WhizBuddy™ Robot

User manual

Table of Contents

1. Introduction

WhizBuddy™ is an indoor interactive companion robot designed for **learning engagement, guided interaction, entertainment, and assisted communication**. The robot is optimized for safe, expressive interaction in controlled indoor environments, making it suitable for educational, institutional, and supervised public spaces.

WhizBuddy™ combines touch interaction, voice communication, visual expressions, and structured content delivery to create an engaging human-robot interaction experience.

2. Application Scenarios

WhizBuddy™ is suitable for use in:

- Educational institutions and learning centers
- Libraries and knowledge zones
- Training rooms and demonstration areas
- Children's activity zones (with supervision)
- Museums and interactive exhibits
- Indoor public engagement spaces

The robot is designed to support guided interaction rather than autonomous operation.

3. Operating Environment

For optimal performance and safety, WhizBuddy™ should be used under the following conditions:

- Indoor environments only
- Flat, stable floors or fixed placement areas
- Dry surroundings with no exposure to liquids
- Moderate ambient lighting
- Controlled noise levels

Using the robot outside these conditions may affect interaction quality.

4. Robot Overview

WhizBuddy™ consists of the following main components:

- Touch-enabled interactive display
- Integrated camera for visual interaction
- Built-in microphone and speaker system
- Expressive motion elements for engagement
- Stable base designed for indoor use

The robot is intended for **guided and assisted interaction**.

5. Physical Characteristics

5.1 Dimensions and Weight

- **Overall Height:** Approximately 70–90 cm
- **Base Footprint:** Compact indoor base
- **Approximate Weight: 12–16 kg**

The structure is designed to remain stable during interaction and expressive motion.

5.2 Placement and Handling

- Place the robot on a flat, stable surface
- Avoid sloped or uneven floors
- Do not lift or reposition the robot while powered on

Proper placement ensures safe and reliable operation.

6. Power and Startup

6.1 Power Supply

- Connect the robot to the designated power source
- Ensure cables are securely connected and safely routed

6.2 Startup Procedure

- The robot initializes automatically when powered
- Allow the system to complete startup before interaction

6.3 Shutdown Procedure

- Use the on-screen shutdown option when available
- Disconnect power only after shutdown is complete

7. Interaction Methods

7.1 Touch Interaction

The primary interaction method is the touch display:

- Tap interface elements gently
- Do not apply excessive pressure
- Avoid sharp or hard objects

7.2 Voice Interaction

WhizBuddy™ supports spoken interaction:

- Speak clearly and at a normal pace
- Stand within the recommended interaction range

Performance may vary depending on background noise and pronunciation clarity.

7.3 Visual Interaction

On-screen expressions, animations, and prompts guide users and indicate robot states such as listening, responding, or idle.

8. Functional Modes

8.1 Learning and Knowledge Mode

This mode enables WhizBuddy™ to:

- Present educational content
- Support question-and-answer interaction
- Display learning materials and guided explanations

Content should be reviewed and curated before deployment.

8.2 Companion Interaction Mode

In this mode, the robot provides:

- Friendly conversational interaction
- Expressive responses through animation and motion
- Engagement through guided prompts

This mode is suitable for supervised environments.

8.3 Multimedia Playback Mode

WhizBuddy™ can display and play:

- Images and slides
- Videos and animations
- Audio content

Audio and display settings can be adjusted for comfort.

8.4 Expression and Motion Mode

The robot can perform pre-configured expressive movements to enhance interaction.

Operational Notes

- Maintain clear space around the robot
- Avoid physical interference during motion
- Supervision is recommended in public areas

9. Movement and Motion Behavior

- WhizBuddy™ supports limited expressive motion
- The robot is not designed for autonomous navigation
- Do not manually force moving parts

Any resistance or abnormal behavior should be addressed by stopping operation.

10. Display and Audio Adjustment

Users can adjust:

- Screen brightness
- Audio volume
- Audio muting when required

These settings allow adaptation to different indoor environments.

11. Safety Guidelines

11.1 General Safety

- Indoor use only
- Keep away from liquids and heat sources
- Do not place objects on the robot

11.2 Child Safety

- Adult supervision is required
- Do not allow climbing, pulling, or rough handling
- Encourage calm and gentle interaction

11.3 Electrical Safety

- Use approved power accessories
- Disconnect power before cleaning
- Do not operate with damaged cables

11.4 Operational Safety

- Ensure stable placement
- Stop operation if abnormal behavior occurs
- Do not modify or disassemble the robot

12. Maintenance and Care

12.1 Cleaning

- Clean with a soft, dry cloth
- Do not use liquid or chemical cleaners

12.2 Routine Care

- Inspect the robot periodically
- Ensure connectors and cables remain secure
- Power off when not in use

13. Environmental and Noise Considerations

- Designed for quiet indoor operation

- Audio output adjustable for shared spaces
- Suitable for classrooms, libraries, and learning areas

14. Operational Limitations

WhizBuddy™ is designed for **structured indoor environments** and guided interaction. Performance depends on content configuration, placement, and user behavior.

15. Storage and Transportation

- Power off before moving
- Handle with care using both hands
- Store in a dry, temperature-controlled environment

16. Basic Specifications

General

- **Robot Type:** Indoor interactive companion and learning robot
- **Primary Applications:** Education, guided interaction, multimedia engagement

Physical Characteristics

- **Overall Height:** Approximately 70–90 cm
- **Base Design:** Stable indoor base
- **Approximate Weight: 12–16 kg**
- **Exterior Housing:** Enclosed, impact-resistant structure

Display and Interaction

- **Display Type:** Integrated touch-enabled display
- **Display Size:** Approximately 10–12 inches

- **Interaction Methods:** Touch, voice, visual prompts

Audio and Visual System

- **Camera:** Integrated front-facing camera
- **Microphones:** Built-in microphone array
- **Speakers:** Integrated audio output

Motion and Expression

- **Movement Type:** Stationary with expressive motion
- **Supported Modes:** Interaction, learning, expression

Sensors

- **Human Presence Detection:** Supported

Power

- **Power Source:** External power supply
- **Operating Duration:** Continuous operation while connected to power

Environmental Requirements

- **Operating Environment:** Indoor only
- **Surface:** Flat and stable
- **Temperature:** Normal indoor room temperature
- **Humidity:** Dry, non-condensing environment

17. Conclusion

WhizBuddy™ provides an engaging and approachable interactive experience through expressive behavior, guided learning features, and intuitive operation. Proper placement, supervision, and maintenance ensure consistent and safe performance across educational and public environments.