

BARON OPS BOT

Range Rush Reversal — Strategy & Complete Setup Guide

Baron Ops Bot is a fully automated SPY 0DTE options trading system built on a single principle: discipline compounds. Most traders fail not because their strategy is wrong, but because emotion overrides logic — they overtrade on losing days, hold losers too long, and abandon winners too early. This bot removes the human element entirely. It scans the market, waits for a confirmed setup, enters with precise sizing based on settled available capital, manages exits automatically, and sends real-time alerts to Telegram on every action. The goal is to compound a small account into a large one through consistent, rules-based execution — one trade at a time.

AT A GLANCE

Asset	SPY 0DTE Options (same-day expiry calls & puts)
Broker	Interactive Brokers via TWS Gateway API
Entry Window	10:00 AM – 2:00 PM ET only
Force Exit	3:45 PM ET — all positions closed regardless of P&L.; Never holds overnight.
Max Trades/Day	3 trades maximum per session
Max Losses/Day	After 2 stop-outs the bot stops scanning for the rest of the day
Daily Stop	If account drops 25% from open — bot shuts down completely for the day
Sizing Basis	AvailableFunds (settled cash only) — prevents rejected orders on cash accounts
Alerts	Real-time Telegram to two phones — signal, entry fill, TP hit, stop, force exit
Orphan Recovery	On restart, bot automatically detects and resumes managing any open positions
Phase 1 Target	\$200 → \$5,000 Phase 2 → \$30,000 Phase 3 activates at \$30k with margin account — 5 trades/day, 15 contracts

CORE STRATEGY — OPENING RANGE BREAKOUT

The bot identifies SPY's Opening Range — the high and low price established in the first 30 minutes of trading (9:30–10:00 AM ET). When price breaks decisively above or below that range with confirmation, the bot enters a 0DTE option in the breakout direction. The thesis: a confirmed range break with momentum tends to follow through, giving the option enough intrinsic value gain to hit take-profit targets before expiration. The opening range must be between 0.25% and 1.25% of SPY's price — too tight means there is no tradeable edge, too wide means the move has already occurred.

FOUR SIGNAL SETUPS

SIMPLE_ORB	Two consecutive 5-minute bars close above (CALL) or below (PUT) the opening range, with VWAP confirming direction. Requires 2-bar confirmation to filter fakeouts. The cleanest, highest-conviction setup.
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MOMO	A momentum bar — a single large-range bar closing strongly in the breakout direction with volume confirmation. Catches explosive moves where waiting for 2 bars would mean missing the entry.
RETEST	Price breaks the opening range, pulls back to test the breakout level from the other side, then resumes in the original direction. Classic breakout-retest-continuation pattern.
REVERSAL	Price initially breaks in one direction, fails to follow through, reverses, and then breaks hard the other way. Catches traders who got trapped on the fake side of the move.

EXIT LOGIC

Stop Loss: -25% of premium paid. The bot monitors the option price every 5 minutes and exits immediately if this level is breached. Example: buy at \$1.28, stop triggers at \$0.96. Caps maximum loss per trade.

TP1 — Take Profit 1: +40% of premium. If only 1 contract, entire position exits at TP1. If 2+ contracts, half exits at TP1 and the remainder runs toward TP2. Example: buy at \$1.28, TP1 at \$1.79.

TP2 — Take Profit 2: +100% of premium. The second half of a 2-contract position exits here, doubling the premium on that portion. Example: buy at \$1.28, TP2 at \$2.56.

Force Exit: 3:45 PM ET every day without exception. The bot closes whatever remains open at market price. 0DTE options expire worthless at 4 PM — this exit prevents total loss from holding too late.

Daily Stop: If the account value drops 25% from the opening NetLiq, the bot stops trading for the rest of the day. Prevents one bad session from destroying significant capital.

PHASE SCALING SYSTEM

Phase	Account Range	Allocation	Max Contracts	Strike Selection	
1a	\$0 – \$500	90%	2 contracts	3 trades/day	ATM/OTM slide
1b	\$500 – \$1,500	90%	3 contracts	3 trades/day	ATM/OTM slide
1c	\$1,500 – \$3,000	90%	5 contracts	3 trades/day	ATM/OTM slide
1d	\$3,000 – \$5,000	90%	7 contracts	3 trades/day	ATM/OTM slide
2	\$5k – \$30k	50%	10 contracts	3 trades/day	ATM only + risk cap
3	\$30k – \$100k	40%	15 contracts	5 trades/day	1 ITM — switch to margin
4	\$100k+	30%	20 contracts	7 trades/day	2 ITM — full institutional

Dynamic Trade Limit: Maximum trades per day scales automatically with account size. Phase 1 and 2 allow 3 trades per day — appropriate for cash accounts where settlement reduces available funds after each trade. Phase 3 (\$30k+) allows 5 trades per day on a margin account where settlement is not an issue. Phase 4 (\$100k+) allows 7 trades per day. No code change is required — the bot reads the account balance at startup and sets the limit automatically.

