde3d783a3591	DS200 - 0314340372		
14	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	122	25a32fea304b2027	DS200 - 0107380936		
15	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	123	41b8503476f2bb6e	DS200 - 0107380936		
16	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	124	49727b5cf85c3013	DS200 - 0107380936		
17	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	125	498a7899ef0dca8e	DS200 - 0107380936	Marked	
18	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	126	4f160d2b06ad97a8	DS200 - 0107380936	Marked	
19	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	127	4facd5a126b2b5f7	DS200 - 0107380936	Marked	
20	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	128	502e01b251971074	DS200 - 0107380936		
21	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	109	62015f8137280e2b	DS200 - 0314340372		
22	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	129	6cce0aa23118e88b	DS200 - 0107380936		
23	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	110	7137395da43a39ec	DS200 - 0314340372		
24	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	111	82a0eb49b7d94d60	DS200 - 0314340372		
25	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	112	82fc5c88d1c830c5	DS200 - 0314340372		
26	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	113	8347211ca10f6746	DS200 - 0314340372	Marked	
27	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	130	8ed2b9f492062fb0	DS200 - 0107380936		
28	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	131	9448ceefc04b76e	DS200 - 0107380936	Marked	
29	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	132	99077ec2c66dc8bd	DS200 - 0107380936		
30	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	114	a958baffe86db4c9	DS200 - 0314340372		
31	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	115	bd13ae798ac2c6f2	DS200 - 0314340372	Marked	
32	Paper	POLL 1	PRECINCT 1	0001	PRECINCT 1	Valid	113	c29413716b7941	DS200 - 0107380936		

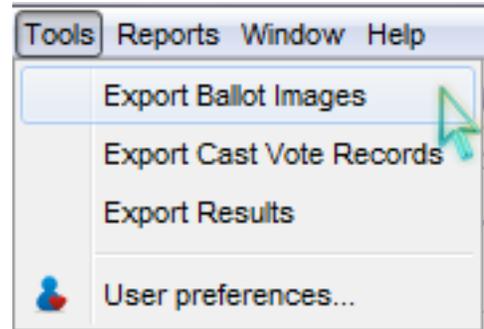
### 10.5.8.2 Export Ballot Images

Ballot images can be exported in a .zip file.

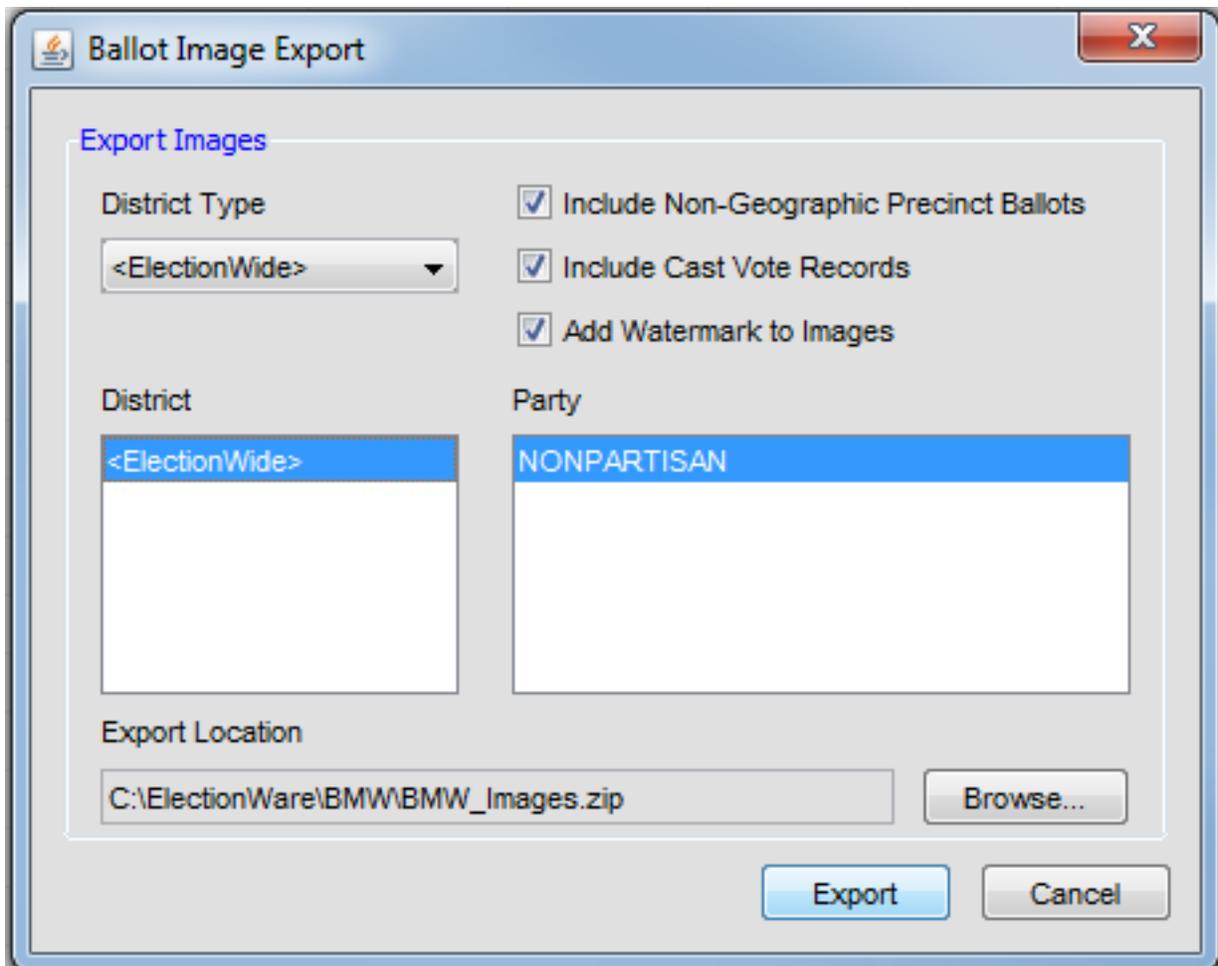
1. From the **Tools** menu, select **Export Ballot Images**.

There are three items that can be optionally included in the export (see image below):

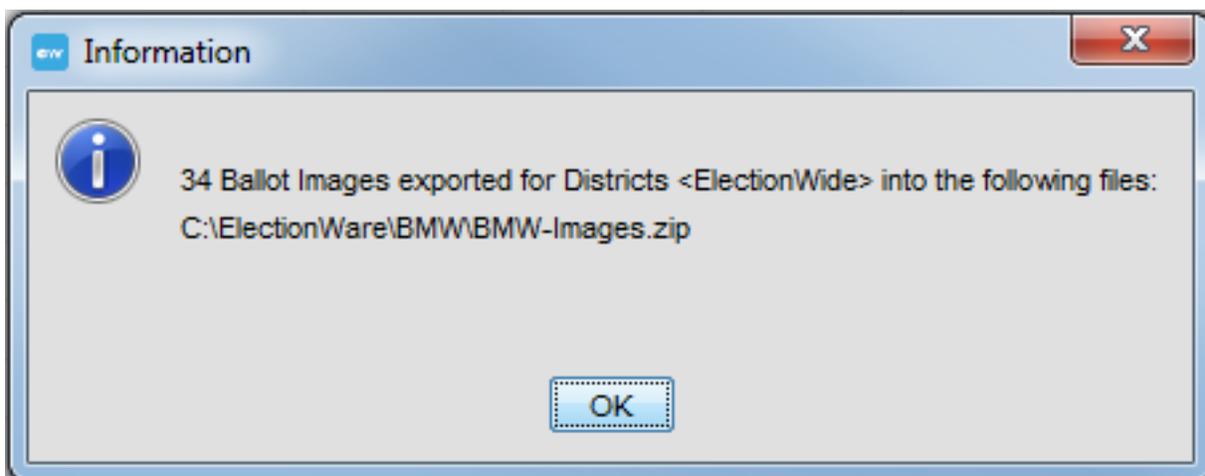
- Non-Geographic Precinct Ballots
- Cast Vote Records (CVR)
- Watermark



To be exported, an item must be selected.



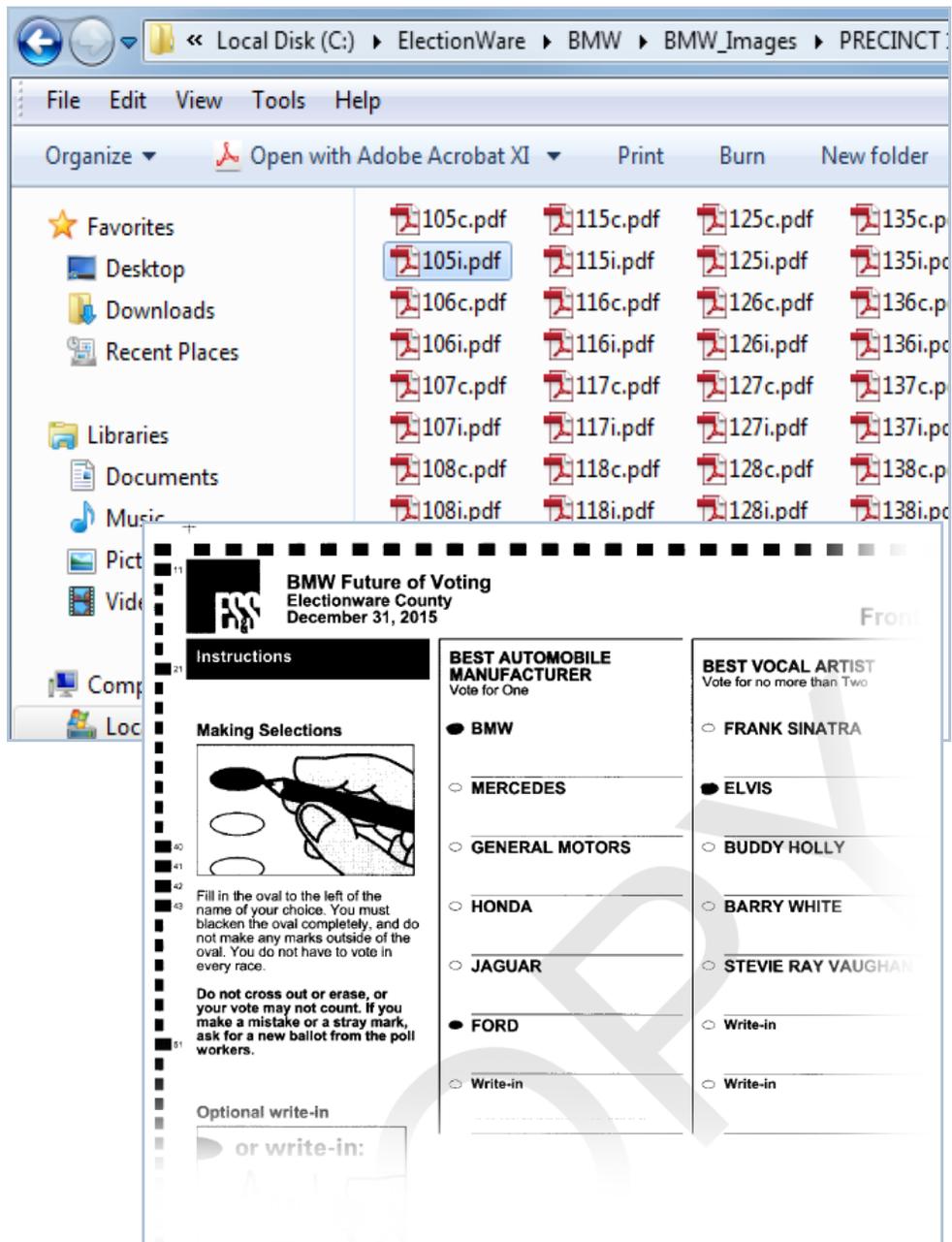
2. In the Ballot Image Export window, specify ballot, and optionally, CVR export parameters:
  - To include absentee and early voting ballot images, select **Include Non-Geographic Precinct Ballots**.
  - To include CVRs with the exported ballot images created in Electionware using Non-Geographic Precincts, select **Include Cast Vote Records**.
  - The watermark identifies the printout as a ballot copy that is not intended for scanning. To include this on exported ballots, select **Add Watermark to Images**.
  - From the **District Type** drop-down list, select a district type.
  - The contents of the **District** drop-down list are determined by the selected District Type. Select the appropriate district(s).
  - Select the party or parties from the **Party** list.
3. Browse to the target folder in which to save the file. Enter a filename for the .zip file, then click **Save**.
4. The Ballot Image Export window reappears, with the location and filename in the Export Location box. Click **Export**.
5. When the export is complete, a confirmation dialog will display the number of images exported, the specified export parameters, and the location and name of the .zip file. Click **OK**.





**Note** The number of districts that can be selected for a single export is 250. If you need to export images for more than 250 districts, either set up additional exports or select only the Countywide district to export the entire election.

