

Crypto Arbitrage Bot User Guide

Version 1.0

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1. Introduction

The Crypto Arbitrage Bot is a powerful tool designed to help traders take advantage of price differences between major crypto exchanges. It monitors real-time prices and alerts users when profitable arbitrage opportunities arise.

The **Crypto Arbitrage Bot** is a desktop application designed to help traders identify and act on arbitrage opportunities across multiple cryptocurrency exchanges. By monitoring real-time price differences, transaction fees, and volume, the bot provides actionable insights that enable users to make informed trading decisions quickly and securely.

Unlike traditional trading tools, this bot integrates directly your license account and device, ensuring that access is secure and restricted to the registered user. It also includes built-in alerts, profit calculators, search criteria and customizable thresholds to fit your trading strategy.

Key Features:

- **Real-time arbitrage monitoring** across supported exchanges (e.g., Binance, Bybit, KuCoin, OKX).
- **Profit calculator** with fees and liquidity (volume) considered.
- **Device-bound license activation** for added security.
- **Telegram integration** for instant trade alerts.
- **User-friendly interface** with professional charts, filters, and summaries.
- **License & subscription management**, including reminders before expiry.

2. System Requirements

Before installing the Crypto Arbitrage Bot, ensure your computer meets the following minimum system requirements. Running the bot on systems below these specifications may result in errors, slow performance, or instability.

Operating System

- **Windows 10 or later** (64-bit recommended).
- **MacOS 12+**
- **Linux:** Ubuntu 22.04+/Debian 12/Fedora 39+, glibc 2.35+.
 - *Install the related version to your Operating system.*

Hardware

- **Processor:** Intel i5 / AMD equivalent or higher (multicore recommended).

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- **RAM:** Minimum 8 GB (16 GB recommended for smoother performance).
- **Storage:** At least 500 MB free disk space for installation, logs, and temporary files.
- **Graphics:** Standard integrated graphics sufficient (no GPU required).

Network Requirements

- **Stable internet connection** (minimum 5 Mbps).
- The bot communicates with multiple exchange APIs in real time. A reliable, low-latency connection improves accuracy and speed.
- Ensure **firewall and antivirus settings** allow the bot to connect to the following:
 - Your backend server API (default: `http://127.0.0.1:5001` or production domain).
 - Supported exchange APIs (Binance, KuCoin, Bybit, OKX).
 - Telegram API (for alert messaging).

Software Dependencies

- **Python runtime is bundled** with the executable (if you're using the packaged `.exe`), so no Python installation is required.
- If running from source code:
 - Python 3.10 or later.
 - Required Python libraries (see `requirements.txt`).

License Requirements

- A valid license is required to run the bot.
- The license is **bound to your registered email and device ID** during first activation.
- Ensure your license is active and has not expired.
- The bot will not run if the license is expired, revoked, or used on an unauthorized device.

3. Installation Steps

Follow these steps to download, install, and prepare the Crypto Arbitrage Bot on your computer.

Step 1 – Download the Bot

- Obtain the official installer or packaged executable (`crypto_tracker.exe`) from the project website or distribution link.
- Ensure you are downloading from a trusted source provided by the developer.



☞ [Insert link or instructions for where the user will download from — e.g., your official site or Google Drive.]

Step 2 – Extract Files

- If you received the bot in a **ZIP file**:
 1. Right-click the file and select **Extract All**.
 2. Choose a destination folder (recommended: `C:\CryptoArbitrageBot\`).
- Ensure the following files are present in the folder after extraction:
 - `crypto_tracker.exe` (the main bot)
 - `license.json` (created automatically on first run)
 - `user_profile.json` (template profile file)
 - `excluded_tokens.csv` (optional list of coins to ignore)
 - `alerts_log.txt` (generated automatically when alerts are triggered)
 - `usage_guide.pdf` (this guide)

☞ [Add a screenshot of the extracted folder here]

Step 3 – Check Dependencies

- If you are running the **.exe version**, everything is bundled — no extra setup required.
- If you are running from **source code**:
 1. Install Python 3.10 or later.
 2. Install required packages:

```
pip install -r requirements.txt
```

Step 4 – Configure Firewall/Antivirus

- Allow the bot to communicate with:
 - The backend API (`http://127.0.0.1:5001` or your production domain).
 - Supported exchange APIs (Binance, KuCoin, Bybit, OKX).
 - Telegram API (for alerts).
 - If your antivirus blocks the `.exe`, mark it as safe.
-

