

717 17<sup>th</sup> Street  
Suite 310  
Denver, Co 80202

# Optech Insight, AVC Edge 5.0, & Optech 400C California Procedures

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# 1 Introduction

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This chapter defines the following Introduction, as specified by chapter 1 of the “Voting System Use Procedures for California Template”:

- System Description and Components
- Terms and Definitions
- Related Documents

## 1.1 System Description and Components

This section defines the System Description and Components, as specified by Section 1.1 of the “Voting System Use Procedures for California Template.”

### 1.1.1 *Optech Insight* - APX K2.16 HPX K1.44



**Figure 1-1: Optech Insight**

### **1.1.1.1 System Description**

Optech Insight - APX K2.16 HPX K1.44, referred to as the Optech Insight, manufactured by Sequoia Voting Systems (SVS), is a portable Precinct Count System that uses Optical Scan Read-Head technology to electronically read and tabulate Optical Scan ballots at the Polling Place. The Optech Insight complements SVS's Optech 400-C Central Count System, as a versatile and Voter-friendly ballot tabulator.

The Optech Insight is classified by the Federal Election Commission as a Marksense Voting System used to cast and tabulate ballots. It allows Local Officials to conduct efficient, timely elections, and performs the following functions on the votes recorded on ballots, which are inserted by the Voter:

- **Record Votes:** Optically reads the marks made on the ballots.
- **Tabulate Ballot:** Tabulates ballots as they are cast, allowing the results of the election to be readily available when closing the Polls.
- **Print Results:** Produces Precinct Totals.
- **Store Precinct Totals:** Stores the Precinct Totals in the removable MemoryPack, for easy transfer to the Central Counting Location, after closing the Polls.

### **1.1.1.2 System Components**

The Optech Insight comprises the following system components, per Appendix B.1: Optech Insight.

- Paper ballots
- Marking devices
- Ballot tabulator
- Ballot Box
- MemoryPack Receiver, MemoryPacks, and cables
- Ballot guide bar & keys
- Printer and Paper Tape
- WinEDS
- Insight battery (recommended)

### **1.1.2 Optech Insight Plus - APX K2.16 HPX K1.44**

For details, see Section 1.1.1 Optech Insight - APX K2.16 HPX K1.44, referred to as the Optech Insight.

### 1.1.3 AVC Edge Models I&II firmware version 5.0.24



**Figure 1-2: AVC Edge 5.0**

#### 1.1.3.1 System Description

The AVC Edge Models I&II firmware version 5.0.24, referred to as the AVC Edge 5.0, is a Direct-Record Electronic voting machine. It performs the following functions:

- Validate and load ballot definitions.
- Perform pre-election testing and verifications.
- Perform Election Day voting.
- Perform post-election testing and verifications.
- Print Zero Proof and Results Reports.
- Consolidate vote data from multiple machines.
- Perform maintenance diagnostic tests and functions such as Audit Trail Transfer, Set Time/Date, and print the Event Log report.

The *Edge* provides a large format Liquid Crystal Display (LCD) and associated touch screen to present the ballot and allow the voter to make their selections. The presentation of the offices and issues can be set up in multiple formats allowing the election administrator maximum flexibility in the layout of ballots.

The *Edge* is a stand-alone system, meaning it does not require any networking to a central system in

order to function. All processing from loading the ballot to recording votes is done on individual units. Loading ballots and accumulating tally from the machines are transmitted via a Results Cartridge.

The Results Cartridge records voting results. It is removed from the machine at the closing of the polls and is read by the WinEDS Central System. The Results Cartridge stores:

- an electronic representation of the ballot,
- ballot logic to enable the voter to make those selections to which he or she is lawfully entitled,
- the aggregated vote totals,
- a randomized record of all individual ballots cast, and
- a chronological log of significant machine operations, including error conditions.

### **1.1.3.2 System Components**

The AVC Edge 5.0 comprises the following system components:

- AVC Edge 5.0 machine
- WinEDS 3.1 (note: WinEDS 4.0 will drive the optical scan equipment)
- Cartridges
- Card Activator 5.0 and Voter/Smart Cards
- Verivote printer and paper roll
- Edge Audio Accessory 5.0
- Edge Aux power unit (recommended)

### **1.1.4 Optech 400-C-WinETP Firmware Version 1.16.6**



**Figure 1-3: Optech 400-C**

#### 1.1.4.1 System Description

The Optech 400-C-WinETP firmware version 1.16.6, referred to as the Optech 400-C, is a central count mark-sense ballot tabulator, which performs the following functions:

- Reads mark-sense ballots.
- Tabulates the results.
- Prepares output reports.

The external parts of the Optech 400-C consist of the following:

- Main Chassis
- Outstack Tray
- Main Bin (On Roll-Around Cart)
- Write-In Bin
- Keyboard and Trackball
- Computer Monitor

The Optech 400-C uses an automatic ballot feed hopper to process the ballots at a high speed.

A built-in sorting system diverts the tabulated ballots into the following three ballot bins:

- **Main Bin:** Contains all fully tabulated ballots.
- **Write-In Bin:** Holds all tabulated ballots that have one or more offices with a Write-In position marked.
- **Outstack Tray:** Holds ballots that are mis-read, blank, overvoted, or unprocessable.

A roll-around cart holds the main bin.

**Transportation and Storage:** The Optech 400-C is capable of being moved using its four caster wheels. It can be stored in a warehouse or central counting area.

**Health and Safety:** The Optech 400-C does not require the use of cancer causing agents when maintenance is performed. The acoustic noise level is approximately 75dB.

**Security:** The Optech 400-C is constructed of metal skins with key locks to prevent unauthorized access to the computer and interface electronics. A key lock also protects the computer from unauthorized use. Please see the Optech 400-C Security Specification.

**Power:** The Optech 400-C operates on 120 VAC, 60 Hertz (Hz), single-phase electrical power that is commonly available in the U.S. This supply tolerance should be 95 to 135 VACS. There is no provision for battery backup.

**Operating Environment:** The operation environment should be in the nominal temperature range of 68 to 75 degrees Fahrenheit with prevailing atmospheric pressure and relative humidity not to exceed 80 percent.

#### 1.1.4.2 System Components

The Optech 400-C comprises the following system components:

- Paper ballots
- Power Switch and cord
- Computer running WinETP 1.16.6
- WinETP 1.16.6

- Ballot feed hopper
- Ballot Transport System
- Ballot bins
- Printer(s) and paper
- Marking devices
- Summary system (recommended)
- WinEDS 4.0

### **1.1.5 WinEDS versions 3.1.012 and 4.0.116**

WinEDS is a client/server application developed specifically for election management. The system has been designed to support single input of customer profile data such as:

- Voting locations
- Precincts
- Political subdivisions
- Offices
- Parties
- Machines

And use this data to simultaneously manage multiple elections by multiple users.

In addition, the system supports the use of multiple voting systems within any given election: For example, using the:

- AVC Edge
- Insight
- 400C

WinEDS is a client/server application to design and print ballots as well as tally cartridges. As is common with client/server application, WinEDS main components are:

- SQL Server
- Workstations
- Extended Services (WinEDS 4.0 only)
- Election Reporting (WinEDS 4.0 only)



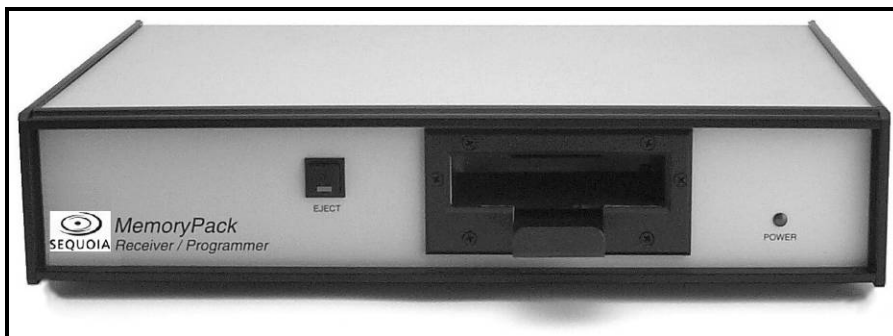
### 1.1.6 Card Activator Version 5.0.21



**Figure 1-4: Card Activator 5.0**

The Card Activator version 5.0.21, referred to as the Card Activator 5.0, is a component of the AVC Edge 5.0, and serves as the Voter’s access to the AVC Edge 5.0 direct-record electronic touch-screen voting system. After establishing the Voter’s identity and party affiliation the Poll Worker inserts a Voter/Activation Card into the Card Activator 5.0, presses the appropriate number on the Card Activator 5.0 Keypad that designates the Voter’s party. After the Voter/Activation Card is activated, the Poll Worker hands the activated Voter/Activation Card to the Voter who then uses the Voter/Activation Card to access the AVC Edge 5.0 voting system.

### 1.1.7 MemoryPack Receiver - MPR Firmware Version 3.01



**Figure 1-5: MemoryPack Receiver**

The MemoryPack Receiver – MPR firmware version 3.01, referred to as the MemoryPack Receiver (MPR), is Sequoia Voting System’s (SVS) desktop device for encoding precinct election data from WinEDS 4.0 to a MemoryPack.

The MemoryPack is then placed in the Optech Insight for that precinct and ballots are tabulated by

the MemoryPack.

After the election, the MemoryPacks from each precinct are inserted back into the MPR. The ballot tabulation totals stored in each MemoryPack are read by WinEDS 4.0 software, which accumulates the jurisdiction-wide results.

### 1.1.8 *Insight Battery*

The Insight Battery, SVS Part No. 460-31038-00, plugs into the Optech Insight, or Optech Insight Plus, and allows for continuation of Ballot Tabulation in case of a power failure, for up to 16 hours.

When the voltage drops below that of 12 VDC, the Insight Battery automatically is used to provide power.

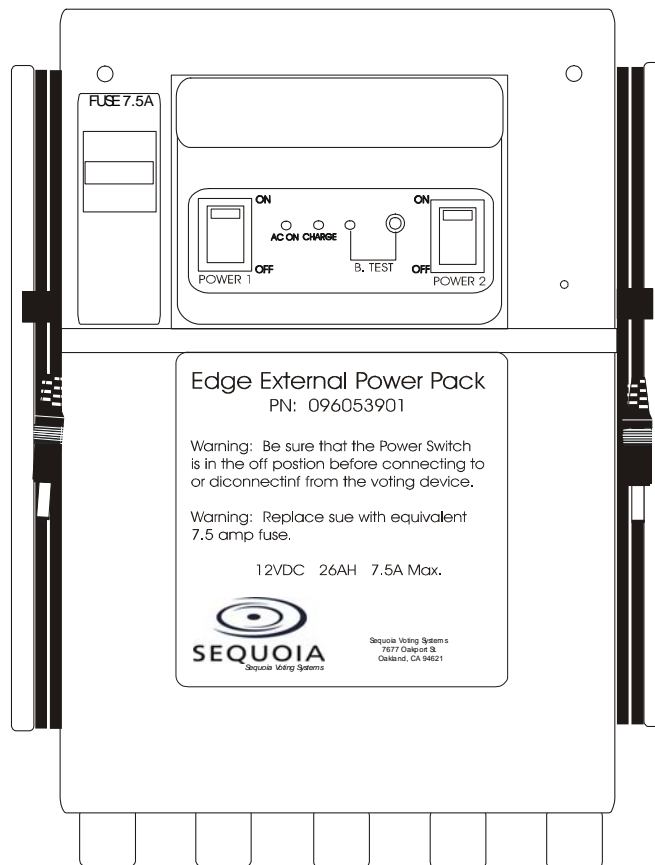
NOTE: Cable 46030139-00 is required to connect the Insight Battery to the Optech Insight or Optech Insight Plus.

You will receive the following components:

- Insight Battery with Battery Cable
- Charger with Charger Cable

With the Insight Battery in a fully charged state, it will provide emergency power for an Optech Insight for six (6) hours, and up to 2000 ballots.

### 1.1.9 *Edge Aux Power Unit*



**Figure 1-6: Edge Aux Power Unit**

With the Auxiliary Backup Power Unit in a fully charged state, it will provide emergency power for a fully charged AVC Edge 5.0 for eight (8) hours, or two fully charged AVC Edge 5.0s for four (4) hours.

### 1.1.10 Verivote Printer



**Figure 1-7: Verivote Printer Installed on AVC Edge 5.0**

The Sequoia Voting Systems Verivote Printer (Voter Verifiable Paper Audit Trail) incorporates a side-mounted printer to an AVC Edge voting machine, to produce a paper record that can be reviewed by the Voter as they vote.

The Verivote Printer also provides the following features:

- Privacy panels make the printout viewable only to the Voter.
- There is provision for seals/locks to keep the contents secure and the unit securely mounted to the voting machines.
- The paper record also serves as verification to the electronic record of vote selections.

### 1.1.11 Optech Printers Manual

This *Optech Printers Manual* is the product of many years of ballot printing experience and its rules are based on the requirements of ballot tabulation.

The printed ballot that is prepared in accordance with this manual is used in the following optical scan voting systems, as an Optech ballot, to record votes by reading marks made in the voting response locations:

- **Optech Insight/Insight Plus:** A precinct count system that tabulates ballots as they are cast at the polling place.
- **Optech 400-C:** A central count system that tabulates ballots in a central counting location.

Then, the ballots are tabulated by the voting system and the reports are prepared.

The Optech Insight/Insight Plus and 400-C share a common ballot format defined by Sequoia Voting Systems (SVS).

This Ballot Specifications and Printers Manual is the product of many years of ballot printing experience and its rules are based on the requirements of Ballot Tabulation.

The Optech Printers Manual defines the following Information:

- **Ballot Description:** Discusses the physical characteristics of the Optech Ballot.
- **Ballot Definition:** Defines the process for using WinEDS to generate Ballot Styles for the election.
- **Ballot Printing:** Defines the operations for Printing of the Ballot.
- **Ballot Inspection and Test:** Defines the criteria for Ballot Inspection and Test.
- **Ballot Tests:** Defines the Ballot Tests.

## 1.2 Terms and Definitions

For a listing of Terms and Definitions, as specified by section 1.2 of the “Voting System Use Procedures for California Template,” refer to Appendix A Glossary..

## 1.3 Related Documents

### 1.3.1 Optech Insight

Part Number	Document Title
190-32638-00	Insight Battery Operators Manual
190-31817-00	MPR Operators Manual
190-32439-00	MPR Test & Verification Specification
190-31946-00	Optech Insight Maintenance Manual
190-31943-00	Optech Insight Operators Manual
190-32608-00	Optech Insight Test & Verification Specification
190-32379-00M	Optech Printers Manual
	WinEDS 3.1 Installation Guide
190-32381-00	WinEDS 3.1 Reference Guide
190-32381-00	WinETP Reference Guide

### 1.3.2 AVC Edge 5.0

Part Number	Document Title
	AVC Edge Acceptance Testing Guide
096051001	AVC Edge 5.0 System Maintenance Manual
096050901	AVC Edge 5.0 Operators Manual
096051101	AVC Edge 5.0 Voter Instructions
096132301	Card Activator 5.0 Operators & Maintenance Manual
096116601	Edge Audio Accessory 5.0 Poll workers/Operators Manual
096117301	Edge Aux Power Unit Operators & Maintenance Manual
096117101	Edge Aux Power Unit Poll workers Manual

Part Number	Document Title
190-32849-00	HAAT Operators & Maintenance Manual
190-32388-00	Verivote printer Maintenance Manual
190-32389-00	Verivote printer Operators Manual
	WinEDS 3.1 Installation Guide
190-32381-00	WinEDS 3.1 Reference Guide
190-32381-00	WinETP Reference Guide

### 1.3.3 Optech 400-C

Part Number	Document Title
950-31740-00	Optech 400-C Maintenance Manual
190-32073-00	Optech 400-C Operators Manual
950-31738-00	Optech 400-C Read-Head Sensitivity Adjustment
190-32034-00	Optech 400-C Test & Verification Specification
190-32379-00M	Optech Printers Manual
	WinEDS 3.1 Installation Guide
190-32381-00	WinEDS 3.1 Reference Guide
190-32381-00	WinETP Reference Guide

### 1.3.4 WinEDS 4.0

WinEDS 4.0 documents are covered in Addendum A to these Use Procedures

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## 2 Ballot Definition

This chapter defines the following Ballot Definition information, which is performed by the Technician, using WinEDS 3.1 and 4.0, as specified by chapter 2 of the “Voting System Use Procedures for California Template”:

- Overview
- Layout Requirements and Specifications
- Inspection by Election Official
- Inspection by Poll worker

NOTE: WinEDS 3.1 will only be used to layout AVC Edge ballots.

### 2.1 Overview

This section defines the Overview, as specified by Section 2.1 of the “Voting System Use Procedures for California Template.”

The Technician uses WinEDS 3.1 to prepare the following Ballots, per Section 4.1 Programming and Configuring Election Management System/Software:

- Touchscreen ballots (AVC Edge 5.0)

Then, during Election Setup and Definition, the Ballot Definition data will be loaded onto the AVC Edge 5.0 per Section 4.2 Programming and Configuring Vote Recording/Tabulation Devices .

#### 2.1.1 Touchscreen Ballots (AVC Edge 5.0)

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Figure 2-1: Touchscreen Ballot

All ballots are controlled by the Secretary of State, pursuant to California Administrative

Regulations, and shall be as specified by the Secretary of State.

When performing Ballot Definition, the operator uses WinEDS 3.1 to define the Touchscreen Ballot.

The resulting software (for displaying the Touchscreen Ballot on the AVC Edge 5.0) is loaded onto the Results Cartridge(s), to be later inserted into the AVC Edge 5.0s.

### **2.1.1.1 Loading the Touch Screen Ballot**

To begin, the Edge must be powered up and at the Maintenance Diagnostics display.

1. Insert the Results Cartridge in the Results Port.

**IMPORTANT: ALL EDGE CARTRIDGES HAVE A LABEL ON ONE SIDE. THIS IS THE “UP” SIDE. IF THE FORCE REQUIRED TO INSERT A CARTRIDGE SEEMS EXCESSIVE, THIS IS LIKELY A SIGN THAT THE CARTRIDGE IS UPSIDE-DOWN.**

Once the Results Cartridge has been inserted, the following messages appear:

PLEASE WAIT, VALIDATING THE RESULTS CARTRIDGE

PLEASE WAIT, COPYING RESULTS CARTRIDGE TO THE AUDIT TRAIL

After these messages appear, the screen will briefly display the election information for the election that was just loaded.

Finally, the following screen appears:

**Ready To Open PRE LAT Polls**

**To Begin Voting Move The Polls Switch To OPEN**

At this point, the Edge has entered its election program. Note that if the unit is powered down/up, it will return to the same place, rather than return to Maintenance Diagnostics.

2. Turn the POLLS switch to the Open position.

Depending on the configuration parameters, the Edge will now generate a Zero Proof Report in one of three ways:

- On the printer
- To a file on the Results Cartridge
- To the screen

## **2.2 Paper and Printing Specifications (Optech Insight & 400-C)**

This section defines the Paper and Printing Specifications, as specified by Section 2.2 of the “Voting System Use Procedures for California Template.”

WinEDS 4.0 has been developed to adhere to the following paper and printing specifications of the FEC 2002 Standard:

- Introduction
- Ballot Description
- Ballot Definition
- Ballot Printing
- Tint and Water Mark

## General

The following suggestions when implemented will create a good working relationship between the ballot copy preparer, editor, and the ballot printer.

- The ballot copy preparer and editor should be mindful of the final layout of the ballot.  
When listing candidates and issues the simple rules of spelling, grammar, and legal phrasing and terminology should not be overlooked.
- If the instructions to the ballot printer are "Fol. lit" (Follow literally), the ballot printer will not make any changes to the ballot copy.  
Ballot copy authorized to be marked "Fol. lit" must be thoroughly prepared by the requisitioning agency as to capitalization, punctuation, (including compounding), abbreviations, signs, symbols, italics, and such copy, including even manifest errors, will be followed.
- It should be remembered that this manual is primarily a printer's book that describes the rules that shall be followed to produce ballots that can be used in the Optech Eagles/Insights and 400-C.  
Easy rules of grammar and spelling cannot be prescribed, for it is assumed that editors are versed in correct expression.  
As a printers book, it necessarily uses terms that are obvious to those skilled in graphic arts.  
A glossary of such printing terms to be complete would unnecessarily burden the manual.  
For the purposes of this manual, printed examples are to be considered the same as the printed rules.

## Ballot Copy Preparation

- Ballot copy must be carefully edited in accordance with the style laid down in WinEDS before being sent to the printer.  
Changes on proofs add greatly to the expense and delay the work.
- WinEDS designates the voting tracks that are active and maintains the column counts once the start bar crosses the read head.  
Therefore, it is required that the ballot be laid out first prior to coding the election.
- Ballot Copy samples on SVS approved layout sheets (Part No. 963-28695-00) should be furnished to the printer and should be plainly edited and marked showing the desired:
  - Type of ballot
  - Size of ballot
  - Trim
  - Lettering
  - BindingThese samples will not be considered as style for typesetting if they conflict with the rules of this manual or the rules of the user jurisdiction.
- Ballot Master Overlays, per section 3.2: Ballot Master Overlays are available to assist with preparing approved layout sheets.

## Ballot Proofs

- The ballot printer shall use the ballot copy and prepare a proof of the ballot.  
The process most ballot printers use is offset preparation by which type and graphics for a ballot are assembled and converted into a sheet of film, which represents the final layout.
- This prepared film then goes to a maker of printing plates (within the printing plant), where it is converted into metal printing plates that wrap around the offset printing press cylinders.
- All full service print preparation houses ("Prep House") will:
  - Set the type.
  - Key-line it into type elements for layouts.
  - Shoot the type and graphic elements on a camera copy at the sizes specified by the editor.
  - Strip by means of cutting and taping these elements into master ballot artwork according to the layouts provided by the editor.
  - Convert each stripped-together page into a single piece of film.

This film bears index markings (register marks) and 0.0035-inch trim marks for front to back alignment.

### **2.2.1 Ballot Description**

The following parameters are built into WinEDS 4.0, used by the Technician as a part of the Ballot Definition process:

#### **2.2.1.1 Layout Dimensions**

Layout dimensions include:

- Ballot length & width
- Number of columns
- Single/double-sided
- Ballot caliper (thickness)

The Optech ballots are printed on dimensionally stable ballot stock in:

- Three different widths (1, 2, and 3 columns)
- Single- or double-sided
- A range of ballot lengths

#### **2.2.1.2 Voting Tracks**

SVS's ballot format specifies up to four Voting Tracks on each ballot side that contain all the machine-readable ballot components.

### **2.2.1.3 Machine-Readable Ballot Components**

SVS's ballot format specifies up to four Voting Tracks on each ballot side that contain the following Machine-Readable Ballot Components, which are required for the Optech Eagle/Insight and 400-C to correctly read the ballot:

- Orientation bars
- Header code bars
- Extended header code bars: As applicable
- Start/stop bars
- Voting arrows

### **2.2.1.4 Text Areas**

Text areas consist of the following areas of the ballot:

- Text area before start bar
- Ballot text area
- Text area after stop bar

Text Areas provide the following functions:

- Identify the election.
- Provide Voter Instructions, as applicable.
- List the offices, candidates, and issues that the Voter is entitled to vote.

### **2.2.1.5 Ballot Inspection Components**

The following Ballot Inspection Components are required as specified by the SVS ballot specification:

- Cut lines
- Registration targets
- Restricted areas

### **2.2.1.6 Ballot Specifications**

Ballot Specifications include:

- Ballot stock (paper)
- Ballot ink
- Folds: For Absentee ballots
- Stubs: If required
- Packaging of ballots

## **2.2.2 Ballot Definition**

To define the ballot, the following activities are performed:

### **2.2.2.1 Using WinEDS 4.0 to Define Ballots**

The Ballot Copy Preparer uses WinEDS to generate election parameter data (files) and ballot definition data. The following functions define the ballot:

- Creating and defining elections
- Entering Districts and Precincts into System
- Specifying contests and candidates
- Creating ballot styles
- Completing final preparations

WinEDS automatically generates all ballot styles from the WinEDS election coding.

