

KRISH'S MICROPAD - COMPLETE USER SETUP GUIDE (Easy for Everyone!)

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STEP 1: DOWNLOAD & EXTRACT FILES

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1. Go to GitHub: <https://github.com/Justanormalperson-13/Krishs-MicroPad>
2. Click the green CODE button
3. Click "Download ZIP"
4. Extract the ZIP file to a folder on your computer
5. You should have:
 - Firmware/ folder (with main.py, config.json, and templates/ folder)
 - templates/ folder inside Firmware/ (with index.html)

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STEP 2: UPLOAD FIRMWARE TO YOUR XIAO MICROCONTROLLER

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1. Download CircuitPython for XIAO ESP32-C3:
https://circuitpython.org/board/seeed_xiao_esp32c3/
2. Plug in your XIAO via USB to your computer
3. Drag the .uf2 file onto the XIAO (it appears as a USB drive)
4. XIAO will reboot. It now has CircuitPython!
5. Download and install Thonny IDE (for beginners):
<https://thonny.org/>
6. Open Thonny and plug in XIAO
7. Create NEW file in Thonny:
 - Go to File > New
 - Copy the ENTIRE code from:
<https://docs.google.com/document/d/1OL66F5jeRezZHWGiAKG3kTB0sCVxnsnMP-vurWVzcCQ/edit> (FILE 1: main.py)
 - Paste it into Thonny
 - Save as "main.py" to the XIAO device
8. XIAO will auto-run firmware when you unplug and replug it!

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STEP 3: RUN THE WEB CONFIGURATOR (NO CODING NEEDED!)

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1. Install Python on your computer:

<https://www.python.org/downloads/>

(Make sure to check "Add Python to PATH" during installation)

2. Open Command Prompt (Windows) or Terminal (Mac/Linux)

3. Go to your Firmware folder:

cd C:\Users\YourUsername\Downloads\Krishs-MicroPad-main\Firmware

4. Install Flask (one-time only):

pip install flask

5. Run the web app:

python app.py

6. You'll see:

"Running on http://127.0.0.1:5000"

7. Open your browser and go to:

http://localhost:5000

8. You'll see the beautiful configurator interface!

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STEP 4: CUSTOMIZE YOUR 6 KEYS

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Now you can customize your keys without touching code!

1. On the web interface, for each key:

- Click "Preset" dropdown to see pre-made options (Copy, Paste, Play, etc.)
- OR type custom shortcuts in the "Custom" box (CTRL+ALT+Delete, etc.)
- See preview in real-time

2. Click "Save Configuration"

3. INSTANTLY your XIAO MicroPad will use the new settings!

(No restart needed - it auto-detects changes)

4. Press your keys on the MicroPad to test them

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STEP 5: VIEW YOUR SETTINGS ON THE OLED DISPLAY

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Your 0.91" OLED will show:

- Top line: Last key pressed (e.g., "ACT: COPY")
- Bottom: Volume level bar (0-100%)

Rotate the volume knob to adjust! It's live.

TROUBLESHOOTING

PROBLEM: "Command not found: pip"

SOLUTION: Python not installed or not in PATH. Reinstall Python and check "Add Python to PATH"

PROBLEM: "ModuleNotFoundError: No module named 'flask'"

SOLUTION: Run: pip install flask

PROBLEM: "Address already in use"

SOLUTION: Flask is already running. Close the old Command Prompt window and try again

PROBLEM: Keys not working

SOLUTION:

- Check config.json has your custom keys
- Unplug and replug XIAO
- Check your key syntax (should be like "CTRL+C" or "A")

PROBLEM: OLED not showing anything

SOLUTION:

- Check OLED wiring (SDA=D4, SCL=D5)
- Check I2C address in main.py matches your OLED (usually 0x3C)

WHAT'S IN EACH FOLDER?

Firmware/

- └── main.py (Upload to XIAO - the brain of your pad)
- └── config.json (Stores your custom keys - auto-updated)
- └── app.py (Run on your computer - starts web interface)
- └── templates/
 - └── index.html (The beautiful web interface)

QUICK START VIDEO STEPS

1. Plug in XIAO → See OLED show "ACT: READY" ✓
 2. Open <http://localhost:5000> ✓
 3. Change Key 1 from "A" to "CTRL+C" ✓
 4. Click Save ✓
 5. Press Key 1 on MicroPad → Your computer copies text ✓
 6. DONE!
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FAQ

Q: Do I need to know coding?

A: No! The web interface does everything. Just dropdown and type.

Q: How do I change keys permanently?

A: The config.json saves automatically. Your settings stay even after restart.

Q: Can I use it offline?

A: Yes! Once configured, the MicroPad works completely offline. Flask is only for setup.

Q: What keys can I use?

A: A-Z, 0-9, F1-F12, CTRL+X, ALT+TAB, MEDIA_PLAY, MUTE, VOLUME_UP, VOLUME_DOWN, and more!

Q: How many keys?

A: Exactly 6 keys. The rotary knob is for volume/special control.

Q: Can I share my config with others?

A: Yes! Share your config.json file. They can drop it in the Firmware/ folder.

NEXT STEPS (ADVANCED - OPTIONAL)

- Add more complex macros (coming soon)
 - Create LED animations on the OLED
 - Custom fonts on the display
 - Save multiple key profiles
 - Export/import settings as backup
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VIDEO TUTORIALS

- CircuitPython Setup: <https://learn.adafruit.com/welcome-to-circuitpython>

- Flask Basics: https://www.youtube.com/results?search_query=flask+tutorial
- MicroPad Demo: (Coming soon - video of it working)

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GET HELP

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GitHub Issues: github.com/Justanormalperson-13/Krishs-MicroPad/issues

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THAT'S IT! YOU'RE DONE!

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Your MicroPad is now fully customizable and ready to use.

Happy hacking! 