Xiaomi JMJQR01IQI

Xiaomi MITU Mi Robot Builder Instruction Manual

Model: JMJQR01IQI

1. Introduction

The Xiaomi MITU Mi Robot Builder is a versatile and educational STEM toy designed for building and coding enthusiasts. This modular kit allows users to assemble various structures, including a robot, plane, or dinosaur, using 978 high-quality building blocks. It integrates a CPU processor and a proprietary operating system, enabling complex actions and programmable movements. This manual provides essential information for assembly, operation, maintenance, and troubleshooting to ensure a rewarding experience with your Mi Robot Builder.



Figure 1: The Xiaomi MITU Mi Robot Builder in its primary robot configuration.

2. Key Features

- **Versatile 3-in-1 Design:** Build a robot, plane, or dinosaur from the same set of 978 pieces, offering limitless creative potential.
- **Advanced Self-Balancing System:** Equipped with a gyrometer, the robot maintains upright stability even on uneven surfaces, supporting up to 6.6 lbs.
- **Powerful Dual Motors:** Features two high-speed motors (up to 170rpm, 25N/CM torque) with built-in photoelectric encoders for precise control and stall prevention.
- **Intuitive App Control & Programming:** Connect via Bluetooth to the dedicated app (iOS/Android) for remote control, route planning, and drag-and-drop graphical programming without needing a computer.
- **STEM Educational Focus:** Designed to enhance STEM skills and introduce coding concepts through hands-on building and interactive programming.
- **High-Quality, Safe Materials:** All parts are made from environmental non-toxic materials, complying with US and

EU safety regulations.



Figure 2: The three primary transformation models possible with the Mi Robot Builder kit.

3. Setup and Assembly

3.1 Unpacking and Inspection

Carefully unpack all components from the box. Verify that all 978 pieces are present according to the included parts list. Inspect all parts for any damage. If any parts are missing or damaged, contact customer support immediately.



Figure 3: The Mi Robot Builder product packaging.

3.2 Assembly Instructions

The Mi Robot Builder comes with detailed graphical instructions for assembling the various models. Follow these instructions carefully. Assembly typically involves:

1. **Sorting Pieces:** Organize the 978 building blocks by type or color to facilitate easier assembly.
2. **Core Unit Assembly:** Begin by assembling the main CPU unit and motor components as per the manual.
3. **Structural Building:** Connect the various blocks to form the desired model (robot, plane, or dinosaur). Ensure all connections are secure.
4. **Battery Installation:** The device requires 1 Lithium Polymer battery (included). Install the battery into the designated compartment as shown in the assembly guide.