Step 5 – Optional Customization

- Edit `user_profile.json` to configure your name, email, Telegram details, and alert threshold. Example:



```
{
  "name": "Your Name",
  "email": "your@email.com",
  "country": "YourCountry",
  "telegram_token": "YOUR_TELEGRAM_BOT_TOKEN",
  "telegram_chat_id": "YOUR_CHAT_ID",
  "telegram_enabled": true,
  "telegram_threshold": 1.3
}
```

☞ [Add a screenshot of the user profile editor UI here]

,

4. License Activation

The bot uses a **secure license system** to ensure only authorized users can run it. During your first run, you will need to **activate your license**.

Step 1 – Launch the Bot

- Double-click `crypto_tracker.exe`.
 - On first launch, the bot will look for `license.json`.
 - If none is found, it will guide you through activation.
-

Step 2 – Enter License Credentials

You will be prompted for:

1. **Email address** (must match the one you registered with).
2. **License key** (received upon purchase/registration).

☞ [Insert screenshot of activation prompt here]

Step 3 – Device Binding

- The bot generates a **device ID** unique to your machine.
- This ID is hashed and sent to the backend, binding your license to this device.

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- ⚠ You cannot share your license across devices. If you try, activation will fail with a “*License bound to another device*” error.

Step 4 – License Validation

- The bot checks your license status (active, expired, revoked).
- If your license is **active and valid**, the bot launches normally.
- If your license is **expired**, you will see a **popup message** guiding you to the renewal page:
 - Example: “*Your license expired on YYYY-MM-DD. Please renew to continue.*”
 - The popup includes a button/link to your **Frontend Login Page** (`registrationP.html`) where you can renew.

☞ [Add screenshot of expired license popup here]

Step 5 – Subscription Reminder

- If your license has **5 days or fewer remaining**, the bot automatically sends you a **Telegram reminder**:
 - Example: “⚠ *Reminder: Your license will expire in 4 days. Please renew to avoid interruption.*”

✓ After successful activation, your license details are saved in `license.json`. From then on:

- Subsequent launches validate automatically.
- No prompts appear unless the license expires or device mismatch occurs.

5. How to Use the Bot

Once your bot is installed and your license is activated, you can begin monitoring arbitrage opportunities. This section explains the key features of the bot’s interface and how to use them effectively.



5.1 Dashboard Overview

When you launch the bot, the main window (dashboard) is displayed. It has several key sections:

1. Toolbar (Top Bar)

- Contains quick access buttons:
 - **Open Log** – Opens `alerts_log.txt` (record of all alerts).
 - **Edit Excluded Tokens** – Opens `excluded_tokens.csv` where you can manage coins to ignore.
 - **Only Arbitrage Checkbox** – When checked, the table shows only records that have profitable opportunities.
- Hovering over buttons highlights them for quick identification.

 *[Insert screenshot of toolbar here]*

2. Filter Bar

- Text box labeled **Filter** (white background).
- Type any coin name or symbol to quickly filter results.
- Works in real time (updates as you type).

3. Arbitrage Opportunities Summary (Main Table)

- Displays live arbitrage opportunities across **Binance, KuCoin, Bybit, and OKX**.
- Rows are color-coded:
 - **Green** = high-profit opportunity.
 - **Yellow** = moderate profit.
 - **Red** = warning/low volume.
- Columns include:
 - **Crypto** (symbol)
 - **Buy Price / Sell Price**
 - **Volume (24h)**
 - **Profit %**
 - **Signal (e.g., Buy on Binance, Sell on OKX)**

 *[Insert screenshot of arbitrage opportunities summary here]*

4. Arbitrage Profit Calculator (Side Frame)

- Lets you test potential profits by simulating an investment.
- Fields include:
 - **Investment Amount** – Enter the USD amount you want to simulate.
 - **Crypto, Buy Price, Sell Price, Volume** – Automatically filled when you select an opportunity.
- Shows detailed results including **Gross Profit, Fees, and Net Profit**.