Phase 3 threshold is \$30,000 not \$25,000: The PDT minimum is \$25k but the bot activates Phase 3 at \$30k to maintain a \$5,000 safety buffer. This prevents accidentally dipping below the PDT threshold after switching to a margin account.

Sliding Contract Scale: Phase 1 uses a sliding cap that grows with the account. This ensures 90% full-port sizing actually means 90% at every balance level. A \$200 account gets max 2 contracts. A \$2,000 account gets max 5. A \$4,000 account gets max 7. Without this, a \$3,000 account buying 2 contracts at \$1.80 is only using 12% of capital — not 90%. The sliding scale fixes this so compounding works correctly all the way to Phase 2.

Phase 2 dual-cap (50% + risk cap): At \$5,000+ the bot applies both a 50% allocation limit AND a per-trade risk cap, taking the lower of the two. This protects a meaningful account while still allowing aggressive growth through larger position sizes.

Dynamic Opening Range Extension: If the 9:30-10:00 AM opening range is too tight (below 0.25%), the bot expands the lookback window in 30-minute steps up to 12:00 PM noon. This captures moves on days where major news (CPI, PCE, FOMC) causes the market to consolidate at open before picking a direction. The 2-bar confirmation filter and 2 PM entry cutoff still apply.

Why AvailableFunds and not NetLiquidation: In a cash account, profits from closed trades do not settle until the next business day (T+1). If the bot sized off total NetLiquidation, it would attempt to spend yesterday's unsettled profits — causing IBKR to reject orders with Status: Inactive. By using AvailableFunds, the bot only trades with cash IBKR has confirmed is immediately available. This is the correct sizing basis for cash accounts and eliminates intraday order rejections.

Daily stop uses NetLiquidation — not AvailableFunds: The daily stop protection compares true account value (NetLiquidation) at open vs now. AvailableFunds drops whenever a position is open — if the daily stop used AvailableFunds it would falsely trigger every time a trade is entered. Two separate functions handle these two jobs — sizing uses AvailableFunds, risk management uses NetLiquidation.

Baron Ops Bot — Confidential

BARON OPS BOT

Complete Setup & Installation Guide — Step by Step

This guide walks through everything required to get the bot running from scratch on a Windows PC. Every step must be completed in order before the bot will function correctly. No technical background is required — each step is explained in full detail.

FILES INCLUDED IN THIS PACKAGE

<code>main_new_full_bot_v2.py</code>	THE MAIN BOT — this is the only file you run every trading day. Contains all signal logic, order management, sizing, exit logic, and Telegram alerts.
<code>backtest_sliding.py</code>	Standalone backtester — runs historical simulations without an IBKR connection. Uses the sliding contract scale that matches the live bot exactly. Use this to understand performance before going live.

WHAT YOU NEED BEFORE STARTING

- Windows 10 or 11 PC — must remain powered on and connected to the internet during all market hours (9 AM – 4 PM ET). Set sleep to Never before running the bot.
- A dedicated bot phone — this is the phone physically near the PC. It handles IBKR 2-factor authentication every morning when Gateway opens, and receives all Telegram trade alerts.
- Your personal phone — receives duplicate Telegram alerts simultaneously so you can monitor trades remotely without being near the bot phone.
- An Interactive Brokers account with options trading enabled. You must be approved for at least Level 2 options (long calls and puts). Call IBKR at 1-877-442-2757 to verify or upgrade your approval level.
- Stable internet connection. The bot communicates with IBKR every 5 minutes. A dropped connection triggers the built-in reconnect loop, but a consistently bad connection will cause issues.

STEP 1 — INSTALL PYTHON

Python is the programming language the bot is written in. You need it installed on the PC before anything else will work.

1. Open a browser and go to: python.org/downloads
2. Download the latest Python 3.10 or newer installer for Windows.
3. Run the installer. On the very first screen you will see a checkbox that says **Add Python to PATH**. Check this box. This step is critical — if you skip it, nothing will work.
4. Click Install Now and wait for it to finish.
5. Open PowerShell (search for it in the Start menu) and type:

```
python --version
```

If installed correctly, you will see: Python 3.11.x or similar. If you see an error, re-run the installer and make sure the PATH checkbox was checked.

STEP 2 — INSTALL REQUIRED PACKAGES

The bot depends on three external Python packages: `ib_insync` (connects to IBKR), `pytz` (handles timezones), and `requests` (sends Telegram messages). Install all three with one command.

Open PowerShell and run:

```
pip install ib_insync==0.9.86 pytz requests
```

Wait for installation to complete. You will see a line that says 'Successfully installed' at the end. If you see any errors, try running PowerShell as Administrator (right-click PowerShell → Run as Administrator) and repeat the command.