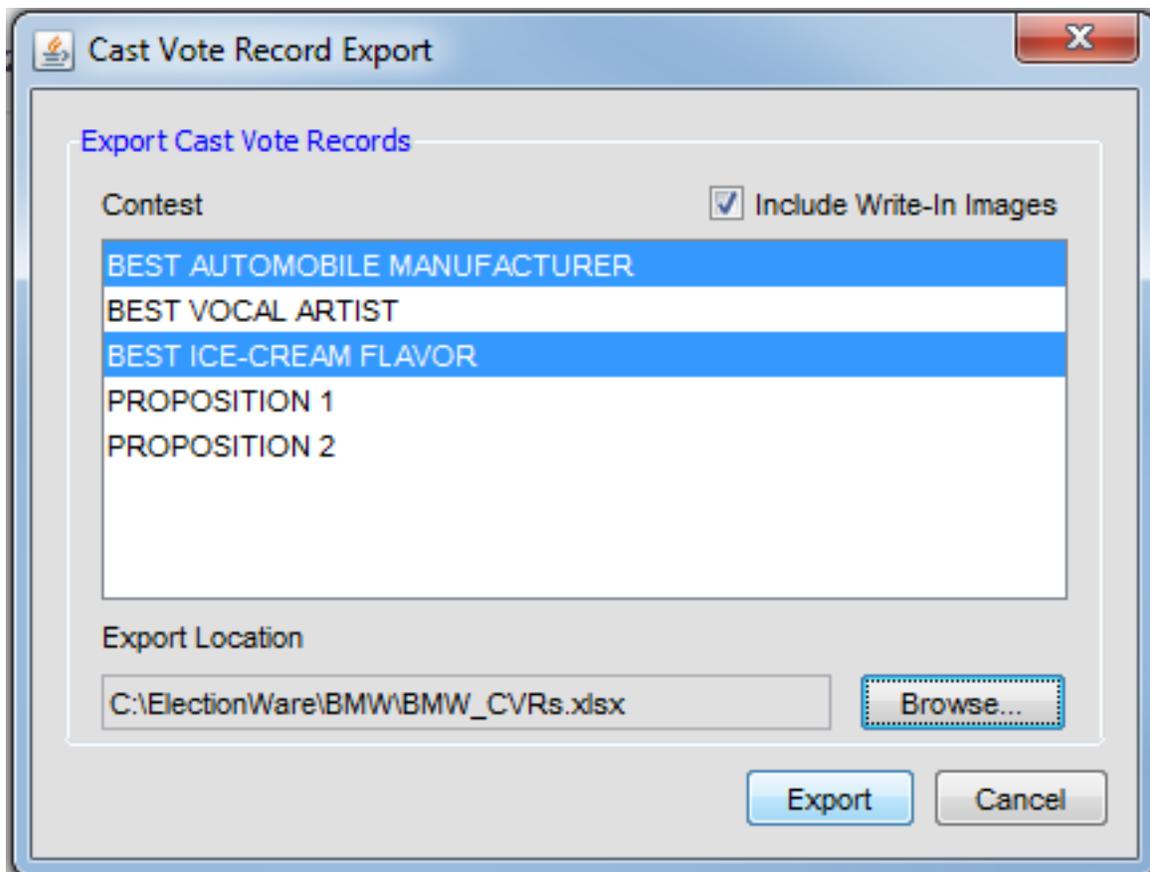
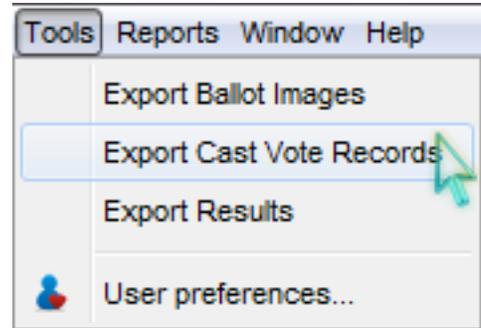
Ballot images (and optionally CVRs) are exported as individual .pdf files within the \*.zip archive. These .pdf files are sorted in folders, by precinct and party. Each file is identified by CVR number, followed by the letter “i” if the file is a ballot image, or the letter “c” if the file is a cast vote record.



### 10.5.8.3 Export CVRs (Write-In Images Optional)

CVR text for selected races, and optionally write-in images, are exported as a .csv or .xlsx file.

1. From the **Tools** menu, select **Export Cast Vote Records**.



2. In the Cast Vote Record Export window, select the contests to be exported.
3. To export thumbnail images of write-in ballot in the CVR file, select **Include Write-In Images**.
4. Browse to the target folder in which to save the file. Enter a filename, then click **Save**.

5. The Cast Vote Record Export window reappears, with the location and filename in the Export Location box. Click **Export**.
6. When the export is complete, a confirmation dialog will display the number of records exported. Click **OK**.



	A	B	C	D	E
1	Cast Vote Record	Precinct	Ballot Style	BEST AUTOMOBILE MANUFACTURER (16)	BEST ICE-CREAM FLAVOR (19)
2	105	PRECINCT 1	PRECINCT 1	overvote	Write-in <i>Daemmel</i>
3	106	PRECINCT 1	PRECINCT 1	MERCEDES (26)	CHOCOLATE (42)
4	107	PRECINCT 1	PRECINCT 1	FORD (31)	CHOCOLATE (42)
5	108	PRECINCT 1	PRECINCT 1	BMW (25)	VANILLA (44)
6	109	PRECINCT 1	PRECINCT 1	MERCEDES (26)	STRAWBERRY (43)
7	110	PRECINCT 1	PRECINCT 1	BMW (25)	STRAWBERRY (43)
8	111	PRECINCT 1	PRECINCT 1	JAGUAR (30)	STRAWBERRY (43)
9	112	PRECINCT 1	PRECINCT 1	JAGUAR (30)	VANILLA (44)
10	113	PRECINCT 1	PRECINCT 1	BMW (25)	STRAWBERRY (43)
11	114	PRECINCT 1	PRECINCT 1	BMW (25)	STRAWBERRY (43)
12	115	PRECINCT 1	PRECINCT 1	MERCEDES (26)	Write-in <i>COEN</i>
13	116	PRECINCT 1	PRECINCT 1	BMW (25)	STRAWBERRY (43)
14	117	PRECINCT 1	PRECINCT 1	JAGUAR (30)	CHOCOLATE (42)
15	118	PRECINCT 1	PRECINCT 1	BMW (25)	CHOCOLATE (42)
16	119	PRECINCT 1	PRECINCT 1	overvote	Write-in <i>Daemmel</i>
17	120	PRECINCT 1	PRECINCT 1	MERCEDES (26)	CHOCOLATE (42)
18	121	PRECINCT 1	PRECINCT 1	MERCEDES (26)	CHOCOLATE (42)
19	122	PRECINCT 1	PRECINCT 1	BMW (25)	STRAWBERRY (43)
20	123	PRECINCT 1	PRECINCT 1	MERCEDES (26)	STRAWBERRY (43)
21	124	PRECINCT 1	PRECINCT 1	JAGUAR (30)	STRAWBERRY (43)
22	125	PRECINCT 1	PRECINCT 1	MERCEDES (26)	Write-in <i>COEN</i>
23	126	PRECINCT 1	PRECINCT 1	overvote	Write-in <i>Daemmel</i>
24	127	PRECINCT 1	PRECINCT 1	MERCEDES (26)	Write-in <i>COEN</i>

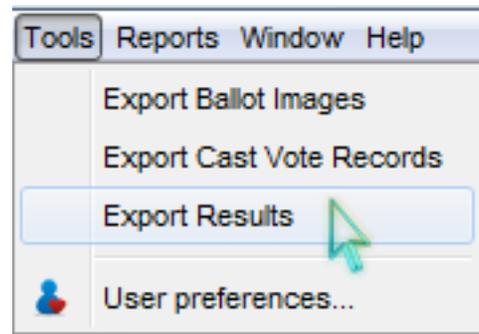
## 10.5.9 Export Election Results Reporting Files

The Produce module can export two results data text files to a destination of your choice.

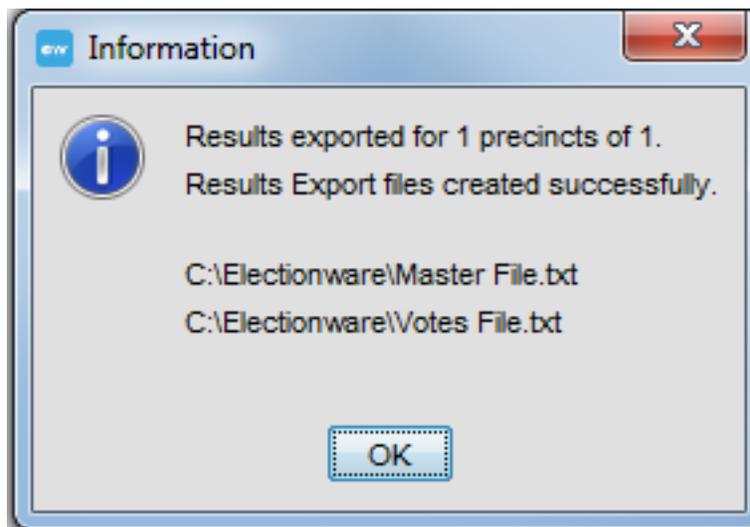
**Master File** – The Master File identifies the election definition data, consisting of Ballot Style, Precinct, Party, District, Contest, and Candidate.

**Votes File** – The Votes File contains the candidate votes, ballots cast, undervotes, overvotes, and blank ballot contest counts, by ballot style number, within each precinct.

1. From the **Tools** menu, select **Export Results**.
2. In the Export Results window, click **Browse** and navigate to the location to save the files.
3. Click **Export**.

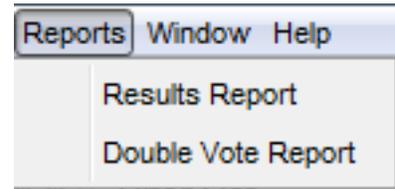


A dialog box will display the number of precincts with exported data, and the path and filenames for the Master File and Votes File.



## 10.5.10 Produce Reports

In Produce, use the **Reports** menu to generate results reports and double vote reports.



### 10.5.10.1 Results Report

The Election Results - Summary Report can be viewed and saved in XML or HTML format. This report contains the results of all loaded ballots.

**BMW Future of Voting**  
 Unofficial Results

**Election Results - Summary Report**

BEST AUTOMOBILE MANUFACTURER			
Times Over Voted	3		
Times Under Voted	0		
Candidate	Votes	Vote%	Bar Graph
BMW	14	45.16%	<div style="width: 45.16%;"></div>
MERCEDES	9	29.03%	<div style="width: 29.03%;"></div>
GENERAL MOTORS	0	0.00%	<div style="width: 0%;"></div>
HONDA	0	0.00%	<div style="width: 0%;"></div>
JAGUAR	5	16.13%	<div style="width: 16.13%;"></div>
FORD	3	9.68%	<div style="width: 9.68%;"></div>
Write-in	0	0.00%	<div style="width: 0%;"></div>
BEST VOCAL ARTIST			
Times Over Voted	6		
Times Under Voted	7		
Candidate	Votes	Vote%	Bar Graph
FRANK SINATRA	7	12.73%	<div style="width: 12.73%;"></div>
ELVIS	23	41.82%	<div style="width: 41.82%;"></div>
BUDDY HOLLY	8	14.55%	<div style="width: 14.55%;"></div>
BARRY WHITE	5	9.09%	<div style="width: 9.09%;"></div>
STEVIE RAY VAUGHAN	9	16.36%	<div style="width: 16.36%;"></div>
Write-in	3	5.45%	<div style="width: 5.45%;"></div>
Write-in	0	0.00%	<div style="width: 0%;"></div>
BEST ICE-CREAM FLAVOR			
Times Over Voted	0		
Times Under Voted	0		
Candidate	Votes	Vote%	Bar Graph
CHOCOLATE	8	23.53%	<div style="width: 23.53%;"></div>
STRAWBERRY	16	47.06%	<div style="width: 47.06%;"></div>
VANILLA	4	11.76%	<div style="width: 11.76%;"></div>
Write-in	0	0.00%	<div style="width: 0%;"></div>

