# GER30 UK-Time Trading Strategy

## JavaScript API Implementation – Final Functional Specification

Functional Specification: JavaScript-Based Trading Platform (GER30 Index)

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PROJECT OVERVIEW

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This application automates a trading strategy for the DAX 30 index (GER30) via the IG.com REST API using JavaScript/Node.js. It mirrors the exact logic defined in the MQL4 implementation ("codex\_v1\_1.mq4") and strategy brief ("stuart\_strategy\_final.docx"). The system manages trades based on UK trading sessions, price zones, retraction logic, and strict entry/exit rules with guaranteed stop-loss enforcement.

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CORE FUNCTIONALITY

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1. SESSION MANAGEMENT

**- Two sessions per day:**

\* Session 1: 08:00–12:30 UK time

\* Session 2: 14:30–17:16 UK time

- Track open price at session start.

- Track dynamic session high and low from first tick until session end.

- One only trade at a time can be open (all times).

2. ENTRY RULES

**- Entry Zones defined relative to session open price:**

**Session 1:**

08:16–09:05 (45 pts), 09:30–09:45 (45 pts), 10:15–10:45 (70 pts),

10:45–11:45 (45 pts)

**Session 2:**

14:46–15:06 (45 pts), 15:15–15:45 (70 pts), 15:45–16:48 (45 pts)

**- Trades must:**

\* Be 45+ points from session open.

\* Use opposite direction from price movement.

\* Be adjusted for tolerance (9 pts) and retraction logic.

\* Open hedge position to close out trade if moves 40 points against direction (10 retries allowed).

\* Carry a 42 index point guaranteed stop-loss (GSL). Max cost of GSL must not exceed 6 points.

\* Trade must be skipped if GSL cannot be placed.

3. TOLERANCE & RETRACTION HANDLING

- Tolerance: 9 points. Allows a breach but not closer to open.

**- Retraction tiers:**

\* 15–29.9 pts → Entry adjusted 18 pts beyond session H/L.

\* 30–35.9 pts → Advance to next level.

\* 36–45.9 pts → Skip next level.

\* 46+ pts → Cancel all future trades (if no trade is open).

**- Recursive handling:**

\* Recheck breach and retraction each time to determine furthest valid entry.

4. EXIT RULES

**- Level 45–69.9:**

\* Close at breakeven if 15 pts adverse and price returns.

\* Else, close at start of 16th minute from peak opposite to trade.

**- Level 70–139:**

\* Close at start of 31st minute from peak opposite to trade.

**- Special rule:**

\* If opened 08:16–09:05, and trade goes 15 against → close at 09:31.

\* All 70+ trades → force close at 09:31.

- 40-point SL always enforced, backed by hedge retry logic and fallback to GSL.

5. VOLATILITY FILTERS

**- No trades if:**

\* 17:16–08:00 next day shows 200+ pt move (cancels Session 1).

\* 12:00–14:30 shows 150+ pt move (cancels Session 2).

**- Sweeps: Every 1 minute check:**

\* 1231–1429 and 1716–0759 → close all trades.

\* Price > 179 pts from session open → close all trades.

6. RISK MANAGEMENT

- Lot size = AccountBalance / 800.

- One trade per session maximum.

7. ERROR HANDLING

- Retry trade open/close up to 10 times.

- If close fails at 40-point SL, attempt hedge trade.

- If hedge fails, fallback to GSL with max cost 6 points.

8. DYNAMIC SPREAD ADJUSTMENT

**- Spread reference:**

01:15–08:00 = 4.0 pts

08:00–09:00 = 2.0 pts

09:00–17:30 = 1.2 pts

17:30–22:00 = 2.0 pts

22:00–01:15 = 5.0 pts

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CONFIGURATION OPTIONS

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**Editable via .txt or .json:**

- Active trading zone times and point distances

- Tolerance (default: 9 pts)

- Retraction tiers and values

- Closing minute rules per level

- Session times

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LOGGING AND BACKTEST SUPPORT

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**- Every trade will log:**

\* Session

\* Entry time

\* Entry level

\* Direction

\* Stop-loss level

\* Closing rule used

\* Exit time

\* Result (points)

- Trade logic will support Python-based backtesting with 1-minute bars.

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ENVIRONMENT & INTEGRATIONS

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- IG API integration via Node.js (preferred library: wagerfield/ig-api)

- Authentication managed with API key, username, password

--Username: javascript\_api

--Password: Newzealand6

--API Key: d9e432394ff4ad5de9b061b35e927a2983bc1569

- Hosted on VPS (UK server recommended for latency)

- Optional GUI/web dashboard

- Optional Excel-based live tracking (RTD), not used for backtesting

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STATUS

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Strategy logic confirmed in MQL4 script and translated for JS implementation.

**Next steps:**

- Modularize strategy into JS backend

- Connect IG API endpoints

- Implement logging + test with 2024 DAX data