

Electronic Voting Machine Information Sheet

Sequoia Voting Systems Optech Insight and Opetch Insight Plus

Name/Model: Optech Insight and Optech Insight Plus

Maker: Sequoia Voting Systems

Federally-Qualified Voter-Verified Paper Audit Trail Capability: Uses paper ballots



photo obtained from: http://www.michigan.gov/images/sos/pic04a_225434_7.JPG

Brief Description: This information sheet describes both the Optech Insight and the Optech Insight Plus as “the Insight.” Both are optical scan machines which are used to read and tabulate ballots at the polling place.. According to the California Secretary of State's 2007 Top-to-Bottom Review of voting systems, the major difference between the Insight and the Insight Plus seems to be that the Insight Plus has an LCD screen for displaying messages to voters. On both models, there is also a small four-digit LED screen that shows how many ballots have been accepted since the polls opened. ¹

The Optech Insight consists of an electronic ballot counting device which reads completed ballots by scanning for the voters’ marks indicating their preferences. The scanner sits atop a ballot box. The Optech Insight then tabulates the results. When the polls close, the results are both printed on a paper copy and stored to an internal memory card.²

¹Source Code Review of the Sequoia Voting System. Secretary of State of California's Top-to-Bottom Review of Voting Systems, August 2007, p.16. Available at: http://www.sos.ca.gov/elections/voting_systems/ttbr/sequoia-source-public-jul26.pdf



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The Optech Insight runs off both internal and external power to reduce the risk of malfunctions, and it can store voter data on an internal memory card.

Voting on the Optech Insight and Insight Plus: Upon entering the polling place, the voter will receive a paper ballot. The voter makes choices on her ballot by connecting an arrow next to her choice of candidate or issue position. The voter inserts the ballot into the scanner at the top of the device, which reads the marks on the ballot. If the voter has overvoted (voted for more candidates than eligible), the Insight will eject the ballot for the voter to review again, or deposit the ballot into the ballot box. If the voter has cast a write-in vote, the scanner will feed the ballot into a center bin so that pollworkers may process the write-in votes. Ballots that require no review by pollworkers are deposited into a rear bin. A front, auxiliary bin is available in case the machine is not functioning during polling hours; voters deposit ballots into the auxiliary bin manually, but they will not be able to use the auxiliary bin unless pollworkers have unlocked it.

As votes are entered, the Optech Insight stores the vote tallies on its internal memory card., and when the polls close, the Optech Insight prints out a paper copy of the election results for polling officials.³

The Insight has an optional modem for transmitting election results, and can also transmit results via a proprietary Sequoia device called a Hybrid Activator and Accumulator (HAAT). The HAAT accumulates results from machines in a polling place, and transmits them to the jurisdiction's central election office via a wireless cellular network.⁴

What to Look For

- **Security Seals.** Ideally, the Insights's exposed ports, memory card access areas, ballot box doors and case seams would be covered with tamper-evident security seals. The integrity of these seals should be maintained at all times, and only breached under controlled, explained circumstances. A voided seal looks like this: <http://www.flickr.com/photos/joebeone/2247733620/> . Seals should be logged to maintain chain of custody of sensitive materials.
- **Ballot Box Access.** Optical scan systems have at least one and possible more ballot boxes. Each ballot box should be inspected by a voter at the beginning of

³ From the manufacturer's website, available at: <http://www.sequoiavote.com/bEAGLE.php>

⁴Source Code Review of the Sequoia Voting System. Secretary of State of California's Top-to-Bottom Review of Voting Systems, August 2007, p.10. Available at: http://www.sos.ca.gov/elections/voting_systems/ttbr/sequoia-source-public-jul26.pdf



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voting to make sure that they are empty. These ballot boxes should be locked and/or sealed with tamper-evident tape.

- **Keys.** The keys for the Insight and Insight Plus models are the same for all machines and are easily pickable with readily available tools. Care should be observed around the ballot box lock and the scanner key lock (turns the system off and on).
- **The Removable Memory Card is Sensitive.** Corrupt memory cards may be able to introduce viruses, cause the main election server to crash and falsify votes. Access to the memory card should be controlled, monitored and logged at all times.
- **The System Chip is very sensitive.** The main software chip on the Insight, the HPX chip, is easily replaceable with minimal access to an Insight scanner. A malicious HPX chip could count votes incorrectly, selectively accept or reject ballots and ignore system software updates.
- **Correct Inks.** Some models of the Optical Scan systems have trouble reading red inks or inks with red in them. Voters should use the writing instrument provided at the polling place or, if voting at home, a black ballpoint pen that does not bleed through paper.

Past Problems: