

# Hover Breakout Optimization

## Default Parameters

Lookback: 8  
Range Threshold (pips): 10  
Stop Loss (pips): 15  
Take Profit (pips): 30  
Hold Period (bars): 4  
Spread (pips): 2  
Risk Per Trade: 0.01  
Initial Equity: 10000.0

## Parameter Grid Tested

Lookback: [2, 6, 8, 12]  
Range Threshold (pips): [10, 40, 80, 150]  
Stop Loss (pips): [3, 9, 15, 30]  
Take Profit (pips): [10, 30, 60, 120]  
Hold Period (bars): [6, 12, 20, 30]  
Risk Per Trade: [0.005, 0.01, 0.02, 0.05]

## Top 50 Results

- 1) Final Equity: 6216105130950582957814980382983769222469910528.00, Max DD: -59.19%, Expectancy: 3.02%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0
- 2) Final Equity: 6159578921965205439963387723252741787128692736.00, Max DD: -59.19%, Expectancy: 3.01%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0
- 3) Final Equity: 3260080132053177745230029766862017119878381568.00, Max DD: -65.01%, Expectancy: 3.11%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0
- 4) Final Equity: 2621245691261583380591744500484023389207396352.00, Max DD: -65.01%, Expectancy: 3.11%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0
- 5) Final Equity: 1903746565937768882608925003484840715863719936.00, Max DD: -73.31%, Expectancy: 3.08%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0
- 6) Final Equity: 1886434829090592190813566310157608483257581568.00, Max DD: -73.31%, Expectancy: 3.07%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

7) Final Equity: 282825212364297458687486968549942335914377216.00, Max DD: -65.01%, Expectancy: 3.07%

Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

8) Final Equity: 213979751245716258566054398647760800123453440.00, Max DD: -65.01%, Expectancy: 3.06%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

9) Final Equity: 12601207981449357260138520558088491458625536.00, Max DD: -65.01%, Expectancy: 3.03%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

10) Final Equity: 9086234804696331065147256821472341117632512.00, Max DD: -59.19%, Expectancy: 2.91%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

11) Final Equity: 8014607879344599309201391956678321505304576.00, Max DD: -95.39%, Expectancy: 2.98%

Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

12) Final Equity: 7941726969131545418520546424778335398658048.00, Max DD: -95.39%, Expectancy: 2.97%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

13) Final Equity: 2988525664337992613102527546872000784891904.00, Max DD: -73.31%, Expectancy: 2.98%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

14) Final Equity: 1916018059117107754158576209753633753923584.00, Max DD: -90.85%, Expectancy: 2.97%

Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

15) Final Equity: 1898594731334220926115140780192200468201472.00, Max DD: -90.85%, Expectancy: 2.97%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

16) Final Equity: 1859057468949030360608586988517910024028160.00, Max DD: -77.82%, Expectancy: 3.08%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

17) Final Equity: 1677010122591961310581529427572168633352192.00, Max DD: -77.82%, Expectancy: 3.08%

Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

18) Final Equity: 976173240570520255974757908215020851822592.00, Max DD: -65.01%, Expectancy: 2.97%  
Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

19) Final Equity: 12521794089403402662825815806083740991488.00, Max DD: -95.39%, Expectancy: 2.87%  
Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

20) Final Equity: 8260124985560660463217142773314209447936.00, Max DD: -77.82%, Expectancy: 2.99%  
Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

21) Final Equity: 2602014873485867575599424234502393692160.00, Max DD: -90.85%, Expectancy: 2.86%  
Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

22) Final Equity: 2215147563759301569941931757502323490816.00, Max DD: -77.82%, Expectancy: 2.94%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

23) Final Equity: 1364448760257083461034806001893990465536.00, Max DD: -77.82%, Expectancy: 2.92%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

24) Final Equity: 118638605427628394734875847813903679488.00, Max DD: -95.34%, Expectancy: 2.97%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

