



Clear Ballot

ClearCount 1.4
System Operations Procedures
(Vote-by-Mail Campaign 2)

ClearCount System Operations Procedures (Vote-by-Mail Campaign 2)

Clear Ballot Part Number: 100024-10012

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Preface

This section defines the purpose of this document. It contains the following subsections.

- About this document
- Scope of this document
- Intended audience
- Contact us

About this document

This document provides information about using the ClearCount system. Taken together with the *ClearCount Election Preparation and Installation Guide* and the *ClearCount Election Administration Guide*, it corresponds to the *VVSG 2005, Volume 2 Section 2.8* requirement for the Technical Data Package (TDP).



A ClearVote™ system can comprise the ClearAccess™, ClearAudit™, ClearCast™, ClearCount™, and ClearDesign™ products. Jurisdictions are not required to purchase all products. You can ignore references to any ClearVote components that are not part of your voting system. Also ignore implementation options that are not relevant to your policies and procedures.

Scope of this document

This document provides summary information about the following aspects of the ClearCount system:

- [Operating functions](#)
- [Operational environment](#)
- [System installation and test specification](#)
- [Operational features](#)
- [Operational procedures](#)
- [Operations support](#)

Intended audience

This document is intended for election officials and election staff who are responsible for operations and maintenance before, during, and after an election. This document is also used by Clear Ballot personnel who support election officials and election staff.

Contact us

Clear Ballot Group welcomes your feedback on our documentation. Please send comments to Documentation@ClearBallot.com.

If you have questions about using your ClearVote product, contact your Clear Ballot representative.



Chapter 1. Operating functions

This chapter summarizes the ClearCount system's operating functions, and identifies relevant personnel. Where applicable, it points to specific ClearCount documentation that contains procedures for the identified functions.

ClearCount is a central-count-only system. It does not contain a precinct-based polling place component.

The ClearCount software runs on unmodified commercial off-the-shelf (COTS) computers running the Windows and Linux operating systems, and supports several models of Fujitsu scanners.

End-to-end, ClearCount consists of the following operating functions:

- Prevoting functions:
 - Creating a ballot definition file (BDF) based on the jurisdiction's election definitions
 - Setting up the central-count location, including tables and accommodating electrical outlets
 - Setting up the COTS hardware on which ClearCount runs
 - Installing the ClearCount software (along with supported third-party software)
 - Administrative tasks, such as creating users with appropriate access levels and creating the election database
 - Laser printing the target cards and box labels from PDFs provided by Clear Ballot
 - Completing readiness testing
 - Completing logic and accuracy (L&A) testing, as required by statute
- Voting functions:
 - Ballot scanning and tabulation
 - Administrative tasks, such as monitoring system logs
- Postvoting functions:
 - Adjudicating unreadable cards
 - Issuing election reports for review
 - Sharing election reports
 - Backing up the election database
 - Breaking down and storing the ClearCount hardware

1.1 Required facilities, furnishings, fixtures and utilities

For a full list of ClearCount hardware components, see the *ClearVote Approved Parts List*. For a list and explanation of the full requirements of the facilities, furnishing, fixtures, and utilities, see the *ClearCount Election Preparation and Installation Guide*.



Chapter 2. Operational environment

2.1 Operating phases

The following procedural documentation is associated with different operating phases:

- The *ClearCount Election Preparation and Installation Guide* covers the pre-election phase, as well as the breakdown and storage tasks associated with the postelection phase.
- The *ClearCount Election Administration Guide* covers the election phase, as well as postelection tasks not associated with hardware breakdown and storage, such as backing up the election.

2.2 Operating modes

The ClearCount system consists of a single operating mode. Distinction between phases and activities is made procedurally.

ClearCount does not contain a dedicated test mode. To test the system, a test election is created and used with actual voted ballots. This election should include the word *test* in its name. After testing is completed, the test election is backed up and then deleted from the ClearCount system.

2.3 Roles of operating personnel

The ClearCount system identifies the following user roles from the jurisdiction:

- Principal supervisor
- Assistant supervisor
- IT/System administrator
- Scanning supervisor
- Scanning operator
- Preparation staff
- Recordkeeper
- Ballot resolution personnel
- Public relations official
- Scanner maintenance and troubleshooting personnel

The following section aligns the user roles to system interfaces and functions.