To display the XML version of the report, click **Show XML** at the bottom of the screen. The button name changes to **Show Report**. This report includes ballot style statistics.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <Owner id="0" name="ERM Results XML File version 2.1">
  <ReportTime>2015-08-09T10:57:12.986-07:00</ReportTime>
  - <PartyMap>
    <Party id="1" abbrv="NON" name="NONPARTISAN" partyBallotsCast="7" />
    <Party id="5" abbrv="DEM" name="Democratic" partyBallotsCast="4" />
    <Party id="6" abbrv="REP" name="Republican" partyBallotsCast="4" />
  </PartyMap>
  - <ReportingTagList>
    <ReportingTag id="1" abbrv="ELD" name="Election Day" order="1" altid1="" altid2="16" tagBallotsCast="9" />
    <ReportingTag id="2" abbrv="ABS" name="Absentee" order="2" altid1="" altid2="3" tagBallotsCast="6" />
  </ReportingTagList>
  - <JurisdictionMap totalJurisdictions="1" reportingJurisdictions="1" percentReported="0.0">
    - <Jurisdiction id="0" title="Jurisdiction Wide" typeId="2" totalBallotsCast="15" totalRegistration="0" totalCastPercentage="0.0"
      reportedRegistration="0" reportedPercentage="0.0" totalPrecincts="3" precinctsReported="0" precinctsReportedPercentage="0.0">
      <BStyle id="685" refReportingTagId="1" refPtyId="1" name="NON Ballot Style" typeSeqSplit="01-0001-01"
        useForVoterCount="true" />
      <BStyle id="686" refReportingTagId="1" refPtyId="5" name="DEM Ballot Style" typeSeqSplit="01-0002-01"
        useForVoterCount="true" />
      <BStyle id="687" refReportingTagId="1" refPtyId="6" name="REP Ballot Style" typeSeqSplit="01-0003-01"
        useForVoterCount="true" />
      <BStyle id="688" refReportingTagId="2" refPtyId="1" name="ABS NON Ballot Style" typeSeqSplit="02-0001-01"
        useForVoterCount="true" />
      <BStyle id="689" refReportingTagId="2" refPtyId="5" name="ABS DEM Ballot Style" typeSeqSplit="02-0002-01"
        useForVoterCount="true" />
      <BStyle id="690" refReportingTagId="2" refPtyId="6" name="ABS REP Ballot Style" typeSeqSplit="02-0003-01"
        useForVoterCount="true" />
      - <Precinct id="0001" ballotsCast="5" castPercentage="0.0" counted="true" regVoters="0" name="Precinct 1">
        <PrecinctParty partyId="1" regVoters="0" ballotsCast="2" castPercentage="0.0" refBStyleId="685" blanksCast="0" />
        <PrecinctParty partyId="5" regVoters="0" ballotsCast="2" castPercentage="0.0" refBStyleId="686" blanksCast="0" />
        <PrecinctParty partyId="6" regVoters="0" ballotsCast="1" castPercentage="0.0" refBStyleId="687" blanksCast="0" />
      </Precinct>
      - <Precinct id="0002" ballotsCast="4" castPercentage="0.0" counted="true" regVoters="0" name="Precinct 2">
        <PrecinctParty partyId="1" regVoters="0" ballotsCast="2" castPercentage="0.0" refBStyleId="685" blanksCast="0" />
        <PrecinctParty partyId="5" regVoters="0" ballotsCast="1" castPercentage="0.0" refBStyleId="686" blanksCast="0" />
        <PrecinctParty partyId="6" regVoters="0" ballotsCast="1" castPercentage="0.0" refBStyleId="687" blanksCast="0" />
      </Precinct>
      - <Precinct id="0003" ballotsCast="6" castPercentage="0.0" counted="true" regVoters="0" name="ABSENTEE">
        <PrecinctParty partyId="1" regVoters="0" ballotsCast="3" castPercentage="0.0" refBStyleId="688" blanksCast="0" />
        <PrecinctParty partyId="5" regVoters="0" ballotsCast="1" castPercentage="0.0" refBStyleId="689" blanksCast="0" />
        <PrecinctParty partyId="6" regVoters="0" ballotsCast="2" castPercentage="0.0" refBStyleId="690" blanksCast="0" />
      </Precinct>
    </Jurisdiction>
  </JurisdictionMap>
  - <Election id="1001" electionName="PRIMARY" electionTitle="PRIMARY" final="false" totalBallotsCast="15" totalRegistration="0"
    totalCastPercentage="0.0" reportedRegistration="0" reportedPercentage="0.0" totalPrecincts="3" precinctsReported="0"
    precinctsReportedPercentage="0.0">
    - <ContestList>
      - <Contest id="400" altId2="102" partyId="1" stateWide="true" title="SUPERVISOR" typeCode="N" voteFor="1" runoff="false"
        ballotsCast="7" castPercentage="0.0" writeInVotes="0" overVotes="0" underVotes="0">
        - <Candidate id="447" pos="1" name="Kevin Powell" partyId="1" winner="false" runoff="false" recount="false">
          <Votes refPrecinctId="0001" refBStyleId="685">1</Votes>
          <Votes refPrecinctId="0002" refBStyleId="685">1</Votes>
          <Votes refPrecinctId="0003" refBStyleId="688">0</Votes>
        </Candidate>
      </ContestList>
    </Election>
  </Owner>
</xml>
```

To save the report as a file, click **Save** at the bottom of the screen. Browse to the target folder, name the file, and click **Save**.

### 10.5.10.2 Double Vote Statistics Report

The Double Vote Statistics Report contains all contests with candidates endorsed by more than one party who have received double votes.

**Note**



The Double Vote Statistics report is not available if this type of contest is not included in the election.

**Double Vote Statistics Report**  
Sample Election 3  
April 12, 2012  
ElectionWare County, ElectionWare State

Summary	Contest	# of Double Votes
	ATTORNEY GENERAL	1
	UNITED STATES SENATOR	2
	COUNCILMAN	1
Grand Total		4

District	Contest	# of Double Votes
PRECINCT 1 ED ">>"	ATTORNEY GENERAL	1
	UNITED STATES SENATOR	2
	COUNCILMAN	1
Grand Total		4

The first section of the report lists all contests that have double votes, including the total number of double votes for each contest and the grand total of all double votes.

# Chapter 11: Official Canvass and Post-Election Procedures

## 11.1 Purpose of the Official Canvass

The Official Canvass consists of a post-election audit of all of the voting precincts' returns and the vote-by-mail voter ballot returns. Its purpose is to validate the outcome of the election by verifying that there were not more ballots cast than the sum of the numbers of voters who signed the Precinct Roster/Index and who applied for, and were issued vote-by-mail voter ballots, as well as to account for all official ballots produced for the election. Additionally, the Official Canvass verifies that all required certificates and oaths were properly executed by the precinct board. Verification of the computer or tabulator count is accomplished by manually recounting the voted ballots from at least one percent of the voting precincts and comparing the manually tallied results to the tabulator and Summary System produced results. Each of the following Official Canvass functions must be performed by a minimum of three persons.

## 11.2 Election Observer Panel

Before processing ballots, the election administrator appoints election boards to carry out the following tasks.

### 11.2.1 Canvassing Precinct Returns

- Canvassing precinct returns consists of the following tasks:
- Processing the provisional ballots returned from each precinct
- Verifying the eligibility of persons who cast ballots provisionally
- Opening the envelopes of eligible voters and removing the provisional ballots
- Examining the ballots for write-in votes
- Noting cause for rejection and damage identifying original or duplicate provisional ballots by precinct and delivering same to the designated official responsible for updating the ES&S tabulators (and/or computer tallies)

- Writing the reason for rejection on the envelopes of ineligible provisional voters (these unopened envelopes are to be retained for the period prescribed by law)
- Processing the Statement of Votes (SOV) in the manner prescribed for Ballot Inspection Boards

### **11.3 1% Manual Recount Procedures**

For the purpose of validating the accuracy of the computer count, a public, manual recount of the ballots cast in at least one percent of the precincts shall be conducted within fifteen days after every election in which the precinct tabulator system is used. This one percent precinct sample shall be chosen at random. If the random selection of precincts results in an office or ballot measure not being manually recounted, select and manually recount as many additional precincts as necessary so as to include all candidates or ballot measures not recounted in the original sample.

Precincts selected at random shall be chosen by an individual who is designated by the responsible elections official and who is not the same person, or a relative of the person responsible for election coding. Selected precinct numbers shall not be revealed to such personnel until the tally is complete.

In the event a precinct tabulator fails after the semiofficial or official ballot tally process has begun, the ballots from the last precinct tallied on the equipment prior to the failure shall be included in the automatic manual recount. If a discrepancy is discovered between the automated tally and the manual recount tally, each precinct's ballots which had been read and processed by the failed equipment, subsequent to the time the equipment last successfully completed logic and accuracy test, shall be tallied again.

The California Secretary of State requirements concerning the interpretation and counting of valid voting position marks, shall be followed during the automatic recount of ballots.

### **11.3.1 Handling Ballot Exceptions (Definition of Vote, Determining Voter Intent)**

The California Secretary of State requires defined procedures to determine voter intent and how to handle various incorrect markings.

## **11.4 Post-Election Logic and Accuracy Testing**

All post-election logic and accuracy testing of election equipment must come under the direction of the county. When imposed, this test will analyze the calibration requirements as specified for election use.

Follow the same procedures described in [Chapter 5: Logic and Accuracy Testing](#).

## **11.5 Final Reporting of Official Canvass**

### **11.5.1 Ballot Security and Reporting Results**

Use the following instructions as a general guideline for reporting results. Consult the California Elections Code for specific regulations governing the reporting of results.

1. Complete the official canvass and add any write-in votes or other totals to the final vote count. Then, post the final vote count at the counting location for public inspection.
2. Prepare a certified statement of the election results and submit the statement to the governing district within 28 days of the election. Show results on a precinct by precinct basis. Include the following information on your statement of results:
  - The total number of votes cast
  - The number of votes cast at each precinct for each candidate and for and against each measure
  - The total number of votes cast for each candidate and for and against each measure
  - The number of votes cast in each city, assembly district, congressional district, senatorial district, State Board of Equalization district and supervisory district located in whole or part of the county.

3. Send a copy of the results to each of the following:
  - All candidates participating in your statewide election.
  - All of the candidates voted for in the following offices:
    - Member of the Assembly
    - Member of the Senate
    - Member of the U.S. House of Representatives
    - Member of the State Board of Equalization
    - Justice of the Court of Appeal
    - Judge of the superior court
    - Judge of the municipal court
    - All persons voted for in a presidential primary
  - The vote given for persons for electors of President and Vice President of the United States.
  - All statewide measures.

**Note**



For procedures to run the required reports, refer to [9.6 Closing the Polls](#) and [10.2 Precinct and Election Report Options](#).

## 11.6 Backup and Retention of Election Materials

### 11.6.1 Acronis Backup and Recovery

Acronis software is used for hard disk image backup. These processes require an Acronis boot disc for operation, and a portable USB hard drive or flash with a minimum of 32G available storage to save your backup files. Multiple backups of the hard disk images are recommended. Store all backup materials in a secure location.

To create the Acronis boot disc, follow the instructions provided in your Acronis documentation. During boot disc creation, if needed, you can install device drivers on the disc. Drivers can also be loaded from a separate drive after bootup.

Dell PERC H730 RAID controller drivers are available for download on the Dell Support Website, and should be preloaded on the disc.

### 11.6.1.1 Accessing Acronis

1. Turn on the computer.
2. When the computer is fully running, press the appropriate key for the Boot Manager.
  - EMS Server: **F11**
  - EMS Workstation: **F12**

#### Note



If you have password protected the BIOS, you must enter the password to enter the Boot Manager.

3. Insert the Acronis boot disc into the computer's DVD-ROM drive.
4. Select the DVD-ROM drive as the boot device.
5. At the prompt, press any key to boot from the disc.

Acronis will begin loading the Windows 7 environment. This process takes several minutes.

6. When loading is complete, the Acronis Welcome screen appears. Click **Disk Management**.

### 11.6.1.2 Backup Procedures

Full system backup can be performed on the EMS server, and also any EMS workstation, as needed.

