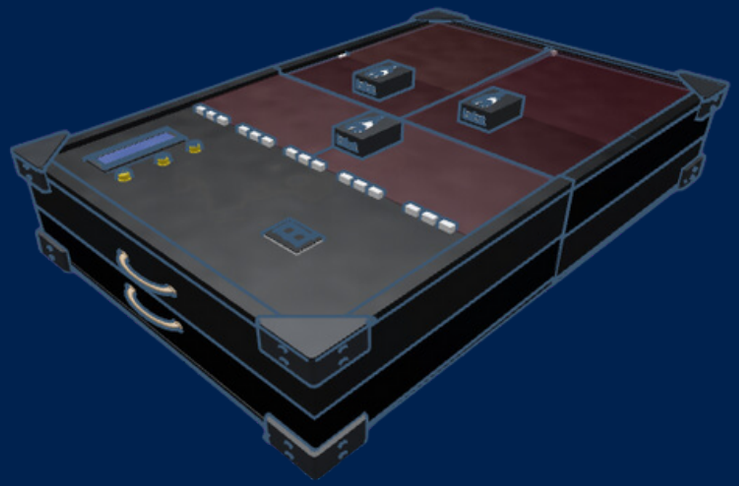
SMART LoBo TRAINING KIT:

USER MANUAL



Getting Started:

1. **Open Up the Logic Board**

   Carefully expand the board to access all parts.

2. **Power Connection**

   Use the kit's dedicated power supply, ensuring the power jack is correctly connected according to the polarity indicator.

3. **Turn on the device**

   Flip the switch on the side of the device to power it on.

4. **Selecting a Mode**

   Choose between **Training Mode** or **IoT Mode** by flipping the Mode Selector Switch, located on the side of the board.

5. **Creating the Logic Circuit**

   Place the logic blocks and connect inputs/outputs based on the logic expression. Use the switch to toggle inputs between "0" and "1."

6. **Output Identifier**

   The output of the circuit is displayed on the seven-segment display, showing whether the circuit is 1 or 0.

Precautionary Measures

- When connecting the logic blocks, ensure that **all inputs** are properly connected and none are left unconnected. This will prevent interference or floating inputs, which can cause unpredictable changes in the output.

- **Do not** connect multiple outputs at a time. Only one output must be connected to avoid damaging the components or getting incorrect outcomes.

INTERFACE OVERVIEW

The Logic Training Kit interface is designed for easy navigation and control, using the following buttons:

- **Select**: Choose an option
- **Option:** Access additional settings.
- **Back:** Return to the previous menu.

When powered on, the LCD displays the available modes. Use the buttons to select between Practice Mode and IoT Mode.

TROUBLESHOOTING

If the LCD display shows no content or not functioning properly, follow these steps:

1. Flip the board over and open the compartment containing the electrical connections.
2. Press the Reset button on both microcontrollers, labeled **EN** and **RST**.

This should restore the display and resolve any issues with the LCD.

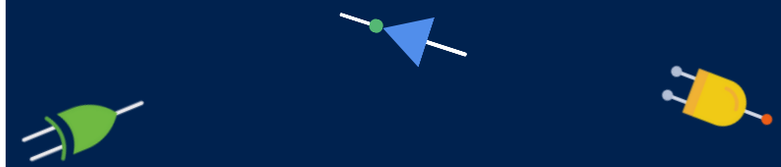
TRAINING MODE

In Training Mode, users can work with predefined logic equations to enhance learning experience.

Features include:

- **Timed Practice:** Work on logic problems with difficulty levels:
  a. Easy
  b. Average
  c. Difficult
- The logic equation is displayed for 25 seconds before the timer starts, so it's advised to take note of the equation.
- As the questions are randomized, repeated problems may occur.

Note: Timer duration varies by difficulty, and the buzzer sounds when time expires.



IOT MODE

In IoT Mode, users can customize their own logic exercises through a mobile device or computer.

Features include:

- **Custom Logic Expression:** User can input expression to the LCD display.
- **Network Host:** The microcontroller will act as a network host, allowing devices to connect to a dedicated Wi-Fi network.
- **Web Server Access:** Once connected to the network, devices can access the web server to input custom equations and set time limits.

  To do this, connect to the ESP8266 Wi-Fi module named **"Smart Logic Board"** (password: **ECELOBOKIT**) and open a web browser to **192.168.4.1.**

Final Note: Follow safety precautions for proper use and durability. Enjoy building logic circuits!