Configuration Guide - Amazon PPC Optimizer

📋 Complete Configuration Reference

This guide explains every configuration option in `config.json`.

🔧 Configuration Structure

Amazon API Settings

```
"amazon_api": {
  "region": "NA",               // API region: "NA", "EU", or "FE"
  "profile_id": "1234567890",   // Your Amazon Ads profile ID
  "client_id": "...",           // API client ID
  "client_secret": "...",       // API client secret
  "refresh_token": "..."        // OAuth refresh token
}
```

Region Codes:

- `NA` - North America (US, Canada, Mexico)
- `EU` - Europe (UK, Germany, France, Italy, Spain)
- `FE` - Far East (Japan, Australia, India)

Bid Optimization Settings

```
"optimization_rules": {
  "lookback_days": 14,
  "min_clicks": 10,
  "min_spend": 5.0,
  "target_acos": 0.45,
  "high_acos": 0.60,
  "low_acos": 0.25,
  "min_ctr": 0.003,
  "up_pct": 0.15,
  "down_pct": 0.20,
  "min_bid": 0.25,
  "max_bid": 5.00
}
```

Setting	Description	Recommended Range	Example
`lookback_days`	Days of historical data to analyze	7-30	14
`min_clicks`	Minimum clicks before optimizing	5-25	10
`min_spend`	Minimum spend ($) before optimizing	5-20	5.0
`target_acos`	Target ACOS (% as decimal)	0.20-0.50	0.45 (45%)
`high_acos`	Threshold to decrease bids	0.40-0.80	0.60 (60%)
`low_acos`	Threshold to increase bids	0.15-0.35	0.25 (25%)
`min_ctr`	Minimum CTR threshold	0.002-0.01	0.003 (0.3%)
`up_pct`	Bid increase percentage	0.10-0.30	0.15 (15%)
`down_pct`	Bid decrease percentage	0.10-0.30	0.20 (20%)
`min_bid`	Minimum allowed bid ($)	0.20-0.50	0.25
`max_bid`	Maximum allowed bid ($)	3.00-10.00	5.00

How Bid Optimization Works:

1. **Gather Data:** Analyze keywords with at least `min_clicks` or `min_spend`
2. **Calculate ACOS:** ACOS = Cost / Sales
3. **Decision Logic:**
   - If ACOS > `high_acos` → Decrease bid by `down_pct`
   - If ACOS < `low_acos` → Increase bid by `up_pct`
   - If CTR < `min_ctr` → Decrease bid by `down_pct`
   - If no sales after `min_clicks` → Decrease bid by `down_pct`
4. **Apply Limits:** Clamp bid between `min_bid` and `max_bid`

Dayparting Settings

```
"dayparting": {
  "enabled": true,
  "peak_hours": [9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20],
  "peak_multiplier": 1.20,
  "off_peak_multiplier": 0.85,
  "day_multipliers": {
    "MONDAY": 1.0,
    "TUESDAY": 1.0,
    "WEDNESDAY": 1.0,
    "THURSDAY": 1.0,
    "FRIDAY": 1.1,
    "SATURDAY": 1.2,
    "SUNDAY": 1.15
  },
  "min_multiplier": 0.4,
  "max_multiplier": 1.8
}
```

Setting	Description	Example
enabled	Turn dayparting on/off	true
peak_hours	Array of peak hours (0-23)	[9-20] = 9am-8pm
peak_multiplier	Bid multiplier during peak	1.20 = +20%
off_peak_multiplier	Bid multiplier off-peak	0.85 = -15%
day_multipliers	Per-day multipliers	Saturday: 1.2 = +20%
min_multiplier	Minimum allowed multiplier	0.4 = -60%
max_multiplier	Maximum allowed multiplier	1.8 = +80%

Dayparting Strategies:

Strategy 1: Business Hours Focus

```
"peak_hours": [8, 9, 10, 11, 12, 13, 14, 15, 16, 17],
"peak_multiplier": 1.30,
"off_peak_multiplier": 0.70
```

Use for B2B products or office supplies

Strategy 2: Evening Focus

```
"peak_hours": [18, 19, 20, 21, 22],
"peak_multiplier": 1.25,
"off_peak_multiplier": 0.90
```

Use for entertainment products or home goods

Strategy 3: Weekend Boost

```
"day_multipliers": {
    "MONDAY": 0.9,
    "TUESDAY": 0.9,
    "WEDNESDAY": 0.9,
    "THURSDAY": 0.9,
    "FRIDAY": 1.1,
    "SATURDAY": 1.4,
    "SUNDAY": 1.3
}
```