Various data files of WinEDS are used to create ballot styles for each election. These files describe the following:

- Contests, candidates, and proposals in an election
- Rotations needed for automatic generation
- Districts where each contest and proposal are running

WinEDS/EMS creates final output in the form of a hard copy of each ballot format to assist in proofing/typesetting/printing of ballots.

In addition, WinEDS/EMS helps allocate ballot space and type fonts to ensure that each office, candidate, and contest is uniform, and no active voting position is perceived by the Voter to be preferred to any other.

### **2.2.2.2 Using Ballot Master Overlays**

SVS provides high stability Ballot Master Overlays for ballot printing and accurate cutting. These Ballot Master Overlays are provided to licensed printers and using jurisdictions and are part of the Ballot Printers Kit.

The Ballot Master Overlays are used in conjunction with normal typesetting of Candidates, Issues, and Text to make Printing Plates:

Ballot Master Overlays show the following:

- Orientation bars
- Header code marks
- Start/stop bars
- Registration targets
- Cut lines
- Score lines
- Voting tracks
- Read head channels
- Extended header code marks (if required)
- Hairlines for defining top, bottom, left and right margins

Each Ballot Master Overlay supplies different candidate/issue (target) positions per inch: 4 targets per inch, 5 targets per inch, and 6 targets per inch.

The Ballot Copy Preparer should pay close attention to the following:

- These Ballot Master Overlays shall not be altered or modified by printers or using jurisdictions.
- The Ballot Master Overlays provide accurate placement of machine-readable codes and voting arrow targets where the Voter indicates candidate and issue choices by making a mark.
- All Ballot Master Overlays are produced on stable film and should only be duplicated by contact prints of the original master on high stability film.

### **2.2.2.3 Duplicating Ballot Artwork**

- The Ballot Master Overlays should be used for duplicating the artwork, imposition, stripping and layout.

Each Ballot Master Overlay should be considered one piece of artwork and should be duplicated.

Duplication should include retouching, opaquing and registering.

- After negatives or positives have been made, the individual films must be properly prepared before they can be assembled to make printing plates.

The films should be trimmed, marked for register, margins, bleeds, etc.

Camera negatives contain pinholes and other flaws. These should be opaque so they do not print when a contact print or Printing Plate is made.

The opaquer or stripper should square and outline halftones as well as contact film elements to produce a final composite image on film.

Registration targets should be added to indicate the correct fit for successive images, and trim marks should be added as guides for trimming the printed sheet.

- Stable base films should be used because the dimensional stability is critical.  
If ballots are to contain photo images of candidates, lithfilm should be used for line and halftone photography.  
"Daylight" film should be used for contact printing for stripping or image assembly.  
Continuous tone film should be used for color separation.
- When producing ballot artwork, shifting any voting track or losing the parallelism between the Voting Tracks and the cut lines will create a ballot that cannot be read by the Optech Eagles/Insights and 400-C.

### **2.2.2.4 "Ganging" Ballot Artwork**

Once the ballot artwork is duplicated, it should be "ganged" on a layout.

The layouts or imposition will vary among printers, because of the variations in the type and size of printing and binding equipment.

However, certain basic rules apply, after ballot size has been determined, 1/4 inch is added to the top, bottom, and sides for trim and gripper.

### **2.2.2.5 Preparing Ballot Proof**

- Strippers and operators must study carefully the rules governing composition.

Failure to do this will show plainly on proofs.

In correcting pickup matter, the stripper or operator must indicate what portion was actually reset. If after a proof is read the first time, a word or line is pied or a dropout occurs, attention must be called to such mishap by marking that part of the proof "PIED" or "DROPOUT."

If a proof is not available, the type involved must be placed feet uppermost when returned to position. This direction is intended for all who handle type.

- In correcting matter set on a linotype, care must be taken to insert corrected type slugs in their proper places and to remove only such type slugs as necessary.

Matter must be run down to see that lines have not been duplicated, transposed, or eliminated. If the corrector is in doubt, he/she must read the slugs.

- On return of the galley proofs to the Ballot Copy Preparer or Editor for ballot makeup, all corrections should be made on first proofs submitted, as later proofs are intended for verification only.

All corrections must be indicated on the "REVIEW" set of proofs, and only that set should be returned to the Ballot Printer.

- Every precaution must be taken to prevent the soiling of proofs, as it is necessary for the reviser to see clearly every mark on the margin of a proof after it has been corrected.
- Corrections should be marked on the margins of a proof opposite the indicated error, not by writing over the print or between the lines. All queries on proofs must be answered.
- The first duty of Ballot Copy Preparers is to mark those things which are not readily understood and to indicate headings, indentations, dashes, and other matters of style necessary to give the completed ballot a good typographic appearance so that no active voting position shall be perceived by the Voter to be preferred to any other.
- Ballot Copy Preparers must indicate point size and type series on copy and whether printed matter is to be leaded or double leaded, etc.

The content and arrangement of printing on ballots affects the suitability of systems for election use. Printing shall comply with the regulations and specifications of the user jurisdiction.

For optimum ballot performance and legibility, SVS recommends using minimum sizing/measurements as described, below, for the following ballot information:

- Legends and Information: Legends and information, other than the names of candidates or the statement of issues, should be printed in 8 point (minimum) to 14-point (maximum) type.
- Names of Candidates and Titles of Issues: Names of candidates and the titles of issues should be printed in 8 to 10 point type.
- Information Associated with the Candidate or Statement of Issue: Information associated with the candidate or statement of issue should be printed in 6 to 10 point type.
- Spacing of text is governed by the leading, narrow spacing being more desirable in solid than in leaded matter.
  - Very thin or very wide spacing of first and last lines of a paragraph should be avoided.
  - Words in a line requiring more than 1 em space between them should be letter-spaced, but the fewer letter-spaced words the better.
  - All of a short word, including adjacent punctuation, is letter-spaced, rather than part of a long word.
- A single justification space (close spacing) shall be used between sentences.

This applies to all types of composition.



### **2.2.2.6 Correcting Ballot Proofs**

- Strippers must see that special instructions, layout and style sheets are completed with the first installment of each job.  
Accuracy is of first importance.
- The proofreader should see that the rules governing spacing, division of words, and good printing generally have been observed.
- The proofreader who passes bad spacing will be at fault.  
If the proofreader detects inconsistent and erroneous statements, it is his/her duty to correct them.  
The proofreader must know, not guess, that they are errors and must be prepared, if called upon, to vindicate by recognized authority the soundness of his/her corrections.  
If the proofreader does not know, then query.
- If the candidate's name, grammatical construction of a sentence or clause, or other element on the ballot proof is questioned by the proofreader and it seems desirable to change the form, the proof-reader must question the proposed correction, add a query mark, and enclose all in a ring.  
If any name or statement is thought erroneous or doubtful, the proofreader must underscore the matter in question, write in the margin "AUTHOR VERIFY," and enclose all in a ring.  
It is not enough to write only a query in the margin.  
A query on copy must be carried to the author.
- Proofs that are not clearly printed or are in any manner defective must be called to the attention of the Ballot Copy Preparer.  
The manner in which correction marks are made on a proof is of considerable importance.  
The following faults are to be avoided:
  - Stragglings, unsymmetrical characters
  - Disconnected marks placed in the margin above or below the lines to which they relate
  - Irregular lines leading from an incorrect letter or word to a correction
  - Large marks
  - Marks made with a blunt pencil
  - Indistinct marks
  - Frequent use of the eraser to obliterate marks hastily or incorrectly made
- In marking errors in display or other unusual type, the case number must be indicated.  
On discovering wrong-font matrices, the proofreader must immediately fill out a wrong-font notice that will be sent to the typesetting section concerned.  
Readers must not make important changes in the Ballot Style without consulting with the Election Officials of the user jurisdiction.
- The marks of the Copy Preparer will be followed as they are in a position to know more about the peculiarities of a job than one who reads but a small portion of it.  
Any mark which will change the proof from the copy as prepared must be enclosed in a ring.
- All instructions on copy must be carried on proof by proofreaders.  
The importance of revising proofs cannot be overemphasized.

Although a reviser is not expected to read proof, it is not enough for them merely to follow the marks found on the proof.

Revisers should be alert to detect errors and inconsistencies and must see that all corrections have been properly made and that words or lines have not been transposed or eliminated by the stripper in making the corrections.

- A reviser must not remodel the punctuation of the proofreaders or make any important changes. If the reviser thinks that an important change should be made, they must submit the proposed change to the Election Official for decision.
- All instructions on proofs must be transferred to the revises.  
All queries must be carefully transferred to the revises.  
Revising must be done with reasonable dispatch, but accuracy must not be sacrificed to speed.  
The corrector's slug number must be written on revise proof.
- Press revising calls for the exercise of utmost care.  
The press reviser must be thoroughly familiar with the Ballot Style and makeup.  
The Press Reviser is required to OK all job works, and must see that all queries are answered.  
They must be capable of ascertaining the proper head, back, and side margins for all work, to ensure proper trimming of the completed job to the required size. Accuracy must not be sacrificed.

### **2.2.3 Ballot Printing**

The following activities are performed when the Technician sends the ballot proof to a printing company to print the ballot:

#### **2.2.3.1 Preparing Printing Plate**

The Ballot Printer prepares an intermediate image carrier (printing plate or cylinder), using the following information:

- Gripper margins
- Additional density and alignment marks
- Inspection of printing plate

The making of the intermediate image carrier (Printing Plate or cylinder) is an important step in all printing processes. The Printing Plate or cylinder is used for printing on the press. Each printing process uses a different type of image carrier, determined by the characteristics of the image produced, type of ink and press to be used, the number of impressions that can be printed, and the speed they are printed. The image carrier is the central focus on which each printing process revolves.

#### **2.2.3.2 Preparing Ballot Stock**

The Ballot Printer will prepare the Ballot Stock (paper), keeping in mind the conditioning of ballot stock, and keeping ballot stock clean.

The Ballot Printer should ensure the ballot stock is in balance with the pressroom relative humidity, and that the pressroom relative humidity is in balance with the expected election environment. An increase in the relative humidity can cause wavy ballot edges; where cut ballot edges absorb moisture. A decrease in relative humidity causes tight Ballot Edges that lose moisture. Both wavy

and tight ballot edges cause wrinkles and mis-registers in printing.

### **2.2.3.3 Printing Ballot**

The Ballot Printer will do the actual printing of the ballot, making press proofs and resolving common printing problems.

Ballots may be printed using either the lithographic or letterpress method.

SVS recommends of the following:

- Using a two-color process and the lithographic method, because of the tight register between colors and Diazo-coated lithographic printing plates are not affected by changes in temperature and relative humidity.
- Stacking in lift sizes of 3 to 8 inches, because of the weight of the index ballot stock. Lifts greater than 8 inches can cause offsets when drying.

SVS warns of the following:

- DO NOT recommend corn starch when printing ballots.  
NOTE: Cornstarch is normally used to thicken ink and adds grain to the ink.
- DO NOT recommend waxing, because wax adds to the ballot caliper and interferes with the application of a Second Color Ink.  
NOTE: Wax is normally sprayed onto printed material to prevent offsets when drying.

### **2.2.3.4 Secondary Print Operations**

Secondary Print Operations include scoring the ballot for folding Absentee ballots and making stubs, if required.

### **2.2.3.5 Trimming Ballots**

The Ballot Printer trims the ballots, paying particularly close attention to the following requirements:

- Determining lift size and clamp pressure
- Splitting ballots at cut lines
- Inspecting ballot width

**IMPORTANT: OVERALL BALLOT WIDTH IS A KEY FACTOR IN MAINTAINING BALLOT READING ACCURACY. THE WIDTH OF EVERY BALLOT MUST BE TRIMMED TO A TOLERANCE OF LESS THAN + 0.015 INCH.**

Ballot trimming must be done with care and precision. Making a mistake on the initial trim will cause all ballots in the lift stack to be trimmed incorrectly and these ballots may not be used in the Optech Eagles/Insights and 400-C.

Ballot trimming involves:

- Using sharp knives with ballot stacks of the correct lift size and clamp pressure
- Maintaining the perpendicularity of the knives to the ballot surface
- Inspecting the trimmed ballots with GO/NO-GO gauges, as follows:

Place the appropriate size GO/NO-GO gauge, from the following sizes, on a workbench/table, and apply the ends of the ballot into each side of the GO/NO-GO gauge:

3-Column: SVS Part Number 460-31470-00

2-Column: SVS Part Number 460-31473-00

1-Column: SVS Part Number 460-31476-00

No ballot shall bind as it passes through the GO (green) side of the GO/NO-GO gauge.

No ballot shall pass through the NO-GO (red) side of the GO/NO-GO gauge.

#### **2.2.3.6 Packaging Ballots**

The Ballot Printer will package ballots by binding, shrink-wrap, and boxing. The Ballot Printer should pay close attention to the following:

- When jogging ballots for packaging, be careful that you do not damage the Ballot Edges, which can cause the following to the Ballot Stock:
  - Flares
  - Delaminating
  - Bends
  - Tears
- Ballots shall be packaged as specified on the procurement document from the using jurisdiction.

#### **2.2.4 Tint and Water Mark**

Printed ballots are to be tinted and water-marked in accordance with the California Secretary of State.

### **2.3 Layout Requirements and Specifications**

This section defines the Layout Requirements and Specifications, as specified by Section 2.3 of the “Voting System Use Procedures for California Template.”

WinEDS has been developed to adhere to Ballot Layout requirements and specifications of the FEC 2002 Standard: Volume I: Paragraph 2.3.1: Ballot Preparation:

For that reason, WinEDS will not allow the Technician to lay out a ballot that violates the ballot layout requirements and specifications of the FEC 2002 Standard, as follows:

- Ballot Styles
- Ballot Layout
- Printing Plates (Optech Insight & 400-C)
- Paper Position (Optech Insight & 400-C)
- Inspection & Test of Printed paper ballots (Optech Insight & 400-C)

### **2.3.1 Ballot Styles**

WinEDS automates the creation and management of ballot styles, which are unique ballots within an election, used to list contests and associated precinct assignments.

Here, the Technician generates ballot styles that will be used in the election, as follows:

- Generate ballot styles.
- Change the order of the ballot styles.
- Maintain or add ballot styles.
- Edit ballot styles by repositioning contests.

### **2.3.2 Ballot Layout**

WinEDS automates the creation and management of ballot layout, which specifies the voting machine and tally type attributes, such as ballot mode.

Here, the Technician is able to view layout properties for each tally type that will be used in the election, and adjust them, as follows:

- Maintain ballot layouts.
- Generate ballot layouts, if necessary.
- View and change ballot layout properties.
- Alter or adjust default voting machine type positioning.

### **2.3.3 Printing Plates (Optech Insight & 400-C)**

WinEDS allows the Technician to view the details of the printing plates that have been automatically generated by the system, print and save ballots, and change contest positions for specific printing plates, as follows:

- View the printing plates and ballot styles for a voting machine type.
- Maintain the contest positions for a printing plate.
- Manually regenerate print plates for a voting machine type.
- Print and save ballots in batches.

### **2.3.4 Paper Position (Optech Insight & 400-C)**

WinEDS allows the Technician to move column positions for contests that belong to ballot styles on each tally type. In addition, they can perform the following functions:

- Generate header codes.
- Generate voting machine files.
- Change column positions for one or more contests.

## **2.3.5 Inspection & Test of Printed paper ballots (Optech Insight & 400-C)**

### **2.3.5.1 Inspection by Ballot Printer**

Ballot printing is a manufacturing process using printing press machines and variable products such as:

- Ballot Stock
- Ink
- Press Blankets
- Fountain Solutions
- Printing Plates
- Film

Every effort must be used to control them. Successful quality control examines, measures, and controls the printing press machine and its variables.

- Successful quality control consists of the following:
- Use of specifications and control of raw materials
- Use of proper procedures and control of the printing process
- Knowledge of standards and tolerances of acceptability
- Tests and inspections of the final product

### **2.3.5.2 Inspection by Election Official**

The Election Official should:

- Periodically inspect the following to ensure that quality control of the press machine and raw materials are being maintained, since ballot printing is a manufacturing process:
  - Printers facility
  - Presses
  - Processes
- Periodically test printed ballots in the voting systems to assure they can be read and tabulated.
- Check the relative humidity of the printing environment to assure that it meets the relative humidity of the election place.
- Require the Ballot Printer to maintain quality control records of periodic inspection of raw materials and processes to ensure quality is being controlled.
- Inspect ballots using consistent ballot inspection procedures.

### **2.3.5.3 Inspection by Poll worker**

The Poll worker should:

- Inspect each ballot before giving the ballot to a Voter.
- Check the ballot for the following:
  - Incorrect precinct and election title
  - Voter Instructions, as applicable
  - Tears
  - Ink in the read head channel
  - Missing cut lines on both ballot edges
  - Incorrect stub numbers, or stub numbers that do not match or are not in sequence
  - Ink fade, blurs, double images
  - Incorrect fronts and backs
  - Ink offset

If any of the above conditions exist, the Poll worker should not use the ballot.

### **2.3.5.4 Ballot Inspection Criteria**

Ballots are inspected using the following criteria:

- Layout dimensions
- Voting tracks
- Machine-readable ballot components
- Text areas
- Ballot inspection components
- Ballot specifications
- Distance measurements

### **2.3.5.5 Ballot Inspection & Test Checklist**

Refer to Appendix M Ballot Inspection & Test Checklist.

### **2.3.5.6 Layout Drawings**

The following layout drawings are available:

- DWG 963-28605-00: Layout Dimensions
- DWG 963-28606-00: Voting Arrow
- DWG 963-29873-00: Cut Line Detail
- DWG 710-30004-00: Stubs
- DWG 963-30080-00 Ballot Components
- DWG 963-30080-00 Layout Options

- DWG 963-30080-00 Single-Sided Ballots
- DWG 963-30080-00 Voting Tracks

## **2.4 Distribution of Absentee and Sample Ballots to Voters (Optech 400-C)**

The following activities are a part of the ballot definition and preparation process:

### **2.4.1 Ballot Definition**

The ballot is defined in WinEDS.

### **2.4.2 Distribute Absentee and Sample Ballots to Voters**

1. Ensure that the ballot style numbers of the Absentee and sample ballots to be mailed match.
2. Distribute of Absentee ballots to voters who request them.
3. Generate a list, or identification on the roster index, of Absentee ballot applicants, which will be supplied to each precinct.

### **2.4.3 Inspect Delivered Precinct Supplies**

1. Check all pads of ballots to ensure that ballot style identification numbers, serial numbers, and precinct numbers (if used) printed on the ballots are correct.
2. Report any problems to the Election Official responsible for the election.
3. Check that ballots have been delivered in the quantity and manner required by the jurisdiction, as well as demonstrator ballots marked for demonstration use only.
4. In Primary Elections, check that ballots are appropriately tinted for each political party and for nonpartisan voters, as directed by the Secretary of State.
5. Check for demonstration placards.
6. Check for general-purpose precinct supplies as provided for the jurisdiction.
7. Check for secrecy sleeves or envelopes, if ballots are printed on two sides.
8. Check for ballot marking devices.
9. Check for sample ballots of each ballot style as required by the jurisdiction.
10. Check for seals and any other supplies and forms deemed necessary.

### **2.4.4 Check Optech 400-C Hardware**

1. Move the Optech 400-C to the place where the ballots will be read.
2. Ensure that the following system components are attached and working:
  - Main bin (on roll-around cart)
  - Power cord
  - Computer monitor
  - Trackball
  - Keyboard



#### **2.4.5 Check WinETP Tabulation Program**

Ensure that the WinETP tabulation program is loaded into the computer and working.

#### **2.4.6 Prepare Optech 400-C**

Typically, the equipment preparation, as a minimum, consists of the following:

1. Remove the Optech 400-C and support equipment from storage.
2. Set up in the maintenance area the Optech 400-C and support equipment.
3. Remove dust and debris from the read heads.
4. Clean the Ballot Transfer System rollers.
5. Check for operational status and make adjustments as necessary.
6. Set up in the central counting area the Optech 400-C and support equipment and connecting the power cord to the building electrical power source.
7. Ensure the connection the following Optech 400-C system components to the computer:
  - Computer monitor
  - Keyboard
  - Trackball
  - Printer(s)
8. Arrange the computer monitor on the adjustable swing arm and position the keyboard and trackball on the keyboard support.

#### **2.4.7 Clean Optech 400-C**

The Optech 400-C needs to be free of dust and other contaminants to perform at its best. The major sources of contamination are:

- Ink from ballot printing or marking pens. Ink can build up on the rubber rollers and make them slippery.
- Dust or lint from the ballot paper stock. Dust accumulation on the Read Heads and sensors can reduce accuracy.

Follow the steps below to clean the 400C.

1. Backup vote totals.
2. Power down machine.
3. Disconnect printer.
4. Clean outstack tray.
5. Clean ballot feed hopper
6. Clean read head assembly.
7. Clean ballot transfer system.
8. Reassemble 400C.
9. Reconnect power.

Perform these steps as routine preventive maintenance before and after each election. If you begin to experience the following errors excessively, clean the 400C:

- Pick check errors
- Jams in the Ballot Transfer System
- Ballots outstacked in error

#### **2.4.7.1 Material Requirements**

1-Can "Dust Off" or similar air product. Compressed air may be used provided there is an OSHA approved end nozzle and the compressed air is dry. The air pressure shall not exceed 40 psi.

#### **2.4.7.2 Tool/Equipment Requirements**

- 1 ea. Suitable length of ½-inch diameter air hose with OSHA approved end nozzle
- 1 ea. Bottle Brush, 14 inches long with 1-inch diameter that includes bristles
- 1 ea. Bottle Brush, 8 inches long with 1/4-inch diameter that includes bristles
- 1 ea. Cloth, lint-free and dry
- 1-2 dz. Cotton tip swabs

#### **2.4.7.3 Personal Safety Equipment**

- 1 pr. Safety glasses/goggles

WARNING: ELECTRIC VOLTAGE AND HIGH SPEED MOVING PARTS ARE PRESENT. TURN OFF ALL ELECTRICAL POWER TO THE OPTECH 400-C BEFORE BEGINNING ANY CLEANING ACTIVITY.

DUST IS PRESENT. WEAR SAFETY GLASSES/GOGGLES WHEN USING CANNED AIR PRODUCTS OR COMPRESSED AIR. NEVER AIM NOZZLES TOWARD YOU OR ANYONE ELSE.

### **2.4.8 Start WinETP Tabulation Program**

Double click the WinETP icon displayed on the Windows desktop of the computer monitor.

The blank WinETP Main window is displayed.

### **2.4.9 Set Up Configuration**

#### **2.4.9.1 Stand-Alone Configuration**

1. Select Configure from the File menu.

The Configuration Options window is displayed.

NOTE: If an election is open, it needs to be closed in order to enable this menu option

Cancel: Cancels the operation, and closes the Configuration Options window.

2. Station Name: This is a name that is used to refer to the Optech 400-C in various messages, and should be unique. Example: COUNT1.
3. Reader Number: This is a two-digit number used to refer to the Optech 400-C in various messages. This number must be unique. Example: 01.

4. Station Type: Click Standalone. This is the default non-networked configuration for an Optech 400-C.
5. Self Backup: Select this option if you wish to enable a real-time backup of election files, in case of machine failure.
6. Click OK.  
The blank WinETP Main window is re-displayed.

#### **2.4.9.2 Network Configuration**

1. Select Configure from the File menu.  
The following Configuration Options window is displayed, with the Network tab.  
NOTE: If an election is open, it needs to be closed in order to enable this menu option  
Cancel: Cancels the operation, and closes the Configuration Options window.
2. Station Name: This is a name that is used to refer to the station in various messages, and should be unique. Example:
  - o MASTER for the Master System
  - o COUNT1, COUNT2, etc. for Counting Stations
  - o REPORT1, REPORT2, etc. for Reporting Stations
3. Reader Number: This is a two-digit number used to refer to either the Master System or Counting Stations in various messages. This number must be unique. Example:
  - o 99 for the Master System
  - o 01, 02, etc. for Counting Stations
4. Station Type: Select one of the following:
  - o Master System
  - o Counting Station
  - o Reporting Station
5. Master Address: Machine name of the Master System. You can also use a dotted IP address.  
NOTE: This applies to a Counting Station only.
6. Master Port: TCP/IP port number or service name for communication between Counting Stations and the Master System. This must be the same on the Master System and all Counting Stations. Usually, there is no reason to change this from the default port number 8888.
7. Connect Timeout: Maximum number of seconds allowed to connect to the Master System.  
NOTE: This applies to a Counting Station only.
8. Send/Receive Timeout: Maximum number of seconds allowed to send/receive a network message.  
NOTE: This applies to Counting Station and Master System only.
9. Self Backup: Select this option if you wish to enable a real-time backup of election files, in case of machine failure.  
NOTE: This applies to Master System or standalone only.
10. Backup Directory: Directory used for self-backup. Typically this would use network drive mapping to back up the election files on another machine.  
NOTE: A Reporting Station can double as a backup destination.
11. Click OK.