1. Access the Acronis program as previously instructed.
2. Connect the removable storage device that will be used to save the backup image. After a few seconds, the new disk will appear in the directory list.

If the disk does not appear after a few seconds, refresh the window. If it still does not appear, remove the drive and connect it to a different USB port.

3. Click **Back** to return to the Welcome screen.

4. Click **Back up now**.
5. Under "What to back up," click **Items to back up**.
6. In the Data to Back Up window, select **Disks/volumes**.
7. The computer will display any connected disks. Each disk node can be expanded to show its contents.

Select the check boxes next to only the computer's internal disk drives. Deselect the removable storage device.

**Note**



The drive letters that appear in Acronis Windows 7 may be different from the drive letters in standard Windows. The drives can generally still be identified by their capacity and interface type.

8. Click **OK**.
9. Under "Where to back up," click **Location**.
10. Expand the Local folders node, select your backup drive, then select the desired path. (You can create sub-folders on the drive by clicking **Create folder**.)
11. At the bottom of the window, enter a Name for the backup image file. The name can not end with a number.
12. Click **OK** twice.

The backup process lasts at least 20 minutes.

13. When the backup is complete, click **Close**.

**Note**



Ignore the warning that appears under Status.

14. Remove the Acronis boot disk and backup drive from the computer.
15. Close the Acronis window.

This causes Acronis to shut down and the system to reboot.

### 11.6.1.3 Recovery

The following steps are for hard disk image recovery.

1. Access the Acronis program as previously instructed.
2. Connect the removable storage device containing the backup image. After a few seconds, the new disk will appear in the directory list.

If the disk does not appear after a few seconds, refresh the window. If it still does not appear, remove the drive and connect it to a different USB port.

3. Click **Back** to return to the Welcome screen.
4. Select **Recover**.
5. Remove the Acronis boot disk and backup drive from the computer.
6. Close the Acronis window.

This causes Acronis to shut down and the system to reboot.

7. Under "What to recover," click **Select data**.
8. Click **Browse** and navigate to the folder containing the backup images.
9. Click **OK**.
10. Select the backup archive.
11. Next to Backup contents, select **Disks**.
12. Select all of the available disks.
13. Click **OK**.
14. Under "Where to recover," click **Clear all**.
15. Click **Recover `Disk 1' to**.
16. Select the destination disk for Disk 1, then click **OK**.

17. Click **Recover `Disk 2'** to.

**Note**



On the EMS workstation, there is only one disk to recover, so this option will not be available.

The recovery procedure will last at least 20 minutes.

18. When the restoration is complete, click **Close**.

### 11.6.2 Precinct Tabulator Election Materials

Upon the certification of the election results, the guidelines in the California Elections Code apply to the handling, security and disposition of unused ballots and other election materials. As noted in various sections of this document, memory cards are not deemed to fall within the purview of these Elections Code sections.

**Note**



For information about vote reporting, refer to [9.6 Closing the Polls](#).

For information about printing audit logs for all devices, refer to [13.8 Audit Logs](#).

### 11.6.3 Central Tabulator Election Materials

Consult the California Elections Code for guidelines on retaining election materials. The retention period for ballots and related election materials is six months for all elections if no federal elections are involved. The federal election retention period is 22 months. Extend retention periods in the case of a court challenge.

**Note**



For information about vote reporting, refer to [9.6 Closing the Polls](#).

For information about printing audit logs for all devices, refer to [13.8 Audit Logs](#).

# Chapter 12: Manual Recount Procedures

## Note



Poll workers are not permitted to participate in any post-election manual count auditing of precinct results from a precinct in which they were poll workers.

## 12.1 Manual Recount for Precinct Tabulators

A manual recount of an optical or digital scan voting system is straight forward in that the names of all contests, candidates, and issues appear on the ballot face. The votes/marks on the ballot are a secret, permanent record of the election and become part of the Election Audit Trail CHECKPOINT of the voting system. The ballots are manually tallied for the office(s) to be recounted, and these results are compared to the tabulator-generated Precincts Results Tape for that precinct. Should the totals not agree, then the ballots are reviewed for any ballot marking anomaly that would cause the ovals on a particular ballot to not be scanned. Once these differences are resolved, the next precinct is manually tallied. This process continues until all precincts have been tallied manually.

# Chapter 13: Security

Election administration security must be a part of a jurisdiction's overall security plan to prevent lapses in adjacent or interconnected departments and processes from compromising the election function.

Election administrators must implement strong physical controls, including employee background checks, identity verification, locks, security guards, badges, alarms, backup power, printed reports, and similar measures to control access to computers and related equipment.

Pre-election security should include proof of content on all ballots, equal distribution of poll workers among all political parties, location of all ballots, and ensure privacy at all voting booths.

Post-election security should include examination of audit logs attached to the tabulators, examination of final reports, and ensuring that all election equipment and ballots are returned to secure physical storage locations.

## Note



Complete guidelines for Election Management System (EMS) security are provided in the *EVS 5210 CA Installation* documents.

## 13.1 Physical Security of System and Components

Physical access control must be implemented for all election-related equipment, software, and supplies including, but not limited to, tabulators, PCs, software, media, ballots, logbooks, locks and seals, and keys. Secure warehouse storage and staff work areas must be maintained, with controlled access limited to authorized personnel, to store all voting related equipment, software, and supplies.

It is the responsibility of the jurisdiction to provide a secure physical and procedural environment for the storage, handling, preparation and transportation of the system hardware.

ES&S voting and tabulation equipment has access doors to protect external communication and data ports. These access doors can be locked with an administrator key and further protected with the installation of tamper-evident seals.

Each model of equipment is either powered on and off by an administrator key, or by a power switch protected behind a lockable access door. Certain system screens require entry of a code to prevent unauthorized access to sensitive functions. Carrying cases and ballot bins are equipped with locks and locations for security seals.

ES&S supplies a variety of tamper evident devices for use to secure your ES&S voting equipment. Visit **myES&S Supply Store** at <http://shop.esvote.com> for more information about all the available devices.



Each type of label or seal includes an identification number. Election officials should keep a record of the security seal numbers of the labels and seals in use as verification of the chain of custody of sensitive materials.

**Note**



Jurisdictions are required to use Securevue Tamper Evident Labels when affixing a sticker seal to a plastic surface. (Item #800-0112, pictured below.)



When the time and date are reset or new firmware is uploaded, the security code should be reset by the designated election official and kept private.

Upon request, members of the public must be permitted to observe and inspect, without physical contact, the integrity of all externally visible security seals used to secure voting equipment in a time and manner that do not interfere with the conduct of the election or the privacy of any voter.

### 13.1.1 AutoMARK Locks and Seals

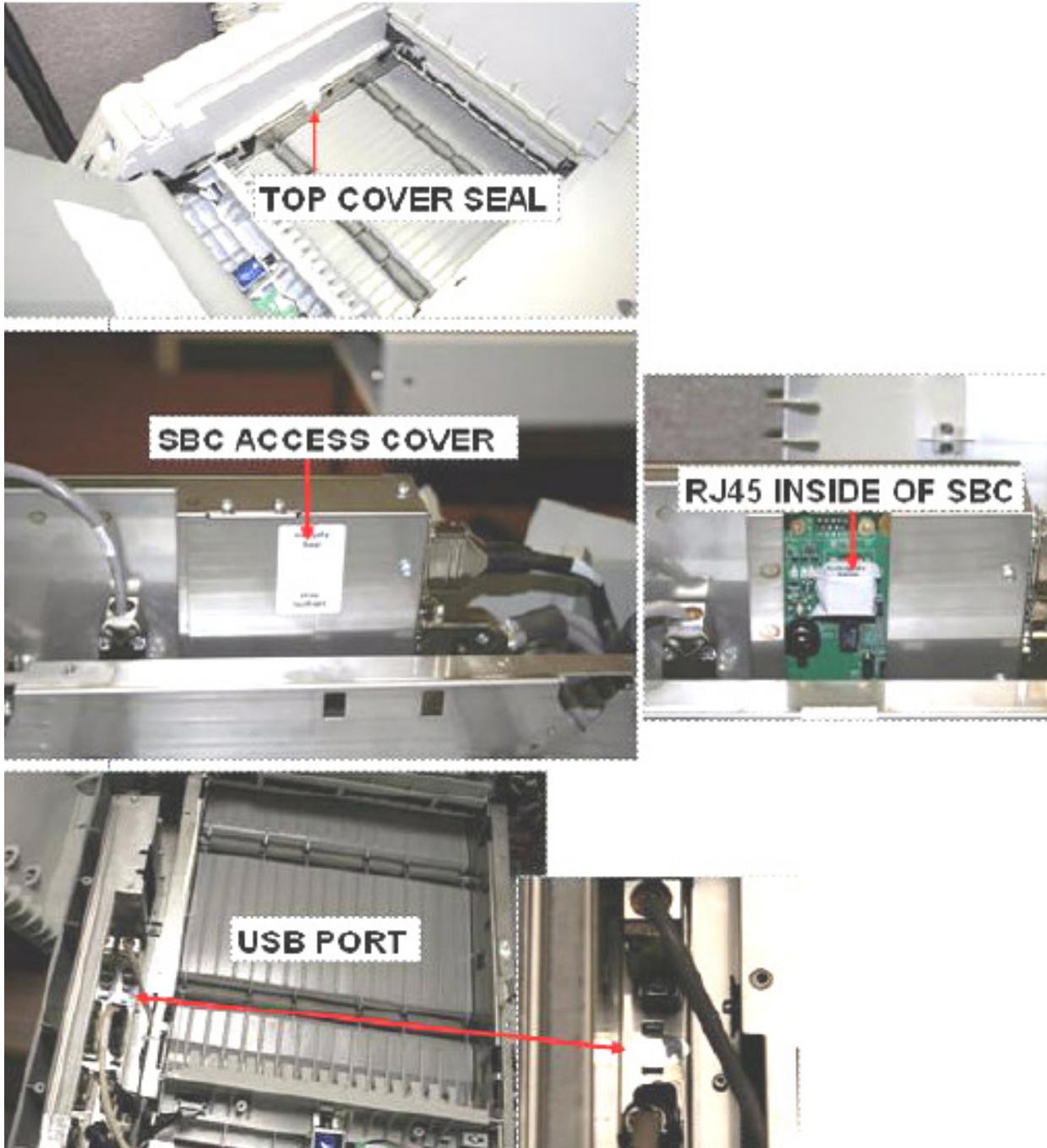
The AutoMARK's compact flash card compartment can be protected from unauthorized access using the key lock, tamper-evident tape, and a wire seal.



The back of the AutoMARK can be protected using tamper-evident tape and a wire seal to prevent unauthorized access to the ink cartridge.



Additional seals can be used on the AutoMARK to prevent unauthorized access to the SBC casing and USB port. Only an ES&S-certified technician or trained vendor technician should apply these seals.



The AutoMARK case has an information window for displaying equipment identification.



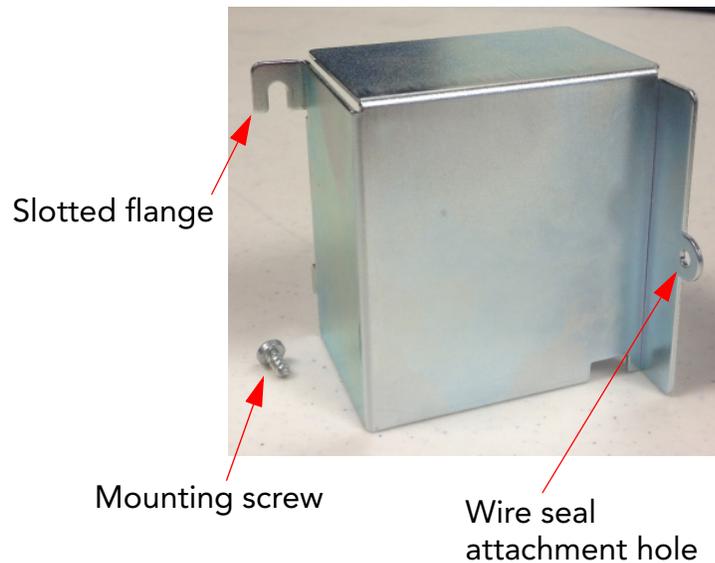
## **13.1.2 ExpressVote Locks and Seals**

### **13.1.2.1 Access Compartment**

The access compartment contains the On/Off Power toggle switch, Official/Voter Mode toggle switch, and USB ports, as well as the internal solid-state drive (SSD). The access compartment door can be locked and sealed with tamper-evident seals. Access to this compartment should be controlled, monitored, and logged at all times. Follow your jurisdiction's rules regarding security seals.

Because the access compartment door needs to be opened to access the Power and Mode switches, ES&S provides additional protection to secure the SSD in the event that the compartment door is compromised.

A metal security box secures the SSD inside the access compartment, protecting the SSD from damage or unauthorized removal.



To install or remove the security box, complete the following steps:

1. Install the mounting screw into the available threaded hole in the back of the access compartment. Do not tighten the screw at this time.

If the mounting screw is already present, loosen the screw.

2. Position the box over the SSD, sliding the slotted flange on the box over the loosened mounting screw in the access compartment.
3. Re-tighten the mounting screw.

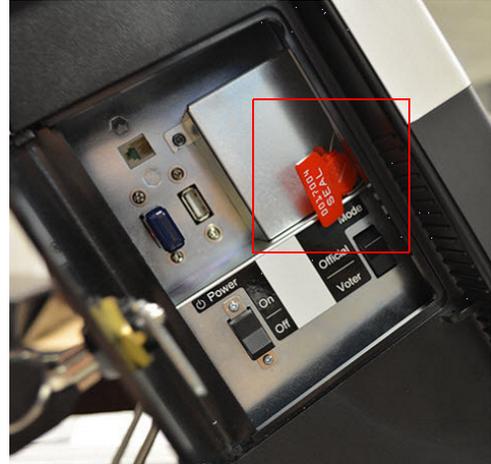


4. Install a wire seal via the available attachment hole on the right side of the box, securing the box to the access compartment.

**Note**



To remove the metal security box, reverse the steps in this section.



The following measures help to limit unauthorized access to the USB ports and the election definition flash drive.

- Whenever the door is closed, and especially when polls are open, ensure the door is locked.
- In addition, a secure seal can be snapped through the loop on the door.
- A tamper-evident seal can also be affixed to the door, either instead of or in addition to the secure seal.



### 13.1.2.2 Paper Path Doors

The paper path can be accessed from the front and from the right side of the ExpressVote. Whenever the doors are closed, and especially when the polls are open, the paper path access doors should be locked and a tamper-evident seal can be used as an additional method of securing access to cards.



### 13.1.2.3 Securing the ExpressVote with Rolling Kiosk

If you use the ExpressVote rolling kiosk, you can use seals and locks to safeguard the accessory panel and the secure card container, as explained in this section.

#### Rolling Kiosk Accessory Panel

The center door of the accessory panel of the rolling kiosk can be locked with a key and secured with a tamper-evident seal. Locking the center door secures each of the following components:

- Secure card container release button
- Code scanner cover

#### Note



The code scanner cover can be left open during operation while the center door remains locked to secure the secure card container release button.



#### 13.1.2.4 Secure Card Container

Election officials should inspect the secure card containers at the beginning of voting to ensure that they are empty. The secure card container has two openings that should be secured: an access door for removing voter cards and a metal flap through which cards are deposited from the ExpressVote. Both of these openings have provisions for attaching tamper-evident loop seals.

A seal here secures the flap so it cannot open. Remove this seal during voting.

Printed cards are deposited through this flap.



A seal here secures the container door. Leave in place during voting.

Both the container door and the metal flap can be sealed after the ExpressVote and secure card container have been prepared for Election Day to ensure that the secure card container is empty before the start of voting.

The seal that secures the metal flap must be removed before voting begins. Otherwise, the ExpressVote will be unable to deposit printed vote summary cards into the secure card container. After voting, or any time the secure card container must be replaced, secure the metal flap with a seal.