25) Final Equity: 113445901026647527682311250198489202688.00, Max DD: -29.21%, Expectancy: 2.28%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

26) Final Equity: 112560883911877417272860208581115379712.00, Max DD: -95.34%, Expectancy: 2.97%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

27) Final Equity: 92423182510698537621058921815775117312.00, Max DD: -30.79%, Expectancy: 2.27%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

28) Final Equity: 72092806621561339138499822626600386560.00, Max DD: -30.31%, Expectancy: 2.28%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

29) Final Equity: 58733251389381927143732641982941495296.00, Max DD: -30.79%, Expectancy: 2.26%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

30) Final Equity: 45151679420080296609724888915166363648.00, Max DD: -30.31%, Expectancy: 2.27%

Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

31) Final Equity: 43371489477099019526185606542465695744.00, Max DD: -31.37%, Expectancy: 2.27%

Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

32) Final Equity: 36784598385149450577587068055672848384.00, Max DD: -30.79%, Expectancy: 2.26%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

33) Final Equity: 35334296359999749165496711499497865216.00, Max DD: -31.37%, Expectancy: 2.26%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

34) Final Equity: 23848794566030149303611168580582768640.00, Max DD: -77.82%, Expectancy: 2.85%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

35) Final Equity: 5915286312711199278758792910560296960.00, Max DD: -31.10%, Expectancy: 2.27%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

36) Final Equity: 5621947475361460586480918687471632384.00, Max DD: -97.77%, Expectancy: 2.98%

Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

37) Final Equity: 5333941467466601244558976538600538112.00, Max DD: -97.77%, Expectancy: 2.99%

Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

38) Final Equity: 3759056857887603593372477655913332736.00, Max DD: -30.89%, Expectancy: 2.26%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 12, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

39) Final Equity: 2354294944572650427644271395940073472.00, Max DD: -30.89%, Expectancy: 2.26%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

40) Final Equity: 2261472435266936603491945413364154368.00, Max DD: -31.37%, Expectancy: 2.26%

Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 10, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

41) Final Equity: 781419897704810477766377618934857728.00, Max DD: -95.33%, Expectancy: 2.89%  
Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

42) Final Equity: 27164330757316235085422739383648256.00, Max DD: -98.07%, Expectancy: 2.89%  
Lookback: 2, Range Threshold (pips): 40, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 30, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

43) Final Equity: 6019957145352302995936636863250432.00, Max DD: -96.14%, Expectancy: 2.79%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

44) Final Equity: 3210213957488166367118182309691392.00, Max DD: -96.14%, Expectancy: 2.76%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 20, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

45) Final Equity: 3107019560111082402460068086808576.00, Max DD: -55.88%, Expectancy: 3.66%  
Lookback: 6, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 60, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

46) Final Equity: 2269299208850333586136330269622272.00, Max DD: -55.88%, Expectancy: 3.69%  
Lookback: 6, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 120, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

47) Final Equity: 1423429951737362650692509302259712.00, Max DD: -98.41%, Expectancy: 3.25%  
Lookback: 2, Range Threshold (pips): 80, Stop Loss (pips): 3, Take Profit (pips): 30, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

48) Final Equity: 1020300324465224294397457480024064.00, Max DD: -55.70%, Expectancy: 3.47%  
Lookback: 6, Range Threshold (pips): 150, Stop Loss (pips): 9, Take Profit (pips): 30, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

49) Final Equity: 666408676467443911802104297029632.00, Max DD: -98.41%, Expectancy: 3.22%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 3, Take Profit (pips): 30, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0

50) Final Equity: 434660055563239105914760712945664.00, Max DD: -47.21%, Expectancy: 2.03%  
Lookback: 2, Range Threshold (pips): 150, Stop Loss (pips): 15, Take Profit (pips): 60, Hold Period (bars): 6, Spread (pips): 2, Risk Per Trade: 0.05, Initial Equity: 10000.0