EVM BROCHURE FOR ELECTORS

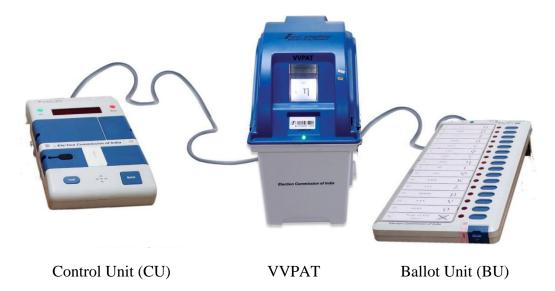

OCTOBER, 2023

ELECTION COMMISSION OF INDIA

Control Unit (CU)   VVPAT   Ballot Unit (BU)

Electronic Voting Machine (EVM): An EVM consists of two units, namely, Control Unit (CU) and Ballot Unit (BU) with a cable (5mt.long). A Ballot Unit caters upto16 candidates. 24 (Twenty-four) Ballot Units can be cascaded together for catering to 384 candidates (including NOTA) which can be used with one Control Unit. On the right side of the BU along the candidates' vote button, digits 1 to 16 are embossed in Braille signage for guidance of visually impaired electors. It runs on a power pack (Battery) having 7.5 volts.

Voter Verifiable Paper Audit Trail (VVPAT): Voter Verifiable Paper Audit Trail is an independent system attached with the Electronic Voting Machines that allows the voters to verify that their votes are cast as intended. VVPAT runs on a power pack (Battery) of 22.5 volts.
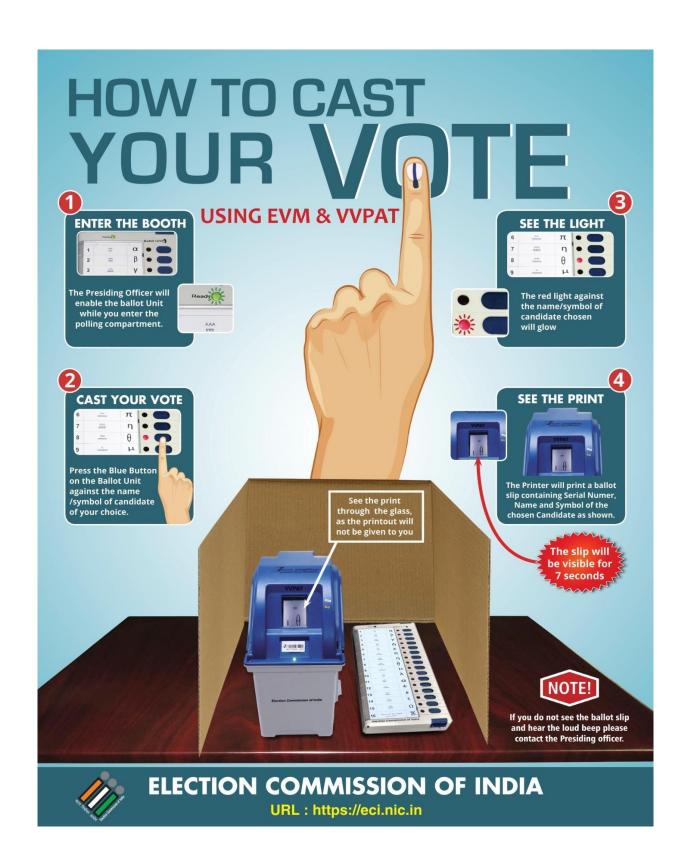
Functioning of EVM and VVPAT:

- Control Unit is kept with the Presiding Officer/Polling Officer and Ballot Unit and VVPAT are kept in the Voting Compartment.
- When a vote is cast on Ballot Unit by pressing candidate button (Blue Button) of his/her choice, **RED** light is glow against that particular candidate button.
- On other hand, a slip is printed on the VVPAT printer containing the serial number, name and symbol of the candidate and remains exposed through a transparent window for about 7 seconds.
- Thereafter, this printed slip automatically gets cut and falls in sealed drop-box of the VVPAT.
- Thereafter, a beep sound is heard from the Control Unit to ensure vote has been registered successfully.

Technical Security Features		
Features	**Purpose**	**Ruled Out**
Standalone	EVM used by the Commission is a stand-alone non-networked machine which can be connected to EVM components only (e.g. CU, BU, VVPAT, SLU, P-FLCU).	Any connection with external world through wire or wireless
One Time Programmable (OTP) Chip	The machine is electronically protected to prevent any tampering/manipulation. The programme (software) used in these machines is burnt into a One Time Programmable (OTP) chip so that it cannot be altered or tampered with.	Any alteration or tampering
Unauthorized Access Detection Module (UADM)	Software as well as polled data is stored in the micro-controller of the Control Unit of EVM, which is protected by a Secure Module. Any attempt to open the Secure Module at any time whether the machine is on or off, renders the machine in factory mode and the machine becomes inoperative.	Any access to microcontroller or memory
No Radio Frequency Transmission or Reception Capability	Any tampering of ECI-EVM by coded signals by wireless, Bluetooth or WiFi is ruled out as EVM does not have any radio frequency (RF) communication capability, hence, cannot communicate through Wifi, Bluetooth etc.	Any tampering by coded signals by wireless like Bluetooth or Wifi
Dynamic Coding of Key Presses	Every key press is coded dynamically making it impossible for anyone to decode the signals between Control Unit and Ballot Unit.	Any decoding of the signal between Control Unit, Ballot Unit and VVPAT
Most Advanced Encryption Techniques	Standards used are proven to work effectively in modern systems	Any deciphering by tapping cables
Strong Mutual Authentication Capability	The strong mutual authentication capability ensures that any unauthorized devices cannot interact with EVMs	Any interaction with any unauthorized devices
Real Time Clock for date and time stamping key presses	Every authorised or un-authorised key press is recorded with date and time stamp on real time basis.	Any malpractice