2.4 ClearCount roles

The following sections describe how different user roles interact with ClearCount system components, and identifies where the associated procedures are documented.



One individual can perform more than one user role during the election. For example, someone with a principal supervisor role might also take on the tasks of the public relations official.



ClearCount system access levels are hierarchical, with each subsequent level containing all of the privileges of the levels below it. In the tables below, access level indicates the minimum level to access the interface or perform the task.

For more information about ClearCount user roles and the training associated with them, see the *ClearVote Personnel Deployment and Training Plan*.

2.4.1 IT/System administrator

Task/Interface	Access level	Documentation
Pre-election phase		
Set up hardware and scanners and install necessary software.	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Set up and configure router.	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Test physical system prior to election. Run logic and accuracy test on system.	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Election phase		
Be available to address (and, if necessary, escalate) technical issues.	NA	Original documentation for all COTS hardware in the system <i>ClearCount Election Administration Guide</i>
Diagnose faulty computer hardware, scanners, and connections.	NA	Original documentation for all COTS hardware in the system <i>ClearCount Maintenance Guide</i> <i>ClearCount Election Administration Guide</i>
Repair faulty computer hardware or connections.	NA	Original documentation for all COTS hardware in the system <i>ClearCount Maintenance Guide</i>



Task/Interface	Access level	Documentation
Test computer hardware, scanners, or connections that have been fixed.	NA	Original documentation for all COTS hardware in the system <i>ClearCount Maintenance Guide</i>
Postelection phase		
Be available to address (and, if necessary, escalate) technical issues.	NA	Original documentation for all COTS hardware in the system <i>ClearCount Maintenance Guide</i> <i>ClearCount Election Administration Guide</i>

2.4.2 Principal supervisor

Task/Interface	Access level	Documentation
Pre-election phase		
Prepare and securely transmit ballot style PDFs to Clear Ballot, which uses the ballot style PDFs to create ballot definition files (BDFs).	NA	EMS documentation on ballot preparation <i>ClearCount Election Preparation and Installation Guide</i>
Receive and validate BDFs.	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Perform L&A testing.	dbadmin	Local statute documentation <i>ClearCount Election Preparation and Installation Guide</i>
Secure the Tabulator.	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Obtain necessary election resources (equipment, location, and staffing).	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Create users and assign/change their access levels and passwords.	useradmin	<i>ClearCount Election Preparation and Installation Guide</i> <i>ClearCount Election Administration Guide</i>

Task/Interface	Access level	Documentation
Election phase		
Oversee central-count scanning operations.	NA	<i>ClearCount Election Administration Guide</i>
Monitor staff adherence to local election and ClearCount processes and procedure.	NA	Local election process and procedure documentation
Review and produce ClearCount election reports.	read	<i>ClearCount Reporting Guide</i>
Postelection phase		
Review and produce ClearCount election reports.	read	<i>ClearCount Reporting Guide</i>
Publicize results.	NA	Local election process and procedure documentation
Ensure the safe transport of ballots and equipment.	NA	Local election process and procedure documentation
Break down scanning location.	NA	<i>ClearCount Election Preparation and Installation Guide</i>

2.4.3 Assistant supervisor

Task/Interface	Access level	Documentation
Pre-election phase		
Assist principal supervisor in pre-election tasks.	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Create and verify the election in the ClearCount system.	dbadmin	<i>ClearCount Election Preparation and Installation Guide</i>
Election phase		
Assist principal supervisor in election tasks.	dbadmin	Local election process and procedure documentation <i>ClearCount Election Administration Guide</i>
Set the election phase appropriately.	dbadmin	<i>ClearCount Election Administration Guide</i>

Task/Interface	Access level	Documentation
Set the current election as the active election.	dbadmin	<i>ClearCount Election Administration Guide</i>
Post-election phase		
Publicize results.	NA	Local election process and procedure documentation
Ensure the safe transport of ballots and equipment.	NA	Local election process and procedure documentation
Break down scanning location.	NA	<i>ClearCount Election Preparation and Installation Guide</i>