5.2 Profit Calculator (Popup Window)

The calculator can be accessed by **double-clicking any record in the table**. This opens a detailed popup:

- **If Invested \$X** – Displays your entered investment amount (in yellow).
- **Gross Profit** – Difference between buy and sell multiplied by quantity.
- **Fees** – Breakdown of:
 - Trading Fee (0.2% of investment)
 - Transfer Fee (\$6.80 average between platforms)
- **Net Profit** – Final profit after fees (green if positive, red if negative).
- **Signal** – Clearly shows “Buy on [Exchange A], Sell on [Exchange B]”.
- **Warnings:**
 - If **Net Profit** ≤ 1 , the popup shows “*WARNING: DO NOT DO TRANSACTIONS*” in red.
 - Low-volume tokens (< \$1,000,000 24h) are flagged in red as liquidity risks.

☞ [Insert screenshot of Profit Calculator popup here]

5.3 Alerts

The bot generates alerts when profitable signals are found.

- **In-App Highlighting** – Rows in the summary table update dynamically and change color based on profitability.
- **Alerts Log** – All alerts are written to `alerts_log.txt` with timestamps.
- **Telegram Alerts (Optional)** – If enabled in `user_profile.json`:
 - You will receive instant alerts when profit exceeds your defined threshold.
 - Example message:
 - 📢 Arbitrage Alert!
 - Buy on Bybit @ \$24,000
 - Sell on Binance @ \$24,200
 - Profit: +1.5%
 - If your license is close to expiry (≤ 5 days), Telegram also sends a renewal reminder.

☞ [Insert screenshot of a sample Telegram alert here]

5.4 Excluded Tokens

Some tokens may be too risky, low volume, or irrelevant. You can exclude them:

- Edit the `excluded_tokens.csv` file.
 - Add one token per line (e.g., `DOGE`, `PEPE`, `XYZ`).
 - The bot will ignore these tokens in future scans.
-

5.5 Best Practices

- Always check **volume** before acting on an opportunity. Low liquidity can trap your funds.
 - Use the **Profit Calculator** to see the realistic profit after fees.
 - Start with small investments until you are confident with the system.
 - Review `alerts_log.txt` regularly to analyze past signals.
-

✓ At this point, users know how to navigate the bot, calculate profits, and manage alerts.

6. Telegram Alert Setup

The bot can notify you instantly on **Telegram** whenever a profitable arbitrage signal is found. This feature ensures you don't miss opportunities even if the bot window is minimized.

6.1 Requirements

- A valid Telegram account.
 - The bot's own Telegram Bot Token (created via BotFather).
 - Your personal Telegram **Chat ID**.
-

6.2 Enabling Telegram Alerts

1. Open the file `user_profile.json` (located in the bot's main folder).
2. Edit the following fields:

```
{
  "name": "Your Name",
  "email": "your@email.com",
  "country": "Your Country",
  "telegram_token": "YOUR_BOT_TOKEN_HERE",
  "telegram_chat_id": "YOUR_CHAT_ID_HERE",
  "telegram_enabled": true,
  "telegram_threshold": 1.3
}
```



- **telegram_token:** Paste the token you got from BotFather.
 - **telegram_chat_id:** Paste your chat ID.
 - **telegram_enabled:** Set to `true` to activate.
 - **telegram_threshold:** Minimum profit % required to trigger an alert. Example: 1.3 means alerts only for arbitrage $\geq 1.3\%$.
-

6.3 How to Find Your Chat ID

1. Start a conversation with `@userinfobot` on Telegram.
 2. It will reply with your numeric chat ID.
 3. Copy that number into `user_profile.json`.
-

6.4 Test Your Setup

- Run the bot.
- If configured correctly, you'll receive a **"Bot Started"** test message.
- When opportunities appear, you'll see alerts like:

```
@ Arbitrage Alert!  
Buy on Bybit @ $24,000  
Sell on Binance @ $24,200  
Profit: +1.5%
```

- If your license is expiring in 5 days or less, you will also receive a **renewal reminder** message.

☞ *[Insert screenshot of Telegram alert here]*

7. License & Subscription Management

The bot uses a **subscription-based license system** to prevent unauthorized sharing and ensure only active subscribers can access signals.

7.1 License Activation

- On first installation, the bot prompts for your **Email** and **License Key**.
- It generates a unique **device fingerprint** (hashed Device ID).



