The Quick Start Management Guide for Central County Optical Scan Ballots is part of a series of brochures designed to highlight and summarize the information contained in the chapters of the U.S. Election Assistance Commission’s (EAC) Election Management Guidelines (EMG). The goal of the EMG is to provide a collection of election management guidelines, consolidated into one document, to assist State and local election officials effectively manage and administer elections. These guidelines are solely designed to serve as a source of information for election officials and not as requirements by which they must abide. The EAC expects the EMG to be completed in 2008. However, due to the urgent need for election management resources, EMG chapters and Quick Starts are released as they are completed.

The content of the EMG and the Quick Start Management Guides has been developed in collaboration with State and local election officials and other election professionals who have first-hand experience managing elections. The EAC is grateful for their participation and ensuring the guidelines are practical and applicable for jurisdictions regardless of their size and resources. The EMG and the Quick Starts are available online at www.eac.gov.
In general, an optical scan voting system is a system by which votes are recorded by means of marks made in voting response fields designated on one or both faces of a ballot card or series of cards. An optical scan system then reads and tabulates ballots, usually paper ballots, by scanning the ballot and interpreting the contents, also known as marksense (2005 Voluntary Voting System Guidelines, Volume 1, Version 1.0). When a jurisdiction makes the decision to use an optical scan system, their next step is to consider whether they will implement a central count or precinct count scanners to review and tabulate the optical scan ballots.

In a central count system, ballots are tabulated at a central location with the use of a high speed ballot scanner. At the polling place, cast ballots are deposited by voters into secure ballot boxes, which at the close of the polls are transported to the central count location. In precinct count systems, ballots are tabulated in the same precinct in which those ballots were cast. Polling place procedures for precinct scanners differ from central count in that they can be programmed to immediately return blank, overvoted, and undervoted ballots to a voter for inspection prior to it being tabulated. Therefore, polling place procedures for processing voters and ballots will have to be taken into account when deciding between central and precinct scanners. This guide will highlight considerations and administrative practices election officials should consider when implementing a central count optical scan ballot system; precinct-based optical scan ballot systems are addressed in the chapters of the Election Management Guidelines available at www.eac.gov.
Deciding whether to change to a central count optical scan ballot system requires careful consideration of a jurisdiction’s internal and external environments. This kind of transition must be managed in a way that prevents or minimizes the impact of the change on election processes, while preserving the integrity of the electoral system (see Quick Start Management Guide for Managing Change in an Election Office, www.eac.gov). As such, election officials should identify and assess the impact that a central count optical scan ballot system will have on their various office and election functions. Some key factors that should be taken into account are:

- **Voter’s Intent Determination:** Since a voter is not present during the review and tabulation of his/her ballot, the use of central count ballot scanners requires the development of procedures for ensuring a voter’s cast ballot is counted as he/she intended for it to be counted (voter’s intent). The definition and process for determining a voter’s intent varies by state; local election officials should consult with their state’s officials and election code for state-specific guidance. Some
jurisdictions considering central count ballot scanners already have such procedures for their absentee ballots.

**Voter Education:** Election officials will need to establish a voter education program that notifies each voter of the effect of casting multiple votes for an office, and provide voters with instructions on how to correct the ballot before it is cast and counted (including instructions on how to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error).¹

**Blank Ballots, Overvotes, and Undervotes:**

Election officials will need to determine whether the central count ballot scanner will be programmed to stop at ballots that are blank, over-voted, and/or under-voted. **Note:** Stopping

¹ Section 301 (a)(1)(A)(iii) of the Help America Vote Act (HAVA) of 2002 requires voting systems used in an election for Federal office to: “(I) notify the voter that the voter has selected more than one candidate for a single office on the ballot; (II) notify the voter before the ballot is cast and counted of the effect of casting multiple votes for the office; and (III) provide the voter with the opportunity to correct the ballot before the ballot is cast and counted.” A State or jurisdiction that uses a central count voting system may meet the requirements of subparagraph (A)(iii) by “(i) establishing a voter education program specific to that voting system that notifies each voter of the effect of casting multiple votes for an office; and (ii) providing the voter with instructions on how to correct the ballot before it is cast and counted (including instructions on how to correct the error through the issuance of a replacement ballot if the voter was otherwise unable to change the ballot or correct any error)” [HAVA Section 301 (a)(1)(B)].
the scanner for every over-voted ballot significantly slows the scanning of the ballots.