2.4.4 Preparation staff

Task/Interface	Access level	Documentation
Pre-election phase		
Print the necessary target cards and box labels from PDFs available in the Support section of www.clearballot.com .	NA	<i>ClearCount Election Preparation and Installation Guide</i>
Election phase		
Jog ballots prior to scanning to minimize scanner jams.	NA	<i>ClearCount Election Administration Guide</i>
Assign a target card to each batch of ballots.	NA	<i>ClearCount Election Administration Guide</i>
Affix labels to all boxes.	NA	<i>ClearCount Election Administration Guide</i>
Deliver boxes of ballots to ScanStations.	NA	<i>ClearCount Election Administration Guide</i>
Retrieve boxes of scanned ballots from ScanStations.	NA	<i>ClearCount Election Administration Guide</i>
Postelection phase		
Break down preparation area.	NA	<i>ClearCount Election Preparation and Installation Guide</i>



2.4.5 Recordkeeper

Task/Interface	Access level	Documentation
Election phase		
Record all activity regarding opening, recording, and resealing sealed ballot boxes or bags.	NA	Local election process and procedure documentation

2.4.6 Scanning supervisor

Task/Interface	Access level	Documentation
Election phase		
Oversee preparation staff and scanner operators.	NA	<i>ClearCount Election Administration Guide</i>
Ensure that Tabulators are open and ScanStations are ready for scanning.	NA	<i>ClearCount Election Administration Guide</i>
Oversee staff preparation of ballots before and after scanning to minimize jams.	NA	<i>ClearCount Election Administration Guide</i>
Assist scanner operators with scanning problems; use the DeleteBox utility as needed.	modify	<i>ClearCount Election Administration Guide</i>
Oversee usage of consumables and ensure required resources are available.	NA	<i>ClearCount Maintenance Guide</i>
Monitor staff adherence to local election and ClearVote processes and procedures.	NA	<i>ClearCount Election Administration Guide</i>
Oversee proper labeling of boxes at ScanStations for storage.	NA	<i>ClearCount Election Administration Guide</i>
Review and produce ScanStation reports.	read	<i>ClearCount Election Administration Guide</i> <i>ClearCount Reporting Guide</i>
Oversee transfer of boxes to designated area.	NA	<i>ClearCount Election Administration Guide</i>
Post-election phase		
Oversee process of breaking down ScanStations and preparation area.	NA	<i>ClearCount Election Administration Guide</i>

2.4.7 Scanning operator

Task/Interface	Access level	Documentation
Election phase		
Scan ballots on a single scanner (associated with ScanStation).	append	<i>ClearCount Election Administration Guide</i> <i>ClearCount Scanner Operator Guide</i>
Appropriately summon scanning supervisor for help with scanning problems.	NA	<i>ClearCount Election Administration Guide</i> <i>ClearCount Scanner Operator Guide</i>

2.4.8 Scanner maintenance and troubleshooting personnel

Task/Interface	Access level	Documentation
Pre-election phase		
Perform standard preventive maintenance tasks prior to the election.	NA	Fujitsu scanner documentation <i>ClearCount Maintenance Guide</i>
Election phase		
Troubleshoot any scanner problems that arise during the election (escalating to Clear Ballot, or Fujitsu, if necessary).	NA	Fujitsu scanner documentation <i>ClearCount Election Administration Guide</i>
Clean the scanners periodically (every 4 hours or after every 10,000 ballots scanned).	NA	Fujitsu scanner documentation <i>ClearCount Election Administration Guide</i>
Replace scanner consumables, such as rollers, if needed.	NA	Fujitsu scanner documentation <i>ClearCount Election Administration Guide</i>

2.4.9 Ballot resolution personnel

Task/Interface	Access level	Documentation
Election phase		
Examine cards that the system was unable to read and either recommend to the supervisor that boxes be rescanned to correct scanning errors or use the Card Resolutions tool to resolve unreadable cards.	read to examine modify to resolve	<i>ClearCount Election Administration Guide</i>

2.4.10 Election reporter

Task/Interface	Access level	Documentation
Postelection phase		
Generate election reports and produce results.	read	Local election process and procedure documentation <i>ClearCount Election Administration Guide</i>

2.4.11 Public relations official

Task/Interface	Access level	Documentation
Postelection phase		
Gather election reports and publicize results.	read	Local election process and procedure documentation <i>ClearCount Election Administration Guide</i>

2.5 ClearCount system environment

The ClearCount software runs on unmodified COTS hardware. The ScanServer runs the Linux operating system. Election administration station and ScanStation computers run the Windows operating system. Each scanning station also includes a supported model of Fujitsu scanner, of which there are several. For further information, see the *ClearCount Election Preparation and Installation Guide*.