The blank WinETP Main window is re-displayed.

#### **2.4.10 Configure Hardware Interface**

1. Select Configure from the File menu.

The Configuration Options window is displayed.

2. Select the Hardware tab.

The Configuration Options window is displayed.

NOTE: Cancel: Cancels the operation, and closes the Configuration Options window.

3. Hardware Interface: Select one of the following two types of hardware interface card to be supported by the WinETP tabulation program:

- o ISA Interface Board: Is the older of the two cards, and works with older PC's.
- o PCI Interface Board: Is required for most newer PC's, since they do not have ISA slots.

4. Click OK.

The blank WinETP Main window is re-displayed.

NOTE: The WinETP tabulation program needs to be configured for the correct type of interface card. If it is configured for the wrong type of interface card, an error dialog box will be displayed when starting the WinETP tabulation program.

If the error dialog box is displayed, and you are not sure which type of interface card is being used, try switching to the other type of interface card.

Use this option to re-configure interface card type. If an election is open, close it.

## 3 System Installation and Configuration

This chapter defines the following System Installation and Configuration information, which are performed by the Technician, as specified by chapter 3 of the “Voting System Use Procedures for California Template”:

- Hardware Requirements and Specifications
- Hardware and Network Setup and Configuration
- Software Installation and Configuration
- Acceptance Testing
- Software and Firmware Upgrade

### 3.1 Hardware Requirements and Specifications

This section defines the Hardware Requirements and Specifications, as specified by section 3.1 of the “Voting System Use Procedures for California Template.”

#### 3.1.1 General

The Technician needs to ensure that the following hardware requirements and specifications are met, for both the polling places and the Central Counting Location:

- **Power Requirements:** The Optech Insight requires an 110VAC 60Hz, single-phase power source. Testing may require the simultaneous operation of 10 to 20 percent of the total number of machines in a jurisdiction. Provide for power at the rate of 1 ampere per machine.
- **Environmental Requirements:** The Optech Insight meets FEC standards for operating and storage temperatures; however, for optimum performance, SVS suggests the following environmental conditions.
  - **Temperature:** 68-75 degrees Fahrenheit
  - **Humidity:** 20 to 60 percent

Repeated exposure to extreme changes in temperature and humidity has a deleterious cumulative effect on electronic equipment.

- **Telephone Service:** Provide telephone service for Election Day support and routine business. A phone line must be installed near each remote accumulation system.

There are no special additional requirements. Most of the support equipment and facilities needed are on the administrative level and are usually centrally located within a jurisdiction.

#### 3.1.2 Optech Insight

At the polling place, the following system components are required, per the following appendices within this document:

- B.1.1: Paper ballots
- B.1.2: Marking devices
- B.1.3: Ballot tabulator
- B.1.4: Ballot box

- B.1.5: MemoryPack Receiver, MemoryPacks, and cables
- B.1.6: Ballot guide bar & keys
- B.1.7: Printer and paper tape
- B.1.9: Insight battery (recommended)

NOTE: The Printer already is a part of the ballot tabulator.

### **3.1.3 AVC Edge 5.0**

At the polling place, the following system components are required:

- B.2.1: AVC Edge 5.0 machine
- B.2.3: Cartridges
- B.2.4: Card Activator 5.0 and Voter/Smart Cards
- B.2.5: Verivote printer and paper roll
- B.2.6: Edge Audio Accessory 5.0
- B.2.7: Edge Aux power unit (recommended)

### **3.1.4 Optech 400-C**

At the Central Counting Location, the following system components are required:

- B.3: Optech 400-C
- B.1.1: Paper ballots
- B.3.2: Power switch and cord
- B.3.3: Computer running WinETP 1.16.6 (located inside the 400 C)
- B.3.4: WinETP 1.16.6
- B.3.7: Ballot bins
- B.3.8: Printer(s) and paper
- B.1.2: Marking devices
- B.3.10: Summary system (recommended)
- B.4: WinEDS 4.0 for the 400 C (note that WinEDS 3.1 is needed for the AVC Edge)

NOTE: The power switch, ballot feed hopper, Ballot Transport System, and printer already are a part of the Optech 400-C unit.

### **3.1.5 WinEDS 3.1**

At the Central Counting Location, the following components are required:

- Workstations
- SQL server
- Printer

#### **3.1.5.1 Workstation Minimum requirements**

- Pentium IV @ 1 GHz or equivalent
- 512 MB RAM

- 20 GB hard disk
- 1024 x 768 32 MB video card
- Windows XP
- Office 2000 or Office XP
- Visio 2002

### **3.1.5.2 SQL Server Minimum Requirements**

- Dual or Quad Pentium V @ 1 GHz or equivalent (depends upon jurisdiction size)
- 1 GB RAM
- 2x4 GB SCSI II – RAID 0 System drives
- 2x36 GB SCSI III – RAID 0 Log drives
- 3x36 GB SCSI III – RAID 5 Data Drives
- Windows 2000 or .Net Server with latest service pack
- SQL Server 2000 with latest service pack

NOTE: Storage, backup, and redundancy depend on jurisdiction size and customary election network structure. If there are any questions regarding Server configuration, please contact your local Sequoia Voting Systems Account Manager.

NOTE: Only service packs that were certified with the system should be employed; and that only in emergency situations, and with concurrence from the State, should additional service packs be installed.

### **3.1.5.3 Printer**

A printer is required for printing reports of election results.

Any printer that can be attached to the PC can be used. However, if you use a laser printer, it must be Hewlett-Packard (H-P) or H-P-compatible.

## **3.2 Hardware and Network Setup and Configuration**

This section defines the Hardware and Network Setup and Configuration, which is performed by the Technician, as specified by section 3.2 of the “Voting System Use Procedures for California Template.”

### **3.2.1 General**

For Hardware and Network Setup and Configuration security, see Section 10.1.2 Hardware and Network Setup and Configuration.

## 3.2.2 Optech Insight

### 3.2.2.1 Optech Insight Machine

You can adjust the Optech Insight to accept the following types of ballots:

- 1 Column
- 2 Columns
- 3 Columns

Your jurisdiction Election authority determines the ballot width.

NOTE: If the Optech Insight was last set to read 1- or 2-column ballots, the ballot guide bar will be in either the first or second width adjustment slot, respectively.

Perform the following steps to adjust the ballot guide bar:

1. Unplug the Optech Insight from the 110 VAC power source!
2. Insert the Southco key into the rear access lid lock and turn counterclockwise to unlock.
3. Use the red key to open the rear access lid, and flip the lid upward.
4. Lift up the cover, disengage it from its hinges, and set it aside.
5. Insert your finger into the hole on the right chassis side to lift the ballot platens.
6. Lift and raise all three stainless steel entry ballot platens.
7. Adjust the bar as needed.

### 3.2.2.2 MemoryPack Receiver and MemoryPacks

At the Central Counting Location, the Technician will use the communications cable to hook up the MemoryPack Receiver to the PC running WinEDS 4.0, to enable communication and transfer of data between the PC and the MemoryPacks in the MemoryPack Receiver.

### 3.2.2.3 Insight Battery (Recommended)

Perform the following steps to install the fully charged Insight battery in the Optech Insight ballot box:

1. Facing the front of the ballot box, use the green key to unlock (counter-clockwise) the ballot box lid, and put the key in a safe place.
2. Open the ballot box lid, so that both ballot slots are visible.
3. Place the Insight battery into the top of the ballot box.

**WARNING! ENSURE THAT THE RED END OF THE BATTERY CABLE IS CONNECTED TO THE RED CONNECTOR OF THE INSIGHT BATTERY!**

**FAILURE TO DO SO WILL DAMAGE THE INSIGHT BATTERY!**

4. Fit the battery cable into the groove of the ballot box.  
**IMPORTANT! ENSURE THAT NOTHING OBSTRUCTS THE BALLOT SLOTS. FAILURE TO DO SO WILL CAUSE BALLOT JAMS.**
5. Mount the ballot tabulator on top of the ballot box.
6. Ensure that you can easily reach the battery cable from the rear of the Optech Insight.



### **3.2.3 AVC Edge 5.0**

No hardware setup is required for the AVC Edge 5.0.

### **3.2.4 Optech 400-C**

400C machines are uncrated and setup by the Technician. This task entails:

- Removal from container.
- Setup
- Starting WinETP
- Setup test

## **3.3 Software Installation and Configuration**

This section defines the Software Installation and Configuration, which is performed by the Technician, at the Central Counting Location, as specified by section 3.3 of the “Voting System Use Procedures for California Template.”

### **3.3.1 General**

At the Central Counting Location, the Technician uses WinEDS 4.0 to configure the Optech Insight and Optech 400-C, and WinEDS 3.1 to configure the AVC Edge 5.0.

The configuration options are loaded into the Optech Insight, AVC Edge 5.0, and Optech 400-C at the time of Election Setup and Definition, as follows, per Section 4.1 Programming and Configuring Election Management System/Software.

- **Optech Insight:** Via MemoryPack
- **AVC Edge 5.0:** Via Results Cartridge
- **Optech 400-C:** Via WinEDS disk or similar media

For software installation and configuration security, please see Section 10.1.3 Software Installation and Configuration.

### **3.3.2 Optech Insight**

Please see the following appendices for configuration:

- D.1: General: Voting Variations
- D.2: Optech Insight: Ballot Disposition

### **3.3.3 AVC Edge 5.0**

See the following appendices for configuration:

- D.1: General: Voting Variations
- D.3.1: Configurations and Operating Modes
- D.3.2: Features
- D.3.3: Auto/Manual Activation
- D.3.4: Review and Casting the Ballot
- D.3.5: Voting Disposition
- D.3.6: Reports
- D.3.7: Maintenance Diagnostics

### **3.3.4 Optech 400-C**

See the following appendices for configuration:

- D.1: General: Voting Variations
- D.4.1: Election Files
- D.4.2: Passwords
- D.4.3: Running Standalone in a Non-Networked Configuration (Recommended)
- D.4.4: Hardware
- D.4.5: Ballot Handling Options
- D.4.6: Report Format Options
- D.4.7: Printers

### **3.3.5 WinEDS 3.1**

#### **3.3.5.1 Workstations**

The following software needs to be installed and running:

- Windows XP
- Office 2000 or Office XP
- Visio 2002

#### **3.3.5.2 SQL Server**

The following software needs to be installed and running:

- Windows 2000 or .Net Server with latest service pack
- SQL Server 2000 with latest service pack

#### **3.3.5.3 Printer**

The PC running WinEDS 3.1 needs to be configured for the printer selected.

## **3.4 Acceptance Testing**

This section defines Acceptance Testing, which is performed by the Technician, as specified by section 3.4 of the “Voting System Use Procedures for California Template.”

### **3.4.1 Optech Insight**

#### **3.4.1.1 Optech Insight Machine**

The following acceptance testing of the Optech Insight machine is performed at the warehouse by the Technician:

- Prepare for acceptance testing
- Follow Customer acceptance procedure
- Perform physical inspection
- Perform complete diagnostic test
- Close the polls
- Complete the Optech Insight Acceptance Test Log
- Address security
- Perform any additional tests
- Complete documentation and records

#### **3.4.1.2 MemoryPack Receiver**

The following acceptance testing of the MemoryPack Receiver is performed at the warehouse by the Technician:

- Follow Customer acceptance procedure
- Perform physical inspection
- Follow Acceptance Test Check-Off List

### **3.4.2 AVC Edge 5.0**

#### **3.4.2.1 AVC Edge 5.0 Machine**

The following acceptance testing of the AVC Edge machine is performed at the warehouse by the Technician:

- Set Up the Card Activator 5.0
- Perform physical inspection
- Initialize the AVC Edge to reset system
- Run internal hardware test
- Perform firmware update (if necessary)
- Calibrate the touch screen
- Set the date and time
- Load the demonstration election and vote simulation

- Process a manual vote
- Close polls
- Generate the Event Log Report (Optional)
- Reset the system
- Test the battery
- Disassemble the AVC Edge

#### **3.4.2.2 Card Activator 5.0**

The following acceptance testing of the Card Activator is performed at the warehouse by the Technician:

- Program Card Activator 5.0
- Set date and time
- Activate a voter card
- Process a vote

#### **3.4.2.3 Verivote Printer**

The following acceptance testing of the Verivote printer is performed at the warehouse by the Technician:

- Attach the Verivote printer to the A VC Edge 5.0
- Print a test page

#### **3.4.2.4 Edge Audio Accessory 5.0**

The following acceptance testing of the Edge Audio accessory is performed at the warehouse by the Technician:

- Connect the audio unit.
- Test volume on unit
- Test each key on the unit.

#### **3.4.2.5 Edge Aux Power Unit (Recommended)**

The following acceptance testing of the Edge auxiliary power unit is performed at the warehouse by the Technician:

- Test the green B test light.
- Replace fuse if necessary ands retest.

### **3.4.3 Optech 400-C**

The following acceptance testing of the Optech 400C is performed at the warehouse by the Technician:

- Non-straight party test
- Report menu
- Non-straight party vote counts
- Straight party vote counts
- The Report menu

### **3.4.4 WinEDS 3.1**

At the Central Counting Location, the Technician performs the following acceptance testing activities:

- Overview
- Test setup
- Setup and parameters
- Profile preparation
- Election creation
- Election data
- Vote simulation
- Tally and Election night reporting
- Post-Election processes

NOTE: this list also applies to the Central Count WinEDS 4.0 installation.

#### **3.4.4.1 Overview**

During acceptance test, only the modes of operation that are used by the jurisdiction under test are used exercised by the testing team to assure accuracy and completeness. The testing team follows closely the processes of a jurisdiction working with the system.

#### **3.4.4.2 Test Setup**

A client-server environment will be arranged, using the following setup.

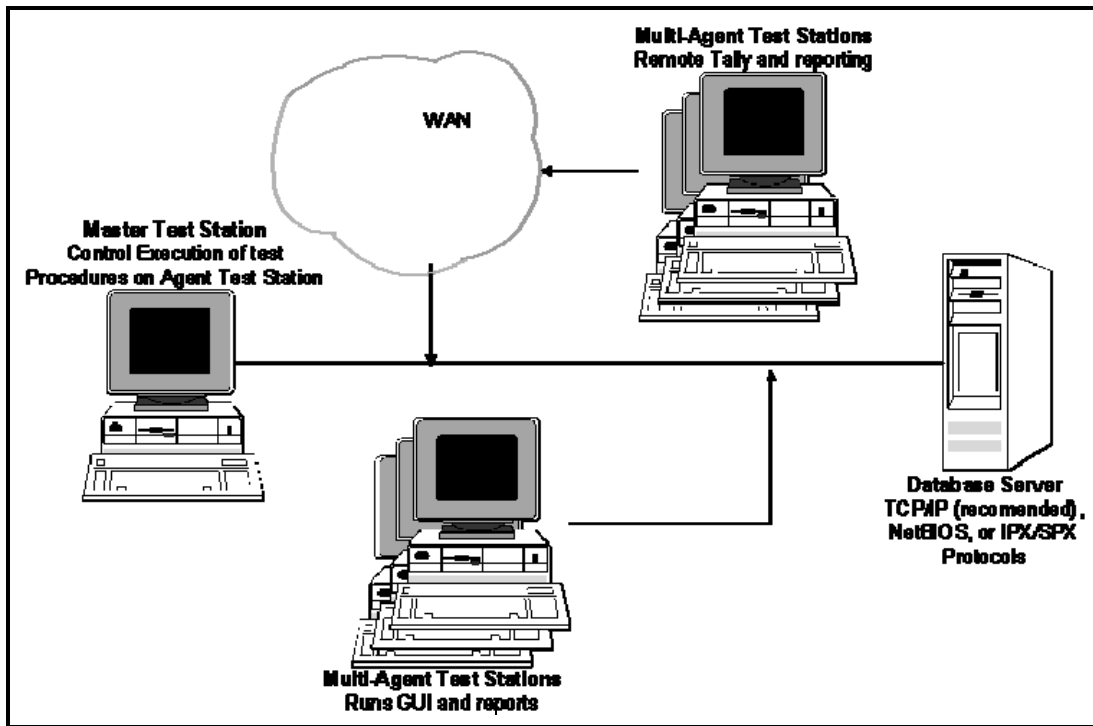


Figure 3-1: WinEDS 3.1: Test Setup

Because of the following, the WinEDS 3.1 QA team prepared a set of databases that can be used to test and monitor the system features that apply to the jurisdiction:

- WinEDS 3.1 success rides on data manipulation for specific data sets.
- The size of the results can be too large for a close inspection of each data item.
- The test results must be easy to compute and understand.

#### 3.4.4.3 Setup and Parameters

Parameters setup will be verified for the following parameters:

- Open Primary
- Partisan offices
- Write-In
- California-Style rotation
- Split precinct
- Vote For
- Recall voting
- Provisional voting

NOTE1: There is only one profile data set with one set of parameters.

NOTE2: Be sure to follow the requirements for a properly air-gap configured system.

#### 3.4.4.4 Profile Preparation

A new profile will be created, using a setup program on a new SQL Server installation.

NOTE: Some report and application features may not be relevant to the testing jurisdiction.

#### **3.4.4.5 Election Creation**

An election will be created at this time to test WinEDS 3.1.

#### **3.4.4.6 Election Data**

The data set that is being tested by the jurisdiction should closely resemble the actual data for that jurisdiction to unearth any potential problems with the actual data for that jurisdiction.

#### **3.4.4.7 Vote Simulation**

This is not part of testing the system per-se. However, a good set of votes is important for tally and Election night reporting.

#### **3.4.4.8 Tally and Election Night Reporting**

This is the most time-critical component of the test.

#### **3.4.4.9 Post-Election**

All Post Election activities are performed at this time, in order to test WinEDS 3.1.

### **3.5 Software and Firmware Upgrades**

This section defines Software and Firmware Upgrades, which are performed by jurisdiction personnel or contractors, as specified by section 3.5 of the “Voting System Use Procedures for California Template.”

- New Software Releases, for the Optech Insight, Optech Insight Plus, AVC Edge 5.0, and Optech 400-C.
- System Test must be performed for every major release of software for the Optech Insight, Optech Insight Plus, AVC Edge 5.0, and Optech 400-C, per its respective Test and Verification specification. The QA Tester and the Project Manager conduct the system test in cooperation with the system implementers.
- No software will ever be installed or supplied that has not been approved by the Secretary of State.
- Consult with Sequoia and test with the jurisdiction’s computing systems before installing new Windows security patches. Note that installation of service packs may violate the certified configuration.

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## 4 Election Setup and Definition

This chapter defines the following Election Setup and Definition information, which are performed by the Technician, at the Warehouse and the Central Counting Location, as specified by chapter 4 of the “Voting System Use Procedures for California Template”:

- Programming and Configuring Election Management System/Software
- Programming and Configuration of Vote Recording/Tabulation Devices
- System Diagnostic Testing Procedures
- System Proofing
- Logic and Accuracy Testing of System and Components
- Ballot Tally Programs
- Election Observer Panel
- Hardware Maintenance and Preparation for Use

NOTE: This section applies to both WinEDS 3.1 and 4.0 as these progress through the parallel path election workflow found in Addendum A, Figure 1.

### 4.1 Programming and Configuring Election Management System/Software

This section defines the following Programming and Configuration of Election Management System/Software, which are performed by the Technician, at the Central Counting Location, using WinEDS, as specified by section 4.1 of the “Voting System Use Procedures for California Template”:

- Profile Management
- Election Setup
- Candidate Management
- Ballot Management

#### 4.1.1 Profile Management

As part of configuring the WinEDS system for the election, the following tasks are performed to set up the election profile:

- Define your jurisdiction’s parties
- Define the precincts
- Identify voting locations
- Update your jurisdiction’s voting machines
- Identify offices
- Group voting locations
- Distribute political subdivisions
- Consolidate precincts

- Validate the profile

#### **4.1.2 Election Setup**

The following tasks are performed for Election Setup:

- Define the Election.
- Input Election data
- Assign machines
- Ballot management
- Create cartridge
- Enter external codes

#### **4.1.3 Candidate Management**

The following tasks are performed to set up the Election Data:

- Enter contests and candidates
- Enter precinct-level contests and candidates
- DTS offices
- Enter special contests
- Enter proposals
- Compose Election audio
- Validate the Election data

#### **4.1.4 Ballot Management**

The following tasks are performed for Ballot Management:

- Generate layout positions
- Generate ballot styles and layouts
- Update layouts
- Verify plates
- Process batches
- Create Optech ballots

## **4.2 Programming and Configuring Vote Recording/Tabulation Devices**

This section defines the Programming and Configuration of Vote Recording/Tabulation Devices, which are performed by the Technician, as specified by section 4.2 of the “Voting System Use Procedures for California Template.”

#### 4.2.1 *Optech Insight*

The following procedures, which are performed by the warehouse Technician, use a programmed MemoryPack to load the WinEDS-generated Ballot Definition data onto the Optech Insight:

- Burn MemoryPacks for each precinct
- Turn on the MemoryPack Receiver
- Turn off the MemoryPack Receiver
- Test MemoryPack data in Optech Insight
- Deliver Optech Insight to polling place

#### 4.2.2 *AVC Edge 5.0*

The warehouse Technician loads the ballot to the AVC Edge using a Results Cartridge programmed with WinEDS 3.1-generated ballot definition data. Follow the steps below to load a Results Cartridge into an Edge:

1. Turn on the Edge.

The Maintenance Diagnostics screen is displayed.

2. Insert the Results Cartridge in the Results Port.

The following messages appear:

**PLEASE WAIT, VALIDATING THE RESULTS CARTRIDGE**

**PLEASE WAIT, COPYING RESULTS CARTRIDGE TO THE AUDIT TRAIL**

The screen briefly displays the election information for the election that was just loaded.

Finally, the following screen appears:

**Ready To Open PRE LAT Polls**

**To Begin Voting Move The Polls Switch To OPEN**

At this point, the Edge has entered its election program.

Note that if the unit is powered down/up, it will return to the same place, rather than return to Maintenance Diagnostics.

3. Turn the POLLS switch to the Open position.

The Edge generates a Zero Proof Report

The Edge advance to the “Pre-Election LAT Voter Inactive” state.

#### 4.2.3 *Optech 400-C*

The following Election Setup procedures are performed at the Central Counting Location by the Technician, using a programmed WinEDS disk to load the WinEDS-generated ballot definition data onto the Optech 400-C:

- Install WinEDS files for new Election.
- Perform logic and accuracy test
- Open Election.
- Initialize Election.
- Set up Election passwords

## 4.3 System Diagnostic Testing Procedures

This section defines the System Diagnostic Testing Procedures, which are performed by the Technician, as specified by section 4.3 of the “Voting System Use Procedures for California Template.”

### 4.3.1 *Optech Insight*

At the warehouse, the Technician performs the following System Diagnostic Testing Procedures, per the following appendices.

- E.1.1: Entering Diagnostic Monitor
- E.1.2: Group 1 Tests
- E.1.3: Group 2 Tests
- E.1.4: Group 3 Tests
- E.4: Ballot Specifications Diagnostic Testing (Optech Insight & 400-C)

### 4.3.2 *AVC Edge 5.0*

At the warehouse, the Technician performs the following System Diagnostic Testing Procedures, per the following appendices.

- E.2.1: LCD
- E.2.2: Printer Test
- E.2.3: Set Date and Time
- E.2.4: System Reset
- E.2.5: Event Log Report
- E.2.6: Aux Cartridge Reports
- E.2.7: Hardware Tests

### 4.3.3 *Optech 400-C*

At the Central Counting Location, the Technician performs the following System Diagnostic Testing Procedures, per the following appendices.