- **Rate of Ballot Scanning:** The effective rate of ballot scanning that can be achieved on election night is approximately 25% of the maximum rated speed of the scanner. A central ballot scanner that is rated at a maximum speed of 300 ballots per minute will effectively scan about 75 ballots per minute or 4500 ballots per hour on election night. For example, if you have 100,000 ballots
and you want to finish scanning them in five hours you will need about 5 scanners. The rate of the scanner is impacted by stoppages caused by rejected ballots and whether or not the scanner was programmed to stop at every over-voted ballot. **Note:** Depending upon the anticipated number of voted ballots in each jurisdiction, election officials should communicate to all stakeholders (media, candidates, etc.) that the use of central count scanners will impact the release of unofficial election results.

- **Staffing:** Central count operations require additional staff at the main election office. The staff are responsible for accountability and receipt of all ballot boxes containing voted ballots, including documentation of chain of custody as the voted ballots are removed from each box, counted and balanced to the signed voter roster, reviewed for voter intent, bundled into batches, scanned, and re-boxed and sealed for storage.

- **Cost:** A high-speed central ballot scanner is more expensive than precinct-based ballot scanners.

### Polling Place Considerations

Once the decision has been made to purchase and implement a central count optical scan ballot system, election officials should review their current polling place processes to identify areas that will require revision or new policies and procedures. Addressing these needs in advance will help the office and poll workers to prepare accordingly for the new system and effectively manage the system on Election Day. Polling place considerations include, but are not limited to:

- Jurisdictions that are changing from DRE’s to optical scan central count will need to allow
sufficient time to revise poll worker manuals, checklists, supplies, and training procedures.

- In jurisdictions where there is more than one than precinct and/or ballot style in each polling place, poll workers must be trained to work in teams of two when issuing ballots to voters. In a primary election, this issue is compounded further when each precinct and/or ballot style is also available by party affiliation and/or non-partisan ballot. This issue is compounded again even further in jurisdictions where ballots are also available in various languages.

- Poll place supplies should, if needed, include a tool(s) for enabling voters to magnify their ballot.

- Policies and procedures must be developed to track spoiled and/or replacement ballots issued to voters.

- Ballot boxes must be secured to ensure the safety and integrity of the ballots at all times. For example, have poll workers inspect the ballot box prior to the opening of the polls to confirm that the ballot box is empty; then have them apply a seal and/or lock to the box to ensure no tampering occurs throughout the day. The lock on the ballot box would be removed at the end of the night, once the poll workers are ready to conduct closing procedures.

- Ballot boxes must be monitored at all times to prevent tampering and to guide voters on how to properly deposit their ballots in the box. **Note:** Be aware that some
central count ballot scanners will only scan ballots in a certain orientation, i.e. face up, top edge first. Poll workers must keep this in mind as voters drop their ballots into the ballot box.

- Procedures should be developed to provide poll workers the ability to balance throughout the day the number of voters processed to the number of voted ballots deposited in the ballot box. Recommendation: This can be accomplished by issuing a receipt to each voter to deposit in an envelope attached to the outside of each ballot box.

- After the polls close, poll workers will have to open the ballot box and manually count the ballots. This count should be balanced against the voter list and registration lists. Recommendation: Any time the ballot box is opened and voted ballots are handled there should be at least two poll workers to ensure the security and integrity of the content of the ballot boxes are not compromised at any point. Some states may require this process be overseen by poll workers from different parties; this will vary according to a state’s election code and administrative procedures.

- At this time, and if required, the ballots can be oriented face up, top edge first, to expedite the review and tabulation process. They may also be examined at this point to determine voter’s intent (if required).

- It is recommended that the ballots be bundled in batches of 25 to 50 ballots. Note: Do not put rubber bands around the batches; they can crimp the edges of the ballots and cause the central scanner to misread the ballot.

- The audit sheet containing the ballot count should be placed in the ballot box with the ballots and the ballot box re-sealed and/or locked.
Once all end-of-night processes have been completed and election supplies are ready to be transported back to the election office, procedures must be developed to ensure the security and integrity of the content of the ballot boxes are not compromised at any point in the delivery. Recommendation: Incorporate two-person integrity security measures at all times during the delivery process.

