

Nifty 50 Options Intraday Strategy

We propose two complementary algorithms – a **Quick-Scalping** engine (Logic A) and a **High-Conviction** engine (Logic B) – each using the available data streams (price, volume/VWAP, momentum, moving averages, PCR/OI, option Greeks) to identify high-probability entries. In both, entries are timed to strong intraday moves, and risk is controlled by tight stops and profit-protection rules.

Logic A: Quick Scalping

- **Market State Filter:** Trade only when the index shows a clear short-term bias. For example, require a rising ADX above ~25 (strong trend) or a clear short-term MA alignment (e.g. fast $SMA(5) > SMA(8) > SMA(13)$) ¹ ² . In a confirmed trend, a scalper can capture small counter-moves back toward a mean (VWAP or short MA) before resumption.
- **Entry Conditions (Long Call example):**
 - **Pullback into Value:** Spot/futures price briefly dips to or below the VWAP (or a short moving average) on higher volume. VWAP serves as a dynamic fair-value pivot ³ .
 - **Momentum Thrust:** On that pullback, a momentum indicator (e.g. RSI rising from oversold or MACD turning up) indicates buying pressure ⁴ . A very short-time chart (e.g. 1–5 min) shows a bullish candle with above-average volume.
 - **Sentiment/OI Confirmation (optional):** Ideally, overall sentiment aligns: for example, a relatively low PCR (calls > puts) suggests bullish bias ⁵ , or rising call open interest with rising index (bullish conviction) ⁶ .
- **Option Selection:** Buy an **ATM call** (or slightly ITM) with high gamma and delta, to exploit the move. Keep position size small (given ₹10k capital, typically 1 lot).
- **Entry (Short Put):** Mirror the above on the downside (price spikes above VWAP on pullback, RSI/MACD turning down, PCR high, rising put-OI).
- **Execution:** These trades are very short-duration (seconds to a few minutes). Because price moves are small, tight profit targets are used (few points). A trigger can be the price moving one tick above/below the pullback extreme on confirming volume.

Logic B: High-Conviction

- **Market State Filter:** Trade only when multi-factor confirmation of a strong intraday trend exists. For example, require $ADX > 25$ ¹ and a longer MA alignment (e.g. 50EMA above 200EMA) to signal a broad trend. Also avoid trading during obvious range or choppy periods.
- **Entry Conditions (Long Call example):**
 - **Trend Confirmation:** Ensure the index is in a clear up-swing. Price is above VWAP, short MA above long MA, and momentum (RSI/MACD) in upcycle.
 - **Key Trigger:** Look for a breakout above a consolidation zone or key level (e.g. previous swing high or heavy call-OI “wall” ⁷) **confirmed by rising ADX** ⁸ . One may wait for a pullback then a fresh break above it on above-average volume.
 - **Sentiment/OI Alignment:** Confirm that option markets back the move. For example, PCR should be relatively low (<0.7) indicating bullish lean ⁵ , and open interest patterns should show new call buying (rising call-OI with rising price) ⁶ . This weeds out false breaks.
- **Option and Trade Setup:** Enter by buying an **ITM or ATM call** (weekly expiry) to get strong delta. Because this is high-conviction, one can allow slightly wider stops and target a larger move than

in scalping. One might use one lot or split into two lots, taking partial profits on the first target and trailing the rest (see below).

- **Entry (Short Put):** Likewise for bearish setups (breakdown below support with confirming PCR/OI and ADX).

Note: Logic B uses tighter filters than A (e.g. multi-timeframe MA alignment plus PCR/OI). Consequently it trades less frequently but aims for higher win rate and larger per-trade gains.

Market State Filter: Trending vs Sideways

We explicitly **screen for trend strength** before taking any trade. A common metric is the ADX (Average Directional Index): readings above ~25–30 signify a strong trend, while ADX below 25 implies a weak or sideways market ¹. (In backtesting, strategies often switch off if $ADX < 25$.) Alternatively, one can use moving-average ribbons or volatility: e.g. if short MAs are crossing frequently and price is whipsawing around VWAP, treat as range-bound. In sideways conditions, skip breakouts and only take very short scalps (Logic A) if any.