- The backend validates:
 - License **exists** for that email.
 - License **is active** (dates valid).
 - License is either **unbound** (first activation) or already bound to the same device.
 - Once validated, the bot starts normally.
-

7.2 Device Binding Rules

- **Strict single-device binding:**
 - On **first activation**, your license is permanently bound to that device.
 - If you reinstall the bot on the same machine, it works normally.
 - If you try to use it on another machine, it will **fail with “device_mismatch”**.
 - This prevents license sharing among multiple users.
-

7.3 Subscription Validity

- Each plan has a set duration:
 - **Monthly** = 30 days
 - **Quarterly** = 90 days
 - **Annual** = 365 days
- During validation, the bot checks:
 - **Start Date** (license cannot be used before it starts).
 - **End Date** (license cannot be used after expiry).
 - **Status** (must be *active*).

If expired, the bot **does not start** and shows a clear popup message:

✗ *Your license has expired. Please renew to continue using the bot.*

A “**Renew License**” button will redirect you to the frontend **login/renewal page**.

7.4 Renewal Process

1. Go to the frontend **renewal page** (e.g., `userp.html`).
2. Log in with your registered email and password.
3. Select a new plan (Monthly, Quarterly, Annual).
4. Complete payment.
5. The backend issues a **new license record** and updates your status to active.



6. Next time you run the bot, it validates the new license and starts normally.

7.5 License Expiry Reminders

- If you have ≤ 5 **days remaining**, the bot automatically sends a **Telegram reminder**:

⚠ Reminder: Your license will expire in 3 days.
Please renew to avoid interruption.
Renew here: http://yourfrontend.com/renew_license

- This ensures users never get locked out unexpectedly.

8. Troubleshooting & FAQs

8.1 Common Errors & Solutions

✖ Error: "User not found"

- **Cause:** The email you entered during activation does not exist in the system.
- **Fix:**
 1. Double-check the email you registered with on the frontend (registration page).
 2. Make sure you have completed the registration process and received confirmation.
 3. If you are sure the email is correct, contact support with your email address.

✖ Error: "Invalid email or password"

- **Cause:** Typo or incorrect credentials when logging in through the frontend.
- **Fix:**
 - Verify your email spelling.
 - Reset your password via the **Forgot Password** option if necessary.

✖ Error: "License not found"

- **Cause:** Your license key is not linked to your account, or it hasn't been issued properly.
- **Fix:**



- Ensure you have purchased/activated a subscription from the frontend.
 - If you just registered, wait a few minutes and try again (license issuance may take a short while).
-

✗ Error: "License expired"

- **Cause:** Your license end date has passed.
 - **Fix:**
 - Renew your subscription via the frontend renewal page.
 - Once renewed, restart the bot; it will validate the new license.
-

✗ Error: "License is already bound to a different device"

- **Cause:** The license was first activated on another machine.
 - **Fix:**
 - Licenses are **strictly single-device bound**. You cannot transfer to another machine.
 - If this is the same machine but you changed hardware (e.g., reinstalled Windows or changed your hard drive), contact support to reissue your license.
-

✗ Error: "Device mismatch"

- **Cause:** The device ID generated by your machine does not match the one stored with your license.
 - **Fix:**
 - Reinstalling the bot on the same machine should still work.
 - Installing on a different machine is not allowed.
-

✗ Error: "Account locked due to too many failed attempts"

- **Cause:** Too many wrong login attempts.
 - **Fix:**
 - Wait the lockout period (default: 15 minutes).
 - Ensure you enter the correct credentials.
-



✗ Error: "Internal server error"

- **Cause:** Backend database or server problem.
 - **Fix:**
 - Try again in a few minutes.
 - If persistent, contact support with your logs.
-

8.2 Frequently Asked Questions (FAQs)

Q1: Can I use the bot on multiple devices?

- **No.** Each license is bound to a single device at first activation. Sharing the license key with others will not work.

Q2: Can I reinstall the bot on the same machine?

- **Yes.** As long as it's the same device, the license will validate normally.

Q3: What happens when my license expires?

- The bot will **not start**.
- A popup will inform you that your license has expired and provide a button to go to the renewal page.

Q4: How do I renew my subscription?

- Log in to the frontend, choose a new plan (Monthly, Quarterly, Annual), and pay. The backend will issue a new license, and the bot will recognize it on the next run.

Q5: Will I get notified before my license expires?

- Yes. If you have Telegram alerts enabled, the bot sends reminders when you have **5 days or less remaining**.