Central Count Location Considerations

Similar to the polling place consideration listed above, election officials will have to review their current facilities to effectively implement a central count location. The level of activity in a central count location may be significantly more intense than in systems that do not use central count. As such, the size and layout of the facility will play a critical role in how procedures are designed to maintain a smooth workflow throughout Election Day, in particular the delivery of the ballot boxes at the end of the night. Ideally, there should be enough space, both inside and outside the facility, to accommodate the level of office staff, poll workers, media, public, and security expected to be present at that time. However, due to the significant variation in size and resources across jurisdictions space can be limited and central count locations and procedures will vary from place to place.

A large number of vehicles, at least one for each polling place, will arrive at the central counting location in a short period of time. There must be sufficient space on the street or in parking lots for these vehicles to queue up to wait for their turn to unload their ballot boxes. Recommendation:
As ballot boxes are delivered to the central counting location, election officials should develop a drop-off process that ensures the security and integrity of the content of the ballot boxes are not compromised at any point in the delivery. For example, assign election staff to meet the poll workers at the parking/drop-off area and escort them to the check-in point; the staff may also be accompanied by security or law enforcement officials as an additional layer of protection.

- The receiving operation at election central will resemble an assembly line, where each ballot box is accepted, logged as being received, and
transferred to the next station for processing. It is recommended that each ballot box be numbered by polling place to enable receiving staff to quickly receive the ballot boxes and at all times be alert to any ballot boxes that have not been returned.

- At the next receiving station, each ballot box is opened and the polling place paperwork is examined for completeness and accuracy. The ballots are again manually counted and the count compared with the polling place totals. If these totals agree, the ballot box may move to
At the next station, the ballots are prepared for counting. If the ballots have not been oriented face up, top edge first, and organized in batches this needs to be done at this time. Examine the ballots for anything that may cause them to mis-read: crimped edges, folds, etc. If the ballots were not reviewed for voter intent at each polling place, this activity must take place now prior to scanning the ballots.

Depending upon state law, ballots that are torn and/or crimped will need to be duplicated. The duplication will have to be conducted according to state or administrative practices; however, it is recommended that these include two-person integrity security measures. This same duplication process will be required for any ballots that fall into the category of “voter’s intent”.

As the ballots pass through the scanner there are a number of incidents that may possibly occur that can interrupt the scanning. For example: jammed ballots, multiple feeds, a worn belt, etc. **Note:** In addition, be aware that central count scanners will sometimes stop for no apparent reason.
The ballots should be managed at the central count scanners in batches. Each batch should represent a specified number of ballots. As each batch is scanned, it is important that the number on the scanner’s public counter be balanced to the total number of ballots that have been scanned. This is important because if a jam does occur it may be difficult to determine which ballots were in fact scanned or not scanned. After scanning each batch, if the numbers do not balance, it will be necessary to delete that batch and re-scan the entire batch. For this reason it is recommended that the batches be relatively small (25 is recommended).

If the scanner rejects a ballot due to a write-in do not rescan the ballot. The voted races on this ballot have been counted correctly. **NOTE: Ballots with hand written write-in candidate names will need to be processed by a write-in team who will have the responsibility of hand tallying the votes by race by candidate name.**

After scanning, the ballots are returned to the ballot boxes and sealed pending validation of the election.

The overall balance sheet should include all ballots returned from all polling places. That number should equal the total number of ballots scanned.

After the election is validated the ballot boxes can be opened and the ballots prepared for archival storage.
For information regarding this publication or to request additional copies, please, contact:

**Address**
U.S. Election Assistance Commission  
1225 New York Avenue, NW, Suite 1100  
Washington, DC 20005  
Attn: Election Management Guidelines

**Telephone**
(202) 566-3100  
(866) 747-1471 (toll free)

**Fax**
(202) 566-3127

**E-mail Address**
HAVA info@eac.gov

**Website**
[www.eac.gov](http://www.eac.gov)

The EAC is an independent bipartisan commission created by the Help America Vote Act of 2002 (HAVA). It is charged with administering payments to states and developing guidance to meet HAVA requirements, implementing election administration improvements, adopting voluntary voting system guidelines, accrediting voting system test laboratories and certifying voting equipment and serving as a national clearinghouse and resource of information regarding election administration.