

TWS Options Trading App - User Guide

Overview

This Electron application provides a user-friendly interface for trading options through Interactive Brokers TWS (Trader Workstation) or IB Gateway. The app supports placing market orders, viewing positions, and managing your portfolio.

Features

1. Connection Management

- Connect to TWS/IB Gateway with custom host, port, and client ID
- Automatic connection status monitoring
- Clean disconnect functionality

2. Options Trading

- **Place Market Orders:** Buy or sell options contracts with market orders
- **Order Parameters:**
 - Symbol: Stock ticker symbol (e.g., AAPL, TSLA, SPY)
 - Quantity: Number of option contracts
 - Expiry Date: Option expiration date (defaults to today)
 - Strike Price: Option strike price
 - Type: Call or Put option

3. Positions Management

- **Real-time Position Tracking:** View all your current positions
- **Position Details:**
 - Symbol with contract details
 - Position size (positive for long, negative for short)
 - Average cost per contract
 - Current market value
 - Unrealized P&L (profit/loss)
- **Quick Close:** Close any position with a single click
- **Auto-refresh:** Positions update automatically every 5 seconds

4. Portfolio Balance

- Real-time account balance display in the header
- Shows net liquidation value
- Updates automatically with positions

How to Use

Initial Setup

1. Ensure TWS or IB Gateway is running

2. Enable API connections in TWS/Gateway settings:
 - In TWS: Edit → Global Configuration → API → Settings
 - Enable “Enable ActiveX and Socket Clients”
 - Note the Socket port (default: 7496 for paper trading)

Connecting to TWS

1. Enter your connection details:
 - **Host:** Usually `127.0.0.1` for local connection
 - **Port:**
 - `7496` for TWS paper trading
 - `7497` for TWS live trading
 - `4001` for IB Gateway paper trading
 - `4002` for IB Gateway live trading
 - **Client ID:** Any number (default: 1)
2. Click **Connect**
3. Wait for the “Successfully connected” message
4. Trading and positions sections will appear automatically

Placing an Options Order

1. After connecting, scroll to the “Place Options Order” section
2. Fill in the order details:
 - **Symbol:** Enter the stock ticker (e.g., AAPL)
 - **Quantity:** Enter number of contracts (minimum 1)
 - **Expiry Date:** Select the option expiration date
 - **Strike Price:** Enter the strike price (e.g., 150.00)
 - **Type:** Select Call or Put
3. Click **Buy Market Order** to go long or **Sell Market Order** to go short
4. Wait for order confirmation
5. Your positions will automatically update

Managing Positions

1. View your positions in the “Current Positions” table
2. Each position shows:
 - Full contract details (symbol, expiry, strike, type)
 - Position size
 - Average cost
 - Current market value
 - Unrealized P&L (green for profit, red for loss)
3. To close a position:
 - Click the **Close** button in the Action column
 - Confirm the closure
 - Position will be closed with a market order

Disconnecting

1. Click the **Disconnect** button
2. All trading functionality will be disabled
3. Python bridge will disconnect from TWS

Technical Details

Architecture

- **Frontend:** Electron + HTML/CSS/JavaScript
- **Backend:** Python bridge using `ib_insync` (preferred) or `ibapi`
- **Communication:** IPC (Inter-Process Communication) between Electron and Python

Files Modified

- `index.html` : Added trading UI and positions table
- `styles.css` : Styled all new components
- `renderer.js` : Implemented trading logic and UI handlers
- `tws_bridge.py` : Added options trading functionality
- `main.js` : Added IPC handlers for trading operations
- `preload.js` : Exposed new API methods

Python Dependencies

The app requires either:

- `ib_insync` (recommended): `pip install ib_insync`
- OR `ibapi` (fallback): `pip install ibapi`

Auto-refresh

When connected, the app automatically refreshes:

- Positions: Every 5 seconds
- Balance: Every 5 seconds

Important Notes

⚠ Risk Warning: This is a trading application. Always test with paper trading accounts first before using with live accounts.

⚠ Market Orders: This app uses market orders which execute immediately at the best available price. Be cautious with illiquid options.

⚠ Options Multiplier: Remember that each option contract represents 100 shares of the underlying stock.

⚠ Connection: Keep TWS/IB Gateway running throughout your session. If disconnected, reconnect using the Connect button.

Troubleshooting

Connection Issues

- Ensure TWS/Gateway is running
- Check that API connections are enabled
- Verify the correct port number
- Try a different Client ID if “Already connected” error occurs

Orders Not Executing

- Verify you have sufficient buying power

- Check that the option contract exists (valid expiry and strike)
- Ensure market is open (or use paper trading)

Positions Not Showing

- Wait a few seconds after connecting
- Click the Refresh button
- Check Python console for error messages

Balance Shows \$0

- Wait for account data to load
- Ensure you're connected to the correct account
- Check TWS/Gateway is properly logged in

Support

For issues related to:

- TWS/Gateway setup: Contact Interactive Brokers support
- App functionality: Check the logs in the Electron dev console

Version

Options Trading Version: 1.0.0

Last Updated: November 2025