- E.3.1: Optech 400-C Diagnostic Tests
- E.3.2: Summary System Diagnostic Tests
- E.4: Ballot Specifications Diagnostic Testing (Optech Insight & 400-C)

The Technician may also perform the following Diagnostic Tests, per the following appendices .

- E.3.3: Read Head Alignment
- E.3.4: Read Head Sensitivity
- E.3.5: Cleaning Procedure
- E.3.6: Revitalization of Feeder Drum

## 4.4 System Proofing

This section defines System Proofing, which is performed by the Technician, as specified by section 4.4 of the “Voting System Use Procedures for California Template.”

### 4.4.1 Optech Insight & 400-C

The Technician performs system proofing.

System proofing is the mandatory preliminary, in-house testing of all phases of election preparations (except the Logic and Accuracy tests) of the computer hardware and software used to tabulate and summarize ballots. System proofing shall include, but is not limited to, verification of the correctness of the following:

- Assignment of jurisdictions participating in the election to ballot styles.
- Linkage of precincts in which the election will be held to ballot styles.
- Ballot content of each ballot style, including offices, district designations, candidate assignment and rotation, ballot measures, all in the proper sequence.
- Printing of official ballots, including instructions, candidates' names, political and/or occupational designations, number to be elected, candidate rotation (where applicable), ballot measures, voting positions and all column and office headings and designations.
- Formatting of ballots into or for sample ballot pamphlets for each ballot style.
- Header code printing, precinct identification (if used), start and stop lines, fold scoring, numbering, padding and verifying ballot dimensions by suitable means.
- Optech Insight/400-C recognition of and response to precinct header codes, and ballots that are damaged, or improperly marked.
- Optech Insight/400-C ability to accept ballots with correctly printed header codes, and to reject ballots with incorrectly printed header codes.
- All phases of preparation and assembly of the Optech Insight/400-C as described variously herein.
- Voter registration data for jurisdictions participating in the election.

The reusable test deck consists of ballots which are pre-scored for folding. If the Optech Insight/400-C is to be used for Absentee tabulation, test ballots may be folded before the test begins.

#### 4.4.1.1 Exception Processing

Exception Processing is part of system proofing and includes a test to determine whether the system properly responds to error or anomaly conditions. At least 10 days prior to each election a deck shall be prepared which will cause all non-destructive errors or anomalies for the Optech Insight/400-C. The Optech Insight/400-C is tolerant of ballots introduced in orientations which could be considered anomalous, such as upside down or reversed. This tolerance should be tested by introducing test ballots in these orientations. The exception processing test should contain, but is not limited to, the following types of conditions, if they apply to the system:

- Upside down ballots
- Reversed ballots
- Ballots torn in various places

Exception testing is also required to assure that the error condition of extraneous clock marks is detected.

#### **4.4.1.2 Error Ballots**

Six ballots shall be prepared, as follows:

- One ballot for each votable track on a double-sided, 3-column ballot
- Four ballots for a double-sided, 2-column ballot
- Two ballots for a double-sided, single-column ballot.

One extra clock mark (voting position arrow graphic) shall be made in an active column of the ballot. The extra clock mark shall be drawn between the ballot start and the ballot stop and shall be drawn to approximate the thickness and dimension of the printed clock marks. Tests for Error Ballots will comply with the ballot processing regulations herein.

For exception processing the Ballot Tabulation program(s) must be used. Program restarts or equipment resetting is allowed for this test.

#### **4.4.2 AVC Edge 5.0**

At the Warehouse, the Technician performs the System Proofing, which is the mandatory, preliminary, in-house testing of all phases of election preparations except the Logic and Accuracy tests of the computer hardware and software used to tally and summarize votes. System proofing shall include, but is not limited to, verifying of the correctness of the following:

- Assignment of jurisdictions participating in the election to ballot styles
- Linkage of precincts in which the election will be held to ballot style
- Ballot content of each ballot style, including offices, district designations, candidate assignment and rotation, ballot measures, all in the proper sequence
- Precinct identification coding (if used)
- Election Night summary report format
- All phases of preparation of voting machines and Results Cartridges, as described herein
- Testing of all cartridges to be used in the election

### **4.5 Logic and Accuracy Testing of System and Components**

This section defines the following Logic and Accuracy Testing of System and Components, as specified by section 4.5 of the “Voting System Use Procedures for California Template”:

- Pre-Conditions for Performance of Tests
- Accuracy Test Procedures
- Logic Test Procedures
- Retention of Test Materials
- Logic and Accuracy Board and Certification of Testing

#### **4.5.1 Pre-Conditions for Performance of Tests**

This paragraph defines the Pre-Conditions for Performance of Tests, as specified by paragraph 4.5.1 of the “Voting System Use Procedures for California Template.

The Technician ensures that the following pre-conditions are met, per the following appendices:

- Optech Insight & 400-C: F.1.1: Optech Insight & 400-C
- AVC Edge 5.0: F.1.2: AVC Edge 5.0

#### **4.5.2 Accuracy Test Procedures**

This paragraph defines the Accuracy Test Procedures, which are performed by the Technician, as specified by paragraph 4.5.2 of the “Voting System Use Procedures for California Template, per the following appendices:

- General: F.2: Accuracy Test Procedures
- Optech Insight: F.6.1: Optech Insight
- AVC Edge 5.0: F.6.2: AVC Edge 5.0
- Optech 400-C: F.6.3: Optech 400-C

#### **4.5.3 Logic Test Procedures**

This paragraph defines the Logic Test Procedures, which are performed by the Technician, as specified by paragraph 4.5.3 of the “Voting System Use Procedures for California Template,” per the following appendices:

- General: F.3: Logic Test Procedures
- Optech Insight: F.6.1: Optech Insight
- AVC Edge 5.0: F.6.2: AVC Edge 5.0
- Optech 400-C: F.6.3: Optech 400-C

#### **4.5.4 Retention of Test Materials**

This paragraph defines the Retention of Test Materials, as specified by paragraph 4.5.4 of the “Voting System Use Procedures for California Template,” per the following appendices:

- Optech Insight & 400-C: F.4.1: Optech Insight & 400-C
- AVC Edge 5.0: F.4.2: AVC Edge 5.0

#### **4.5.5 Logic and Accuracy Board and Certification of Testing**

This paragraph defines the Logic and Accuracy Board and Certification of Testing, as specified by paragraph 4.5.5 of the “Voting System Use Procedures for California Template.”

See appendix F.5: Logic and Accuracy Board and Certification of Testing.

#### **4.5.6 Two-Person Rule and Chain of Custody**

Appendix F also describes the use of the “two person rule” and equipment chain of custody. These procedures are methods to ensure that equipment is in a known good state when deployed to the polling locations and that more than one person checks the equipment to guard against errors in the

equipment preparation and deployment process. Proper chain of custody also helps to ensure accountability for persons charged with the security of election sensitive items. The two person rule is applied to equipment preparation steps such as the inspection of tamper evident seals before and after Pre-LAT commences and upon equipment delivery at the polling location.

## 4.6 Ballot Tally Programs

This section defines the Ballot Tally Programs, as specified by section 4.6 of the “Voting System Use Procedures for California Template.”

The Election Official shall send ballot tally programs to the Secretary of State pursuant to the next paragraph. These must be received by the Secretary of State no later than seven (7) days before each statewide election.

Ballot tally programs for statewide elections are to be deposited with the Secretary of State no later than seven (7) days prior to each statewide election. Ballot Tally programs must be accompanied by the Election Official's certification of testing, the list of ballot tabulation equipment used and a notification that they have caused the Optech Insight to be programmed in conformity with the ballot processing regulations as set forth herein. Refer to the California Elections Code. Should changes be required following certification and submission to the Secretary of State, resubmission and recertification is required.

## 4.7 Election Observer Panel

This section defines the Election Observer Panel, as specified by section 4.7 of the “Voting System Use Procedures for California Template.”

All procedures prescribed herein shall be carried out in full view of the public insofar as feasible. In addition, the responsible Election Official shall devise a plan whereby all critical procedures of the ballot tabulation 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 tally of all voted ballots.

Pursuant to the California Elections Code, all proceedings at the Central Counting Location shall be open to the view of the public and no person except one employed and designated for the purpose by the Election Official or authorized deputy shall touch any ballot container, or other tabulating equipment. Access to the area where the electronic data-processing equipment is being operated may be restricted to those authorized by the Election Official.

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 the restrictions established by the responsible Election Official to ensure the efficiency and integrity of the ballot tally process.

## 4.8 Hardware Maintenance and Preparation for Use

This section defines Hardware Maintenance and Preparation for Use, which is performed by the Technician, as specified by section 4.8 of the “Voting System Use Procedures for California Template.”



## **4.8.1 Optech Insight**

### **4.8.1.1 Optech Insight Machine**

#### **Pre-Election Setup**

The following tasks are part of Pre-Election Setup:

- Cleaning Optech Insight
- Changing paper tape

#### **Preventive Maintenance**

The following tasks are part of annual preventive maintenance:

- Checking ballot thickness
- Performing MemoryPack battery test
- Performing MemoryPack data retention test

#### **Storage:**

Ample storage space is required for the Insight, the ballot bins, and the MemoryPack storage rack.

For transportation and storage security, refer to Section 10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A.

### **4.8.1.2 Insight Battery (Recommended)**

#### **Charging the Battery**

The Warehouse Technician ensures that Insight batteries remain charged while in storage. Each Insight battery must be charged; once every 3 months, or after every use, for 24 hours.

#### **Transportation and Storage**

For transportation and storage security, refer to Section 10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A.

## **4.8.2 AVC Edge 5.0**

### **4.8.2.1 AVC Edge 5.0 Machine**

#### **Preventive Maintenance Program**

The recommended preventative maintenance program is as follows:

- *Once every three months*, inspect the AVC Edge damage, wipe the exterior, ensure that parts and pieces of your system are there, power-up and monitor for errors, check LCD/Touch-screen calibration, check time and date, check all mechanical points for loose and missing parts and system components.
- *Prior to Election Setup*, turn on and check power-up routine, check time and date, check LCD/Touch-screen operation and contrast, confirm batteries are fully charged and charge as required, check for loose and missing parts, proceed with election setup procedures.

- *After the machines return from an Election*, check the units for shipping damage, check for broken or missing legs, curtains, power cords and anything else associated with the machine power-up the unit and check the LCD/Touch-screen assembly for proper operation and cleanliness, and charge the batteries for 24 hours.

### **Battery Care and Service**

The recommended battery care and service is as follows:

- 12-Volt Internal Battery Care - We recommend that you perform the charging procedure on the AVC Edge once a month and the charging duration be 24 hours.
- 12-Volt Battery Replacement – Before replacing battery, make sure the AVC Edge is disconnected from AC power and is powered down.

### **Storage**

Storage is as follows:

- There are no extraordinary measures required for the storage and maintenance of this equipment. A clean and dry environment is the only storage criteria.
- Remove the Results Cartridge from the results port compartment, and place in the cartridge tray for storage.

For transportation and storage security, refer to Section 10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A.

#### **4.8.2.2 Card Activator 5.0**

Perform the following procedures after the polls Are closed:

- Status – Check the Card Activator 5.0's status
- Erase - Erase the Voter Activation card
- SetSys – Load new firmware as necessary
- Exit – Exit the Card Activator 5.0 menu

For transportation and storage security, refer to Section 10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A.

#### **4.8.2.3 Verivote Printer**

##### **Preparation, Assembly, and Setup**

Follow the steps below for preparation, assembly, and setup of the printer:

- Open Verivote printer
- Remove used thermal paper roll, if applicable
- Properly seat new core on take-up reel
- Install paper
- Perform functional test
- Attach cover
- Place Verivote printer in nylon case for transport

### **Preventive Maintenance Procedures**

As part of preventive maintenance procedures:

- Clean paper dust from unit
- Wipe fingerprints from window

### **Storage**

The Verivote printer can be stored in a normal warehouse environment such as normally used for the storage of the AVC Edge 5.0. Shelves sufficient to store the number of Verivote printers at a jurisdiction is an adequate method of storage between elections.

For transportation and storage security, refer to Section 10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A.

### **4.8.2.4 Edge Aux Power Unit (Recommended)**

#### **Battery Care and Service**

The Warehouse Technician should charge each Edge Auxiliary Power unit once every 3 months for 8 hours.

#### **Transportation and Storage**

For transportation and storage security, refer to Section 10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A.

## **4.8.3 Optech 400-C**

### **4.8.3.1 Preventive Maintenance Procedures**

The Warehouse Technician performs the following preventive maintenance procedures at the Central Counting Location:

- Cleaning
- Safety check
- Inspection

### **4.8.3.2 Changing Printer Paper**

The procedure for changing printer paper will depend upon the printer type selected by the jurisdiction's requirements.

### **4.8.3.3 Transportation and Storage**

The Optech 400-C is capable of being moved using its four caster wheels. It can be stored in a warehouse or central counting area.

For transportation and storage security, refer to Section 10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A.

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## 5 Polling Place Procedures (Optech Insight & AVC Edge 5.0)

This chapter defines the following Polling Place Procedures, as specified by chapter 5 of the “Voting System Use Procedures for California Template”:

- Precinct Supplies, Delivery, and Inspection
- Polling Place Setup
- Opening the Polls
- Polling Place Procedures
- Special Needs Voters (AVC Edge 5.0)
- Provisional Voters
- Closing the Polls and Vote Reporting
- Securing Audit Logs and Backing Up Records
- Troubleshooting and Problem Resolution
- Printer/Ballot Jams
- Vote Save Failure (AVC Edge 5.0)
- Improperly/Not Activated voter card (AVC Edge 5.0)

### 5.1 Precinct Supplies, Delivery, and Inspection

This section defines the following Precinct Supplies, Delivery, and Inspection, as specified by section 5.1 of the “Voting System Use Procedures for California Template”:

- Precinct Supplies
- Delivery
- Inspection
- Spare Verivote printers On Hand (AVC Edge 5.0)
- Some paper ballots and Sealing Envelopes on Hand (AVC Edge 5.0)

#### 5.1.1 *Precinct Supplies*

Prior to Election Day, the Precinct Board ensures the precincts have the correct supplies.

### **5.1.1.1 Optech Insight**

- Check all pads of paper ballots to ensure that ballot style identification numbers, serial numbers, and precinct numbers (if used) printed on the paper ballots are correct.
- Report any problems to the Election Official responsible for the election.
- Supplies necessary for the conduct of elections at Polling Places shall be delivered as follows:
  - Paper ballots shall be in the quantity and manner required by the California Elections Code, as well as demonstrator ballots marked for demonstration use only.
  - In primary elections, paper ballots shall be appropriately tinted for each political party and for non-partisan voters, as directed by the Secretary of State.
  - Demonstration or voting instruction placards.
  - General purpose precinct supplies as provided in the California Elections Code.
  - Secrecy sleeves or envelopes, if ballots are printed on two sides.
  - Marking devices.
  - A certificate of packaging and sealing, in duplicate, together with a postage paid self-addressed stamped business reply envelope, or postcard addressed to the responsible Election Official.
  - Sample ballots of each ballot style as required by the California Elections Code.
  - Seals and any other supplies and forms deemed necessary.

### **5.1.1.2 AVC Edge 5.0**

- Each polling place will be given a Card Activator 5.0 and a number of voter cards in their supplies.
- Tables
- Power cords
- Card Activator 5.0's
- Voter cards
- Seals
- Machine/seal log
- Voter instructions
- Machine stickers
- Results cartridges

## **5.1.2 Delivery**

### **5.1.2.1 Optech Insight**

Prior to shipping the Warehouse Technician must perform a Pre-Election procedure for preparing the Optech Insight for shipment.

1. Complete *final inspection* sheet.
2. Enter the Optech Insight serial number and software revision level of the CPU boot ROM in the daily log.
3. Gather all keys (Southco, Red, and Green), and place them in an envelope with the final inspection sheet.

4. Clean the Optech Insight
5. If installed, remove the MemoryPack that you used for testing.
6. Remove the case cover, and use the canned air (compressed air) and remove the paper debris from the CPU circuit board and surrounding areas.
7. Open the electronic chassis assembly and insert the bottlebrush through the four holes to access the Read-Heads. Rotate the brush and clean the lens and reflector areas. Blow the air into the four holes and remove any remaining dust or paper debris.
8. Close the electronic chassis assembly.
9. Check the printer paper and change if needed.
10. If the jurisdiction chooses to ship the Optech Insight with the MemoryPack already sealed inside, insert the MemoryPack, and seal.
11. Close up the Optech Insight and gather up the envelope containing final inspection sheet, keys (Southco, red, and green). Place the unit with the envelope in a Mylar storage bag and deliver the packaged goods for shipment or storage.

#### **5.1.2.2 AVC Edge 5.0**

##### **AVC Edge 5.0 Machine**

Prior to Election Day, the Warehouse Technician prepares the voting machines for delivery by performing the following tasks:

- Advance to official Election
- Seal and close up voting machine

##### **Verivote Printer:**

At the warehouse, the Technician places the Verivote printer in the nylon case for transport, per Section 3.2.3 AVC Edge 5.0.

### **5.1.3 Inspection**

#### **5.1.3.1 Optech Insight**

After the Optech Insights have been delivered to the polling place, the Poll worker verifies that a MemoryPack is already installed and coded for the specific precinct.

#### **5.1.3.2 AVC Edge 5.0**

After the machines have been delivered to the polling place, the Poll worker performs the following inspection:

- Check leg assembly and all external parts.
- Verify that the correct identifying information such as polling place, machine number, and delivery address are found on the voting machine.
- After power-up, verify that the voting machine has been fully charged (no yellow or red warning bars are displayed by the screen).
- Card Activator 5.0:
  - Power – the Card Activator 5.0 is fully charged
  - Site – the precinct site is correct
  - Time – That the Card Activator 5.0 date and time are correct

- Verivote printer  
Verify that there is a Verivote printer for each AVC Edge 5.0, and spare Verivote printers, as specified by the jurisdiction.
- Edge Audio Accessory
  - Verify there is an Edge Audio Accessory for each AVC Edge 5.0
  - Verify there is no obvious damage
- Edge Aux Power Unit (recommended)
  - Verify there is an Edge Aux Power Unit for each AVC Edge 5.0
  - Verify there is no obvious damage
  - Connect the Edge Aux Power Unit to the AVC Edge 5.0, 1, and verify that the power switch, on the front of the Edge Aux Power Unit, lights up.

#### **5.1.4 Spare Verivote printers On Hand (AVC Edge 5.0)**

SVS recommends having spare Verivote printers, on hand, in case of printer jam or malfunction.

Prepare the spare printers for use:

- Open Verivote printer.
- Remove used thermal paper roll, if applicable.
- Properly seat new core on take-up reel.
- Install paper.
- Perform functional test.
- Attach cover.
- Place Verivote printer in nylon case for transport.

#### **5.1.5 Some paper ballots and Sealing Envelopes on Hand (AVC Edge 5.0)**

SVS recommends having some paper ballots and sealing envelopes, on hand, in case of Vote Save Failure.

## **5.2 Polling Place Setup**

This section defines the procedures for Polling Place Setup, as specified by section 5.2 of the “Voting System Use Procedures for California Template.”

### **5.2.1 Optech Insight**

The Poll workers will setup the ballot boxes. The programmed MemoryPack should already have been inserted into the Optech Insight and sealed.

### **5.2.2 AVC Edge 5.0**

#### **5.2.2.1 AVC Edge 5.0 Machine**

The Poll worker will set up the Edge machines. We recommend that two persons work as a team to set up each Edge.



### **5.2.2.2 Card Activator 5.0**

Each polling place will be given a Card Activator 5.0 and a number of Voter Activation Cards in their supplies. The Voter Activation Cards are used to activate the machine for the voter. Set up the Card Activator 5.0/HAAT.

### **5.2.2.3 Verivote Printer**

The Poll worker mounts Verivote printer onto AVC Edge 5.0, and connects the power and printer cable to the Edge prior to turning on the Edge.

## **5.3 Opening the Polls**

This section defines procedures for Opening the Polls, which are performed by the Poll worker, as specified by section 5.3 of the “Voting System Use Procedures for California Template,” per the following appendices:

- G.1: General
- G.2: Optech Insight
- G.3: AVC Edge 5.0

## **5.4 Polling Place Procedures**

This section defines the Polling Place Procedures, which are performed by the Poll worker, as specified by Section 5.4 of the “Voting System Use Procedures for California Template.”

See Appendix H.1: General.

### **5.4.1 Optech Insight**

See the following appendices:

- H.2.1: General Procedures
- H.2.2: For Regular Ballot
- H.2.3: For Blank Ballot
- H.2.4: For Overvoted Ballot
- H.2.5: For Undervoted Ballot
- H.2.6: For Write-In Ballot
- H.2.7: For Cross-Voted Ballot
- H.2.8: For Error Ballot
- H.2.9: For Unprocessable Ballot
- H.2.10: For Voted Absentee Ballot
- H.2.11: For Surrender of Unvoted Absentee Ballot
- H.2.12: Provisional Voting

### **5.4.2 AVC Edge 5.0**

See the following appendices:

- H.3.1: General Procedures
- H.3.2: If Voter Wishes to Change a Selection
- H.3.3: Entering Write-In Candidate
- H.3.4: For Blank Ballot:
- H.3.5: For Fleeing Voter
- H.3.6: For Undervote
- H.3.7: Overvote is Not Allowed
- H.3.8: Provisional Voting

## **5.5 Special Needs Voters (AVC Edge 5.0)**

This section defines the following procedures for Special Needs Voters, as specified by section 5.5 of the “Voting System Use Procedures for California Template”:

- Audio Voting
- Wheelchair Voting

### **5.5.1 Audio Voting**

See the following appendices:

- H.4.1: General Procedures
- H.4.2: If Voter Wishes to Change a Selection
- H.4.3: Entering Write-In Candidate
- H.4.4: For Blank Ballot
- H.4.5: For Fleeing Voter
- H.4.6: For Undervote
- H.4.7: Overvote is Not Allowed
- H.4.8: Provisional Voting

### **5.5.2 Wheelchair Voting**

The AVC Edge 5.0's display and touch screen are adjustable to different viewing angles to accommodate a wide range of conditions, including wheelchair-bound Voters.

Wheelchair voting is identical to regular voting, per the following appendices:

- H.3.1: General Procedures
- H.3.2: If Voter Wishes to Change a Selection
- H.3.3: Entering Write-In Candidate
- H.3.4: For Blank Ballot
- H.3.5: For Fleeing Voter
- H.3.6: For Undervote
- H.3.7: Overvote is Not Allowed
- H.3.8: Provisional Voting

## **5.6 Provisional Voters**

This section defines the following procedures for Provisional Voters, as specified by section 5.6 of the "Voting System Use Procedures for California Template":

- In Precinct
- Out of Precinct

### **5.6.1 In Precinct**

This paragraph defines the In Precinct procedures, as specified by paragraph 5.6.1 of the "Voting System Use Procedures for California Template."

### **5.6.1.1 Optech Insight**

See the following appendices:

- H.2.12: Provisional Voting
- I.1.6: For Provisional Ballots

### **5.6.1.2 AVC Edge 5.0: Regular Voting**

See the following appendices:

- H.3.8: Provisional Voting
- I.2.3: For Provisional Votes

### **5.6.1.3 AVC Edge 5.0: Audio Voting**

See the following appendices:

- H.4.8: Provisional Voting
- I.2.3: For Provisional Votes

## **5.6.2 Out of Precinct**

This paragraph defines the Out of Precinct procedures, as specified by paragraph 5.6.2 of the “Voting System Use Procedures for California Template.”

The procedure for Out of Precinct Provisional Voters is determined by the jurisdiction. Before the election, please check with them about their procedure.

## **5.7 Closing the Polls and Vote Reporting**

This section defines the procedures for Closing the Polls and Voting Reporting, which are performed by the Poll worker, as specified by section 5.7 of the “Voting System Use Procedures for California Template.”

### **5.7.1 Optech Insight**

Please see the following appendices:

- I.1.1: General Procedures
- I.1.2: Obtaining Regular Ballots from Rear Bin
- I.1.3: Checking Center Bin for Write-In Ballots
- I.1.4: Checking Auxiliary Bin for Blank, Overvoted, Undervoted, Cross-Voted, Error, and Unprocessable Ballots
- I.1.5: For Voted Absentee Ballots
- I.1.6: For Provisional Ballots

For posting results, see Appendix L.1: Optech Insight.

### 5.7.2 **AVC Edge 5.0**

See the following appendices:

- I.2.1: General Procedures
- I.2.2: Vote Consolidation (Optional)
- I.2.3: For Provisional Votes
- I.2.4: Audit Trail Transfer: If Results Cartridge Damaged or Unreadable

For Posting Results, please see the following appendices:

- L.2.1: Option #1
- L.2.2: Option #2

## 5.8 **Securing Audit Logs and Backing Up Records**

This section defines the procedures for Securing Audit Logs and Backing Up Records, as specified by section 5.8 of the “Voting System Use Procedures for California Template.”

### 5.8.1 **Optech Insight**

Optech Insight *close polls* procedures include:

- Obtaining signatures and public counter number
- Distributing Vote Totals Report
- Printing Electronic Log Report

Refer to additional Close Polls Procedures in Section 5.7.1 above.

### 5.8.2 **AVC Edge 5.0**

Vote data is redundantly stored, using separate data paths. One copy is in the machine’s internal audit trail memory; the other is in the Results Cartridge. Both copies are stored onto non-volatile, sold-state memory devices. In the case of a catastrophic failure of the internal audit trail memory, the Results Cartridge will still have the data. In the event of a catastrophic failure of the Results Cartridge, provisions exist, once at the polls closed state, for transferring a copy of the audit trail memory onto a special Audit Trail Transfer Cartridge.

The process of saving votes on the AVC Edge 5.0 involves double and triple-checks at each step. These checks include:

- Data being read from a file, such as vote totals to be incremented, are read twice and compared before being used.
- Data being written to a file is read back, twice, and compared to the original data.
- Arithmetic operations, such as bit-packing and incrementing, are double-checked.

Any error in the above tests is considered fatal. If one were to occur, that machine would report an error condition and disable itself from further voting.

The Event Log provides a record of the events.

### 5.8.3 *Optech 400-C*

If you have a log printer, the election log will print out continuously while using the WinETP tabulation program. This log shows all error conditions, use actions, and functions performed. All log lines contain the time and date. These log lines are also displayed on the bottom of the **WinETP Main** window as they occur.

## 5.9 Troubleshooting and Problem Resolution

This section defines Troubleshooting and Problem Resolution, as specified by section 5.9 of the “Voting System Use Procedures for California Template.”

### 5.9.1 *Optech Insight*

Listed below are the most common issues and their resolution.

**Problem:** At the beginning of the election, the Optech Insight will not generate the initial printout, will not accept ballots, and the green and red lights are not on.

**Solution:** Unplug the Optech Insight then plug it in again.  
If the Public Counter Display shows 0000 and there are no other error messages, call your election headquarters. Proceed with the election using the Auxiliary Bin.  
If the Public Counter Display shows more than zero, the Optech Insight may not have been initialized. Call your election headquarters and proceed with the election using the Auxiliary Bin.  
If the Acceptance Test report tape has printed out, verify that the printout is a Zero tape and not a Vote Totals tape. If the tape is a totals tape, call your election headquarters.

**Problem:** The Zero tape will not advance on the printer; printing is overlapping.

**Solution:** Make sure that you are using thermal Paper Tape.  
Make sure the Paper Tape is correctly inserted.

**Problem:** Printed tape is not legible.

**Solution:** Replace the printer.

**Problem:** Keypad is not working.

**Solution:** Replace Keypad or replace CPU.

**Problem:** The Optech Insight is accidentally unplugged while tabulating ballots.

**Solution:** Plug the Optech Insight back in. The Power ON Report will print. Make sure that the Public Counter Display is still holding a count and that the count is appropriate to the number of ballots read. The Optech Insight is ready to continue processing ballots.

**Problem:** There is a path sensor error.

**Solution:** Check for foreign material in the ballot path.

- Problem:** Ballot is returned to Voter.  
**Solution:** Override the ballot, depending on your election authority.
- Problem:** During the voting hours the Optech Insight stops accepting ballots.  
**Solution:** Check to see if both lights are on. If not, check to see if the cord is still plugged into AC power. If the cord is plugged in and there is no power, refer to *sub-chapter 5.4: Powering ON Optech Insight*, to continue with the election process using the Auxiliary Bin. Call your precinct election headquarters for service while operating the Auxiliary Bin.  
Use the Auxiliary Bin if a problem is not located.  
If both the green and red lights are on, check to see if there is a message indicating that an unnoticed ballot is stuck. If a stuck ballot message is given, locate the stuck ballot and remove the ballot.  
Call election headquarters for service if you cannot resolve the problem.
- Problem:** A red line begins to show on the edge of the tape.  
**Solution:** The paper roll is running out of Paper Tape. Replace the Paper Tape by following the Instructions in Section H.2.1.7 Changing Paper Tape.
- Problem:** The red power light is not on.  
**Solution:** Plug the unit into a wall socket.  
Check that the power wall socket is working properly by plugging in another electrical device (e.g., a clock or other electrical device).
- Problem:** Machine out of service (removal of power and resetting will not restore).  
**Solution:** Replace the CPU, MemoryPack and/or power supply.
- Problem:** Ballots are rejected excessively.  
**Solution:** Verify that the ballot printing is not faded or smudged.  
Call your service technician.
- Problem:** The machine is not reading ballots.  
**Solution:** Insert the test election MemoryPack and run the test ballots through to verify that they are being read correctly.  
Verify that the ballots are the correct ones for this precinct.  
The Read-Heads, MemoryPack, or CPU may need to be replaced.
- Problem:** The machine will not read ballots in certain orientations.  
**Solution:** Try inserting ballots in other orientations.  
Verify that the ballots are printed correctly.
- Problem:** Short MemoryPack battery life.  
**Solution:** Verify that MemoryPack battery current drain is not excessive. If the drain is more than 5 micro-amps, replace the MemoryPack.

**Problem:** Under certain conditions the Optech Insight will stop processing and a checksum error message will print.

**Solution:** Place ballots in the Auxiliary Bin, and call your service technician.

WARNING! If you encounter any type of CHECKSUM error message, call your service technician!

### 5.9.2 AVC Edge 5.0

Most Election Day issues can be handled over the phone and rarely require a technician to be deployed. However, if this should occur, the technician should be equipped with a communication device and toolkit to handle problems.

**Issue:** Polls are closed prematurely.

**Resolution:** The *Edge* system can be set to not allow a Poll worker to close the polls until a predetermined amount of time has past from polls being opened. If polls are closed after that period of time, the machine can no longer be used in that election.

**Issue:** Results Cartridge is removed.

**Resolution:** Power down the machine. Place the Results Cartridge back. Power the machine up. If this occurs after the polls are open, make sure the polls remain open and are not closed when the machine is powered up. This is not deemed a “fatal error” requiring additional machine investigation and quarantine.

**Issue:** Low Battery message

**Resolution:** Ensure that the machine is plugged into a working wall outlet. When the machine is receiving AC power, the green AC power light on the back of the machine will be lit.

**Issue:** The LCD is totally unreadable on power up.

**Resolution:**

- 1) Power down.
- 2) Power up, while holding the Activate button pressed.  
After a few seconds, the Poll worker LCD will say "Entering LCD Contrast, Release Activate," and the machine will beep.
- 3) Release the Activate button when this occurs.  
The contrast adjust function will start, and will automatically sweep through all possible settings.
- 4) Touch the screen when a good setting is reached.

This is not considered a “fatal error” requiring additional machine investigation and quarantine.

**Issue:** Onscreen Buttons do not seem to be responding on power-up.

**Resolution:** In the unlikely event that the touchscreen calibration is totally off, it is possible that no on-screen buttons will respond. In this case, from the LCD contrast screen, press the Activate button to enter the touchscreen calibration function.



- Issue:** Screen Contrast and Calibration are "off".
- Resolution:** 1) Hold the activate button until the screen changes.  
2) Touch the LCD button.  
3) Adjust contrast and calibration accordingly.
- Issue:** Fingerprints on the screen.
- Resolution:** Use ONLY screen wipes provided in the supply kit.

## 5.10 Printer/Ballot Jams

This section defines the procedures for the following printer/ballot jams:

- Resolution of Verivote printer Jam on Election Day (AVC Edge 5.0)
- Resolution of Ballot Jam on Election Day (Optech Insight)

### 5.10.1 Resolution of Verivote Printer Jam on Election Day (AVC Edge 5.0)

#### 5.10.1.1 Operator Procedures

On Election Day, the Verivote printer can jam at any of the following times:

##### While Printing Zero Report

1. Replace the printer.
2. At the **Waiting for First Voter** screen, press **Print Zero Proof Report** or **Send Report to Printer**. The report prints on the printer.

##### While Printing the Voter's Selections for their Review

1. Explain to the voter that their vote is not lost and they will be able to continue the voting process as soon as the printer is replaced.
2. Replace the printer.  
The voter's ballot selections continue to print and they can continue the voting process.
3. If the voter prefers to start over, cancel the voting session by powering the machine off and on again.  
The voter card ejects.
4. Activate another voter card for the voter and instruct them to begin voting.
5. If the printer was replaced, there will be a discrepancy between the Results Cartridge and paper trail, so be sure to document the occurrence.

##### While Printing the Voter's Final Ballot Selections after the Voter Casts his Ballot

If the printer paper jams after the voter cast their ballot and while the voter paper record is printing, do the following:

1. Explain to the voter that their vote has been recorded.
2. Replace the printer.
3. If the printer was replaced, there will be a discrepancy between the Results Cartridge and paper trail, so be sure to document the occurrence.

### **While Printing Results Report**

1. Replace the printer.  
The printer will continue printing the Results Report.
2. Because the printed report may be incomplete, due to the fact that it may have printed partially on the former printer, press Print Results Report to print the entire report on the newly connected printer.
3. Press Print Report or Send Report to Printer.  
The complete Results Report is printed on the newly connected printer.

The county should establish procedures for printer jam and documentation. However, the above procedure and documentation are recommended by SVS.

#### **5.10.1.2 Technician Procedures**

Replace the Verivote printer with another one, in that any Verivote printer will work with any AVC Edge.

#### **5.10.1.3 Documentation**

For sample form to document that a printer was swapped, see Appendix M.2.1: Resolution of Verivote printer Jam on Election Day Form.

### **5.10.2 Resolution of Ballot Jam on Election Day (Optech Insight)**

A jam may occur in any of the following ways:

- Jammed Ballot -- Returned to Voter
- Jammed Ballot – NOT Returned to Voter
- Ballot Not Where Expected – Processed
- Ballot Not Where Expected – NOT Processed
- Ballot Stuck in Center Output Slot
- Ballot Stuck in Rear Output Slot

#### **5.10.2.1 Jammed Ballot -- Returned to Voter**

The following message will be displayed by the Optech Insight:

BALLOT JAMMED RETURNING TO VOTER. REMOVE IT AND HAVE VOTER REMAKE IT.

\*\*\* BALLOT HAS NOT BEEN PROCESSED!!! \*\*\*

Remove Ballot from Optech Insight and have Voter remake it.

#### **5.10.2.2 Jammed Ballot – NOT Returned to Voter**

The following message will be displayed by the Optech Insight:

BALLOT JAMMED. REMOVE IT AND PLACE IT IN THE CENTER BIN

\*\*\*\* BALLOT HAS BEEN PROCESSED!!!! \*\*\*\*

Remove ballot and place it in the center bin.

### **5.10.2.3 Ballot Not Where Expected – Processed:**

#### **For Center Bin**

The following message will be displayed by the Optech Insight:

BALLOT NOT WHERE EXPECTED. REMOVE FROM MACHINE AND PLACE IN CENTER BIN. IF BALLOT IS NOT TORN, CALL FOR SERVICE TECHNICIAN

\*\*\*\* BALLOT HAS BEEN PROCESSED!!! \*\*\*\*

1. Remove ballot from machine, and place in center bin, if Ballot is not torn.
2. Call for Service Technician.

#### **For Rear Bin**

The following message will be displayed by the Optech Insight:

BALLOT JAMMED. REMOVE IT AND PLACE IT IN THE REAR BIN

\*\*\*\* BALLOT HAS BEEN PROCESSED!!! \*\*\*\*

1. Remove ballot from machine, and place in rear bin.
2. Call for Service Technician.

### **5.10.2.4 Ballot Not Where Expected – Not Processed:**

The following message will be displayed by the Optech Insight:

BALLOT NOT WHERE EXPECTED. REMOVE FROM MACHINE AND RETURN TO VOTER. IF BALLOT IS NOT TORN, CALL FOR SERVICE TECHNICIAN

\*\*\* BALLOT HAS NOT BEEN PROCESSED!!! \*\*\*

1. Remove ballot from Optech Insight and return to Voter.
2. Call for Service Technician.

### **5.10.2.5 Ballot Stuck in Center Output Slot:**

The following message will be displayed by the Optech Insight:

BALLOT APPEARS TO BE STUCK IN THE CENTER OUTPUT SLOT. IT COULD BE STUCK OR THE BIN MAY BE FULL. MAKE SURE THE BALLOT HAS CLEARED THE MACHINE AND IS IN THE CENTER BIN.

\*\*\*\* BALLOT HAS BEEN PROCESSED!!!! \*\*\*\*

It could be stuck, or the center bin may be full.

Make sure the ballot has cleared the machine and is in the center bin.

### **5.10.2.6 Ballot Stuck in Rear Output Slot**

The following message will be displayed by the Optech Insight:

BALLOT APPEARS TO BE STUCK IN THE REAR OUTPUT SLOT. IT COULD BE STUCK OR THE BIN MAY BE FULL. MAKE SURE THE BALLOT HAS CLEARED THE MACHINE AND IS IN THE REAR BIN

\*\*\*\*BALLOT HAS BEEN PROCESSED

It could be stuck, or the rear bin may be full.

Make sure the ballot has cleared the machine and is in the rear bin.

## **5.11 Vote Save Failure (AVC Edge 5.0)**

This section defines the following procedures for Vote Save Failure:

- Procedure #1 – Retire voter card and issue another one.
- Procedure #2 – Have Voter vote on another AVC Edge 5.0 machine.
- Procedure #3 – Have Voter vote on a paper ballot.
- Documentation (Procedures #2 & #3)

On Election Day, For Vote Save Failure, the AVC Edge 5.0 will display a pop-up window with the following error message:

**Vote Save Failure**

**[Error Detail]**

**Use The Backup Voting Procedure**

The county should establish procedures for backup voting and documentation. However, the following Backup Voting Procedures and documentation are recommended by SVS.

### **5.11.1 Procedure #1 – Retire voter card and Issue another one**

NOTE: This is the preferred procedure.

1. The voter card is probably bad.
2. Retire it (with a note indicating “Bad Card”), and issue another activated voter card to the Voter.

### 5.11.2 Procedure #2 – Have Voter vote on another AVC Edge 5.0 machine

NOTE: Use this procedure ONLY if retiring the voter card does not work. For procedures #2 and #3, this is the preferred procedure for an Audio Voter.

1. Notify the Election Official.
2. The Election Official should power down the affected AVC Edge 5.0 machine, by opening the cover for the power switch, and switching the power switch to OFF.

***IMPORTANT! DO NOT TOUCH THE POLLS OPEN/CLOSE SWITCH.***

3. Activate another voter card, and hand it to the Voter.
4. Instruct the Voter that their vote was not saved, and that they should start over.
5. Usher the Voter to another AVC Edge 5.0 machine, if available in the polling place, where they will start over, or start the voter again on the same Edge 5.0 unit..

NOTE: From this point, the Voting process will be normal.

6. Complete the form from appendix M.2.2: Vote Save Failure – Used Backup Procedure Form.

***IMPORTANT! COMPLETED FORM MUST ACCOMPANY ELECTION RESULTS, TO CENTRAL COUNTING LOCATION, ALONG WITH RESULTS CARTRIDGE FROM AFFECTED VOTING MACHINE.***

7. Once the Voter has voted, receive their voter card, and treat it as normal.
8. If they are an Audio Voter, return the Edge to regular mode.
9. At the time of closing the polls, the affected AVC Edge 5.0 machine will be powered up, and the polls closed as normal, with the following exception:

The completed “Vote Save Failure – Used Backup Voting Procedure” form will accompany the Results Cartridge from the affected machine.

### 5.11.3 Procedure #3 – Have Voter Vote on a Paper Ballot

1. Notify the Election Official.
2. The Election Official should power down the affected AVC Edge 5.0 machine, by opening the cover for the power switch, and switching the power switch to OFF.

***IMPORTANT! DO NOT TOUCH THE POLLS OPEN/CLOSE SWITCH.***

3. Provide the Voter with a paper ballot.
4. Instruct the Voter that their vote was not saved, and that they should start over, by using the paper ballot.
5. Usher the Voter to a booth, or private location, where they will use the paper ballot to start over.
6. Complete the form from appendix M.2.2: Vote Save Failure – Used Backup Procedure Form.

**IMPORTANT! COMPLETED FORM MUST ACCOMPANY ELECTION RESULTS, TO CENTRAL COUNTING LOCATION, ALONG WITH RESULTS CARTRIDGE FROM AFFECTED VOTING MACHINE, AND PAPER BALLOT (IN A SEALED ENVELOPE).**

7. Once the Voter has voted, receive their paper ballot, log it, and put it into a sealed envelope, for later processing at the Central Counting Location.
8. At the time of closing the polls, the affected AVC Edge 5.0 machine will be powered up, and the polls closed as normal, with the following exceptions.

The completed “Vote Save Failure – Used Backup Voting Procedure” form will accompany the Results Cartridge from the affected machine, and paper ballot (in a sealed envelope).

NOTE: At the Central Counting Location, the paper ballot will be counted as an Absentee ballot.

#### **5.11.4 Documentation (Procedures #2 & #3)**

For sample documentation, see appendix T.2: Vote Save Failure – Used Backup Procedure Form.

### **5.12 Improperly/Not Activated Voter Card**

This section defines the procedure for Improperly/Not Activated voter card.

1. Put the voter card in the pile of used voter cards to be erased, and issue another activated voter card to the Voter.

Erasing the voter card, along with the others, will allow it to be used again, after any of the following scenarios:

Poll worker forgot to activate card

Glitch

2. If after erasing the voter card, there is a second occurrence of it being improperly/not activated, the voter card is probably bad.

Retire it (with a note indicating “Bad Card”), and issue another activated voter card to the Voter.

## 6 Absentee/Mail Ballot Procedures (Central Tabulation)

This chapter defines the following Absentee/Mail Ballot Procedures, as specified by chapter 6 of the “Voting System Use Procedures for California Template”:

- System Start-Up and Pre-Tabulation Report Procedures
- Tabulation Procedures
- Post-Tabulation Report and Shutdown Procedures
- Troubleshooting and Problem Resolution

### 6.1 System Start-Up and Pre-Tabulation Report Procedures

This section defines the following System Start-Up and Pre-Tabulation Report Procedures, as specified by section 6.1 of the “Voting System Use Procedures for California Template”:

- Preparing Absentee Ballots for Tally
- Zeroing Counters
- Setting Up Optech 400-C to Tally Absentee Ballots
- Checking Ballot Handling Options
- Inspecting Absentee Ballots

#### 6.1.1 *Preparing Absentee Ballots for Tally*

A list, or an identification on the Roster Index, of absent voter ballot applicants is to be supplied to each precinct. Not more than seven days prior to an election, begin preparing returned Absentee ballots for tabulation, as follows:

1. Confirm that the voter's signature on the identification envelope has been verified.
2. Sort envelopes according to ballot style.
3. Open each envelope and remove the voted ballot.
4. Place empty identification envelopes in a designated storage area.
5. Examine absent voter ballots for cause for rejection and damage; process in the manner determined by the jurisdiction.
6. Deliver ballots to be processed to designated official for secure storage until time for processing.

#### 6.1.2 *Zeroing Counters*

You must initialize all new elections to zero all counters. A new election cannot be run until it has been initialized. To initialize in WinETP, select Initialize from the File menu.

Initialization procedures must be performed any time a change is made in the election files or the first time an election is run. These procedures build results files containing all zero totals, which are necessary to run WinETP. The initialization process will set all totals to zero and create a new empty Election Log.

NOTE: The initialize procedure also deletes the Election Log file.

### **6.1.3 Setting Up Optech 400-C to Tally Absentee Ballots**

You use WinETP to select Absentee if both Election Day and Absentee ballots are counted on the 400-C.

### **6.1.4 Checking Ballot Handling Options**

The ballot handling options should already have been selected, per Appendix D.4.5: Ballot Handling Options.

### **6.1.5 Inspecting Absentee Ballots**

Absentee ballots must be properly prepared for ballot tally. Absentee ballots improperly prepared can cause ballot jams and can damage Absentee ballots. Follow the following steps, to properly inspect Absentee ballots and to ensure proper functioning of the Optech 400-C.

1. Ballots must be inspected for foreign objects such as staples, tape, or paper clips. All foreign objects must be removed from the ballots. If the ballots have stubs, they must be inspected for improperly removed stubs.
2. Ballots must be inspected for damage such as torn or frayed edges. All damaged ballots must be removed from the ballot batches and remade according to your jurisdictions procedures.
3. Folded ballots must be unfolded, oriented with folds in the same direction, and folded in the opposite direction, against the crease, to flatten the ballot.
4. The readability of the ballot is questioned when the clock or marking areas on the ballot have non-acceptable marks. Listed below are a few known reasons.

Bad printing on the ballot

Voter marking the acceptable security ID, orientation marks, start bar, or stop bar areas of a ballot

Mutilation of a ballot

Wrong marking pen used

Greasy fingerprints caused from motor grease, etc

Read head sensor failure

Ballot trimmed incorrectly

## **6.2 Tabulation Procedures**

This section defines the Tabulation Procedures, as specified by section 6.2 of the “Voting System Use Procedures for California Template.”

This section provides instructions for the key procedures you need to know to read Absentee ballots using the Optech 400-C. The instructions are organized in the sequence they are used in an election.

**IMPORTANT: CLEANING OPTECH 400-C DURING ELECTION SHOULD BE PERFORMED BY A TECHNICIAN, EVERY 5000 BALLOTS.**



## **6.2.1 Load Ballots for Precinct/Batch/Polling Place**

Ballots may be loaded into the ballot feed hopper in any orientation. Proper loading technique is vital to the performance of the Optech 400-C.

1. Before loading the batch of ballots, ensure that no test ballots or ballots from another batch are in the ballot feed hopper, main bin, Write-In bin, or outstack tray.
2. If using a header card, place the header card as the first card in the batch of ballots to be loaded, per the following precinct processing mode:
  - Precinct header: Use header card (for the precinct).
  - Mixed: No header card is used.
  - Poll header: Use header card (for the polling place).

NOTE: Precinct processing mode was set when you initialized the election.

3. Prepare ballots by edge aligning, then tamping to a uniform stack dimension.
4. Turn the stack of ballots on end, as shown below, and tamp the ends to obtain a well-aligned stack.
5. Place the ballots in the ballot feed hopper carefully to avoid edge or corner damage. Place the front edge of the stack against the left hand wall of the ballot feed hopper, and let them slope into the bottom edge of the ballot feed hopper against the gate area.
6. When adding a new stack of ballots to ballots currently being processed, lay them down gently.
7. Dropping a stack of ballots on top of other ballots being processed can cause a ballot jam.
8. Do not overload the ballot feed hopper. No more than 150 ballots should be loaded into the ballot feed hopper at one time.

## **6.2.2 Tabulate Ballots for Precinct/Batch/Polling Place**

### **6.2.2.1 Precinct Header Mode**

1. Select Start from the Precinct menu.

NOTE: Cancel: Cancels the operation, and closes the Start Precinct dialog box.
2. Type or select the precinct.

At the top of the list, there will be an automatically numbered new precinct, which is selected by default.

Underneath this selection, all previous precincts will be displayed if there are any.
3. Select OK, to tabulate the loaded ballots.
4. Press <ENTER> to start tabulating the ballots.

NOTE: Cancel Precinct: Cancels the ballot tabulation, and closes the Ballot Reading Halted dialog box.

NOTE: Ballots not belonging to the precinct being read will be outstacked.

### **6.2.2.2 Mixed Mode**

1. Select Start from the Batch menu.  
NOTE: Cancel: Cancels the operation, and closes the Start Batch dialog box.
2. Select the batch.  
At the top of the list, there will be an automatically numbered new batch, which is selected by default.
3. Select OK, to tabulate the loaded ballots.
4. Press <ENTER> to start tabulating the ballots.  
NOTE: Cancel Batch: Cancels the ballot tabulation, and closes the Ballot Reading Halted dialog box.

