

Intelligent Head (Premium Edition) User Manual

V1.0

1. Product Overview

This intelligent device integrates "simulated appearance" and "voice conversation" in one. With a highly realistic anthropomorphic head design, accurate speech recognition and synthesis technology, it enables natural dialogue, facial expression interaction, and other functions. Suitable for scenarios including intelligent guided tours, innovative education, commercial exhibitions, family companionship, and scientific research experiments.

2. Product Features

2.1 Highly Realistic Facial Expressions

Adopts flexible silica gel and internal multi-point micro-drive units, capable of reproducing 7 types of expressions (e.g., joy, sadness, surprise) with smooth and natural transitions.

2.2 Coordinated Head & Neck Movement

Built-in high-performance servo motors support movements like nodding and shaking. Synchronizes with conversation rhythms to simulate human listening and feedback postures.

2.3 Voice Conversation

Equipped with a leading voice AI engine and integrated microphone array, supporting interrupt wake-up, noise suppression, and sound source localization. Delivers millisecond-level response for natural, seamless conversations without lag.

2.4 Multimodal Emotional Interaction

Comes standard with an emotional AI brain—nurture your one-of-a-kind spiritual companion.

2.5 Customizable Appearance

Supports personalized customization of male or female looks.

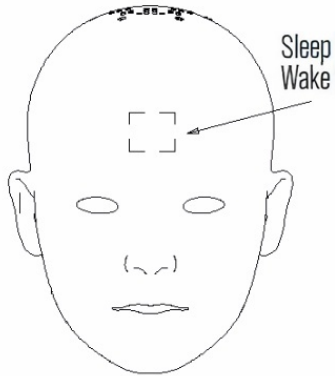
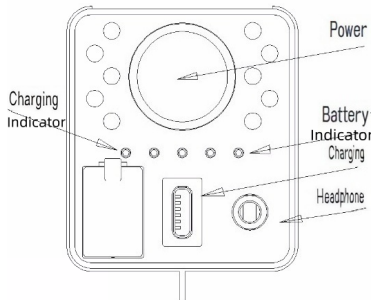
3. Technical Specifications

Category	Specifications
Appearance	Yingfeng (Female) #273

	Zhenyu (Male) - Design Pending
Dimensions	22cm (L) × 17cm (W) × 20cm (H)
Weight	2.25 kg
Material	PC (Polycarbonate) + Liquid Silicone
Expressions	Eyes: Eyeballs, Eyelids Eyebrows: Glabella Mouth: Chin, Facial Movements Neck: Left/Right Rotation
Interaction	Speech Recognition: 3m far-field pickup, 360° sound source localization, recognition rate >98%, 50~60 dB sound level Speech Synthesis: Multiple voice timbres available, supports emotional intonation Supported Languages: English (plus optional additional languages) Sound Delay: 2~5s
Core Performance	Processor: Dedicated Chip + Coprocessor Connectivity: Wi-Fi 6, 802.11 a/b/g/n, 2.4 GHz/5 GHz dual-band, Bluetooth 4.2
Microphone	6-microphone array
Headphone Jack	3.5mm
Speaker	2 × 3W speakers
Power & Consumption	Power Supply: Built-in lithium-ion battery (6400mAh capacity) Charging Time: 4.5 hours Charging Port: Type-C Charging Specifications: Input voltage 5~20V, maximum power 20W, supports PD3.0, DP & DM Standby Power Consumption: <1W Continuous Usage Time: 4~6 hours
Environmental Requirements	Operating Temperature: 0°C ~ 40°C Operating Humidity: 20% ~ 80% non-condensing

4. Component Description

Component	Location	Function	Diagram
-----------	----------	----------	---------

Voice Interaction	Overhead	Dialogue recognition	
Sleep/Wake	Forehead	Standby/wake-up	
Speakers	Ears	Audio output	
Power Button	Back of the head	Press: power on Press again to power off	
Charging Port	Back of the head	Type-C	
Headphone Jack	Back of the head	3.5mm headphones	
Battery Indicator	Back of the head	○○○○ < 10% ●○○○ 10% ≤ < 25% ●●○○ 25% ≤ < 50% ●●●○ 50% ≤ < 75% ●●●● ≥ 75%	
Charging Indicator	Back of the head	Charging: Steady red Fully charged: Steady green Abnormal: Red and green flashing	

5. Usage Process

5.1 First-Time Setup

5.1.1 Unboxing Check

Verify the package includes: 1 × Device Unit, 1 × Type-C Charging Cable, 1 × User Manual, 1 × Warranty Card.

5.1.2 Charging

Insert the Type-C charging cable into the charging port on the back panel of the head, then connect the other end to a charger to start charging. The charging indicator will stay steadily red (charging in progress) and switch to steady green when fully charged.