### 13.1.3 DS200 Locks and Seals

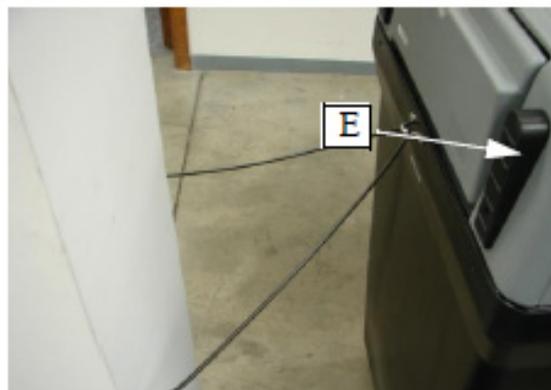
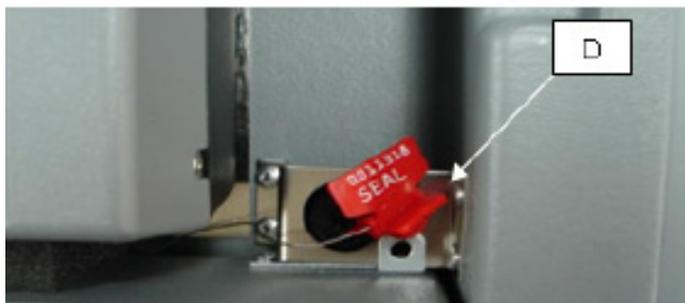
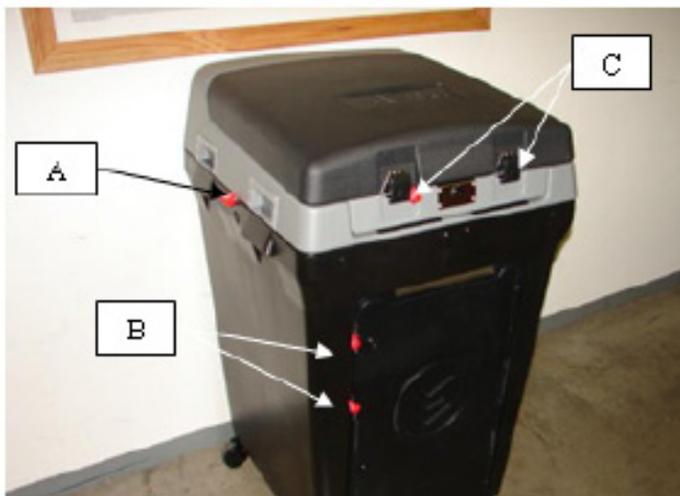
The USB flash drive containing the election definition and the USB backup memory device can both be secured by using tamper-evident seals, then locking the access doors, then placing tamper-evident tape on the doors.



### 13.1.3.1 DS200 Carrying Case and Ballot Bin

The DS200 carrying case and ballot bin has nine possible locations for wire seals.

- To secure the carrying case to the bin, engage the locks on the sides of the bin between the handles, then place one seal on each side of the bin between the handles (two seals).
- To secure the ballot bin, assure that both doors are locked and place one seal on each door (two seals).
- To secure the carrying case lid, secure both lid latches and lock the lid using the lock between the two latches. Place at least one seal on the lid latch. There are two locations for seals on each latch. Only one seal should be necessary to secure the lid.
- To secure the DS200 inside the carrying case, lock the front door and place a seal through the lock bracket.
- Further polling site security may be attained by using the integrated anchor point on the DS200 Ballot Bin.



#### Note

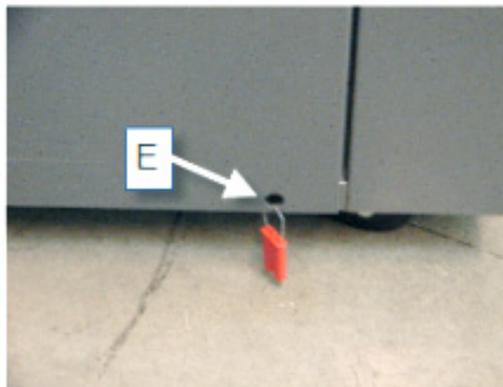
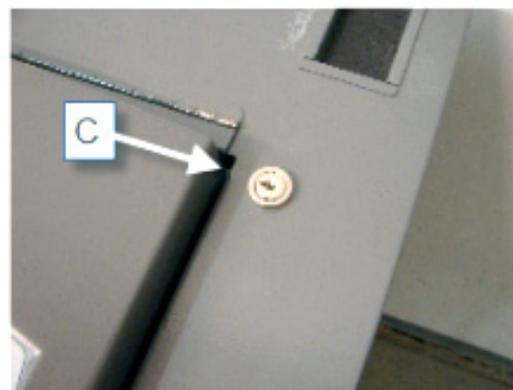
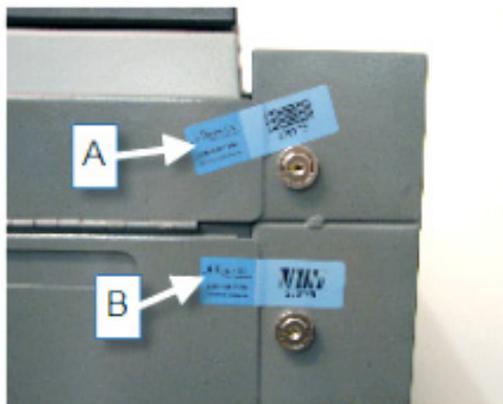


ES&S does not recommend any specific lock for this application due to the unknown anchor points at your polling sites. Check with your local hardware store for options.

### 13.1.3.2 Steel Ballot Box Seals

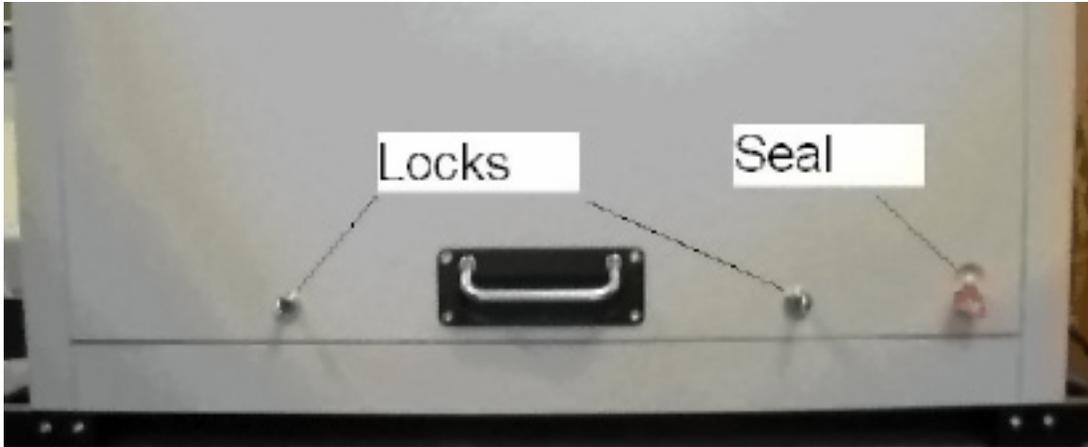
The steel ballot box has six possible locations for seals.

- Slide the tabulator onto the ballot box rails and secure. A tamper-evident seal can also be added for additional security.
- Access to the emergency ballot bin is limited by this lock. A tamper-evident seal can also be added for additional security.
- In operation the ballot flap must be in the UP position. During storage, transportation, or periods of higher security, the ballot flap can be locked in the closed position.
- Access scanned ballots through doors located on each side of the ballot box. These doors should be locked, and a tamper-evident seal can also be added for additional security.
- Additional security can be implemented by adding a seal on the bottom of the ballot box door.

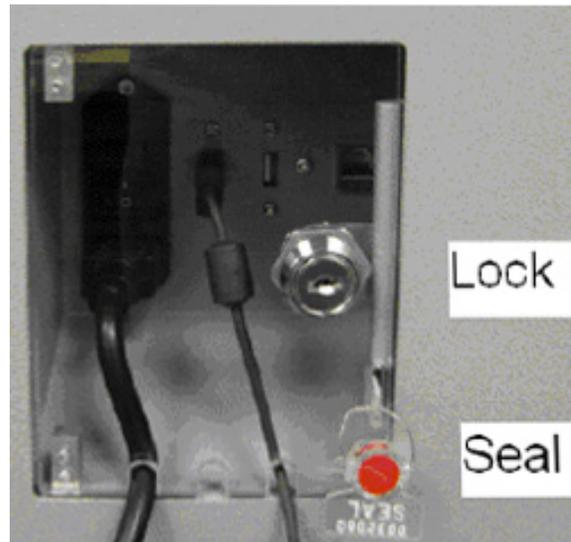
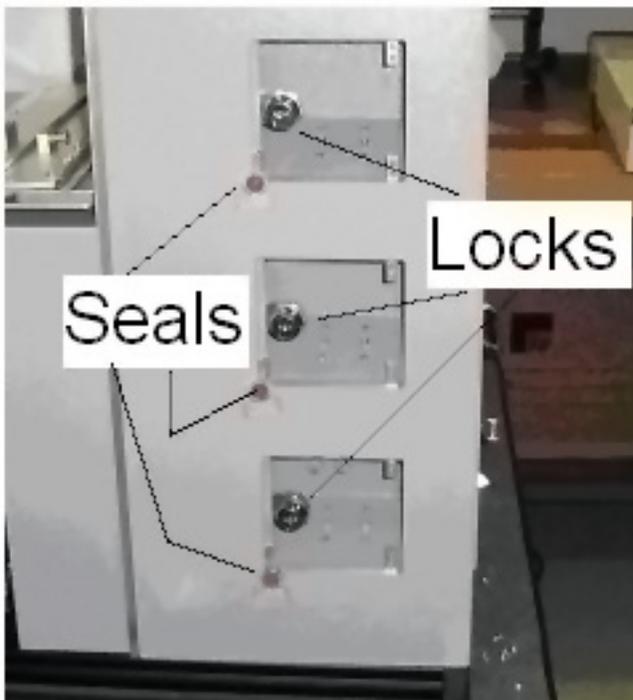


### 13.1.4 DS850 Locks and Seals

The rear of the DS850 is secured by locking both door locks. A tamper-evident tape seal can be used for additional security.



The data ports on the right and left sides of the DS850 are behind clear access doors that can be protected by both locks and seals.



## 13.2 Logical Security of System and Components

The EMS operates on a hardened, stand-alone (non-networked) computer. This involves completely erasing the hard drive, removing all unnecessary files, and disabling any network adapters on the system.

### Note



Complete hardening procedures are provided in the *EVS 5210 CA Installation* documents.

Election administrators should use Windows security procedures to adopt a strict access control policy.

System audit logs must be backed up and stored in a manner that allows the logs and data to be:

- Protected from tampering or destruction
- Used in a regular audit regimen to detect and prevent errors or fraudulent activity, and
- Used in any forensic investigations of suspected errors or fraudulent activities that may occur.

Data backups must be coordinated with the Disaster Recovery or Contingency Planning procedures of the jurisdiction. All system logs and application data must be backed up to write-once, non-modifiable media such as a CD or DVD. A full backup of the data should be done periodically to prevent log file data from being dropped or aged off due to retention limits.

The frequency of backups depends on the size of the jurisdiction staff and level of activity. Shorter intervals of 1-7 days are recommended initially, until a use level can be established and longer periods allowed without risk of data loss. Where large amounts of work are completed such that the loss of the resulting data would jeopardize the accuracy or timely completion of the election process, more frequent backups will be necessary. During heavy election use, ES&S recommends a daily backup stored in a safe and secure environment, and a weekly duplicate backup stored in an alternate but equally safe and secure location.

Backups should be performed by qualified system administrators under the supervision of the appropriate elections officials. All backup functions should be performed in a manner consistent with the policies for separation of duties and logged.

## 13.3 User-Level Security

To ensure the separation of roles and responsibilities, security accounts/ roles should be defined such that each level of user has only sufficient privileges to perform the tasks of that role and no more. ES&S recommends that the following roles be established at a minimum:

- **System Administrator** – This role is responsible for computer system configuration and upkeep, such as hardware and operating system installation, setup, configuration, and password management. The system administrator role should not have access to application operations.
- **Election Administrator** – This role is responsible for defining and administering the election.
- **Election Worker** – This role is under the supervision of the Election Administrator and would perform lower-level and specialized tasks, such as results tabulation and reporting.

Roles and accounts should be reviewed and updated before each election to reflect personnel or responsibility changes, or immediately upon termination or demotion of personnel such that specific roles must be taken away from the individual.

The following checklist provides suggestions to help ensure the security of your elections. Always follow the processes and laws for your jurisdiction.

- No single individual should control all election procedures. The election supervisor should systematically assign responsibilities to many individuals in order to cover all phases of the election process.
- Access control policies should be based on industry best practices and the jurisdiction's unique requirements and should be consistent across all areas that interact or are physically or logically connected to any system or area that is involved with election procedures.
- Perform background checks on all key election personnel.
- Immediately log and report any, and all, security incidents. The ES&S user guides and operator's manuals provide more information about ES&S software and hardware.

### 13.3.1 Password Security

- The System Administrator, under the supervision of the Election Administrator, should manage Windows® PC password management.
- In addition to Windows PC password protection, Electionware enables application-level authentication via the Setup module. The Election Administrator should control this application password management.

The California Secretary of State requires the following password practices:

- In general, a password should be as long as possible while still being easy to remember.

#### Note



One way to do this is create a password based on an easy-to-remember phrase. For example, the phrase might be: "This May Be One Way To Remember" and the password could be: "TmB1w2R!" or "Tmb1W>r~" or some other variation. (Do not use either of these examples as passwords!)

- Do not use an easily guessed password, such as:
  - Names of family, pets, friends, co-workers, etc.
  - Computer terms and names, commands, sites, companies, hardware, software.
  - Birthdays and other personal information such as addresses and phone numbers.
  - Word or number patterns like aaabbb, qwerty, zyxwvuts, 123321, etc.
- Never write down passwords or store them online.
- Change passwords on a regular basis. ES&S recommends either every 90 days, for each election, or any time there is reason to suspect that an account has been compromised or tampered with.
- Passwords should contain a combination of alphabetic, numeric, and punctuation characters, as allowed by the specific application.
- Do not share user names or passwords.

- Lock all software each time a user leaves the protected area. Set screen savers to lock workstations after a period of inactivity, not to exceed 10 minutes, requiring the Windows password to be re-entered.

Users should log off of any application or account when they expect to be away for any appreciable length of time.

## 13.4 Anti-Virus Protection

The specified configuration includes commercially available and standard virus detection software. Virus detection software must be installed and enabled on all three of the referenced PCs at all times, and removable media must always be scanned by the configured PC to prevent virus entry and propagation.

### Important



Install Symantec virus protection software according to the instructions provided in the *EVS 5210 CA Installation* documents.

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### Important



The virus protection software and update files should only be updated if tested and approved for use with the EVS system.

## 13.5 Essential Software Updates and Changes

- **Operating System** – Before each election, a qualified system administrator under the supervision of the appropriate elections official should contact ES&S for any operating system updates available from the third party vendor and tested and approved for use with the EVS system. Depending on the scope of the updates and any regulatory approval required, ES&S will issue procedures for installation of the updates.
- **Applications and Third Party Software** – All applications and third party software are not to be updated unless specifically required by ES&S and approved by Federal and State Certification, or by an exception granted by the Secretary of State's Office.

### 13.5.1 Audit Records for Changes

ES&S recommends that a physical log be kept of all activity related to installation, configuration, and modification of any and all system components, in addition to the logging of storage, transportation, and overall chain of custody. Logging should include at a minimum:

- Printed name of the person performing the task
- Full signature or signed initials of the person performing the task
- Task performed
- Reason for performing the task
- Date and time of the task performed
- Printed name of the person witnessing, verifying, or authorizing the task (if applicable)
- Full signature or signed initials of the person witnessing, verifying, or authorizing the task (if applicable)

#### Note



The entries in this log must be complete.

Example: "System Maintenance" is not an acceptable entry. The entry should state who accessed the system, exactly what maintenance was performed and why it was necessary, when the maintenance work began, and when it ended.

Completed log pages should be reviewed by the appropriate elections official, initialed and stored physically by secure means for a minimum of 22 months or as directed by State Election law.

## 13.6 Security Procedures for Central Processing

The following security measures are recommendations based on industry best practices.

- When ballots are prepared and stored for processing, each box should be logged with contents (such as precinct/ballot type number, date packed, etc.).
- Store ballots in a climate-controlled environment and under pass code security or lock and key.
- When ballots are retrieved for processing (from a storage or collection area), two elections officials are required to monitor the transfer of ballots from the storage area to the tabulation equipment.
- Transfer custody of the ballots from the elections officials to the individuals responsible for tabulation.
- Upon completion of tabulation process, ballots are required to be:
  - Logged as scanned with the tabulation operators' initials and date\time.
  - Logged and sealed in a storage container.

The central tabulation room should be secured at all times with a minimum of two elections officials having access rights to the room (one of whom must be an employee of the jurisdiction). Access to the room should be monitored or logged at all times. All access rights to the room and its components will be restricted to the individual's rights or duties. Any need for change of access rights outside an individual's normal realm of duty or job function shall be maintained and logged by the jurisdiction's chief elections official.

### 13.6.1 DS850: Restricting Access

If an election definition has been loaded on the DS850, with the User Access feature enabled, you can lock the scanner to prevent unauthorized users from modifying the scanner configuration or performing other scanner functions from the touch screen.

The scanner can only be unlocked again with the correct election code.

## 13.7 Security Procedures for Polling Places

### 13.7.1 AutoMARK

The AutoMARK is powered on and off with a key. Remove this key to prevent unauthorized use when it is left unattended.