STEP 3 — CREATE THE BOT FOLDER AND PLACE FILES

1. On the Desktop, right-click on an empty area → New → Folder
2. Name the folder exactly: `trading_bot` (no spaces, no capitals)
3. Place both bot files inside this folder:

```
main_new_full_bot_v2.py  
backtest_realistic.py
```

The folder path should look like: `C:\Users\YourName\Desktop\trading_bot\`

STEP 4 — INSTALL AND CONFIGURE IBKR TWS GATEWAY

TWS Gateway is Interactive Brokers' lightweight application that allows the bot to connect to your account via API. You must use Gateway specifically — not the full TWS platform.

1. Go to: interactivebrokers.com/en/trading/tws.php
2. Scroll down and download TWS Gateway for Windows.
3. Install and open Gateway.
4. Log in with your IBKR username and password.
5. Complete 2-factor authentication on your dedicated bot phone when prompted.

IBKR GATEWAY — API SETTINGS (required)

After logging in, configure the API settings so the bot can connect:

1. In Gateway, go to: Configure → Settings → API → Settings
2. Check the box: Enable ActiveX and Socket Clients
3. Set the Socket Port based on which account you are trading:

Port 4001	LIVE account — trades with real money. Use this when ready to go live.
Port 4002	PAPER account — simulated trading, no real money. Use this for testing first.

4. Uncheck: Read-Only API — the bot must be able to place and cancel orders.
5. Click OK. Leave Gateway running at all times during market hours. Never close it while the bot is active.

IBKR GATEWAY — ORDER PRESETS (optional cleanup)

Go to Configure → Presets → Options. Under Timing, Time in Force will show DAY — leave it. Uncheck 'Allow order to be activated or filled outside of regular trading hours.' Under Miscellaneous, change Open/Close to blank if the option is available. Click Apply then OK. These settings prevent harmless but noisy warning messages in the bot terminal.

STEP 5 — SET UP TELEGRAM BOT AND ALERTS

The bot sends every action — signal, entry, exit, stop, TP hit, disconnect alert — to Telegram in real time. You need a Telegram bot token and the chat IDs for both phones.

CREATE YOUR TELEGRAM BOT:

1. On your dedicated bot phone, open Telegram and search for @BotFather
2. Type /newbot and follow the prompts. Give your bot a name (example: Baron Ops Bot)
3. BotFather will give you a BOT_TOKEN — it looks like: 123456789:ABCdefGHIjkl... Save this.
4. Open your new bot in Telegram and press Start (or send any message)
5. In a browser, go to this URL (replace YOUR_TOKEN with your actual token):

```
https://api.telegram.org/botYOUR_TOKEN/getUpdates
```

6. In the JSON response, find the section that says "chat" and look for the "id" number. That is your CHAT_ID for the bot phone.

ADD YOUR PERSONAL PHONE AS A SECOND ALERT RECIPIENT:

1. On your personal phone, open Telegram and search for your bot by name
2. Tap the bot and press Start
3. Go to the same getUpdates URL in a browser — a second entry will now appear in the results
4. Find the second 'id' number under 'chat' — that is your personal CHAT_ID_2

No new bot or token is needed. Both phones use the same bot token. Every alert fires to both simultaneously.

STEP 6 — CONFIGURE THE BOT FILE

Open main_new_full_bot_v2.py in Notepad. To do this: right-click the file → Open with → Notepad. Find the configuration section at the very top of the file and update these four lines:

```
BOT_TOKEN = "YOUR_TELEGRAM_BOT_TOKEN_HERE" CHAT_ID = "YOUR_BOT_PHONE_CHAT_ID_HERE" CHAT_ID_2 =  
"YOUR_PERSONAL_PHONE_CHAT_ID_HERE" IB_PORT = 4001 # 4001 for live trading | 4002 for paper trading
```

Replace each placeholder with your actual values. The chat IDs are numbers only — no letters, no quotation marks inside the quotes, no spaces. Save the file with Ctrl+S and close Notepad.

STEP 7 — CONFIGURE YOUR PC FOR UNATTENDED OPERATION

Prevent sleep: Go to Windows Settings → System → Power and Sleep. Set both 'Screen' and 'Sleep' dropdowns to Never. If the PC sleeps, the bot disconnects.

Remote access via AnyDesk: Install AnyDesk on both the PC and your phone. This lets you view the bot terminal, restart the bot, or update the code from anywhere without being physically present. Write down the AnyDesk ID and password for the PC.

Keep Gateway open: IBKR Gateway must remain logged in and running at all times while the bot is active. If Gateway closes, the bot will enter its reconnect loop and send a Telegram disconnect alert.