- Note: For the first charge, it is recommended to charge fully for 5 hours.
- The robot can be used while charging, but charging with the device powered off is

recommended.

5.1.3 Power On & Network Configuration

1. Press the power button to turn on the device. System startup takes approximately 1 minute, and the device will play a prompt tone once startup is successful.
2. Download the official APP, complete Bluetooth connection as prompted, and configure the WiFi network.

- Note: After network configuration, it is recommended to connect to the device via the APP and switch to online dialogue for an optimized experience.

5.1.3.1 APP Usage

The APP requires the mobile device to authorize permissions for network access, Bluetooth, and location information.

5.1.3.1.1 Registration & Login

For first-time use of the APP, please register an account first.

5.1.3.1.2 Device Connection

1. On the APP homepage, tap the "+" button to open the Bluetooth device interface.
2. After the search is complete, tap the corresponding device name to connect.
3. To disconnect Bluetooth after use, operate on the same page.

5.1.3.1.3 WiFi Configuration

After successful device connection, tap "WiFi Configuration" at the bottom of the APP page.

5.1.3.1.4 Dialogue Configuration

Navigate to: Settings → Perception Capabilities → Hearing → Prioritize Online Dialogue

5.1.4 Power Off

When the device is on, press the power button again until it pops back to its original position to shut down.

5.2 Voice Dialogue

5.2.1 Wake Up the Device

- Default Wake Word: (Available for check in the official APP)
- Wake-Up Success: The device plays a "Ding-dong" prompt tone.

5.2.2 Initiate Dialogue

Speak directly after waking up the device.

5.2.3 End Dialogue

The dialogue will automatically end after a timeout with no commands.

5.3 Function Adjustment (APP/Voice)

Item	APP Operation Path
WiFi Configuration	Homepage →  → Search & Connect → Configure WiFi
Device Battery Level	Homepage (when APP is connected to the device)
Device Information	Homepage → Device Information ()
Volume	Settings → Volume
Wake Word	Settings → Perception Capabilities → Wake Word
Continuous Dialogue	Settings → Perception Capabilities → Continuous Dialogue
Online/Offline Dialogue Switch	Settings → Perception Capabilities → Hearing
Online Dialogue Language	Settings → Perception Capabilities → Hearing
Offline Dialogue	Settings → Perception Capabilities → Hearing
Sleep Mode	Settings → Battery
Continuous Dialogue Waiting Time	Settings → Battery
Memory Capabilities	Settings → Memory Capabilities
Role & Role Parameters	Settings → Role

6. Precautions

6.1 Safe Usage

- Do not immerse the device in water or place it near water sources.
- Avoid dropping or impacting the device (damage to the outer casing may cause internal component failure).
- Use the original charger for charging.
- Adult supervision is required when used by children to prevent ingestion of small parts (e.g., detachable decorations, if applicable).

6.2 Environmental Requirements

- Operating temperature: 0°C -40°C . Avoid use in high-temperature (e.g., direct sunlight), low-temperature (e.g., near refrigerators), or humid (e.g., bathrooms) environments.
- Avoid noisy environments (e.g., vegetable markets, factory workshops) during voice interaction. For optimal recognition accuracy, use in quiet environments (noise level ≤ 40 dB).

6.3 Maintenance & Care

Cleaning

Wipe the silicone casing gently with a dry soft cloth. For deep cleaning, ?

Prohibitions

- Do not use chemical solvents or sharp objects to touch or scratch the device.
- Prevent water ingress, dropping, or severe impact.
- Do not disassemble the device (unauthorized disassembly will void the warranty).

Storage

- When not in use for an extended period, fully charge the device before storage (recharge every 3 months to avoid battery damage from over-discharge).
- Store in a dry, cool place and disconnect the power supply.

Software Updates

The device and APP support online upgrades. Keep the network connected to access the latest features and optimizations.

7. Troubleshooting

Symptom	Possible Causes	Troubleshooting Solutions
Failed to Power On	1. Dead battery 2. Power button malfunction	1. Charge for 30 minutes and retry 2. Contact customer service for repair.
Dialogue Responses Are Irrelevant	1. Noisy environment 2. Blocked microphone 3. Poor network signal	1. Move to a quiet environment 2. Clean the microphone holes (with a soft brush)

		3. Check network connection.
No Sound Output	1. Volume set to 0 2. Speaker malfunction	1. Say "Increase volume" via voice or adjust through the APP 2. Contact customer service for repair.
Network Connection Failure	Incorrect Wi-Fi password; Weak signal	Reconfigure the network; Move closer to the router.

FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.