Physical security measures for the AutoMARK system include a locked compartment to prevent access to the Compact Flash card containing ballot format information. The compartment is locked with a key. The key is held by the precinct staff.

A password is required to access the System Maintenance Menu items on the AutoMARK, such as setting the time and date, or installing new firmware. The password should be reset by the designated official and kept private.

Headphones can be used to provide audio of the various ballot choices, and the display screen can be turned off to prevent unauthorized access to vote information from a voter with visual impairments.

### 13.7.2 ExpressVote

The election definition flash drive the poll-specific data, including the candidates, contests, and card variations for an individual precinct or an entire jurisdiction.

The election definition includes format styles and touch screen menu settings. For example, the election definition can configure the ExpressVote to query the voter when he or she undervotes a contest and then attempts to move to another contest, or to prevent the voter from overvoting a contest. The election definition also contains the visual and audio ballot files and navigation prompts. The system uses the election definition flash drive to store the audit log and other specific election information.

The election definition flash drive is secured in the ExpressVote unit during the election. When you insert the election definition flash drive into an available USB port on the ExpressVote terminal, the system compares the encrypted keys loaded from the EQC flash drive with the keys stored on the election definition flash drive to validate the election definition. If the keys do not match, the system aborts the election loading process. If the keys do match, the system prompts the election official to enter the election security code.

The system accesses data on the election definition flash drive when the device is first inserted into an ExpressVote USB port. Operations and Systems Log data stored on the election definition flash drive any time a card is inserted into the ExpressVote terminal or the user interacts with the on-screen menus in Official mode.

### **13.7.3 DS200**

The following items are critical to tracking, auditing, and reporting the ballot counting process and must be maintained:

- For the election definition phase, diagnostic proof listings of candidates and active vote positions for each ballot style, ballot type or precinct must be maintained.
- The number of ballots read within each precinct, by type, including totals for each party in primary elections must be maintained.
- The total number of ballots processed must be maintained.
- Separate accumulations and reporting of the quantity of overvotes, undervotes, and write-ins within each precinct for each race or issue must be maintained. This is generally done on reports other than the report distributed Election Night.
- Availability of the above information in summary and by precinct.

## 13.8 Audit Logs

This section provides a description of all audit log files, the file location within the voting system, and procedures to retrieve, export, and archive audit logs from the voting system.

The close of polls will automatically generate two (2) copies of the results report. One copy shall remain with the machine and the other shall be posted in an open public area. At the discretion of the County Election Administrator, the audit log report for that particular scanner can be printed at the close of polls after the results have completed printing. If the audit log is printed, keep the log, along with all related election materials, together with the results tape for processing at the County office. Each jurisdiction shall, before taking any action that could delete or overwrite any audit log, create an electronic copy, when possible, or a clean paper copy, of all audit logs, to be maintained for 22 months.

### 13.8.1 Audit Log: ExpressVote

The ExpressVote's Operations Log and System Log reports comprise a system-generated audit trail you can use to verify that elections are administered fairly, accurately, transparently, and efficiently.

System-generated audit records reduce the possibility of errors and omissions associated with manually-generated audit logs. The following sections summarize how the ExpressVote generates audit record data.

#### Note



Refer to Chapter 11 in your *ExpressVote Operator's Guide* for detailed information about the Operations Log and System Log reports.

#### 13.8.1.1 Record Timing and Sequence of Audit Record Entries

The ExpressVote stores continuously updated audit logs on a removable USB flash drive. The ExpressVote's real-time clock applies a time-and-date stamp to each event recorded in the Operations Log and System Log reports.

#### 13.8.1.2 Preserve Timing and Sequence of Audit Record Entries

Stored audit records are not affected by system power interruptions. The ExpressVote audit record is stored on the removable USB flash drive.

### 13.8.1.3 View and Print Audit Logs

You can view audit logs on the ExpressVote's touch screen by displaying the Operations Log and System Log reports. You also can print both logs using the unit's internal card printer.

Operations Log and System Log report information enables you to immediately identify and resolve error conditions. Each log entry is numbered and includes event details to facilitate recognition, segregation, and retention. You can use each of the ExpressVote's administrative menus to generate machine-level audit reports at any time.

### 13.8.1.4 Display Error Messages and Remedial Actions

The ExpressVote displays and stores all error messages to the user as they occur. Error messages are either displayed in the voter's selected language or include the international warning symbol if intended for the poll worker or if a general system error is generated. The error message details state the recommended action to restore the system to the state existing before the first error occurred and with no irreversible errors.

### 13.8.1.5 Display and Report Critical and Non-Critical Status Messages

The ExpressVote displays and reports critical and non-critical status message in real time and in the voter's selected language or in English, along with the international warning symbol depending on the nature of the error at the time of occurrence.

## 13.8.2 Audit Log: AutoMARK

The Operation Log (also called the System Log) is used to view all significant operations that have occurred on the unit. The log entries are stored in a circular buffer on the flash card, which will hold the most recent 277,777 entries.

Following is an example of entries that might appear in the Operation Log.

---

(1142)	11/10/2004	13:29:19	Aborted Marking Ballot ID: 1
(1141)	11/10/2004	13:20:12	Ballot Marked Ballot ID: 1
(1140)	11/10/2004	13:19:47	Ballot Marked Ballot ID: 1
(1139)	11/10/2004	13:17:07	Unrecognized Ballot
(1138)	11/10/2004	13:16:55	System Powered On Serial Number 000015
(1137)	11/10/2004	13:15:46	Key switch Run Mode

---

---

(1136)	11/10/2004	13:15:01	Test Print Ballot ID: 1
(1135)	11/10/2004	13:14:50	Key switch Test Mode
(1134)	11/10/2004	13:14:00	Hour Print Report Total Printed: 102
(1133)	11/10/2004	13:14:00	System Powered On Serial Number 000015

---

If you insert a different flash card, the data contained in the Operation log will also change. Before using a flash card on a different system, be sure to erase the entire contents of the flash card so that system-oriented files, such as the Operation Log information, are deleted.

**Note**



The Poll ID is not included in the Operation Log when all ballot styles are included on the card. If required by your jurisdiction, manual procedures can supplement the audit log to indicate from which polling place the specific audit log came.

1. Turn the key switch to **Test**.

The **AutoMARK Main Menu** Screen will appear.

2. Press the **Operations Log** button.

The Operations Log appears.

**Note**



The Operations Log does not contain entries related to printing the log.

Press the **Up** or **Down** buttons to scroll one screen up or down.

Or, you can advance the display to show a particular page by touching the text box under "Go to page:". A number keypad appear. Touch the numbers for the page you wish to display.

3. To print this log on completely blank ballot stock paper, touch the **Print** button. The screen displays *Insert blank paper*. (Ballot stock is between 80 and 110 pound index stock. Ballot stock is slightly heavier than normal paper and less likely to jam.)
4. Insert a sheet of completely blank ballot stock paper.

5. After inserting the paper, the unit automatically begins printing the operation log, 66 lines per page. If there are more than 132 entries in the operation log, you will need several pages.
6. After the page has been ejected from the unit, if the message *insert another blank sheet of paper* appears, insert another page. Repeat this process until the message *printing done* appears.

**Note**



If the message "Print Failure" appears, there is paper still in the VAT, and you are unable to exit the screen, turn the key to OFF, then turn the key to TEST and touch Eject Ballot. This will eject the page on which the print failure occurred.

7. Exit Test Mode by turning the key switch.

### 13.8.3 Audit Log: DS200

The Event Log Report is an audit log of all activity that has occurred on the DS200 and contains information including the date and times when the unit was initialized and when it generated reports. It includes a record of all actions taken by election workers and/or voters on the DS200. The Event Log Report also includes information about internal or system events that are not included on the Event Log Summary Report, such as when Intelligent Mark Recognition (IMR) is activated and when ballot images are stored. For each ballot scanned, the Event Log Report lists the time the voting session started and the time the session was completed.

The Event Log Summary Report is a condensed version of the Event Log Report. It omits information about IMR and ballot image storage. In addition, the Event Log Summary Report lists the voting session start time for only the first ballot scanned, and the voting session complete time for every ballot scanned.

The Event Log Report lists all of the DS200 events that occur from the time you load your election definition USB flash drive into the DS200 until you remove the flash drive after the election is complete.

A sample of the Event Log Report follows.

<pre> *** EVENT LOG REPORT *** 1:08 PM April 22, 2014 Unit Serial Number: 02095350655  TIME DATE MSG ID MESSAGE TEXT 16:58:33 04/22/2014 1114111 Election media created 17:01:39 04/22/2014 1004002 Election loaded 17:01:44 04/22/2014 1004326 All data paths and memory locations OK 17:01:44 04/22/2014 1004143 Printing 1 copy of Configuration Report 17:02:08 04/22/2014 1004128 Completed printing Configuration Report 17:02:13 04/22/2014 1004193 Backup Media Detected 17:02:14 04/22/2014 1004302 DS200/UVC not plugged in ~~~~ sample continues in next column ~~~~ </pre>	<pre> 17:02:32 04/22/2014 1004149 Attempting to open poll 17:02:38 04/22/2014 1004193 Backup Media Detected 17:02:40 04/22/2014 6004022 Open process complete 17:02:41 04/22/2014 6004121 Keys detected on poll media 0108340394 17:02:41 04/22/2014 1004003 Poll opened 17:02:44 04/22/2014 1004143 Printing 1 copy of Ballot Status Accounting Report 17:02:55 04/22/2014 1004128 Printing 1 copy of Zero Totals Report 17:14:01 04/22/2014 1004152 Attempting to enter Voting Mode 17:14:02 04/22/2014 1004056 Entering voting mode 17:14:18 04/22/2014 1004115 Vote Session Started 17:14:21 04/22/2014 3004101 IMR Log Characteristic Point Status Init 24 New 24 17:14:22 04/22/2014 1004107 Ballot images stored 17:14:22 04/22/2014 1004002 Ballot data stored 17:14:22 04/22/2014 1004022 Voting session complete 17:14:28 04/22/2014 1004115 Attempting to Close {Poll} 17:14:29 04/22/2014 1004193 Backup Media Detected 17:14:30 04/22/2014 6004041 Close process complete. 17:14:32 04/22/2014 6004072 Collection process complete. 17:14:41 04/22/2014 1004013 Poll closed 17:14:43 04/22/2014 1004143 Printing 1 Copy of Ballot Status Accounting Report 17:15:02 04/22/2014 1004128 Completed printing Ballot Status Accounting Report 17:14:32 04/22/2014 6004072  Unit Serial Number: 02095350655  *** END OF REPORT *** </pre>
--	---

### 13.8.4 Audit Log: DS850

The audit log is generated in real time on the dot matrix printer and provides a time and date stamped record of all actions taken on or by the DS850.

Electionware provides the settings for the audit log printing function in the election definition. The settings enable audit log printing and prevent the user from disabling it.

#### Note



Refer to the *Electionware Volume IV: Deliver User Guide* for information about enabling and disabling the real time audit log.

The audit log can also be enabled or disabled on the DS850.



The following is a partial sample of the Audit Log report.