S. No.	Various activities related to EVMs/VVPATs with the involvement of the representatives of National & State Recognised Political Parties and Candidates
1.	**Opening and Closing of EVM warehouse**
	• During non-election period till finalization of list of the contesting candidates, EVM-VVPAT warehouses are opened/closed (for any purpose like movement, inspection etc.) in the presence of the representatives of National and State Recognised Political Parties. • With finalization of list of the contesting candidates, candidates and their representatives are involved while opening and closing of EVM-VVPAT warehouses/strong room. • Opening and Closing of EVM warehouse/strong room is done under videography.
2	**First Level Checking of EVMs and VVPATs**
	• First Level Checking of EVMs and VVPATs is conducted before every election by the authorised engineers of Bharat Electronics Limited (BEL) and Electronics Corporation of India Limited (ECIL) at DEO level. • For this purpose, National and State Recognised Political Parties at district headquarters are invited in writing by DEO concerned at least two days before the beginning of FLC and a copy is endorsed to state headquarters. • The representatives of National and State Recognised Political Parties are involved to oversee entire FLC process. • Higher mock poll is conducted in 5% randomly selected EVMs and VVPATs (i.e. 1200 votes in 1% EVMs, 1000 votes in 2% EVMs and 500 votes in 2% EVMs). The electronic result of EVM is tallied with the VVPAT slips count. They are allowed to pick 5% EVMs and VVPATs randomly and also to do mock poll. • List of FLC ok EVMs and VVPATs is shared with all National and State Recognised Political Parties. • The representatives of National and State Recognised Political Parties are allowed to sign the seals, forms register during FLC.
3	**Taking out of EVMs and VVPATs for Training and Awareness after FLC**
	• After completion of FLC, maximum up to 10% EVMs and VVPATs are taken out for awareness and training purpose in the presence of National and State Recognised Political Parties. • The list of awareness and training EVMs and VVPATs is shared with them.
4	**Randomizations of EVMs and VVPATs**
	• First randomization of EVMs and VVPATs is conducted in the presence of National and State Recognised Political Parties to allocate EVMs and VVPATs Assembly constituency/ segment-wise. • List of first randomized EVMs and VVPATs (AC/AS-wise) is shared with National and State Recognised Political Parties. • After finalization of list of contesting candidate, list of first randomized EVMs and VVPATs (AC/AS-wise) is also shared with contesting candidate.

	• Second randomization of EVMs and VVPATs is conducted, before commissioning of EVMs and VVPATs, in the presence of contesting candidates to allocate polling station wise and reserve machines. • The list of second randomized EVMs and VVPATs is shared with contesting candidates.
5	**Commissioning of EVMs and VVPATs**
	• Commissioning of EVMs and VVPATs for use in poll is done in the presence of contesting candidates.
	• Candidates/their representatives are allowed to sign the seals used in sealing EVMs and VVPATs.
	• Higher mock poll is conducted in 5% randomly selected EVMs and VVPATs by casting 1000 votes. The electronic result of EVM is tallied with the VVPAT slips count. Candidates/their representatives are allowed to pick 5% EVMs and VVPATs randomly and also to do mock poll.
6	**Dispersal of EVMs and VVPATs with Polling Parties**
	• Dispersal of EVMs and VVPATs are done in the presence of the contesting candidates.
7	**Mock Poll and Actual Poll on Poll Day**
	• Mock Poll on Poll day is conducted at every polling station in the presence of the polling agents nominated by the contesting candidates.
	• Polling agents nominated by the contesting candidates are allowed to remain in polling stations to observe polling process.
	• Polling agents are allowed to sign the seals used in sealing EVMs and VVPATs (before commencement of poll and close of poll).
8	**Transportation of polled EVMs and VVPATs from Polling Stations to Collection Centre**
	• Candidates/Polling agents are allowed to follow vehicles carrying polled EVMs and VVPATs from polling station to collection centre.
9	**Storage of Polled EVMs and VVPATs**
	• Polled EVMs and VVPATs are stored in the strong room in the presence of Candidates/their representatives. • Candidates/their representatives are also allowed to put their seals on the locks of the strong room. • Candidates/their representatives are also allowed to monitor storage and security of polled EVMs and VVPATs.
10	**Counting Day**
	• Polled Strong Room is opened in the presence of Candidates/their representatives, Returning Officer, ECI Observer on counting days.
	• Counting of votes is done in the presence of candidates and counting agents appointed by them.