Risk Management

- **Stop-Loss:** Use **dynamic stops** rather than a fixed percentage. For example, apply an ATR-based stop: if long, set stop \approx (entry – $X \cdot ATR$), if short (entry + $X \cdot ATR$) ⁹. Rayner Teo recommends multiplying ATR by 2–3 for intraday stops to adapt to current volatility ⁹. Alternately, trail the stop on a short-period moving average (e.g. 20-period MA) ¹⁰ – exit when price closes beyond that MA. In any case, stops should be no looser than a few points (given small capital) and should account for the Nifty’s typical 1–2 min volatility.
- **Profit Protection:** As soon as a trade is in profit, raise the stop to lock gains. Two common approaches are:
 - **Trailing Stop:** Convert your fixed stop into a trailing stop (e.g. move it up by $1 \cdot ATR$ as price rises) ⁹. For strong trends, one may trail the stop just below the last swing low (for longs) or above the last swing high (for shorts) ⁹.
 - **Partial Profit Taking:** Take off a portion (say 50%) at the first profit target and let the rest run. Rayner advises selling about half the position at a pre-set target, then trailing the remainder for bigger swings ¹¹ ¹². For example, exit half at +0.5–1% gain, move stop to breakeven on remainder, and then trail by ATR or MA. This locks in some profit while allowing capture of larger moves.
- **Time or Stagnation Exit:** If an open position shows no progress, exit to protect capital. A possible rule: if the trade neither hits stop nor target within N minutes (e.g. 10–15 min for scalps, 30+ min for high-conviction), close it. Similarly, one might exit any remaining intraday position well before market close (e.g. by 3:15 PM) to avoid end-of-day volatility. This “time-stop” prevents capital from being tied up in a stale trade. (Many systematic traders build in an EOD exit as a catch-all ¹³.)

Each trade should risk only a small fraction of capital. With ₹10,000, trades should be tiny (e.g. 1 lot of Nifty weekly ATM/ITM, which costs \approx ₹10–15k). We suggest risking only ~1–2% of capital on any loss. Combined with tight stops and small position sizing, this conserves capital while aiming for a high win-rate (essential for small accounts).

Sources

This design draws on standard scalping and trend-following principles: scalpers use short-term indicators (moving averages, RSI/MACD) to catch brief momentum bursts ⁴ and treat VWAP as an intraday pivot ³. The ADX indicator is a well-known filter for trending markets ¹. Option-market signals (PCR and OI) provide additional confirmation of overall bias ⁵ ⁶. For risk control, volatility-based stops (e.g. ATR) and trailing-stop techniques are widely recommended ⁹ ¹¹. All elements are geared to 1-second tick data and fast execution.

¹ ⁸ Rob Booker ADX Breakout: Entry Signals

<https://www.luxalgo.com/blog/rob-booker-adx-breakout-entry-signals/>

² ⁴ Top Trading Strategies for Scalping

<https://www.investopedia.com/articles/active-trading/012815/top-technical-indicators-scalping-trading-strategy.asp>

³ Volume-Weighted Average Price (VWAP): Definition and Calculation

<https://www.investopedia.com/terms/v/vwap.asp>

⁵ Put-Call Ratio Meaning and How to Use It to Gauge Market Sentiment

<https://www.investopedia.com/ask/answers/06/putcallratio.asp>

⁶ ⁷ Call vs Put Open Interest Explained

<https://www.stockgro.club/blogs/futures-and-options/call-vs-put-open-interest/>

⁹ ¹⁰ ¹¹ ¹² How to Use Trailing Stop Loss (5 Powerful Techniques That Work)

<https://www.tradingwithrayner.com/trailing-stop-loss/>

¹³ Ideal Trades as Targets for Strategy Development : Adaptrade Software

<http://www.adaptrade.com/Newsletter/NL-IdealTrades.htm>