

Voter Verifiable Paper Audit Trail-Reader (VVPAT-R)



Outline

In the 21st Century, it seems incredible that most countries still use a paper ballot for their elections. Recently, some of the most advanced countries have turned to electronic voting, with a generally high level of success, but growing concern amongst electoral watchdogs has seen terminal manufacturers latterly including a paper record such as to provide the facility of a “hard copy” audit trail. The thought behind this move is, that if required, a poll could be reconstructed using these paper records. Even without going that far, a sample of any poll could be reconstructed by verifying terminal electronic output against respective paper record, thereby providing a high level of confidence in what is supposed to be a paperless system.

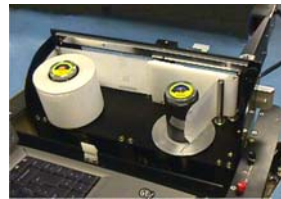
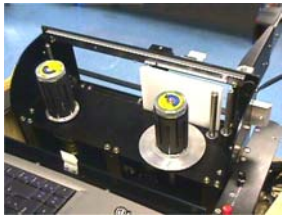
One such terminal manufacturer is Sequoia in the USA: their successful EDGE terminal is installed with VVPAT – Voter Verifiable Paper Audit Trail. This allows the voter to view a hard copy output of all votes they have cast, which is then accepted by making a single keystroke. This final action prints a summary of the votes cast in a proprietary, high density, 2D barcode format (PDF417). Voter records are stored on paper rolls.

Euclid, a completely independent company to Sequoia and based in England, has developed a system to read the VVPAT output and enable recompilation of any vote. This unit is defined as VVPAT-R or Voter Verifiable Paper Audit Trail – Reader. In the absence of any formal specifications regarding the paper output for voting terminals in this rapidly emerging market, Euclid chose to develop their system specifically upon the Sequoia output. Although Sequoia have co-operated with Euclid by supplying paper records for testing, and have included registration marks to facilitate barcode alignment within the scanner, this system has been developed by Euclid and is truly a system to independently verify the efficacy of VVPAT output records.

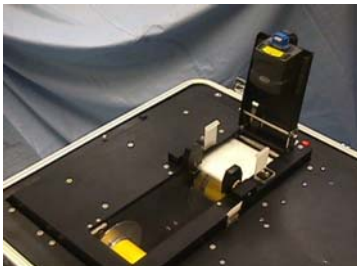
Voter Verifiable Paper Audit Trail-Reader (VVPAT-R)



Set up



Loading



Scan in operation

Voter Verifiable Paper Audit Trail-Reader (VVPAT-R)

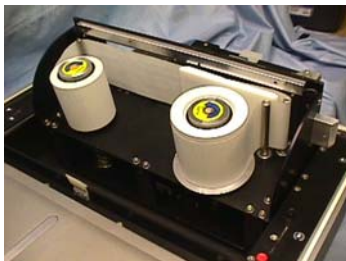


OPERATION

The VVPAT-R is a stand alone system.



An operator loads a paper reel of voter records into the paper transport chamber. The spools are firmly gripped by the expanding mandrels. The chamber is closed and the scanning process started.



Once started the operation is fully automatic, requiring no subsequent operator interaction. Each record is aligned into the scanning position. The barcode is read and verified. The data is stored on the system. When the record has been scanned, the drive automatically advances the paper roll to the next record. The cycle is repeated.

When reaching the end of the roll of records the drive is halted. An audible tone is sounded to alert the operator that action is required.

HARDWARE STANDARD FEATURES

- ▲ Easily transportable
- ▲ Simple set up – no special training required
- ▲ Fast reconciliation
- ▲ Duplex sensing allows bi-directional feed – no need to rewind rolls
- ▲ High spec barcode scanner ensures complete accuracy
- ▲ Networkable
- ▲ Low power – single power cord
- ▲ Fast
- ▲ Accurate
- ▲ Robust

TECHNICAL FEATURES

Length	27 in (68.5 cm)
Width	20.75 in (52.5 cm)
Depth	8.5 in (21.5 cm)
Weight	30 lb (14 kg) approximately
Power	95-120 V, 210-240 V, at 50/60 Hz 80 W

ENVIRONMENTAL REQUIREMENTS

Operating Temperature	15-25 degrees Celsius
Relative Humidity	20% - 85% non-condensing.