### **6.2.2.3 Poll Header Mode**

1. Select Start from the Polling Place menu.  
NOTE: Cancel: Cancels the operation, and closes the Start Poll dialog box.
2. Type or select the polling place.  
At the top of the list, there will be an automatically numbered new polling place, which is selected by default.
3. Select OK, to tabulate the loaded ballots.
4. Press <ENTER> to start tabulating the ballots.  
NOTE: Cancel Poll: Cancels the ballot tabulation, and closes the Ballot Reading Halted dialog box.  
NOTE: Ballots not belonging to the polling place being read will be outstacked.

## **6.2.3 Handle Outstacked Ballots**

Outstacked ballots are un-tabulated because they are blank, overvoted, or have other readability problems. Handle outstacked ballots using the following guidelines:

- Clear ballots from outstack tray.
- Retry outstacks for improper feeding.
- Generate pending Outstack Report.
- Retry outstacked blank and overvoted ballots.
- Convert pending outstacks into permanent outstacks.
- Generate Diagnostics Report.
- Generate Permanent Outstacks Report.
- Review of outstacked ballots by Review Board.
- Re-tabulate ballots re-made by Review Board.

Outstacked ballots are sent to the outstack tray. These ballots require special handling to make the batch or precinct complete. Normally the outstacked ballots are given to a Review Board, so that some can be re-made to be readable. Also, a Permanent Outstacks Report (for outstacked ballots) is usually generated and given to the Review Board, at the same time, to aid them in their review.

When the Review Board is finished, the re-made ballots are returned to the operator for re-tabulating.

The procedures for handling these un-tabulated ballots are determined by your local Election Official.

#### **6.2.4 Handle Write-In Ballots**

Handle write-in ballots using the following guidelines:

- Clear ballots from Write-In bin.
- Tally of Write-In votes by Write-In review team.
- Add Write-In ballots to main bin.

#### **6.2.5 Clear Ballots from Main Bin**

Clear ballots from the main bin.

#### **6.2.6 End Ballots for Precinct/Batch/Polling Place**

1. From the Ballots Reading Halted dialog box, do the following:
  - Precinct Header: Click End Precinct.
  - Mixed: Click End Batch.
  - Poll Header: Click End Poll.
2. Click Yes.  
The totals will be added to the saved totals, and the WinETP Main window will be displayed, with the election totals.
3. Seal the main bin.
4. Transfer the sealed main bin to the storage vault or appropriate designated secured area using the roll-around cart.
5. Place an empty main bin on a roll-around cart at the end of the Optech 400-C Ballot Transport System.

#### **6.2.7 Save and Back Up Precinct/Batch/Polling Place**

**IMPORTANT: BE SURE TO END BALLOT BATCHES QUICKLY AFTER THEY ARE TABULATED, AND MAKE PERIODIC BACKUPS TO SAFEGUARD THESE TOTALS.**

1. Insert a backup disk (for saving and backing up the election files) into the computer's disk drive (A drive).
2. Select Save As from the File menu.  
NOTE: Cancel: Cancels the operation, and closes the Save Election Files As dialog box.
3. Destination Name: Enter the backup disk location. Example: A:\EGLDEM4C
4. Normally, you select Precinct Results File (.pr).
5. Click OK.
6. Remove the backup disk from the computer's disk drive (A drive), and carefully date and label it.

NOTE: You can now proceed with the next precinct or batch. The new totals can overwrite the interim file you saved (use the same filename), or you can enter a new filename.

### **6.2.8 Cleaning Optech 400-C during Election**

During an election, you may need to repeat all or parts of the cleaning process. In particular, you should blow the dust out of the machine every 5,000 ballots for folded ballots and 10,000 for unfolded ballots. You receive a system message after a precinct or batch is completed and about 5,000 ballots are run to notify you to consider routine cleaning.

You need the following supplies to complete the cleaning procedures.

- Cotton cloths
- Tap water
- “Dust Off” or similar canned air spray or compressor

### **6.2.9 Repeating Ballot Tally for Previous Polling Place, if necessary**

As needed, repeat ballot tally for the previous polling place, be it Precinct Header mode, Mixed mode, or Poll Header mode.

### **6.2.10 Recovering from Power Failure**

If the power fails, any votes from batches in progress will be lost, and those ballots must be re-tabulated.

When the power returns:

1. Re-start the WinETP tabulation program, per sub-chapter 5.8: Start the WinETP Tabulation Program.
2. Re-open the election.
3. Check any special option settings.
4. Remove any ballots from the ballot bins, and re-tabulate the interrupted batch.

The totals will be added to the saved totals.

## **6.3 Post-Tabulation Report and Shutdown Procedures**

This section defines the following Post-Tabulation Report and Shutdown Procedures, as specified by section 6.3 of the “Voting System Use Procedures for California Template”:

- Generating Election Totals
- Generating Reports
- Ballot Tally Reporting Using Summary System
- Shutdown Procedures

### **6.3.1 Generating Election Totals**

- Restore vote totals, if necessary to load the totals from the backup disk; if recovering from hardware failure, or to reload after a post-test.
- Merge vote totals, as applicable to replace totals in precincts that have zero vote totals. This procedure is similar to restoring vote totals, except merging vote totals only replaces totals in precincts that have zero vote totals. This option can be used to merge results manually from satellite counting centers.
- Zero precinct totals, if necessary to set vote totals to zero for specified precincts only, unlike the initialization process where all vote totals are zeroed.
- Back up final election results to the a: drive disk.

### **6.3.2 Generating Reports**

Generate reports using the following guidelines:

- Select report format options
- Set up printer(s)
- Generate precinct report
- Generate Accumulated Totals Report
- Generate Precincts Processed Report
- Generate Precincts Not Processed Report
- Generate Canvass Report
- Generate Ballot Image Report, if required

#### **6.3.2.1 Configuring Report Format Options**

The Report Format Options should already have been configured, per Appendix D.4.6: Report Format Options.

Select Reporting Mode: Absentee.

#### **6.3.2.2 Configuring Printer(s)**

Printer(s) should already have been configured, per Appendix D.4.7: Printers.

#### **6.3.2.3 Generating Precinct Report**

Select the following configuration options:

- Precinct List: Select All
- Show Ballot Positions
- Report Destination: Printer

#### **6.3.2.4 Generating Accumulated Totals Report**

Select the following configuration options:

- Precinct List: Select All
- Show Ballot Positions
- Report Destination: Printer

#### **6.3.2.5 Generating Precincts Processed Report**

Select Report Destination: Printer.

#### **6.3.2.6 Generating Precincts Not Processed Report**

Select Report Destination: Printer.

#### **6.3.2.7 Generating Canvass Report**

Normally the Canvass Report is printed after an election is completed. It usually stands as an official record of an election and is sometimes requires signatures by Election Officials.

#### **6.3.2.8 Generating Ballot Image Report**

The Ballot Images Report contains detailed ballot-by-ballot vote counts in selected precincts or batches.

### **6.3.3 Ballot Tally Reporting Using Summary System**

Following the processing of the last Regular or Absentee ballot, the Technician shall, if not already done so:

1. Insert a blank, formatted floppy diskette in the floppy disk drive and make a backup copy of the vote totals, including naming the file. (The election information will be copied to the diskette.).
2. Remove the diskette from the floppy disk drive and label it with the election name and current date.
3. Print a Precincts Processed Report and keep it with the backup diskette for a record of the precincts that have been backed up.
4. Deliver the diskette and the report to the Summary operator(s).

Upon receipt of the floppy diskette and report, the Summary System operator shall:

5. Make entry of this on a log designed for the audit purpose.
6. Cause the data to be read into the Summary System.
7. Produce election results bulletins as required.

The Election Official shall report elections results, as specified, to the Secretary of State for statewide elections and specified special elections.

If such peripheral devices are available, the Summary operator may use floppy diskettes, or magnetic tape to create backup files throughout the Summary System process.

### 6.3.4 **Shutdown Procedures**

Follow the guidelines below for Exit, Ballot Return, and Storage procedures:

- Close election
- Obtain Election Log
- Exit WinETP tabulating program
- Return voted Absentee ballots
- Put Optech 400-C into storage

## 6.4 Troubleshooting and Problem Resolution

As needed, follow the troubleshooting guidelines below:

### 6.4.1 **Re-Install WinETP Tabulation Program**

In the event of software problems, or if you receive a new WinETP release, re-install the WinETP tabulation program, using the same method you would use for installing any other application in Windows

### 6.4.2 **Ballot Jam**

Follow the steps below to clear a ballot jam.

1. Unlatch and lift the Ballot Transfer System cover.  
NOTE: Ballots may have moved slightly past the sensor position indicated due to the momentum of the machine when the motor stops. If ballots do not match the positions noted on the window or if ballots have overlapped each other, re-tabulate this precinct or batch.
2. Close and latch Ballot Transfer System cover.
3. Press Exit to close the Ballot Jam dialog box and return to the Ballot Reading Halted dialog.
4. Press Read Ballots to resume.

### 6.4.3 **Ballot-Reading Problems**

If Stop on Error Ballot is set, the Optech 400-C stops reading ballots when an unread ballot is detected, and displays an Unread Ballots (Stop on Error) dialog box, as in the following paragraphs.

Follow the instructions in the Unread Ballots (Stop on Error) dialog box and then continue.

#### **UNREAD BALLOTS (STOP ON ERROR) -- 1 BALLOT**

In this case, one ballot is outstacked. This ballot should be reviewed.

#### **UNREAD BALLOTS (STOP ON ERROR) -- 2 BALLOTS**

Two ballots may be in the outstack tray if two errors in a row are found, since an additional ballot may be in process when a ballot error is detected. In this case, the unread ballots (Stop on Error) dialog box will indicate the number of ballots. These ballots should be reviewed.

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## 7 Semi-Official Canvass Tabulation & Reporting

This chapter defines the following Semi-Official Canvass Tabulation and Reporting information, as specified by chapter 7 of the “Voting System Use Procedures for California Template”:

- System Start-Up and Pre-Tabulation Reports
- Processing Vote Reports
- Integration with County Systems and Calvoter
- Election Night and Post-Election Reporting

### 7.1 System Start-Up and Pre-Tabulation Reports

This section defines the System Start-Up and Pre-Tabulation Reports, as specified by section 7.1 of the “Voting System Use Procedures for California Template.”

#### 7.1.1 *General*

The responsible Election Official shall establish procedures to account for all voted ballots during the semi-official canvass. These procedures shall record the time voted ballots were received from each precinct and shall determine from whom they were received and to whom they were submitted. In addition, each function listed in Chapter 8 Official Canvass and Post-Election Procedures, is designated as a tracking point, and the responsible Election Official must track the receipt and processing of voted ballots by boards assigned to perform these functions.

#### 7.1.2 *Optech Insight*

Follow the closing the polls procedures:

- Print totals reports:
  - Results Ballot Report
  - Results Vote Totals Report
- Obtain signatures and public counter number
- Distribute Vote Totals Report

#### 7.1.3 *AVC Edge 5.0*

##### 7.1.3.1 *Tally Processing*

1. Click Election Day on the WinEDS menu bar.
2. Click Begin Tally.  
WinEDS enters the Tally Mode.

3. You can now tally the votes.

**Warning:** This step is irreversible. Once WinEDS has begun tally, WinEDS cannot accept certain changes in the Election Setup module.

Note: You can restart the tally any time after you have stopped the tally but before Declaring Winners.

### 7.1.3.2 Election Night Statistics

On Election night, you can view statistics in the following ways:

- View Statistics by Contest  
On the Contests tab of the Election Night Statistics window you can view real-time statistics on the voting results for each contest. You can also view final statistics after the entire vote has been tallied. You can view numerical data in the right pane of the Contests tab, and display graphs of contest results, and display contest results on a screen saver (for example, for public viewing)
- View Tally Statistics  
On the Status tab of the Election Night Statistics window you can view real-time statistics on the progress of tallying the vote. You can view the list of precincts, and the status of tallying the vote for each precinct, and view the list of machines used in a specific precinct, and the status of tallying for each machine.

### 7.1.4 Optech 400-C

Report preliminary Absentee ballot tabulations, compiled pursuant to the California Elections Code, to the Secretary of State immediately following the close of the polls. This requirement shall apply to all elections for which election results are reported to the Secretary of State.

## 7.2 Processing Vote Reports

This section defines the following Processing Vote Reports, as specified by section 7.2 of the “Voting System Use Procedures for California Template”:

- Central Tabulation (Optech 400-C)
- Precinct Tabulation (Optech Insight & AVC Edge 5.0)

### 7.2.1 Central Tabulation (Optech 400-C)

This paragraph defines Central Tabulation, as specified by paragraph 7.2.1 of the “Voting System Use Procedures for California Template.”

Processing ballots "centrally" on election night normally will be done at a county courthouse, county administration facility, City Hall or other such single facility. Nothing herein shall preclude however, the election night processing of ballots at other locations (and they may be several) such as polling places, remote public facilities, etc. When so done, the procedures presented here for "central processing" shall apply as far as is practical. At a minimum, all procedures for testing, sealing, logging, maintenance of the audit trail and subsequent transportation of ballots and election materials shall apply.

The Election Official responsible for the conduct of an election shall appoint boards to carry out the semi-official canvass functions.

Other boards may be deemed necessary by the responsible Election Official. Individuals appointed to the boards may perform more than one function or serve on more than one board.

The semi-official canvass functions must be performed by a minimum of three persons. Each board member shall be appointed to perform the function designated.

Each person who handles ballots at the Central Counting Location shall sign the following declaration:

"To the best of my knowledge and belief, I did not tamper with any ballot, or Ballot Tabulation equipment, nor did I observe any other person in any way tamper or interfere with the Ballot Tabulation process."

Perform the following semi-official canvass procedures:

- Report preliminary Absentee ballot tally results
- Establish audit trails
- Appointment of boards
- Absent voter and provisional voter ballot processing
- Logic testing
- Seal and container inspection
- Ballot inspection
- Ballot processing
- Ballot duplication (for damaged and blank ballots)
- Write-In vote processing
- Ballot storage

Perform the following Post-Election activities:

- Resolve provisional votes
- Resolve Write-Ins
- Declare winners
- Back up an election
- Certify an election

## **7.2.2 Precinct Tabulation (Optech Insight & AVC Edge 5.0)**

This paragraph defines Precinct Tabulation, as specified by paragraph 7.2.2 of the "Voting System Use Procedures for California Template."

### **7.2.2.1 Optech Insight**

Perform the following closing the polls procedures:

- Print Totals Reports
- Obtain signatures and public counter number
- Distribute Vote Totals Report
- Print Electronic Log Report

### 7.2.2.2 AVC Edge 5.0

If the AVC Edge 5.0 is set up for the optional vote consolidation feature, the following consolidation reports may be generated at this time:

- **Consolidated Results Report:** Prints a report in the same format as a standard Results Report, but with the totals being the sum of all the machines that have been consolidated.
- **Consolidated Results Report By Precinct:** Prints a report where the totals are given separately for each different “Poll ID” assigned to the consolidated AVC Edge 5.0 machines.
- **Consolidation Status Report:** Prints a brief listing of each AVC Edge 5.0 machine that has been consolidated, and its public counter number.
- **Turnout Report:** Prints a “by selection code” report of voter turnout.

## 7.3 Integration with County Systems and Calvoter

This section defines Integration with Counting Systems and Calvoter, as specified by section 7.3 of the “Voting System Use Procedures for California Template.”

Semi-Official canvass tabulation and reporting is to be integrated with county systems and Calvoter.

## 7.4 Election Night and Post-Election Reporting

This section defines Election night and post-election reporting.

Any delays in election night's semi-official 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 (2) hours shall be reported them by the 28th day following the election. The responsible Election Official may also report other delays in the processing of ballots as they deem appropriate.

## 8 Official Canvass and Post-Election Procedures

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This chapter defines the following Official Canvass and Post-Election Procedures, as specified by chapter 8 of the “Voting System Use Procedures for California Template”:

- Election Observer Panel
- Canvassing Precinct Returns
- Canvassing Absentee Ballots
- Canvassing Provisional Ballots
- Canvassing Write-In Votes
- 1% Manual Recount Procedures
- Handling Ballot Exceptions
- Post-Election Logic and Accuracy Testing
- Final Reporting and Official Canvass
- Backup and Retention of Election Material

All operations associated with the official canvass and post-election procedures shall be performed in accordance with the applicable control and security provisions of this document. No operation or activity which results in a revision to voting data produced by the semi-official 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.

The official canvass consists of a post-election audit of all of the voting precincts' returns and the Absentee ballot returns.

- 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 Absentee ballots
- To account for all official ballots produced for the election; to ensure that all required certificates and oaths were properly executed by the precinct board
- To verify the accuracy of the computer count by manually re-tallying the voted ballots from at least one percent of the voting precincts and comparing the manually-tabulated results to the computer-generated results

Each official canvass function must be performed by a minimum of three persons, or as required by California Election Code.

This section presents procedures for processing ballots, at the Central Counting Location, on election night. Normally such processing will be done at a county courthouse, county administration facility, City Hall or other such single facility. Nothing herein shall preclude however, the election night processing of ballots at other locations (and they may be several) such as Polling Places, remote public facilities, etc. When so done, the procedures presented here for processing ballots at the Central Counting Location shall apply as far as is practical. At a minimum, all procedures for testing, sealing, logging, maintenance of the audit trail and subsequent transportation of ballots and election materials shall apply.

## 8.1 Election Observer Panel

This section defines the procedures for Election Observer Panel, as specified by section 8.1 of the “Voting System Use Procedures for California Template.”

All procedures prescribed herein shall be carried out in full view of the public insofar as feasible. In addition, the responsible Election Official shall devise a plan whereby all critical procedures of the ballot tabulation 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 tabulation of all voted ballots.

Pursuant to the California Elections Code, all proceedings at the Central Counting Location shall be open to the view of the public and no person except one employed and designated for the purpose by the Election Official or authorized deputy shall touch any ballot container, or other tabulating equipment. Access to the area where the electronic data-processing equipment is being operated may be restricted to those authorized by the Election Official.

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 the restrictions established by the responsible Election Official to ensure the efficiency and integrity of the ballot tally process.

## 8.2 Canvassing Precinct Returns

This section defines the procedures for Canvassing Precinct Returns, as specified by section 8.2 of the “Voting System Use Procedures for California Template.”

### 8.2.1 Optech Insight

1. Examine the Ballot Statement prepared by each precinct board, as follows:
  - a. Compare the number of official ballots reported "received" by each precinct to the number issued by the Election Official. Resolve or explain any discrepancy.
  - b. Verify that the number of ballots voted (including those cast provisional ballots), plus spoiled and unused ballots, equals the number received by the precinct. Resolve or explain any discrepancy.
2. Reconcile tabulations, as follows:
  - a. Compare the number of signatures in the roster-index to the number of precinct Voter ballots reported on the Ballot Statement. Resolve or explain any difference between the two.
  - b. Compare the number of ballots voted by provisional and precinct Voters to the precinct's computer tabulation. Resolve or explain any discrepancy.

Remake and process any ballots not tabulated on election night because of damage, invalid identification punches, or any other reason.

Search election supplies and equipment, including unused and spoiled ballots, ballot containers, etc., for ballots not accounted for.

Process any found ballots.

### **8.2.2 AVC Edge 5.0**

The Local Election Official shall prepare written procedures detailing the following:

1. Assemble the Results Cartridges returned from the polling places.
2. Tabulate Write-In votes, when appropriate, as follows:
  - a. The Results Report produced by the AVC Edge 5.0 shall indicate the number of votes cast in each Write-In position for each contest. The Results Cartridge will also contain the actual Write-In candidates' names cast by the Voter and copy them to the Central Count System.
  - b. After all cartridges from all voting machines have been read; the Central Count System will produce on its printer a Write-In Report which lists all Write-In votes for each office in which a Write-In was cast.
  - c. The Local Election Official will tally and record the Write-In votes cast for Write-In candidates from this Write-In Report.
  - d. The reporting of Write-In votes as part of the official returns shall be required by law or by directive of the Secretary of State, or both.
3. Tabulate provisional ballots, when appropriate, as follows:
  - a. The Results Report produced by the voting machine shall indicate the number of Provisional Ballots cast.
  - b. After all cartridges from all voting machines have been read, the Central Count System will produce a status report and worksheet for all provisional ballots cast.
  - c. The Local Election Official will tally and record the provisional ballots cast from this Provisional Ballot Report in accordance with California law.
  - d. The reporting of provisional ballots as part of the official returns shall be required by law or by directive of the Secretary of State, or both.
4. Tabulate the votes from the Results Cartridges.
5. Review, inspect, and tabulate the absentee ballots and the manual data entry or electronic import of the Absentee results into the Central Count System.
6. Aggregate the vote tally for the entire county, including both polling place and Absentee totals.
7. Secure the premises where vote tabulation and aggregation is being conducted, including definition by the local Election Official as to who shall be admitted to the premises while vote tabulation is taking place.
8. Handle voter verified paper record copies.

### 8.3 Canvassing Absentee Ballots

This section defines the procedures for Canvassing Absentee Ballots, as specified by section 8.3 of the “Voting System Use Procedures for California Template.”

The Election Official is accountable for absent voter ballots to the same extent, as nearly as practicable, as for precinct ballots.

1. Prepare a Ballot Statement for each ballot style or special absent voter "precinct" showing the number of ballots produced (received), any defective ballots received from the vendor, spoiled or damaged ballots, the number of returned ballots that were challenged, and the number to be counted.
2. Reconcile the statement to demonstrate that the total of unused, defective, spoiled, issued, and replaced ballots equals the number received. Resolve or explain any discrepancy.
3. Compare the computer count to the number of ballots to be counted, as shown on the Ballot Statement. Resolve or explain any discrepancy.
4. Process any outstanding ballots not counted in the semi-official count.

### 8.4 Canvassing Provisional Ballots

This section defines the procedures for Canvassing Provisional Ballots returned by each precinct, as specified by section 8.4 of the “Voting System Use Procedures for California Template.”

1. Verify eligibility of persons who cast provisional ballots.
2. Open envelopes of eligible Voters and remove provisional ballots.  
Examine ballots for Write-In votes, noting cause for rejection and damage.  
Process in the manner prescribed for ballot inspection boards.  
Identify original or duplicate provisional ballots by precinct and deliver to the designated official for updating computer tabulations.
3. Write the reason for rejection on envelopes of ineligible Voters. Place unopened envelopes with election materials to be retained for the period prescribed by law.

### 8.5 Canvassing Write-In Votes

This section defines the procedures for Canvassing Write-In Votes, as specified by section 8.5 of the “Voting System Use Procedures for California Template.”

1. Examine the ballots with Write-Ins that were processed by ballot inspection boards, separate Write-In processing boards, Absentee ballot processing boards or canvassing boards to verify that the names written in are for valid candidates.
2. Review the tabulations of valid Write-In votes by precinct or Absentee ballot style, and summarize by jurisdiction.
3. Prepare "Statement of Write-In Votes" for inclusion in the official "Certified Statement of Election Results.”



## 8.6 1% Manual Recount Procedures

This section defines the 1% Manual Recount Procedures, as specified by section 8.6 of the “Voting System Use Procedures for California Template.”

See Section 9.1, 1% Manual Recount Procedures.

## 8.7 Handling Ballot Exceptions

This section defines the following procedures for Handling Ballot Exceptions, as specified by section 8.7 of the “Voting System Use Procedures for California Template”:

- Processing of Unused paper ballots
- Processing of Overvoted paper ballots
- Processing of Damaged and Blank paper ballots
- Processing of Undervotes
- Processing of Blank (Non) Votes

### 8.7.1 *Processing of Unused Paper 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 Election Official will seal or deface Unused Absentee Ballots and un-issued ballots. The Election Official may inspect and count unused ballots as necessary to reconcile the ballot tabulation during the Official Canvass.

### 8.7.2 *Processing of Overvoted Paper Ballots*

A ballot condition which arises when the Voter votes for more candidates than the number of candidates to be elected. In an office to which one candidate can be nominated or elected, a second vote creates an overvoted condition. The result is that no vote for that office can be tabulated, since the Voter's intent is unknown.