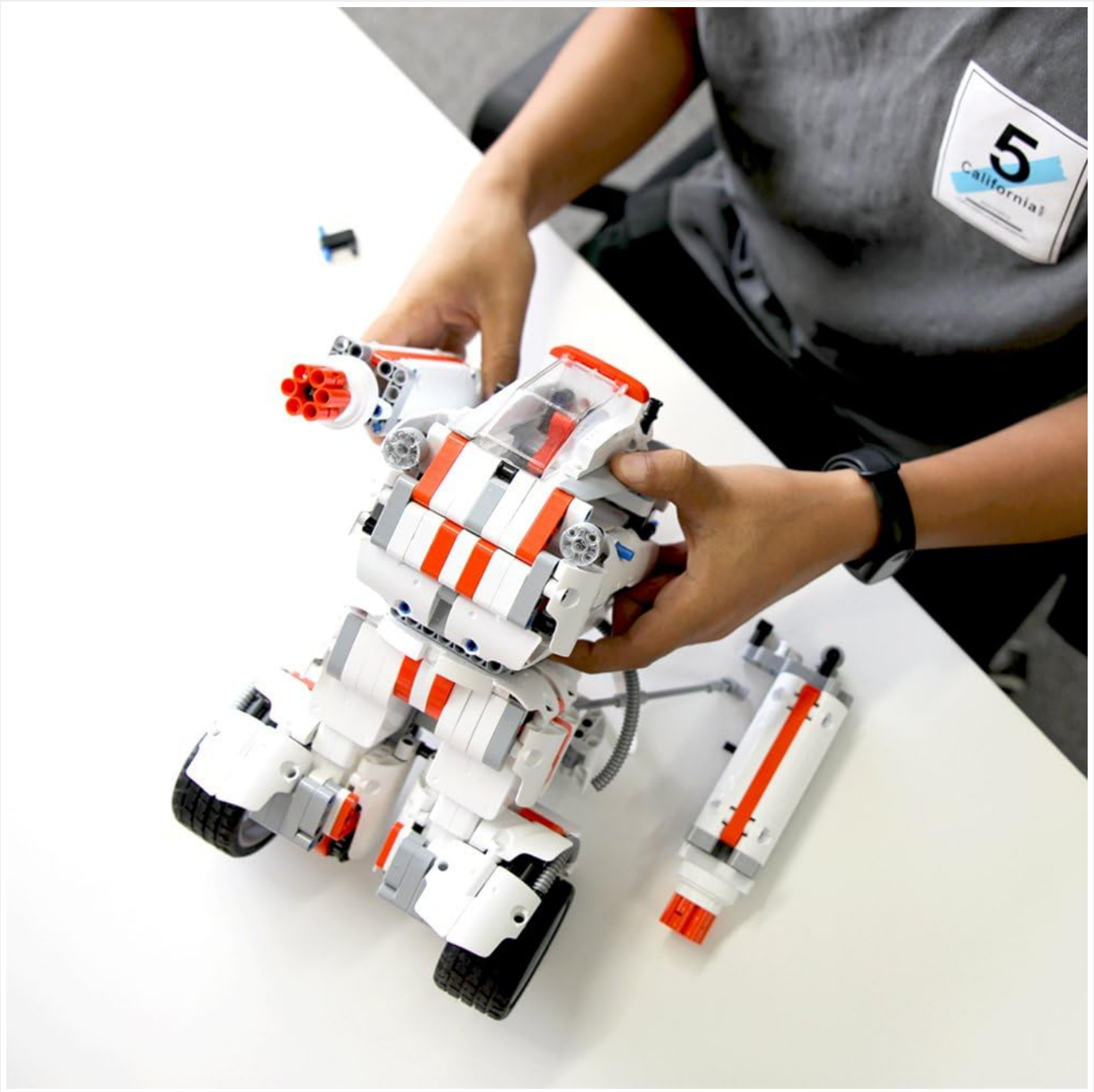


Figure 4: Hands-on assembly of the Mi Robot Builder.

3.3 App Download and Connection

To control and program your Mi Robot Builder, download the official Mi Robot Builder app from your device's app store (available for Android 4.3.0 or higher, and iOS 6.0 or higher).

1. Ensure your Mi Robot Builder is powered on.
2. Enable Bluetooth on your smartphone or tablet.
3. Open the Mi Robot Builder app and follow the on-screen instructions to pair with your robot. The app will guide you through the connection process.

4. Operating Your Mi Robot Builder

4.1 Control Modes

The Mi Robot Builder offers multiple control modes via the app:

- **Rocker Remote Control:** Use the virtual joystick on the app to manually drive the robot.
- **Route Planning Control:** Draw a path on your device screen, and the robot will follow it.
- **Gyrometer Control:** Control the robot's movement by tilting your smartphone or tablet.

4.2 Programming Your Robot

The Mi Robot Builder app features a user-friendly graphical programming interface, allowing you to create complex sequences of actions without writing traditional code.

1. Navigate to the "Programming" section within the app.
2. Drag and drop command blocks onto the workspace to build your program.
3. Connect blocks to define the flow of actions (e.g., move forward, turn, wait, play sound).
4. Upload the program to your robot and observe its execution.

The app also includes tutorials to help users learn programming concepts.