STEP 8 — RUN THE BOT EVERY TRADING DAY

Follow this exact sequence every morning:

1. Open IBKR Gateway on the PC and log in. Complete 2FA on the bot phone when prompted.
2. Open PowerShell on the PC.
3. Navigate to the trading bot folder by typing:

```
cd C:\Users\YourName\Desktop\trading_bot
```

4. Start the bot:

```
python main_new_full_bot_v2.py
```

5. Within seconds you should see 'Connecting to IBKR... Connected.' in the terminal.

6. A Telegram message arrives on both phones confirming startup with your current NetLiq and Phase.

7. Leave PowerShell open and running. Do not minimize or close it. The bot runs until 3:45 PM or until you stop it.

HOW TO STOP THE BOT

Press Ctrl + C in the PowerShell window. The bot stops immediately and cleanly. No background processes continue running. If you need to stop remotely, use AnyDesk to access the PC and press Ctrl + C.

RESTART RECOVERY — FULLY AUTOMATIC

If the bot is stopped mid-day and restarted for any reason — disconnect, code update, manual stop — it performs a complete session recovery before doing anything else. This recovery has two parts:

PART 1 — DAILY STATE RECOVERY (trade count and loss count)

The bot pulls today's full execution history from IBKR and reconstructs how many trades were entered and how many resulted in a stop-loss exit. These counts are loaded into the bot's memory before any signal scanning begins. This means the bot correctly enforces all risk limits even after a restart. For example: if 2 trades were already placed and 1 was a stop-out, the bot restarts knowing it has 1 trade remaining and 1 loss already counted — not a clean slate. Both Telegram phones receive a SESSION RECOVERY alert showing the restored trade and loss counts.

PART 2 — ORPHAN POSITION RECOVERY (open position management)

After restoring the daily state, the bot scans the IBKR account for any open SPY option positions from the previous session. If found, it immediately resumes managing the position with full stop loss and take profit logic, reconstructing the exit levels from the average fill cost. The orphan is counted as a trade for the day. Only after the orphan position is fully closed does the bot resume normal signal scanning. This prevents the scenario where a restarted bot ignores an open position and lets it approach expiration unmanaged.

On detection, both phones receive: 'ORPHAN POSITION DETECTED — Resuming management' with contract details, current price, and reconstructed stop/TP levels.

Combined effect: A mid-day restart is seamless. Trade limits, loss limits, and open positions are all correctly restored. The bot picks up exactly where it left off as if it never stopped.

SIGNAL ALERTS WHEN NOT TRADING

The bot continues scanning for signals even when it cannot trade — either because the daily max trade limit has been reached or because available funds are too low to size a position. When a valid signal fires in either situation, both Telegram phones receive a full alert including setup, direction, strike, premium, and estimated stop/TP levels. This allows the account holder to take the trade manually if desired, or simply stay informed about market conditions. The bot never goes silent — it is always watching and always reporting.

COMMON ISSUES & FIXES

Error 201 — Order Rejected

IBKR requires security verification before allowing API options orders on a new account. Call IBKR at 1-877-442-2757 and say: 'My options orders via API are being rejected with Error 201 — I need the security verification cleared.' This takes approximately 5 minutes and only needs to be done once.

Status: Inactive — Order Blocked

This occurs when the bot attempts to spend unsettled funds from yesterday's trades. The bot uses AvailableFunds (settled cash only) for sizing, which should prevent this. If it occurs anyway, wait until the next trading day when all funds settle. Do not add money mid-session as a workaround.

Error 10349 — TIF Override

A harmless IBKR notification indicating the Gateway order preset applied a DAY time-in-force. Orders still execute normally. This is purely cosmetic and does not affect performance.

Bot shows 'Range out of bounds'

SPY's opening range is either too tight (below 0.25% of price) or too wide (above 1.25%). The bot correctly refuses to trade on these days as there is no reliable edge. This is normal behavior on low-volatility or news-driven open days.

Bot not connecting to IBKR

Ensure IBKR Gateway is open, logged in, and that the port in the bot file matches Gateway's configured port (4001 for live, 4002 for paper). Also verify API is enabled in Gateway settings.

Telegram not receiving messages

Verify BOT_TOKEN, CHAT_ID, and CHAT_ID_2 are correct in the bot file. Test manually by pasting this in a browser:
https://api.telegram.org/botYOUR_TOKEN/sendMessage?chat_id=YOUR_CHAT_ID&text=test

Bot fired signals but no trades placed

Check the terminal for 'ENTRY REJECTED' messages. If present, this is an IBKR permissions or buying power issue. Review the Status field in the rejection message and refer to the Error 201 or Inactive fixes above.

IBKR Support: 1-877-442-2757 | Monday through Friday, 8:00 AM – 8:00 PM ET When calling, have your account number ready. Ask specifically for the API Trading support team for fastest resolution of order rejection issues.