In the case of ballot measures, a "Yes" vote and a "No" vote for the same measure creates an overvote condition.

No vote shall be counted for any candidate or ballot measure when an overvote occurs. The number of overvotes shall be recorded for each office or ballot measure.

### 8.7.3 *Processing of Damaged and Blank Paper Ballots*

#### 8.7.3.1 *Damaged Ballots*

(Damaged ballots may be duplicated before processing or after rejection by the Optech 400-C, or both.)

Deliver damaged voted ballots to the appropriate location for processing. All ballots prepared as duplicates of damaged voted ballots shall be of a distinctive color, or be identifiable by other distinguishing means, clearly labeled "duplicate," and shall be given a serial number which shall also be recorded on the damaged ballot.

In creating the duplicate ballot, one board member shall vote positions marked on the damaged ballot, and shall enter a facsimile of the write-in vote(s), if any. Efforts need not, and should not, be made to match the handwriting characteristics of the voter when entering these write-in facsimiles. Particular attention must be paid to completing or not completing the arrows opposite the write-in spaces as the voter did, or failed to do. Another member shall verify that the voting position marks and write-in entries (including arrow completions or lack thereof) on the duplicate ballot match exactly those on the damaged ballot.

Duplicates of damaged ballots shall be placed with voted ballots of the appropriate precinct for further processing, tallying, and storage. The original ballot which has been duplicated shall be distinctively voided, placed in clearly identified containers for damaged ballots, and segregated in a secure location so they cannot be counted inadvertently.

### **8.7.3.2 Blank Ballots**

When ballots are processed centrally, the Ballot Processing Board may forward blank ballots for processing. Such ballots will carry voting position marks that cannot be read by the Optech 400-C usually because reflectivity of these marks is not within specifications. They are to be duplicated, following the same procedures as for damaged ballots.

### **8.7.4 Processing of Undervotes**

A ballot condition which arises when the Voter votes for fewer candidates than the number of candidates to elect, or when the Voter does not vote for or against a ballot measure.

### **8.7.5 Processing of Blank (Non) Votes**

A ballot condition which arises when the Voter does not vote for any candidate to an office, or for or against a ballot measure, per Section 9.9 Tally of Undervotes.

## **8.8 Post-Election Logic and Accuracy Testing**

This section defines the procedures for Post-Election Logic and Accuracy Testing, as specified by section 8.8 of the “Voting System Use Procedures for California Template.”

### **8.8.1 Optech Insight & 400-C**

This feature is used to verify that the Optech Insight’s logic and the ability to tally ballots accurately has not been compromised since the Pre-Election LAT. The Post-Election LAT is similar to the Pre-Election LAT.

### **8.8.2 AVC Edge 5.0**

This feature is used to verify that the AVC Edge 5.0’s logic and the ability to tally votes accurately have not been compromised since the Pre-Election LAT. The Post-Election LAT is similar to the Pre-Election LAT inasmuch as:

- A Zero Proof Report is created.
- AVC Edge 5.0 machine is voted on.
- A Results Report is printed to verify the test.

## 8.9 Final Reporting of Official Canvass

This section defines the following procedures for Final Reporting of Official Canvass, as specified by section 8.9 of the “Voting System Use Procedures for California Template”:

- Reporting Election Results
- Update of Computer Counts

### 8.9.1 Reporting Election Results

The Election Official shall report elections results, as specified, to the Secretary of State for statewide elections and specified special elections.

### 8.9.2 Update of Computer Counts

(This action may be done as often as the Election Official deems necessary during the canvass process.)

1. During the Official Canvass, previously un-tallied validly voted ballots must be counted in compliance with provisions of this chapter. The Optech Insight may again be used. Any and all equipment and components to be used for this purpose must have logic and accuracy tests performed as directed herein.
2. Verify that provisional ballots, add-on ballots from election night or found during the canvass, and add-on Absentee ballots have header code printing of the appropriate configuration and for the correct precinct or ballot style.
3. Process ballots, by precinct, or ballot style, through the ballot tabulation program. Compare new computer counts to Ballot Statements. Resolve or explain any remaining discrepancies. Original and later logs and reports may be examined to facilitate this resolution.
4. If the original computer count for any precinct has been found to be incorrect, or if there are precincts in which unresolved discrepancies remain, the ballots from such precincts shall be reprocessed through the ballot tabulation program. Compare new computer counts to Ballot Statements. Resolve or explain any remaining discrepancies. Original and later logs and reports may be examined to facilitate this resolution.
5. Upon completion of update session, rerun logic and accuracy tests and confirm results.

## 8.10 Backup and Retention of Election Material

This section defines the procedures for Backup and Retention of Election Material, as specified by section 8.10 of the “Voting System Use Procedures for California Template.”

### 8.10.1 General

#### 8.10.1.1 General Procedures

Upon the certification of the election results, the California Elections Code applies to the handling, security and disposition of elections materials. The retention period for related election materials is six months for all elections if no federal elections are involved. The federal election retention period is 22 months. Retention periods may be extended in the event of a court challenge.

### **8.10.1.2 Security of Materials Following Ballot Tally**

- Either on Election night during vote tally, or following vote tally, all of the event log, ballot images and summary totals from each cartridge used in the election shall be backed up to the tabulation database.
- The local Election Official shall provide for retention and storage of the database containing the cartridge information and of any other data processing materials related to the vote tally in accordance with statutory retention requirements.
- After vote tally, all of these materials shall be placed in locked storage in a secure location, and shall remain there until the expiration of the period for challenging elections and for as long as required by law, unless a court orders their release.
- During the period of storage, the local Election Official or the Secretary of State may order the release of the materials for purposes of a manual recount or for election verification, after which they shall be returned to storage.

### **8.10.2 Optech Insight & 400-C**

Following the processing of the last ballot from a precinct, the operator shall:

1. Insert a blank, formatted floppy diskette in the floppy disk drive and make a backup copy of the vote totals, including naming the file. (The election information will be copied to the diskette.)
2. Remove the diskette from the floppy disk drive and label it with the election name and current date.
3. Print a Precincts Processed Report and keep it with the backup diskette for a record of the precincts that have been backed up.
4. Set up the report format print options available for the reports. (Please see manufacturer's documentation for specific application of the options.)
5. Generate reports as required by the Election Official.
6. Sign ALL reports containing certification messages, as required by the Election Official.

NOTE: If certain peripheral devices are available, the operator may use floppy diskettes or magnetic tape to create backup files throughout the process.

### **8.10.3 AVC Edge 5.0**

The Voter verified paper record copy shall be retained by the Election Official for the same period of time as mandated by state and federal law for the retention of paper ballots for that election.

## 9 Manual Recount Procedures

This chapter defines the following Manual Recount Procedures, as specified by chapter 9 of the “Voting System Use Procedures for California Template”:

- 1% Manual Recount Procedures
- Full Manual Recount
- Request for Manual Recount
- Observers
- Hours of Operation
- Ballot Supervision/Breaks
- Voting Arrow Marking (Optech Insight & 400-C)
- Tally of Overvotes (Optech Insight & 400-C)
- Tally of Undervotes
- Tally of Blank (Non) Votes

### 9.1 1% Manual Recount Procedures

#### 9.1.1 *General*

For the purpose of validating the accuracy of the computer count, within the statutory number of days after every election at which the unit was used, a public manual recount of the ballots cast in at least one percent of the precincts, chosen at random except as described, below, in the event a unit fails), shall be conducted as to all candidates and ballot measures voted on. If the random selection of precincts results in an office or ballot measure not being manually recounted, as many additional precincts as necessary shall be selected and manually recounted as to any office or ballot measure not recounted in the original sample.

Pursuant to the California Elections Code precincts selected at random shall be chosen by an individual who is designated by the responsible Election Official and who is not the same person, or a relative of the person responsible for election programming. Selected precinct numbers shall not be revealed to such personnel until the Semi-Official count is complete.

In the event a unit fails after the semi-official or official ballot tally process has begun, and regardless of whether or not the equipment is to be returned to service following repair and successful processing of the prescribed logic and accuracy tests, the ballots from the last precinct tabulated on the equipment prior to the failure shall be included in the automatic Manual Recount.

If a discrepancy is discovered between the automated tabulation and the automatic Manual Recount tabulation, each precinct's ballots which had been read and processed by the failed equipment, subsequent to the time of the last successfully completed logic and accuracy test by the failed equipment, shall be tabulated again.

The guidelines set forth in Section 9.7 Voting Arrow Marking (Optech Insight & 400-C) , shall be followed during the automatic Manual Recount of ballots.

#### 9.1.2 *Optech Insight*

The paper ballots may be used for the 1% Manual Recount.

### 9.1.3 **AVC Edge 5.0**

The AVC Edge 5.0 has a polls-closed function for facilitating the 1% Manual Recount.

1. From the polls closed screen, proceed to the technician Functions screen:
2. Press and hold the yellow activate button till you hear a beep (about 3 seconds).
3. Release the button and immediately press and hold it again.

After the next beep, the Technician Functions screen will be shown.

Near the top right of the Technician Functions screen is a yellow button that says “Manual Recount.”

4. Pressing this button enters a function that provides a user-friendly way to do a manual recount. First, a prompt is provided to select whether the recount is to go to the screen or to the printer
5. Selecting the screen then causes the ballot images to be shown, in summary screen format, one by one. The title text indicates progress through the ballot images. Each of the ballot images can be printed, and Next and Back buttons provide navigation through the images.
6. Selecting the printer causes all of the ballot images to be printed in succession, in the same format as when they are first displayed on screen.

NOTE: The ballot images are presented in the randomized storage order, not the order of voting.

### 9.1.4 **Optech 400-C**

For the purpose of validating the accuracy of the computer count, within the statutory number of days after every election at which the Optech 400-C voting system was used, a public manual recount of the ballots cast in at least one percent of the precincts, chosen at random shall be conducted as to all candidates and ballot measures voted on. If the random selection of precincts results in an office or ballot measure not being manually recounted, as many additional precincts as necessary shall be selected and manually recounted as to any office or ballot measure not recounted in the original sample.

Precincts selected at random shall be chosen by an individual who is designated by the responsible Election 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 semi official count is complete.

In the event an Optech 400-C device fails after the semi official or official ballot tally process has begun, and regardless of whether or not the equipment is to be returned to service following repair and successful processing of the prescribed logic and accuracy tests, 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 automatic manual recount tally, each precinct's ballots which had been read and processed by the failed equipment, subsequent to the time of the last successfully completed logic and accuracy test by the failed equipment, shall be tallied again. The 400-C Ballot Sorter is a utility program designed to separate ballots that need to be re-run due to a recount. It allows the user to select the contest or contests to be recounted; the software automatically determines the header codes of ballots containing recount contests.

Ballots are then run through the Optech 400-C; the software stacks the ballots containing recount contests and those that don't contain recount contests to different bins.

Typically the recount ballots will be sent to the Write-In bin, and the others to the main bin, but the software can be configured to do it the other way around. In addition, the software can be

configured to separate out only those ballots containing overvotes and/or undervotes in recount contests.

The *ballot sorter* consists of the following single executable file:

SORT400C.EXE

which needs to be placed in the same directory where the WinETP software is installed. Typically this will be the following directory:

C:\WinETP

You can then manually create a shortcut to the program.

## 9.2 Full Manual Recount

### 9.2.1 *General*

The voter verified paper record copy shall be considered the official paper audit record and shall be used for any full Manual Recount.

In the case of a difference between the electronic record and the voter verified paper record copy, the voter verified paper record copy shall govern, unless there is clear evidence that the voter verified paper record copy is inaccurate, incomplete or unreadable as defined in the system procedures.

### 9.2.2 *Optech Insight*

The paper ballots may be used for the Manual Recount.

### 9.2.3 *AVC Edge 5.0*

The AVC Edge 5.0 has a polls-closed function for facilitating the Manual Recount.

See Section 9.1.3 for AVC Edge 5.0 Manual Recount procedures.

### 9.2.4 *Optech 400-C*

See the Section 9.1.4 for Optech 400C Manual Recount procedures.

## 9.3 Request for Manual Recount

A request for a Manual Recount and the conduct of the Manual Recount shall be made in accordance with the California Elections Code and the following sections herein.

## 9.4 Observers

Each candidate, and each side in the case of a ballot measure, shall be allowed not more than two observers for each Manual Recount board. Observers may not interfere in the Manual Recount process, or direct questions to any member of the Manual Recount board, and may not touch or handle the ballots. All questions must be directed to the Election Official in charge of the Manual Recount.

## 9.5 Hours of Operation

Prior to the beginning of the Manual Recount, all parties will be notified of the hours of operation.

## 9.6 Ballot Supervision/Breaks

At least two people will attend ballots at all times during the Manual Recount, including breaks and lunch periods.

Manual Recount boards will be permitted break periods in the morning and afternoon, in addition to a lunch break. They will not stop for a break or for lunch while recounting a precinct.

## 9.7 Voting Arrow Marking (Optech Insight & 400-C)

As determined within the law by the Election Official or court of jurisdiction, any mark or vote where Voter intent is clear and obvious shall be counted. Any mark or vote where Voter intent is not clear and obvious shall not be counted.

## 9.8 Tally of Overvotes (Optech Insight & 400-C)

A ballot condition which arises when the Voter votes for more candidates than the number of candidates to be elected. In an office to which one candidate can be nominated or elected, a second vote creates an overvoted condition. The result is that no vote for that office can be tabulated, since the Voter's intent is unknown.

In the case of ballot measures, a "Yes" vote and a "No" vote for the same measure creates an overvote condition.

No vote shall be counted for any candidate or ballot measure when an overvote occurs. The number of overvotes shall be recorded for each office or ballot measure.

## 9.9 Tally of Undervotes

A ballot condition which arises when the Voter votes for fewer candidates than the number of candidates to elect, or when the Voter does not vote for or against a ballot measure.

Tabulating the number of undervotes in a Manual Recount will add significant time to the Manual Recount process. The undervotes should be tabulated only as part of the Ballot Tabulation process.

## 9.10 Tally of Blank (Non) Votes

A ballot condition which arises when the Voter does not vote for any candidate to an office, or for or against a ballot measure, per Section 9.9 Tally of Undervotes .



## 10 Security

This chapter defines the following Security information, as specified by chapter 10 of the “Voting System Use Procedures for California Template”:

- Physical Security of System and Components
- Logical Security of System and Components
- Security Procedures for Central Processing
- Security Procedures for Polling Places
- Audit Trails

### 10.1 Physical Security of System and Components

This section defines the following Physical Security of System and Components, as specified by section 10.1 of the “Voting System Use Procedures for California Template”:

- General Procedures
- Hardware and Network Setup and Configuration
- Software Installation and Configuration
- Transportation and Storage
- Ballot Box (Optech Insight)
- Security Seals
- Seal and Ballot Box/Bin Inspection (Optech Insight & 400-C)
- Protection Against Malicious Software
- MemoryPack Security: Permanent Serial Numbers & Tamper-Evident Seals (Optech Insight)

#### 10.1.1 General Procedures

- If it becomes necessary to transfer control of any equipment back to SVS for repairs, operational elections activity may not be carried out on the equipment while it is under the SVS’s control.
- Controlled test elections should be run before and after each election to certify accuracy of processing.

#### 10.1.2 Hardware and Network Setup and Configuration

- The unit should *never* be connected to the World Wide Web.
- The unit should be dedicated to election use.
- Any networking *must* be physically isolated
- *No* servers with ballot tally
- *No* wireless is allowed. It *must* be physically disabled

### **10.1.3 Software Installation and Configuration**

#### **10.1.3.1 General**

- The Election Official should verify and submit a statement, to the Secretary of State, stating that no unauthorized program (as designated by lists from Sequoia) has been installed, or resides on the voting system.
- SVS shall provide the jurisdiction with a list of all software needed by the election management software. All other Third-party software must *not* be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the unit.
- Do not allow unauthorized software to be run on the Optech Insight, particularly "shareware."
- Optech Insight software shall be maintained under the control of the local Election Official and not used for any other purpose. Optech Insight software shall be available for inspection by the local Election Official.

#### **10.1.3.2 Optech Insight and Optech Insight Plus**

Physical security is stressed in each installation, as follows:

- The Optech Insight should remain in a controlled, preferably locked area, with access limited to authorized staff.
- The Optech Insight should not be left unattended without first activating one or more levels of password protection.
- The Optech Insight should be locked up between elections.
- The Optech Insight should be dedicated to election use.
- The Optech Insight should be locked to provide security against unauthorized entry.
- The master installation disk should also be locked up to prevent unauthorized changes.
- Controlled test elections should be run before and after each election to certify accuracy of processing.

All Optech Insight Software and Firmware are installed at the factory except for election-specific information that is programmable using WinEDS for use with each election and loaded onto the non-volatile memory in the MemoryPack.

The Optech Insight provides data and code checks at start-up to verify that the correct versions of programs and data are in use. The firmware tests the match between the tabulator and MemoryPack halves of the control program and shuts down if they do not match. The version number and date of each is printed at the top of the event log.

#### **10.1.3.3 AVC Edge 5.0**

- It is recommended that the Election Official verify and submit a statement, to the jurisdiction, stating that no program has been installed, or resides on the unit, which is designed to work with Direct Access Objects.
- SVS shall provide the jurisdiction with a list of all software needed by the election management software. All other Third-party software must NOT be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the unit.

- The unit should NEVER be connected to the World Wide Web.
- The unit should be dedicated to election use.
- Any networking MUST be physically isolated
- NO servers with Ballot Tally
- NO wireless is allowed. It MUST be physically disabled

#### **10.1.3.4 Optech 400-C & WinEDS**

- If the computer/PC cannot be dedicated, reload all software and data files from secured backup copies to assure an intact system.
- An approved virus-checking program must be installed on the computer/PC. It should be updated, and a virus scan runs immediately prior to each election, to protect against the introduction of viruses.
- Third-party software must *not* be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the software/unit.

#### **10.1.3.5 Card Activator 5.0, Insight Battery, Edge Aux Power Unit, & Verivote Printer: N/A**

This does not apply to the Card Activator 5.0, since any software installation is performed by SVS. The Insight Battery, Edge Aux Power Unit, and Verivote Printer do not contain software.

#### **10.1.3.6 MemoryPack Receiver**

The MemoryPack Receiver must be connected to a PC, as follows:

1. Obtain a custom RS-232 communications cable (for connection between the PC and the MemoryPack Receiver).  
  
Enables communication and transfer of data between the PC and the MemoryPacks in the MemoryPack Receiver.
2. Install Software for WinEDS.  
  
Creates precinct-level election data, which is written to MemoryPacks in the MemoryPack Receiver.  
  
Uploads precinct-level ballot tabulation totals from MemoryPacks in the MemoryPack Receiver and accumulates jurisdiction-wide election results.
3. A printer is required for printing reports of election results.  
  
Any printer that can be attached to the PC can be used. However, if you use a laser printer, it must be Hewlett-Packard (H-P) or H-P-compatible.

NOTE: Disk Drive is used to back-up election files to diskettes. You can copy results from one system (e.g., Optech 400-C) to another (e.g., PC with WinEDS).

A custom RS-232 communication cable can be ordered from your SVS representative, per part number 27766-00.

## **10.1.4 Transportation and Storage**

### **10.1.4.1 General**

- House the units in an access-controlled area.
- Keep all spare parts locked up at all times.
- Limit access to the units, spare parts, etc. as much as possible.
- Perform a full inspection of each unit, including validating the firmware version, before election use.

### **10.1.4.2 Optech Insight & Optech Insight Plus**

- Care must be exercised by the jurisdiction to ensure that as precinct data is burned into MemoryPacks for each precinct, an appropriate label is affixed to each MemoryPack correctly identifying the precinct where the MemoryPack is to be used.
- The Optech Insight units and MemoryPacks must be locked and sealed when being transported to the polling place.
- Ensure that the Ballot Box and the Optech Insight door containing the keypad and MemoryPack are locked.
- Lock and seal Optech Insight units and MemoryPacks when transporting them to the polling place.

### **10.1.4.3 AVC Edge 5.0**

- Seal the Results Cartridge in place with a numbered seal and record the seal number.
- Seal the polls opened/closed cover with a numbered seal and record the seal number.
- Keep all cartridges (Results, etc.) locked up when not being used.
- Verivote printer(s) will be placed in their nylon case for transport.

## **10.1.5 Ballot Box (Optech Insight/Insight Plus)**

- Use the two locks to secure the door.
- Use the lock and seal on the flap over the ballot entrance holes.
- Use the Optech Insight internal locking provision to secure the Optech Insight to the ballot box.

## **10.1.6 Security Seals**

See the following appendices:

- K.1: General
- K.2: Optech Insight
- K.3: AVC Edge 5.0
- K.4: Optech 400-C

## **10.1.7 Seal and Ballot Box/Bin Inspection (Optech Insight & 400-C)**

See the following appendices:

- K.2.1.3: Seal and Container Inspection
- K.4.1.4: Seal and Container Inspection

### **10.1.8 Protection against Malicious Software**

#### **10.1.8.1 General**

The Election Official shall ensure the protection of the ballot tally process from intentional and/or fraudulent manipulation, malicious mischief, accidents, and errors, as follows:

- Establish procedures to identify changes to the ballot tally system, including dates and times that files are created, modified, or accessed, and by whom. These procedures must also include a checklist and sign-off requirement for logic testing.
- Establish procedures for the physical protection of facilities, and data and communications access controls; including intrusion and fire alarms, temperature and humidity sensors, etc.

#### **10.1.8.2 Optech Insight, Optech Insight Plus, and Optech 400-C**

Establish procedures for the physical protection of facilities, and data and communications access controls; including intrusion and fire alarms, temperature and humidity sensors, etc.

The procedures shall also include provisions for locked facilities for computers which are dedicated discretely to elections as well as for voted and non-voted ballots and tabulated and untabulated ballots. Such procedures shall not preclude the accessibility of the Optech Insight nor computers for purposes of testing, repair, demonstration, and training or for other purposes, which are deemed justifiable by the Election Official.

- Establish contingency plans for Ballot Tabulation/Vote Tally, including either backup Ballot Tabulation/Vote Tally facilities under the Election Official's supervision, or the availability of such facilities from another jurisdiction, or from a vendor, or from another source. Such plans may take note of the existence of multiple units, if such is the case, citing these situations as adequate backup.
- Establish procedures for internal security, i.e., the protection of Ballot Tabulation/Vote Tally hardware, firmware, and software from fraudulent manipulation by persons within the elections office.
- These procedures must provide for.
  - Restricted access to Ballot Tabulation/Vote Tally hardware, firmware, and software.
  - Individual passwords which must be complex and frequently changed.
  - Physical protection of all non-voted precinct and Absentee Ballots, as well as of all tabulated and un-tabulated ballots, by use of logs to chronicle their quantity, use, and access before and after the election.
- A complete copy of each Election Official's security procedures shall be submitted to the Secretary of State for review and approval by February 1st of each even-numbered year beginning with the adoption of this set of procedures. In lieu of the annual submission of this plan, the Election Official may affirm that no change has been made to previously approved procedures, or may submit updates to the procedures on a continuing basis. If no such plan has been formulated prior to February 1, after the adoption of these procedures, it shall be submitted when completed.

### **10.1.8.3 AVC Edge 5.0, Card Activator 5.0, and HAAT 50**

- To verify that the correct firmware is installed in each machine, SVS has administrative controls in place from the time the firmware is written and compiled until the time it is locked and sealed in each machine. The points in this sequence are when:
  - The firmware is written and the master program created.
  - The master firmware is reproduced for installation in each machine.
  - The machines are delivered to a customer.
- The firmware is written in a high level language and is well designed and written so that it can be easily read and understood. This has been confirmed by the FEC certification process. SVS conducts comprehensive testing as part of the qualification acceptance testing of the machine.
- The software is under strict Configuration Management control. This means that there are verifiable means of controlling, accounting for, and verifying any and all changes to the baseline machine firmware, which has been the subject of detailed review. The firmware is compiled twice, by different people, on different computers and the results verified to be identical.
- During the assembly of the machine, there are manufacturing controls to provide assurances that the correct version of firmware is being installed in each machine. Also in manufacturing there are procedures that allow SVS to verify that the known version of software is, in fact, the version installed on the machines.
- Each machine is a stand alone processor. Errors cannot be promulgated from one machine to another. The machines cannot be accessed by telecommunications. Access to the machine is limited by administrative procedures and is also limited by the physical design of the machines.
- In summary, there are controls from the source code review through the manufacture and delivery of the machine to protect the integrity of the firmware. Thereafter, the design limits access to the program ROMs through physical means -- locks and seals -- and logical means -- checksums at power up and program initiation. Finally, by machine design the machine is not accessible to the outside except through the machine.