Q6: Can I change my registered email?

- No, your license is tied to the email you registered with. If you need to change, contact support.

Q7: Where are my settings stored?

- In these files inside the bot folder:
 - `license.json` → stores email, license key, device hash.



- `user_profile.json` → stores your profile & Telegram settings.
- `alerts_log.txt` → keeps a history of arbitrage signals.

Q8: What should I do if I stop receiving Telegram alerts?

- Ensure `telegram_enabled` is set to `true` in `user_profile.json`.
- Verify your bot token and chat ID are correct.
- Test sending a manual message using Telegram's Bot API.

📎 [Here you can insert screenshots of error messages, sample JSON files, or the popup window.]

9. Quick Start Walkthrough

Follow these steps to get your Crypto Arbitrage Bot up and running in just a few minutes.

Step 1: Check System Requirements

- Make sure you're on **Windows 10/11** (64-bit recommended).
- Install **Python 3.11+** if you're running the source version.
- Have a stable internet connection.
- Ensure you can access Telegram if you plan to enable alerts.

Step 2: Install the Bot

1. Download the installer (or extract the package folder).
2. Place the bot folder somewhere permanent (e.g., `C:\ArbitrageBot`).
3. The first run will automatically generate required files (like `user_profile.json`).

Step 3: First Run & License Activation

1. Double-click the bot executable (`crypto_tracker.exe`).
2. On first launch, you'll be asked to **enter your registered email and license key**.
 - Your email must match what you used on the website.



- Your license key is provided after subscription or renewal.
 - 3. The bot will generate a **device ID**, bind it to your license, and validate it.
 - If successful, the bot window will open.
 - If not, you'll see a clear error (e.g., *expired license, device mismatch*).
-

Step 4: Basic Configuration

- Open the **User Profile** from the bot's top menu.
 - Update your details (name, email, country, Telegram token & chat ID).
 - Save and restart the bot to apply changes.
-

Step 5: Using the Bot

- The main window shows **arbitrage opportunities** across supported exchanges.
 - Double-click any row to open the **Profit Calculator popup**:
 - Enter your investment amount.
 - See expected gross profit, trading fees, transfer fees, and **net profit**.
 - Red warning appears if net profit $\leq$ \$1.
-

Step 6: Enable Telegram Alerts (Optional)

1. Create a Telegram bot using **BotFather**.
 2. Copy your bot token and chat ID into `user_profile.json`.
 3. Set `"telegram_enabled": true`.
 4. Restart the bot → You'll start receiving live signals on Telegram.
-

Step 7: License Renewal & Expiry

- Licenses expire at the end of your subscription term.
 - **5 days before expiry**, the bot will send you a Telegram reminder.
 - If your license expires:
 - The bot will **not start**.
 - A popup will guide you to the renewal page on the website.
-



Step 8: Logs & History

- All signals are logged in `alerts_log.txt`.
 - Excluded coins (that you don't want alerts for) are managed in `excluded_tokens.csv`.
-

☞ *At this point, you're fully set up. All advanced customization (filters, themes, analytics, etc.) can be explored later.*

9. Contact & Support

We're here to help you get the most out of your Crypto Arbitrage Bot. If you encounter issues, have questions, or want to provide feedback, please use one of the support channels below:

✉ Email Support

For technical issues, account questions, or billing inquiries:

- **Support Email:** info@cryptoarbitra.com
 - Expected response time: **within 24–48 hours (business days)**
-

💬 Telegram Support Channel

Join our official Telegram channel for:

- Quick troubleshooting tips.
- Community discussions.
- Announcements on new features and updates.

☞ *[Insert Telegram group/channel link here]*



Online Resources

- **User Portal:** Log in to manage your license, renew subscriptions, or download updates.
[Register / Login - Crypto Arbitrage](#)
 - **FAQs & Guides:** Visit our online documentation for common issues and tutorials.
[How It Works - Crypto Arbitrage](#)
-

Troubleshooting First

Before reaching out, please check:

- The **Troubleshooting & FAQs** section of this manual.
 - Your internet connection, and license status.
-

License & Security Notes

- Licenses are **strictly device-bound**. Sharing your license key will prevent the bot from working on unauthorized devices.
 - Renew your license **before expiry** to avoid service interruption.
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Disclaimer: This is not financial advice. Do your own research.