

# **Polygraph Operation Guide for Border Guard Officers**

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# Chapter 1. 1. Purpose of the Polygraph

**Device:** Standard Polygraph System

**Audience:** Certified Border Guard Personnel

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**Purpose:** Investigative screening and interview support

## 1. Purpose of the Polygraph

The polygraph—commonly known as a lie detector—records involuntary physiological responses to structured questions. It is used as an investigative aid to:

- Support interview procedures
- Screen candidates or suspects
- Corroborate or challenge statements
- Identify deceptive behavior patterns

In the Border Guard **recruitment process**, the polygraph test is used to assess the credibility of applicants regarding personal history, integrity, and potential security risks. The procedure includes a standardized pre-test interview, structured questioning, and physiological monitoring.

## 2. Physiological Signals Measured

**Table 1. Sensors and their role**

Sensor type	Measures	Indicator of Deception
Pneumograph Tubes	Chest and abdominal respiration	Breath-holding or slowed breathing
Blood Pressure Cuff	Cardiovascular activity	Spikes in heart rate or pressure
Galvanic Skin Response	Skin conductivity (electrodermal activity)	Increased conductivity due to fear



**Note:**

- Male subjects typically breathe abdominally; females more often use chest respiration.  
Both are monitored for accuracy.

### 3. Setup Procedure

#### Setup Procedure

**1. Prepare the Subject:**

- Explain the test purpose and procedure.
- Obtain informed consent.
- Instruct subject to sit still, feet flat, fingers spread.

**2. Attach Sensors:**

- Place pneumograph tubes around chest and abdomen.
- Wrap blood pressure cuff on upper arm.
- Attach galvanic skin sensors to fingers.

**3. Launch Software & Calibrate:**

- Start the polygraph software.
- Calibrate sensors to baseline readings.
- Confirm signal quality before proceeding.

### 4. Conducting the Test: Border Guard Application Screening

**• Conducting the Test: Border Guard Application Screening**

#### A. Pre-Test Interview

Conducted by a certified examiner to:

- Explain the purpose and voluntary nature of the test
- Establish rapport and reduce anxiety
- Review the applicant's background and clarify any inconsistencies
- Obtain written consent

The examiner must ensure the applicant understands that the polygraph is part of the vetting process and not a punitive measure.

## B. Questioning Protocol

**Table 2. Questions are divided into three categories:**

Type	Purpose	Example Questions
<b>Relevant</b>	Directly related to application integrity	"Have you ever provided false information on your application?"
<b>Control (Comparison)</b>	Establish physiological baseline	"Have you ever lied to avoid getting into trouble?"
<b>Irrelevant</b>	Used to stabilize response patterns	"Is today Wednesday?"

Note:

All questions must be phrased clearly, neutrally, and without accusation.

## C. Sample Sequence for Border Guard Screening

1. "Is your name [Full Name]?" (*Irrelevant*)
2. "Have you ever used illegal drugs?" (*Relevant*)
3. "Have you ever lied to a supervisor?" (*Control*)
4. "Is your age 34?" (*Irrelevant or Control, depending on context*)
5. "Have you ever committed a criminal offense not disclosed in your application?" (*Relevant*)
6. "Have you ever stolen anything of value?" (*Control*)
7. "Are you currently employed?" (*Irrelevant*)

Each question is asked with consistent tone and timing. The subject must remain still, with feet flat and hands relaxed.

## D. Monitoring & Interpretation

During questioning, the examiner monitors:

- **Respiration patterns** (slowed or held breath)
- **Cardiovascular activity** (heart rate and blood pressure spikes)
- **Galvanic skin response** (electrical conductivity changes due to stress)

Strong physiological reactions to relevant questions may indicate deception. Control questions help differentiate between nervousness and dishonesty.

## 5.Understanding the Science

The polygraph detects involuntary reactions triggered by fear of detection. These are governed by the autonomic nervous system:

- **Sympathetic system:** Activates during stress (e.g., adrenaline rush).
- **Parasympathetic system:** Restores body to baseline (homeostasis).

Analogy: Watching a scary movie—your body reacts before your mind can control it. The polygraph captures this moment of involuntary response.

## 6.Post-Test Procedure

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### **Post-Test Procedure**

- Review chart recordings for anomalies.
- Identify the question that triggered the strongest physiological response.
- Document findings and store test data securely.