### **10.1.8.4 WinEDS**

- In order to verify that the software is correct, SVS has administrative controls in place from the time the software is written and compiled until the time it is ready to be delivered to the customer. The points in this sequence are when:
  - The software is written and the master program created.
  - The software delivered to a customer.
- The WinEDS software is written in a high level language and is well designed and written so that it can be easily read and understood. This has been confirmed by the FEC certification process. SVS conducts comprehensive testing as part of the qualification acceptance testing of the WinEDS.
- The WinEDS software is under strict Configuration Management control. This means that there are verifiable means of controlling, accounting for, and verifying any and all changes to the baseline software, which has been the subject of detailed review. The software is compiled twice, by different people, on different computers and the results verified to be identical.
- In summary, there are controls from the source code review through the delivery of the WinEDS software to protect the integrity of the software.

#### **10.1.8.5 MemoryPack Receiver**

Since the MemoryPack Receiver is connected to the WinEDS PC, see Section **Error! Reference source not found. Error! Reference source not found.**

#### **10.1.8.6 Verivote Printer**

Since the Verivote Printer is installed on the AVC Edge 5.0, see Section 10.1.8.3 AVC Edge 5.0, Card Activator 5.0, and HAAT 50.

### **10.1.9 MemoryPack Security: Permanent Serial Numbers & Tamper-Evident Seals (Optech Insight)**

- Each MemoryPack or Results Cartridge shall have a permanent serial number assigned and securely affixed to it.
- Each MemoryPack or Results Cartridge must be programmed in a secured facility under the supervision of one or both of the following:
  - Registrar of Voters
  - Registrar of Voters' staff
- Once a MemoryPack or Results Cartridge is programmed for the election, it must be immediately inserted into its assigned unit and sealed with a serialized, tamper-evident seal by one or both of the following:
  - Registrar of Voters
  - Registrar of Voters' staffHave its serial number logged into a tracking sheet designed for that purpose.
- The county must maintain a written log that records the following information:
  - Which MemoryPack or Results Cartridge and which serialized tamper-evident seals are assigned to which units.
  - Any breach of control over a MemoryPack or Results Cartridge before an election shall require that its contents be zeroed, in the presence of two Election Officials, before it can be used.
- On Election Day, prior to any ballots being cast on any unit:
  - The integrity of the tamper-evident seal must be verified by the Precinct Officer.
  - The serial number of the seal must also be verified against the log provided to the Precinct Inspector.
- This procedure must be witnessed by at least one or both of the following:
  - Other Precinct Officer
  - Registrar of Voters
- If it is detected that either or both of the following has occurred:
  - The tamper-evident seal has been broken.
  - There is a discrepancy between the log and the serial number.The condition must be:
  1. Confirmed by one or more of the remaining members of the Precinct Board.
  2. Documented.
  3. Immediately reported to the County Elections Official for the Jurisdiction.
- The Elections Official shall immediately investigate and determine appropriate action:

- If the unit involved is an AVC Edge 5.0, it must undergo a full manual reconciliation of the electronic votes cast and captured on the Results Cartridge against the paper audit record for that unit.
- If the unit involved is an Optech Insight, it must undergo a full manual reconciliation of the counts in the MemoryPack against the paper ballots which were scanned by the unit.
- The county must maintain a written log that accurately records the chain of custody of each MemoryPack or Results Cartridge:
  - From: The point of programming for use in the election
  - Through: The time of completion of the Official Canvass

For samples of forms used in the above process, please see the Appendix N:

- Results Cartridge Serial Number Tracking Form
- Results Cartridge Broken Seal / Discrepancy Form
- MemoryPack Serial Number Tracking Form
- MemoryPack Broken Seal / Discrepancy Form

## 10.2 Logical Security of System and Components

This section defines the following Logical Security of System and Components, as specified by paragraph 10.2 of the “Voting System Use Procedures for California Template”:

- Essential and Non-Essential Services and Ports
- User-Level Security
- Anti-Virus Protection
- Procedures for Verifying, Checking, and Installing Essential Updates and Changes

### 10.2.1 Essential and Non-Essential Services and Ports

This paragraph defines the Essential and Non-Essential Services and Ports, as specified by paragraph 10.2.1 of the “Voting System Use Procedures for California Template.”

#### 10.2.1.1 Optech Insight

The Optech Insight precludes the possibility of any non-essential services and ports.

##### For the MemoryPack Receiver

- A communications port should be enabled to allow hook-up of a communications cable between the MemoryPack Receiver and the PC running WinEDS.
- The MemoryPack Receiver should never be hooked up to a network or the World Wide Web.

#### 10.2.1.2 AVC Edge 5.0

The Optech Insight precludes the possibility of any non-essential services and ports.

#### 10.2.1.3 Optech 400-C

- WinETP 1.16.6
- Windows
- Any approved virus-checking program



- The A drive, CD-ROM drive, or a USB port must be enabled, in order to accept the WinEDS media containing the election definition.
- Third-party software must *not* be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the software/unit.
- SVS shall provide the jurisdiction with a list of all software needed by the election management software. All other Third-party software must *not* be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the unit.
- In the event that a new release of WinETP software comes out, only one release should reside on the computer.

#### **10.2.1.4 WinEDS**

#### **10.2.1.5 Software listed for Software Installation and Configuration, per Section 3.3.5**

- Any approved virus-checking program
- Third-party software must *not* be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the software/unit.
- SVS shall provide the jurisdiction with a list of all software needed by the election management software. All other Third-party software must *not* be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the unit.
- A communications port should be enabled to allow hook-up of a communications cable between the MemoryPack Receiver and the PC running WinEDS.

### **10.2.2 User-Level Security**

This paragraph defines the User-Level Security, as specified by paragraph 10.2.2 of the “Voting System Use Procedures for California Template.”

#### **10.2.2.1 Access Control**

##### **General**

- Measures should be taken to prevent unauthorized operating system access to the unit, and to other machines on a network, if any. This is especially important if the room cannot be fully secured.
- At least two persons in the county shall have administrator level access to the unit.
- The unit should remain in a controlled, preferably locked area, with access limited to authorized staff.
- The unit should not be left unattended without first activating one or more levels of password protection.
- The unit should be locked up between elections.

##### **Optech Insight**

- The unit should be locked to provide security against unauthorized entry.

- The access code on the keypad should be restricted to the Maintenance Technicians and Administrative personnel, to run internal diagnostic and maintenance routines.
- The access code should be changed for each election.
- Maintenance Technicians should have full access to the Optech Insight keys and access codes, and should never serve as Poll workers.

#### **Optech 400-C & WinETP**

- The master installation disk should also be locked up to prevent unauthorized changes.
- The Optech Insight/400-C should be locked to provide security against unauthorized entry.
- An official of the Central Counting Location should have keys available to use for inserting storage media during backup.
- Operators should have controlled access to the unit, and keys that lock the unit.
- The keyboard should be locked up inside the machine.

#### **10.2.2.2 Effective Password Management**

##### **General**

- Passwords shall, to the extent practicable, meet or exceed best practices for strong passwords.
- Passwords must be changed before every election.
- Passwords and login IDs may not be used by anyone other than the individuals to whom they have been issued.
- A user should immediately change a password, if the password is suspected or known to be disclosed to an unauthorized party.

#### **AVC Edge 5.0, Optech 400-C, & WinEDS**

##### **Passwords should be used for the software, to secure the unit/computer/PC.**

- Windows passwords should be used to protect against unauthorized entry into the system..

##### **Optech 400-C:**

- A password should be used for WinETP software, for protection for those reports that show candidate totals. One or two passwords can be used.

### **10.2.3 Anti-Virus Protection**

This paragraph defines the Anti-Virus Protection, as specified by paragraph 10.2.3 of the “Voting System Use Procedures for California Template.”

#### **10.2.3.1 General**

Externally supplied floppy disks, CDs or DVDs shall not be used unless they have first been checked by the anti-virus software.

#### **10.2.3.2 Optech 400-C & WinEDS**

- If the Computer/PC cannot be dedicated, reload all software and data files from secured backup copies to assure an intact system.

- An approved virus-checking program must be installed on the computer/PC. It should be updated, and a virus scan runs immediately prior to each election, to protect against the introduction of viruses.
- Third-party software must *not* be installed, that has not been previously approved for use by authorized personnel, to prevent the introduction of software that may damage the software/unit.

#### **10.2.4 Procedures for Verifying, Checking, and Installing Essential Updates and Changes**

This paragraph defines the following Procedures for Verifying, Checking, and Installing Essential Updates and Changes, as specified by paragraph 10.2.4 of the “Voting System Use Procedures for California Template”:

- Audit Records for Changes
- Installation Procedures for those Updates
- Acceptance Testing after Installation

##### **10.2.4.1 Audit Records for Changes**

This paragraph defines the Audit Records for Changes, as specified by paragraph 10.2.4.1 of the “Voting System Use Procedures for California Template.”

Audit Records for Changes should contain at least the following data:

- Old revision/version number
- New revision/version number
- Date and time that change was made
- Name of individual making the change

##### **10.2.4.2 Installation Procedures for those Updates**

This paragraph defines the Installation procedures for those Updates, as specified by paragraph 10.2.4.2 of the “Voting System Use Procedures for California Template.”

Installation Procedures for those Updates should include steps to verify the following:

- Correct version was installed
- New version works correctly
- No anomalies were encountered
- Maintenance Diagnostics should be run.
- Logic and accuracy tests should be performed.
- Electronic Log Report shall be retained and shall be subject to the same physical security and integrity measures as election data

##### **10.2.4.3 Acceptance Testing after Installation**

This paragraph defines the Acceptance Testing after the Installation, as specified by paragraph 10.2.4.3 of the “Voting System Use Procedures for California Template.”

Acceptance Testing shall be performed after Installation, per Section 3.4 Acceptance Testing.

## 10.3 Security Procedures for Central Processing

This section defines the following Security Procedures for Central Processing, as specified by section 10.3 of the “Voting System Use Procedures for California Template”:

- General Procedures
- Transport to Central Counting Location (Optech Insight & AVC Edge 5.0)
- Secure Room
- Ballot Inspection (Optech Insight & 400-C)
- Storage of Ballots during Processing (Optech Insight & 400-C)
- Statistical Ballot Data Required
- For Questions about Integrity or Accuracy of Election Night Tally (AVC Edge 5.0)
- For Lost or Damaged Results Cartridge, while in Transit to Central Counting Location (AVC Edge 5.0)
- WinEDS Application software and Database Security

### 10.3.1 General Procedures

#### 10.3.1.1 General

- During the period of storage, the local elections official or the Secretary of State may order the release of the materials for purposes of a recount or for election verification, after which they shall be returned to storage.
- The local elections official has management control over all resources employed during the voting and ballot tally process until the control is voluntarily relinquished when no longer needed.

#### 10.3.1.2 AVC Edge 5.0

The voter verified paper record copy shall be retained by the elections official for the same period of time as mandated by state and federal law for the retention of paper ballots for that election.

### 10.3.2 Transport to Central Counting Location (Optech Insight & AVC Edge 5.0)

#### 10.3.2.1 Optech Insight

The MemoryPack must be removed and sent by official courier to the Central Counting Location.

#### 10.3.2.2 AVC Edge 5.0

- Removal and transport of the Results Cartridge, to the Central Counting Location, must be done in a secure manner - the Results Cartridges must be placed in a sealed case and transported by at least two Poll workers.
- Voter verified paper record copies must be handled in the same manner.

### **10.3.3 Secure Room**

The secure room should have the following attributes:

- It should be locked, with controlled access to the keys/combinations that unlock the office.
- The keys/combinations shall be kept in safe place(s).
- If using combinations, they must be changed before every election.
- The locks/combinations should be immediately changed, if they are suspected or known to be compromised or disclosed to an unauthorized party.
- An Official of the Central Counting Location should have a key for accessing the office, for election coding.
- At least two persons in the county shall have access to the office.

### **10.3.4 Ballot Inspection (Optech Insight & 400-C)**

Inspection of ballots received on election night shall be performed as follows:

1. Receive, break the seal, and open the inspected containers.
2. Remove the voted ballots.
3. Maintain a control log for the ballots of each precinct. This control log shall indicate the number of voted ballots reported by the precinct officials.
4. Remove any portion of the stub, such as an incompletely detached perforation, that remains attached to a ballot.
5. Forward any torn, soiled/defaced, or other obvious ballot irregularities for ballot duplication.

### **10.3.5 Storage of Ballots during Processing (Optech Insight & 400-C)**

A Ballot Storage Board shall be designated to:

- Receive directly from the Ballot Processing Board all ballots for each precinct.
- Secure all voted ballots until any final logic and accuracy tests are completed.
- Following any final logic and accuracy tests, all voted ballots must be maintained in a locked and sealed room or containers any time the ballots are unattended.
- Any authorized entry into ballot containers must be accompanied by a record or log noting time, place, persons involved, and reasons for breaking the seal.
- Following certification of election results and the period for Manual Recount requests, the ballots may be moved to storage for the ballot retention requirements of the election, provided the ballot containers remain sealed.
- For purposes of this paragraph, all seals shall be destructible seals.
- The Election Official shall not open any ballot containers nor permit any ballot containers to be opened except as permitted pursuant to the Election Code for the jurisdiction, or in the event of a Manual Recount.

### **10.3.6 Statistical Ballot Data Required**

The following items are critical to tracking and reporting the ballot tally process, and must be

maintained:

- For the election definition phase, diagnostic proof listings of candidates and active vote positions for each ballot style or precinct
- The number of ballots read within each precinct, by type, including totals for each party in primary elections
- The total number of ballots processed
- Separate accumulations and reporting of the quantity of overvotes, undervotes, and Write-Ins within each precinct for each race or issue
- Availability of the above information in summary and by precinct

### **10.3.7 For Questions about Integrity or Accuracy of Election Night Tally (AVC Edge 5.0)**

If a question arises about the integrity or accuracy of the election night tally, several safeguards can be relied upon:

- The cryptographic signatures of the totals information can be re-validated.
- There is still a redundant copy of the vote data, and ballot, on each voting machine. A voting machine's Results Cartridge can be returned to the voting machine, and the two copies verified to still match.
- The data that the AVC Edge 5.0 software tallied from the Results Cartridge can be verified against the Results Report generated by the voting machine when polls closed.
- The WinEDS software can print data directly from a Results Cartridge.
- Additional copies of the Results Report can be printed from the voting machine's audit trail memory.

### **10.3.8 For Lost or Damaged Results Cartridge, while in Transit to Central Counting Location (AVC Edge 5.0)**

There are four backup methods for dealing with this situation:

- Use the WinEDS software to manually enter the vote data for the voting machine, from the printed Results Report.
- Use a special "Audit Trail Transfer" Cartridge. This cartridge, in conjunction with a firmware function only available at polls closed, allows for transferring an exact copy of the voting machine's Audit Trail memory to the cartridge. AVC Edge 5.0 software can then do its tally from this cartridge.
- Additional copies of the Results Report can be printed from the voting machine's audit trail memory.
- The corresponding voter verified paper record copy may be used as a backup.

### **10.3.9 WinEDS Application and Database Security**

- WinEDS must not be part of a larger networked system, or have an Internet or other outside connection. By transferring a copy of the current vote totals database to a removable disk and hand carrying the disk to another system for web display, etc., there can be no risk of outside tampering with the real database. See the Appendices to this Use Procedure for information on how to configure an air-gapped WinEDS installation.
- Passwords must be of sufficient strength (minimum eight characters, with upper case and numbers included) and used with appropriate user access levels to prevent unauthorized users from making changes to the database.
- WinEDS should be located in a relatively secure office, and on a PC that is not connected to a network.
- The WinEDS activity system log should be periodically printed and reviewed for unauthorized access. Periodic backups should be made and saved for possible future auditing review or restoration.
- Backup copies of the WinEDS database shall be made and secured in a location separate from the working copies by the local Election Official after completion of Pre-Election LAT:
  - For as long after the election as required by law
  - By order of a court or directive of the Secretary of State
- Use WinEDS passwords, for ballot definition and generation of MemoryPacks, Results Cartridges, and WinEDS disk.
- The local Election Official shall provide for retention and storage of the database containing any data processing materials related to the vote counting in accordance with statutory retention requirements. After tabulation, all of these materials shall be placed in locked storage in a secure location, and shall remain there until the expiration of the period for challenging elections and for as long as required by law, unless a court orders their release.

## **10.4 Security Procedures for Polling Places**

This section defines the following Security Procedures for Polling Places, as specified by section 10.4 of the “Voting System Use Procedures for California Template”:

- Supply and Distribution of Voting Machines (AVC Edge 5.0)
- Loading of Ballot Definition Data, and Pre-Election LAT (Optech Insight & AVC Edge 5.0)
- Conducting the Election
- Closing the Polls (Optech Insight)

### **10.4.1 Supply and Distribution of Voting Machines (AVC Edge 5.0)**

Except when otherwise authorized by the Secretary of State, the distribution of the voting machines shall be no less than one per 300 active registered Voters, and an additional voting machine for every fractional part of such unit; in the case of special elections, however, the local Election Official may exercise discretion in determining the number of voting machines to be furnished to each precinct polling place. Note that there are restrictions regarding the number of DRE units per polling location/precinct. Polling place equipment must be secured per the Appendices to these Use Procedures.

## **10.4.2 Loading Ballot Definition Data & Pre-Election LAT-Optech Insight & AVC Edge 5.0**

### **10.4.2.1 General**

The ballot load and Pre-Election LAT operations should be performed by the Technician, with units still in the storage warehouse.

### **10.4.2.2 AVC Edge 5.0**

- A match between the physical label and the electronic identifier, for the Results Cartridge, shall be verified as part of Pre-Election LAT.
- Following Pre-Election LAT, the test script must be maintained by the local Election Official and locked in sure storage until actual vote counting commences.

## **10.4.3 Conducting the Election**

### **10.4.3.1 General**

- Poll workers should not be allowed to perform the following functions:
  - Initialize the election
  - High volume test ballot auto reading
  - Auto return of all test ballots
  - Re-open the polls to read additional ballots
  - Zero vote totals
  - Hardware diagnostic functions
  - Other system test functions
- In addition to being locked, the MemoryPack must be sealed, so that to remove the MemoryPack, the Election Official must also cut the seal and record the seal number for a subsequent audit.

### **10.4.3.2 AVC Edge 5.0**

- During the Election, the Results Cartridge must always be inserted in the AVC Edge 5.0. If it is removed, the AVC Edge 5.0 will stop its normal operations, generate an error indication and make an entry in the Event Log.
- The Auxiliary Port must be kept empty. Attempting to insert *any* cartridge type into this port will also stop normal operations, generate an error condition and make an Event Log entry.
- A numbered seal should be installed to physically ensure that the Results Cartridge is not removed. This seal is recorded on election paperwork, and cannot be removed without destroying or voiding it.
- Seal on the polls open/closed cover must *not* be cut/removed/voided until machine has been assembled, and polls are open. Then after turning the polls switch to Open, the polls open/closed cover must be sealed with a replacement seal.
- The Verivote printer must be sealed and locked to keep the contents secure and the unit securely mounted to the Edge.



- For Early Voting, the lid on the Polls Open/Closed Switch must be sealed after the polls are opened on the first day of Early Voting. After each day of Early Voting, the power switch must be turned off, but the Poll Open/Closed switch must remain open (and sealed). For additional security, the Results Cartridge must be removed and placed in a sealed, secure transportation or storage device.

#### **10.4.4 Closing the Polls (Optech Insight)**

To access the keypad and close the polls, the Election Official must unlock the access door to the compartment at the rear of the Optech Insight.

### **10.5 Audit Trails**

This section defines the following Audit Trail information, as specified by section 10.5 of the "Voting System Use Procedures for California Template":

- General Procedures
- System Events
- Specific Audit Trails
- Event Log

#### **10.5.1 General Procedures**

All Ballot Tally operations, including mandated Pre- and Post-Election testing, must be documented in sequential order. An automated and/or manual record or log must be maintained to record the time and date of "system events" related to ballot tabulation.

#### **10.5.2 System Events**

"System events" in the ballot tally process include:

- Initiation of the ballot tally program
- Initiation of ballot tally
- Clearing totals
- Running logic and accuracy tests
- Hardware failures, if any
- Repairing hardware (including running accuracy tests after repairs), as needed
- System crashes and restarts, if any

This log or record shall be continued until final certification of results, shall be retained for the same time period as ballots for that election, and shall be subject to the same physical security and integrity measures.

#### **10.5.3 Specific Audit Trails**

Specific audit trails shall include where applicable:

- Exception handling/error messages during ballot tabulation, including:

- Messages generated by the computer's exception handlers or error routines. (The exception handling/error message may be in numeric error code, English language translation, or a combination of the two.)
- Identification code and number of hardware and software failures (their source and disposition)
- Record of the operating system's data read/write/verify, parity or check sum errors and retries
- System status messages, such as:
  - Diagnostic and status messages upon start up of ballot tabulation
  - "Zero totals" check
  - Initialization or termination of processing by the Optech Insight
- Operator interaction with system (TIME, ACTION TAKEN)
- Ballot-related exceptions (e.g., ballots not voting machine-readable, ballots requiring special handling, aborted or deleted precincts, etc.)
- Copies of required tests

#### **10.5.4 Event Log**

With the exception of the reading and processing of a regular ballot, all significant events are logged in the following two ways:

- First, there is an immediate printed record of the event.
- Secondly, the event is logged in the Event Log, which may be printed out at any time, as an Event Log, to show all significant events since the election was initialized.

# 11 Biennial Hardware Certification & Notification

This chapter defines the following Biennial Hardware Certification and Notification, as specified by chapter 11 of the “Voting System Use Procedures for California Template”:

- Biennial Certification of Hardware
- Hardware Certification and Notification
- Certification of Specialized Ballot Tally Equipment
- Notification of Equipment

## 11.1 Biennial Certification of Hardware

The California Elections Code requires each Election Official to inspect and certify the accuracy of their voting or vote tabulating equipment at least once every two (2) years. The Election Official shall certify the results of their inspection to the Secretary of State.

A copy of a sample certificate is attached to these procedures in Appendix N: Certificate of Biennial Inspection.

## 11.2 Hardware Certification and Notification

This section discusses the following Hardware Certification and Notification:

- Certification
- Notification
- Seven (7) Days Before Statewide Election
- If Any Equipment is Repaired:

### 11.2.1 Certification

All ballot readers and specialized vote tabulating 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.

### 11.2.2 Notification

For each statewide election, the responsible county Election Official shall cause to be prepared a list, including quantities, of all equipment to be used to tabulate votes during the semi-official and official canvasses.

### 11.2.3 Seven (7) Days Before Statewide Election

Seven (7) days before each statewide election, the Election Official shall certify to the Secretary of State the results of the logic tests as well as the accurate functioning of all ballot tabulation equipment. This certification shall also affirm the use of the same equipment for Pre-Election

testing and for semi-official and official vote canvasses. In the event of a change to the ballot tabulation program occurring after this certification, an amended certificate shall be submitted no later than the day before the election.

#### **11.2.4 If Any Equipment is Repaired:**

In the event any equipment is repaired, altered or replaced following the certification specified in Section 11.2.3 Seven (7) Days Before Statewide Election, herein 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.

### **11.3 Certification of Specialized Ballot Tally Equipment**

All specialized ballot tally equipment must be certified for use in elections by the Secretary of State prior to use in any election.

### **11.4 Notification of Equipment**

For each statewide election, the responsible county Election Official shall cause to be prepared a list, including quantities, of all equipment to be used to tabulate votes during the semi-official and official canvass.

Seven days before each statewide election, the Election Official shall certify to the Secretary of State the results of the logic tests as well as the accurate functioning of all ballot tally equipment. This certification shall also affirm the use of the same equipment for the Pre-Election LAT test and for semi-official and official vote canvasses. In the event of a change to the ballot tally program after 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 specified in this section, 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 no later than submission of official canvass.