```
14:41:31 Tue Jun 02 2015 Public Count: 0
14:41:31 Tue Jun 02 2015 Ballot Spec ID: DSIM_279.400_215.900_50_24_PP
14:41:31 Tue Jun 02 2015 Load election definition OK
14:41:40 Tue Jun 02 2015 Audit log printer is ready
14:41:45 Tue Jun 02 2015 Selected: Load Election done
14:41:56 Tue Jun 02 2015 Navigated to: Setup Menu
14:42:00 Tue Jun 02 2015 Navigated to: Election Menu
14:42:01 Tue Jun 02 2015 Navigated to: Scanning Menu
14:42:03 Tue Jun 02 2015 Selected: Scan Ballots
14:42:06 Tue Jun 02 2015 Navigated to: Scanning Menu
14:42:07 Tue Jun 02 2015 Selected: Scan Ballots
14:42:09 Tue Jun 02 2015 Navigated to: Scanning Menu
14:42:09 Tue Jun 02 2015 Navigated to: Election Menu
14:42:10 Tue Jun 02 2015 Navigated to: Configuration Menu
14:42:11 Tue Jun 02 2015 Navigated to: Processing Mode Settings
14:42:15 Tue Jun 02 2015 Selected: Edit Processing Mode
14:42:25 Tue Jun 02 2015 Selected: Election code entry canceled
14:42:26 Tue Jun 02 2015 Navigated to: Processing Mode Settings
14:42:26 Tue Jun 02 2015 Selected: Edit Processing Mode
14:42:28 Tue Jun 02 2015 Selected: Election code entry canceled
14:42:28 Tue Jun 02 2015 Navigated to: Processing Mode Settings
14:42:29 Tue Jun 02 2015 Navigated to: Configuration Menu
14:42:30 Tue Jun 02 2015 Navigated to: Election Menu
14:42:31 Tue Jun 02 2015 Selected: Exit
14:42:32 Tue Jun 02 2015 Navigated to: Shutdown Scanner
14:42:32 Tue Jun 02 2015 Selected: Shutdown
14:42:32 Tue Jun 02 2015 Shutdown initiated

