alpha·desk

Complete User Guide · The Alpha Loop

Five agents argue, one decision.

1 · What is The Alpha Loop?

alphadesk is an AI-powered trading analysis system built on a 5-layer pipeline inspired by academic research from UCLA and MIT. It automates the entire investment decision-making process — from raw data to a final trade proposal — in under 15 seconds.

The term alpha in finance means returns above the market benchmark. The Alpha Loop is the cycle that hunts for, validates, and risk-checks those opportunities before presenting a conviction verdict.

Layer	Name	What It Does
1	Alpha Generators	4 agents scan for signals: Technical, Fundamental, News & Sentiment, SEC Filings
2	Backtest Engine	Validates the signal through 6-12 months of historical data
3	Execution Desk	Entry price, ATR-based stop-loss, profit target, risk/reward ratio
4	Risk Oversight	8 hard safety gates — any failure rejects the trade
5	Performance & Attribution	Final conviction thesis, bull/bear debate, P&L projection, PDF export

2 · The Simulated Portfolio

A paper-trading account that starts with $100,000 cash and tracks all approved positions as if they were real. No real money. No broker connection. Every approved trade fills automatically.

Why it matters:

- The Risk Officer reads your portfolio in real time — subsequent analyses see existing positions.
- If you are already 40% in Technology, a new NVDA trade will be sized down automatically.
- VaR, drawdown, and sector exposure all update after each fill.
- Each cycle gets a personalized risk assessment, not a generic one.

Metric	Meaning
NAV	Net Asset Value = cash + all positions at today's price
Cash	Uninvested dollars remaining
Exposure	% of portfolio deployed into positions
VaR (95%)	Maximum expected 1-day loss at 95% confidence
Drawdown	Current loss from the portfolio's all-time peak (%)

Click RESET in the Simulated Portfolio panel to clear all positions and return to $100,000 cash.

3 · Step-by-Step Workflow

Step 1 — Pick a Ticker

Type any ticker symbol into the input field, or click a quick-select button. Free tickers (SPY, BTC-USD) require no license. All others require Tier 1 or Tier 2 activation.

Step 2 — Check the Macro Filter

The banner at the top shows current market conditions. VIX below 20 is CALM (green). VIX 20-30 is ELEVATED (yellow). VIX above 30 is STRESSED (red) and may block high-risk trades.

Step 3 — Select Your Mode

Operational (Tier 1, $19/mo) runs fast deterministic analysis. Strategic (Tier 2, $49/mo) adds a live AI debate and 3-personality risk review. Already subscribed? Paste your license key in the modal and click ACTIVATE.

Step 4 — Watch the Pipeline

Each of the 5 layers lights up in sequence. If the cycle stops early, Risk Oversight rejected the trade — expand that layer card to see which gate failed.

Step 5 — Read the Verdict

The decision banner shows the conviction level (NO EDGE → STRONG CONVICTION), the side (BULL / BEAR / NEUTRAL), entry price, stop-loss, profit target, and risk/reward ratio.

Step 6 — Check Data Sources

Below the verdict, each data source shows its provider (TWELVEDATA / YFINANCE), freshness (e.g. 'asof 12s ago'), and status (green OK or red ERR).

Step 7 — Export the PDF

Click PDF REPORT to download a full 3-page report with executive summary, full layer reasoning, and historical backtest statistics.

---

4 · Understanding Each Layer

Layer 1 — Alpha Generators

Four agents independently score the ticker from 0.0 (strong bear) to 1.0 (strong bull). A combined score above 0.63 is required to proceed.

Agent	Signals Used	Edge
Technical	RSI, MACD, Bollinger, EMA, ADX, Stochastic, VWAP, Donchian	Trend + momentum
Fundamental	P/E, P/S, EPS growth, margins, debt/equity	Valuation quality
News/Sentiment	Headlines, Reddit posts, sentiment polarity	Market narrative
SEC Filings	Insider buys/sells, 8-K filings, earnings guidance	Institutional moves

Layer 2 — Backtest Engine

The signal from Layer 1 is replayed through 6-12 months of historical daily data. Key outputs: win rate (must exceed 52%), Sharpe ratio, and maximum drawdown. A win rate below 52% downgrades conviction; below 50% flags the trade as NO EDGE.

Layer 3 — Execution Desk (ATR Stop Protocol)

Entry mechanics are calculated using the 14-day Average True Range (ATR), which scales stops to the stock's actual volatility:

```
Entry = current price
Stop Loss = Entry − (2 × ATR)
Profit Target = Entry + (4 × ATR)
Risk/Reward = 4 ÷ 2 = 2.0 (minimum required: 1.5)
```

Layer 4 — Risk Oversight

Eight hard gates are checked. Any single failure rejects the trade — no exceptions.

Gate	Rule	Result if Failed
Earnings Calendar	Block trades within 24h of earnings	BLOCKED
VIX Spike	Block if VIX > 30	BLOCKED
Portfolio Capacity	Max VaR per cycle within policy	BLOCKED
Sector Concentration	Max 35% per sector	SIZE DOWN
Position Size	Max 25% per single position	CAPPED
Liquidity	Avg daily volume > 100M shares	SIZE DOWN
Drawdown Limit	Portfolio drawdown < 10%	BLOCKED
Liquidity Score	Can exit all positions in 1 day	WARN

Layer 5 — Performance & Attribution

The final layer writes the complete verdict: bull thesis, bear thesis, conviction level tied to historical win rate, expected P&L; if the target is hit versus if the stop is hit, and which data sources drove the decision.

5 · Modes: Operational vs Strategic

Feature	Operational (Tier 1)	Strategic (Tier 2)
Technical indicators	✓	✓
Backtesting	✓	✓
Entry / Stop / Target	✓	✓
8 risk gates	✓	✓
PDF export	✓	✓
AI bull/bear debate	—	✓
3-personality risk review	—	✓
Evidence-cited arguments	—	✓
Historical win rate display	—	✓
Speed	~5 sec	~10-15 sec
Monthly price	$19/mo	$49/mo

Use Operational for fast daily screening. Use Strategic before placing a trade you want high confidence in.

6 · Common Questions

Q: The spinner keeps going and never finishes.

A: Refresh the page and try again. If it persists, check the server logs for errors. A common cause is a data source timeout.

Q: 'Earnings <24h — position blocked' — can I override it?

A: No. Post-earnings moves are 2-3× normal volatility and unpredictable in direction. This is a hard circuit breaker. Wait for earnings to pass, then re-run.

Q: My trade was 'sized down to 50%' — what does that mean?

A: Risk Oversight approved the trade but found a constraint (sector overweight, elevated VIX, recent drawdown). The system cut position size in half to stay within policy.

Q: Can I connect this to my real broker?

A: Not yet. alphadesk is a research tool. Copy Entry, Stop, and Target values into your broker's order screen manually.

Q: What does 'No fundamentals data found for SPY' mean?

A: ETFs don't have earnings or P/E ratios. The fundamental agent is skipped automatically. All other layers run normally.

Q: What is a good Risk/Reward ratio?

A: The system requires a minimum of 1.5:1. A ratio of 2:1 or higher is ideal — it means you only need to be right 40% of the time to break even.

Q: How do I reset the simulated portfolio?

A: Click the RESET button in the Simulated Portfolio panel. This returns cash to $100,000 and clears all positions instantly.

alphadesk v2 · The Alpha Loop · AI Hedge Fund · alphadesk.finance