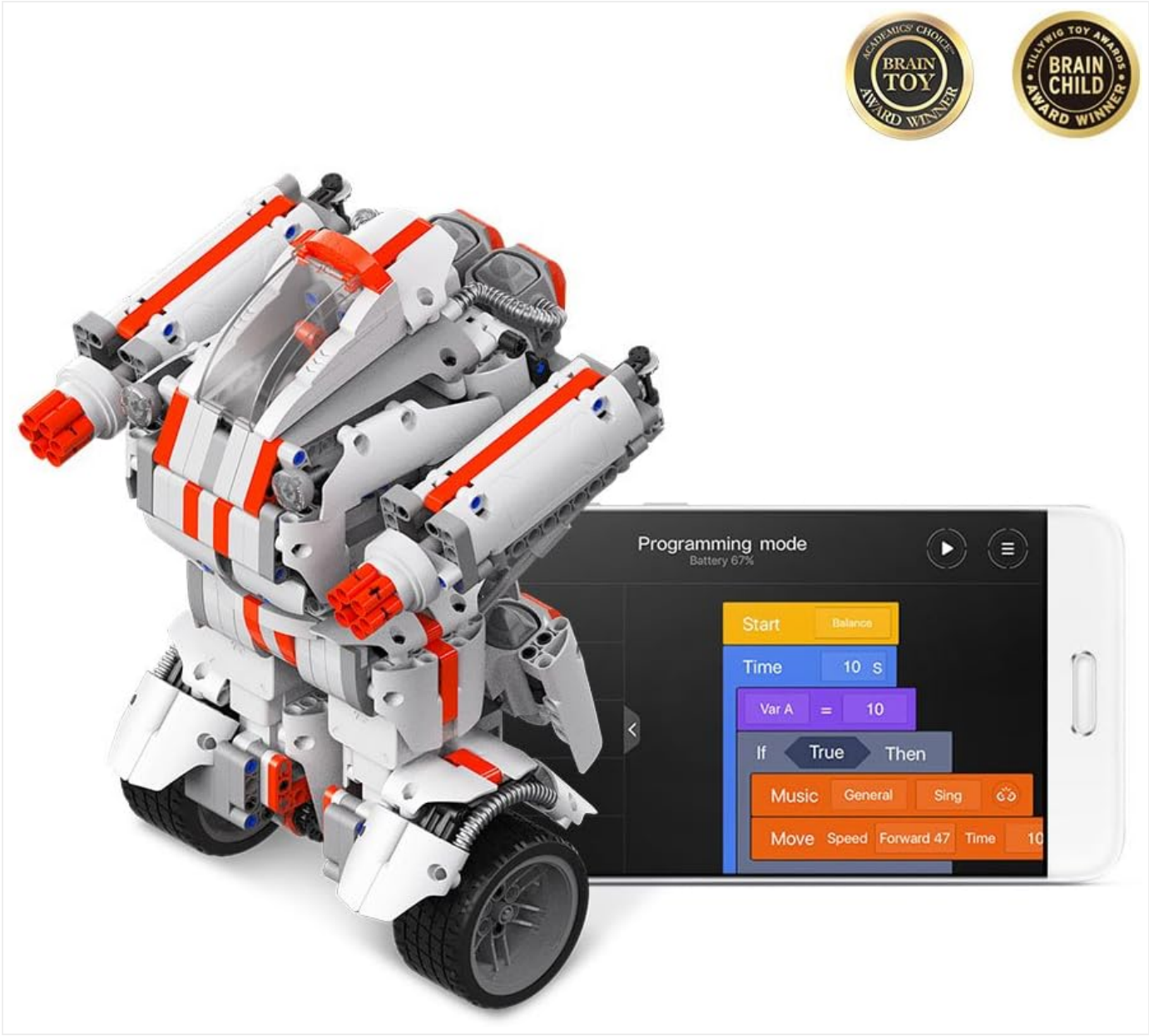


Figure 5: The Mi Robot Builder app's programming interface.

5. Maintenance

- **Cleaning:** Use a soft, dry cloth to wipe down the building blocks and main unit. Avoid using harsh chemicals or abrasive materials.
- **Storage:** When not in use, store the Mi Robot Builder and its components in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Care:**
    - Recharge the battery regularly, even if the robot is not in frequent use, to maintain battery health.
    - Do not overcharge or completely drain the battery.
    - If storing for an extended period, charge the battery to approximately 50% before storage.
- **Firmware Updates:** Periodically check the Mi Robot Builder app for any available firmware updates for the robot's main unit. Updates can improve performance and add new features.

6. Troubleshooting

Problem	Possible Cause	Solution
Robot does not power on.	Battery is low or not installed correctly.	Ensure battery is fully charged and correctly inserted.
Cannot connect to the app via Bluetooth.	Bluetooth is off on device; robot is too far; app not updated.	Enable Bluetooth, bring device closer to robot, restart app/robot, check for app updates.
Robot moves erratically or not at all.	Loose connections in assembly; motor obstruction; low battery.	Check all block connections, ensure no obstructions to motors/wheels, charge battery.
Self-balancing feature not working.	Robot not on a flat surface; internal sensor issue.	Place robot on a flat, stable surface. If issue persists, contact support.

7. Specifications

Feature	Detail
Model Number	JMJQR01IQI
Number of Pieces	978
Processor	ARM Cortex Mx 32-bit processor group, 108MHz (highest)
Storage	32MB Flash (non-expandable)
Connectivity	Bluetooth, 2.4G wireless (sensor connection), Wi-Fi (Type-C adapter support)
Battery	11.1V/18.3Wh Lithium battery (included)
Motors	2 Gear-based motors, up to 170rpm, 25N/CM torque
Sensors	Built-in Gyrometer; supports optional Infrared, Ultrasonic, Color sensors (not included)
App Compatibility	Android 4.3.0 or higher, iOS 6.0 or higher
Product Dimensions	19.56 x 17.02 x 29.46 cm

Feature	Detail
Weight	1.68 kg
Material	Plastic
Recommended Age	10 years and up (Manufacturer recommended age: 3 years and up, but product description states 10+)

8. Warranty and Support

8.1 Limited Warranty

The Xiaomi MITU Mi Robot Builder comes with a**1-Year Limited Warranty**. This warranty covers manufacturing defects and issues arising from normal use. It does not cover damage caused by misuse, accidents, unauthorized modifications, or improper assembly.

8.2 Customer Service

For technical support, warranty claims, or any questions regarding your Mi Robot Builder, please refer to the contact information provided on the product packaging or the official Xiaomi website. Please have your model number (JMJQR01IQI) and proof of purchase ready when contacting support.

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