15:03:22 Tue Jun 02 2015 Election Id: 9PNYROCK
15:03:22 Tue Jun 02 2015 Election Date: 2015-05-29
15:03:22 Tue Jun 02 2015 Election EQC: 9fa48bd5
```

### 13.8.4.1 Exporting DS850 Audit Logs

The audit log can also be exported separately and viewed with regular text viewer and or is also included in a files export from the DS850 which can be loaded into Electionware and viewed via the Acquire module.



1. From the Results menu, press **Export Audit Log**.
2. Insert the Election Definition flash drive or a blank ES&S flash drive into one of the USB ports. The previous pop-up screen is temporarily replaced by a Detecting inserted device pop-up screen.
3. When prompted to do so, enter the Election Code, then press **Accept**.  
The Export Audit Log screen appears.
4. Press **Confirm** to export the audit log.
5. When the Export Audit Log screen indicates the audit log has been successfully exported, remove the flash drive. Press **Done** to return to the Results screen.

## 13.8.5 Audit Logs: Electionware

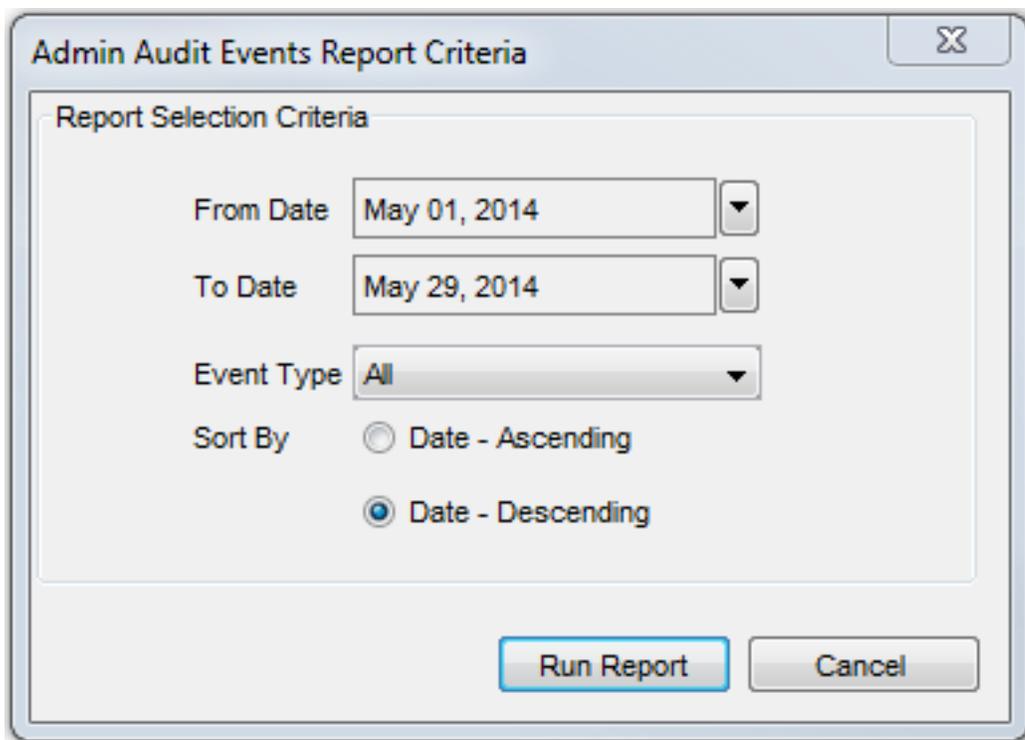
In Electionware's Setup module, use the **Reports** menu to access administrative report options. Use the Report Screen Toolbar to print, save, change the current page, or change the view of the displayed report.

### 13.8.5.1 Admin Audit Events Report

Use the Admin Audit Events Report option to access detailed audit information displayed to the administrator within the specified date range.

This report includes information regarding all administrator events in Electionware, including the type of Event, an event Description, the event's Timestamp, the User ID, and the module in which the event occurred.

1. To run this report, from the **Reports** menu click **Admin Audit Events Report**.



The screenshot shows a dialog box titled "Admin Audit Events Report Criteria" with a close button in the top right corner. The dialog contains the following fields and options:

- Report Selection Criteria** (Section Header)
- From Date**: A text box containing "May 01, 2014" and a dropdown arrow.
- To Date**: A text box containing "May 29, 2014" and a dropdown arrow.
- Event Type**: A dropdown menu currently set to "All".
- Sort By**: Two radio button options: "Date - Ascending" (unselected) and "Date - Descending" (selected).
- Run Report**: A blue button.
- Cancel**: A grey button.

2. In the Admin Audit Events Report Criteria window, define the criteria for the report:
  - a. Specify the date range with the From Date and To Date selectors. Only the data from this range will be included in the report.
  - b. From the Event Type drop-down menu, choose the event types to include in the report:
    - ◆ Fatal
    - ◆ Debug
    - ◆ Verbose
    - ◆ Info
    - ◆ Warning
    - ◆ Error
    - ◆ All
3. Use the **Date-Ascending** or **Date-Descending** option button to sort the events by ascending date or descending date order.
4. Click **Run Report**.

Admin Audit Events Report				ElectionWare County AnyCounty Primary January 24, 2012
				03/01/2012 10:02AM
Event	Description	Timestamp	User Id	Module
Verbose	Generating Report...	03/01/2012 10:02:52AM	admin	Setup
Info	Running report: Admin Audit Events Report	03/01/2012 10:02:52AM	admin	Setup
Verbose	Connecting...	03/01/2012 10:02:52AM	admin	Setup
Verbose	Done.	03/01/2012 10:00:29AM	admin	Setup
Verbose	Generating Report...	03/01/2012 10:00:28AM	admin	Setup
Info	Running report: User Report	03/01/2012 10:00:28AM	admin	Setup
Verbose	Connecting...	03/01/2012 10:00:28AM	admin	Setup
Info	Setup module activated.	03/01/2012 10:00:24AM	admin	Setup
Info	Election Opened: AnyCounty Primary	03/01/2012 09:21:22AM	admin	Home
Info	Home module activated.	03/01/2012 09:05:24AM	admin	Home

### 13.8.5.2 Election Audit Events Report

Use the Election Audit Events Report option to access detailed audit information displayed to the user within the specified date range.

This report includes information about events in Electionware for the open election, including the type of Event, an event Description, the event's time stamp, the User ID, and the module in which the event occurred.

#### Note



An election must be open in order to run the Election Audit Events Report.

1. To run this report, from the **Reports** menu, click **Election Audit Events Report**.

**Election Audit Events Report Criteria**

Report Selection Criteria

From Date: May 14, 2014

To Date: May 16, 2014

Event Type: All

Sort By:  Date - Ascending  Date - Descending

Run Report Cancel

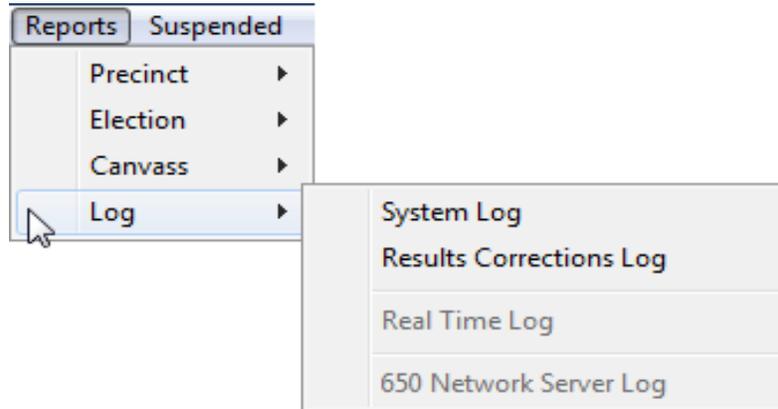
2. In the Election Audit Events Report Criteria window, define the criteria for the report:
  - a. Specify the date range with the From Date and To Date selectors. Only the data from this range will be included in the report.
  - b. From the Event Type drop-down menu, choose the event types to include in the report:
    - ◆ Fatal
    - ◆ Debug
    - ◆ Verbose
    - ◆ Info
    - ◆ Warning
    - ◆ Error
    - ◆ All
3. Use the **Date-Ascending** or **Date-Descending** option button to sort the events by ascending date or descending date order.
4. Click **Run Report**.

<i>Election Audit Events Report</i>				Electionware Election April 1
				06/30/2016 10:54AM
Event	Description	Timestamp	User Id	Module
Info	Running report: Election Audit Events Report	06/30/2016 10:54:00AM	admin	Setup
Verbose	Open Election: Finding Election...	06/30/2016 10:53:42AM	admin	Home
Verbose	Open Election: Finding Jurisdiction...	06/30/2016 10:53:42AM	admin	Home
Verbose	Open Election: Finding Customer...	06/30/2016 10:53:41AM	admin	Home
Info	Election Opened: Election 5220	06/30/2016 10:53:41AM	admin	Home
Info	Election Closed: Election 5220	06/29/2016 02:54:23PM	admin	Capture
Info	Capture module activated.	06/29/2016 02:19:47PM	admin	Capture
Verbose	Open Election: Finding Election...	06/29/2016 02:19:44PM	admin	Home
Verbose	Open Election: Finding Jurisdiction...	06/29/2016 02:19:44PM	admin	Home
Verbose	Open Election: Finding Customer...	06/29/2016 02:19:44PM	admin	Home
Info	Election Opened: Election 5220	06/29/2016 02:19:44PM	admin	Home
Info	Election Closed: Election 5220	06/28/2016 04:12:55PM	admin	Configure
Info	Configure Equipment module activated.	06/28/2016 03:34:00PM	admin	Configure
Info	Home module activated.	06/28/2016 03:27:53PM	admin	Home
Info	Configure Equipment module activated.	06/28/2016 03:25:49PM	admin	Configure
Info	Accessible Ballot module activated.	06/28/2016 03:25:28PM	admin	Accessible Bal
Info	Element Library module activated.	06/28/2016 03:25:22PM	admin	Element Librar
Info	Capture module activated.	06/28/2016 03:25:17PM	admin	Capture
Verbose	Open Election: Finding Election...	06/28/2016 03:24:03PM	admin	Home
Verbose	Open Election: Finding Jurisdiction...	06/28/2016 03:24:03PM	admin	Home
Verbose	Open Election: Finding Customer...	06/28/2016 03:24:03PM	admin	Home

## 13.8.6 Audit Logs: Election Reporting Manager

Generate log reports to check the status of your election equipment and software. Refer to your log reports if any errors occur during the vote-counting process.

On the **Reports** menu, hover over **Log**, then select the log report to generate.



### 13.8.6.1 System Log Report

Select **System Log** to generate the EL68A, System Log report. This report lists every action performed in your election system in chronological order. ERM maintains one audit file that records log records for activities performed in the application. The creation of this audit file cannot be disabled. The System Log is not erased when the results database is reset or recreated.

### 13.8.6.2 Results Corrections Log

Select **Results Corrections Log** to generate the EL68, Manual Entry Report report. Use this report to view user-altered election totals. This report lists candidate names, any user-altered totals, the date and time election totals were altered, and the original totals for each user-altered contest.

# Chapter 14: Biennial Hardware Certification and Notification

EC 19220 requires jurisdictions to examine voting systems every two years and certify the results to the Secretary of State. Requirements for examination and testing are further detailed in Article 15 of the Secretary of State Procedures for Approving, Certifying, Reviewing, Modifying, and Decertifying Voting Systems, Vote Tabulating Systems, Election Observer Panel Plans, and Auxiliary Equipment, Materials, and Procedures.

## 14.1 Certification and Notification for Precinct Tabulation Hardware

Elections Code section 19220 requires each elections official to inspect and certify the accuracy of their voting or vote tabulating equipment at least once every two years. The elections official shall certify the results of their inspection to the Secretary of State.

### 14.1.1 Hardware Certification and Notification for the Precinct Tabulator

#### 14.1.1.1 Certification

All ballot readers and specialized vote tabulating equipment must be certified prior to use in any election by the Secretary of State. Certification procedures are available upon request from the Secretary of State's Elections Division. All firmware and software used as part of the system is subject to the notification of change requirement.

#### 14.1.1.2 Notification

For each statewide election, the responsible county elections official shall cause to be prepared a list, including quantities, of all equipment to be used to tabulate votes during the semiofficial and official canvass.

Seven days before each statewide election, the elections official shall certify to the Secretary of State the results of the logic and accurate tests as well as the functionality of all ballot counting equipment. This certification shall also affirm the use of the same equipment for pre-election testing and for semiofficial and official vote canvasses. In the event of a change to the ballot tally program occurring after this certification, an amended certificate shall be submitted no later than the day before the election.

In the event any equipment is repaired, altered or replaced following the certification, and prior to completion of the official canvass of the vote, an amended certification of logic and accuracy testing and a revised list of equipment used must be submitted to the Secretary of State. This submission shall occur not later than submission of official canvass results. The jurisdiction will have an inventory of all voting equipment available for review by the Secretary of State at all times.

### **14.1.2 Election Observer Panel**

All procedures prescribed herein shall be carried out in full view of the public insofar as feasible. In addition, the responsible elections official shall devise a plan whereby all critical procedures of the vote tallying process are open to observation by an Election Observer Panel. Representatives of the qualified political parties and representatives of the news media may be among those invited to serve on this panel and shall be given the opportunity to observe that the correct procedures are followed in the receiving, processing, and tallying of all voted ballots.

### **14.1.3 Logic and Accuracy Certification**

A Logic and Accuracy Board shall be appointed by the responsible elections official and insofar as is practicable, shall be comprised of the same persons prior to, during, and after the election. The Board shall have the following duties:

- Receive from the elections official all required test materials and take steps to ensure the security of said materials prior to, during, and after the election, except when the materials are properly in the possession of one of the other boards or elections officials as required by these procedures.
- Verify the correctness of the logic and accuracy of test memory cards and the logic and accuracy of test ballots. This verification shall also be required for any material which must be replaced.
- Observe the performance and verify results of all required tests.
- Note any discrepancies and problems and affirm their resolution or correction.
- Deliver into the custody of the elections official all required test materials and printed output.
- Certify to the performance of each of the above-prescribed duties as well as those otherwise established by the procedures; provided that all

members of the Board shall sign the appropriate certificate or certificates. Final pre-election certification shall be made to the Secretary of State no less than seven days before each statewide election. This certification shall be made by the responsible elections official based on the Logic and Accuracy Board's certification of successful testing. In the event an amendment to the ballot counting program is required following this certification, the elections official must immediately recertify to the Secretary of State.

#### **14.1.4 Submit Ballot Tally Programs to the Secretary of State**

Ballot tabulation programs for statewide elections are to be delivered to the Secretary of State no later than seven days prior to each statewide election. Ballot tally programs must be accompanied by the elections official's certification of testing, the list of vote counting equipment used and a notification that he has caused memory cards to be programmed in conformity with the ballot diverter options as set forth in Table 2 herein. Refer to Elections Code section 17500. Should changes be required following certification and submission to the Secretary of State, resubmission and re-certification is required.

#### **14.1.5 Election Night and Post Election Reporting**

Any delays in election night's semiofficial canvass reporting due to hardware, software, environmental, or human causes which result in failure to report results to the Secretary of State at least every two hours shall be reported to the Secretary of State by the 28th day following the election. The responsible elections official may also report other delays in the processing of ballots as he or she deems appropriate.

#### **14.1.6 Preparation of Specific Written Procedures**

Each elections official shall prepare specific written procedures for each phase, step and procedure in the preparation, operation of polling places, vote counting and official canvasses of elections. Written procedures must also include instructions to precinct officials regarding proper handling of Vote-By-Mail voter and provisional voter ballots as well as a description of procedures used to manually recount ballots pursuant to Elections Code section 15645. These procedures must be prepared and submitted to the Elections Division of the Secretary of State's Office within two years following the adoption of these procedures by the Secretary of State. Upon submission, the elections jurisdiction's procedures shall be reviewed for compliance with state procedures, and the elections official shall be advised of any necessary revisions.

## **14.2 Biennial Certification for Central Tabulation Hardware**

Elections Code section 19220 requires each elections official to inspect and certify the accuracy of their voting or vote tabulating equipment at least once every two years. The elections official shall certify the results of their inspection to the Secretary of State.

### **14.2.1 Tabulation Hardware Certification and Notification**

All ES&S election equipment must be certified for use in elections by the Secretary of State prior to use in any election. Certification procedures are available upon request from the Secretary of State's Elections Division.

For each statewide election, the responsible county elections official shall cause to be prepared a list, including quantities, of all equipment to be used to tabulate votes during the semiofficial and official canvass.

#### **14.2.1.1 Logic and Accuracy Tests**

Seven days before each statewide election, the elections official shall certify to the Secretary of State the results of the logic tests as well as the accurate functioning of all ballot counting equipment. This certification shall also affirm the use of the same equipment for preelection testing and for semiofficial and official vote canvasses. In the event of a change to the ballot tally program occurring after this certification, an amended certificate shall be submitted no later than the day before the election.

In the event any equipment is repaired, altered or replaced following the certification and prior to completion of the official canvass of the vote, an amended certification of logic and accuracy testing and a revised list of equipment used must be submitted to the Secretary of State not later than submission of official canvass results.

#### **14.2.1.2 Certifying Logic and Accuracy**

Appoint a logic and accuracy board to perform the following tasks:

- Receive all required test materials from the elections official.
- Verify the correctness of the election definition and test deck.
- Observe scanner performance and verify results.
- Note any discrepancies between test results and the results from ES&S.

- Deliver all the required test material to the elections official.
- Certify the performance of the scanner.

### **14.2.2 Escrow of Ballot Tally Source Code**

Prior to its use in any election, an exact copy of the source code for all ballot tally software programs shall be placed in an approved escrow facility, pursuant to the procedures and requirements of Elections Code section 19103 and Title 2, Division 7, of the California Code of Regulations, beginning with section 20610.

## Appendix A: Revision History

EVS 5.2.1.0 CA Election Management System Document Version: 6.0 11/28/17	
Chapter(s)	Description
13	<ul style="list-style-type: none"> <li>Clarified requirements and repositioned information about Securevue tamper-evident label item #800-0112</li> </ul>

EVS 5.2.1.0 CA Election Management System Document Version: 5.0 11/16/17	
Chapter(s)	Description
13	<ul style="list-style-type: none"> <li>Added information and an image for Securevue tamper-evident label item #800-0112</li> </ul>

EVS 5.2.1.0 CA Election Management System Document Version: 4.0 10/26/17	
Chapter(s)	Description
All	<ul style="list-style-type: none"> <li>Updated system name to EVS 5.2.1.0. CA</li> </ul>
13	<ul style="list-style-type: none"> <li>Security: Updated from Unity to EVS</li> </ul>

<b>EVS5.2.1.0 – CA Election Management System</b> <b>Document Version: 3.0</b> <b>9/18/17</b>	
Chapter(s)	Description
All	<ul style="list-style-type: none"> <li>• Updated system name to EVS5.2.1.0. – CA</li> </ul>

<b>EVS5.2.1.0 – CA Election Management System</b> <b>Document Version: 2.0</b> <b>5/8/17</b>	
Chapter(s)	Description
3	<ul style="list-style-type: none"> <li>• DS200 Firmware Update: Instruction to power off DS200 before inserting, and also after removing, the FW flash drive</li> <li>• Calibrate Camera: Removed navigation step</li> <li>• AutoMARK Firmware Update: Added note to wait for long beep</li> <li>• Full Installation of AutoMARK Firmware: Added dip switch settings for 1.0</li> </ul>

<b>EVS5.2.1.0 – CA Election Management System</b> <b>Document Version: 1.0</b> <b>11/16/16</b>	
Chapter(s)	Description
1	<ul style="list-style-type: none"> <li>• Changed format of hardware version numbers</li> </ul>
2	<ul style="list-style-type: none"> <li>• Deleted model DS450 from Ballot Stock section</li> </ul>

<b>EVS5.2.1.0 – CA Election Management System Document Version: 1.0 11/16/16</b>	
<b>Chapter(s)</b>	<b>Description</b>
3	<ul style="list-style-type: none"> <li>• Updated doc listing to full filenames</li> <li>• DS850 FW update: Added steps for wiping the DS850</li> <li>• Revised steps for EV software upload</li> <li>• Removed software upload from SSD</li> <li>• Removed HW 1.0 step regarding USB plate</li> <li>• Replaced/revised steps for AutoMARK FW installation</li> <li>• Replaced/revised steps for AutoMARK calibration, updated code</li> <li>• SW Pre-Test: Added note referencing Election Programming Guide</li> <li>• Added unpacking steps to DS200/DS850 acceptance testing</li> <li>• AutoMARK Acceptance Testing: Revised verification steps</li> <li>• Moved introductory paragraphs to beginning of Acceptance Testing chapter</li> <li>• AutoMARK Readiness Testing: Added note of recommendation</li> <li>• EV Readiness Testing: Rearranged for clarity</li> <li>• ERM Post-Test: Reordered steps</li> </ul>
5	<ul style="list-style-type: none"> <li>• DS200: Added Clear &amp; Initialize</li> </ul>
7	<ul style="list-style-type: none"> <li>• Removed sentence about HPM</li> </ul>

<b>EVS5.2.1.0 – CA Election Management System Document Version: 1.1 1/9/17</b>	
<b>Chapter(s)</b>	<b>Description</b>
3	<ul style="list-style-type: none"><li>• Calibrate Camera:<ul style="list-style-type: none"><li>• Deleted misplaced shut-down step</li><li>• Corrected model number</li></ul></li><li>• AutoMARK FW: Moved note regarding AutoMARK 1.3.x</li></ul>