Chapter 3. System installation and test specification

Responsive to VVSG 2005, Volume 2, Section 2.8.3.

For details about installing the ClearCount system and performing readiness testing, see the *ClearCount Election Preparation and Installation Guide*.



Chapter 4. Operational features

This chapter provides a detailed description of procedures required to initiate, control, and verify proper system operation.

4.1 System functions flow

Pre-election

1. Ballots in bins, boxes, or bags, arrive at the central-count location.
2. In the preparation area, ballots are broken down into batches, which are then jogged, if necessary.
3. A target card and matching box label are assigned to each batch of ballots.
4. The ballots and their target cards are placed in batches, and a box label is attached to each box or bin that will contain that batch after scanning.

Election

1. Batches of ballots are delivered to the ScanStations by the preparation staff.
2. Scanner operators scan the ballots, starting each batch with its identifying target card. The target card ID becomes part of the ID for each card image. (Each side of a target card is captured as its own image.)
3. Taking care not to disturb the order of the ballots, the scanner operator returns them to the bin or box in which they were delivered, and then initials the box label.

Postelection

1. Preparation staff picks up the scanned ballots and carries them to the scanned card area.
2. Scanned ballots are sealed, transported, and stored securely, following jurisdiction requirements.

Chapter 5. Operational procedures

This section summarizes the ClearCount system operations procedures.

5.1 Running the system

For a full description of how to run the ClearCount system in a central-count setting, see the *ClearCount Election Administration Guide*.

5.2 Administrative operations

ClearCount election administration consists of the following tasks:

- Creating the election and setting its status
- Backing up and restoring the election
- Backing up and deleting obsolete and unused databases

ClearCount user administration consists of the following tasks:

- Creating and deleting users
- Establishing user access levels
- Setting and changing user passwords

For information about administrative tasks related to installing and configuring the ClearCount system, including creating elections and users, see the *ClearCount Election Preparation and Installation Guide*.

For information about administrative tasks related to running the ClearCount system in a central-count setting, including modifying user settings and backing up the election, see the *ClearCount Election Administration Guide*.

5.3 Sharing election results

ClearCount provides numerous ways to share its election results in the form of election reports. Election reports can be viewed interactively in a browser on an election administration station, or they can be copied, printed, or saved as a comma-separated values (CSV) file.

For details about ClearCount election reports, see the *ClearCount Reporting Guide*.

Chapter 6. Operations support

The following section describes ClearCount operations support.

6.1 Recovering from an abnormal state

The hallmark of a successful scanning operation is the absence of ScanStation or scanner error messages related to jams, misfeeds, and other issues. A successful scanning operation features a smooth flow of ballots. If any of the following things occur at the ScanStation, the operator knows that some sort of intervention is required:

- The scanner issues an error message on its operator panel.
- The ScanStation computer issues a warning or error message onscreen. The source of such message may be the scanner software or the ClearCount Tabulator.
- The scanner jams.
- Card images feature smearing and other visual effects that indicate that the scanner must be cleaned.

Likewise, on the human factor side, the following situations indicate the need for an intervention:

- The operator loses track of whether or not certain ballots have been scanned.
- The operator does not keep the scanned ballots in the order in which they were scanned.

For more information about how to respond to these events, see "Troubleshooting scanning issues" in the *ClearCount Election Administration Guide*. For details about how to fix common scanning problems, see the *ClearCount Maintenance Guide*. For additional troubleshooting assistance, refer to the applicable manufacturer's scanner documentation or contact Clear Ballot Technical Support.

6.2 Error and failure detection and recovery

For a full description of ClearCount error and failure detection and recovery, see the *ClearCount Maintenance Guide*.

6.3 System auditing and logging

The ClearCount system generates two event logs: the election activity log and the web activity log.

- The election activity log records all activity for an individual election.
- The web activity log records all web-based activity within the ClearCount system.

For information about the ClearCount logs, see the following documents:

- *ClearCount Election Administration Guide*
- *ClearCount Reporting Guide*