Use for hobby or recreational products

Campaign Management

```
"campaign_management": {
    "enabled": true,
    "acos_threshold": 0.45,
    "min_spend": 20.0,
    "auto_activate": true,
    "auto_pause": true
}
```

Setting	Description	Recommended	Notes
`enabled`	Enable campaign management	true	
`acos_threshold`	ACOS limit before pausing	0.45 (45%)	Match your margins
`min_spend`	Min spend before pausing	$20	Avoid premature pausing
`auto_activate`	Auto-reactivate good campaigns	true	Recommended
`auto_pause`	Auto-pause poor campaigns	true	Use with caution

Important: Setting `acos_threshold` too low may pause campaigns prematurely. Consider your product margins.

Keyword Discovery

```
"keyword_discovery": {
  "enabled": true,
  "min_clicks": 5,
  "max_acos": 0.40,
  "initial_bid": 0.75,
  "max_keywords_per_run": 50
}
```

Setting	Description	Range	Notes
`enabled`	Enable keyword discovery	true/false	
`min_clicks`	Min clicks for search term	3-10	Lower = more aggressive
`max_acos`	Max ACOS to add keyword	0.30-0.50	Only add winners
`initial_bid`	Starting bid for new keywords	$0.50-$1.50	
`max_keywords_per_run`	Limit per execution	20-100	Avoid overwhelming

How It Works:

1. Analyze search term reports
2. Find terms with `min_clicks` and ACOS < `max_acos`
3. Add as new keywords (exact match)
4. Set initial bid to `initial_bid`

Negative Keyword Management

```
"negative_keywords": {
  "enabled": true,
  "min_spend": 10.0,
  "max_acos": 1.0,
  "auto_add": true
}
```

Setting	Description	Range	Example
`enabled`	Enable negative keyword management	true/false	true
`min_spend`	Min spend before blocking	$5-$20	$10
`max_acos`	Max ACOS before blocking	0.80-2.0	1.0 (100%)
`auto_add`	Auto-add negatives	true/false	true

Logic:

- Search terms with spend > `min_spend` and ACOS > `max_acos` are added as negative keywords
- Prevents wasted spend on non-converting terms

Budget Optimization

```
"budget_optimization": {
  "enabled": true,
  "increase_threshold_acos": 0.30,
  "decrease_threshold_acos": 0.60,
  "budget_change_pct": 0.20,
  "min_daily_budget": 5.0,
  "max_daily_budget": 100.0
}
```

Setting	Description	Purpose
`enabled`	Enable budget optimization	Control budget
`increase_threshold_acos`	ACOS to increase budget	Scale winners
`decrease_threshold_acos`	ACOS to decrease budget	Limit losers
`budget_change_pct`	Percentage change	0.20 = 20%
`min_daily_budget`	Minimum budget	Prevent too low
`max_daily_budget`	Maximum budget	Cap spending

Placement Bid Adjustments

```json
"placement_bids": {
  "enabled": true,
  "top_of_search_multiplier": 1.50,
  "product_pages_multiplier": 0.80
}
```

Placement Types:
- **Top of Search**: First page search results (premium placement)
- **Product Pages**: On competitor product pages

Strategy:
- Top of Search: Higher multiplier (1.30-1.80) for brand awareness
- Product Pages: Lower multiplier (0.70-0.90) for cost efficiency

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Features Control

```json
"features": {
  "enabled": [
    "bid_optimization",
    "dayparting",
    "campaign_management",
    "keyword_discovery",
    "negative_keywords"
  ]
}
```

Available Features:
- `bid_optimization` - Adjust keyword bids
- `dayparting` - Time-based adjustments
- `campaign_management` - Pause/activate campaigns
- `keyword_discovery` - Add new keywords
- `negative_keywords` - Block poor terms

Selective Execution:

```
python amazon_ppc_optimizer.py --features bid_optimization dayparting
```

Logging Configuration

```json
"logging": {
  "level": "INFO",
  "output_dir": "./logs",
  "audit_trail": true
}
```

Log Levels:
- `DEBUG` - Detailed technical info (verbose)

- `INFO` - General information (recommended)
- `WARNING` - Warnings only
- `ERROR` - Errors only

🎯 Configuration Templates

Conservative Template (Low Risk)

```json
{
  "optimization_rules": {
    "min_clicks": 25,
    "up_pct": 0.10,
    "down_pct": 0.10,
    "target_acos": 0.50
  },
  "campaign_management": {
    "acos_threshold": 0.60,
    "auto_pause": false
  },
  "keyword_discovery": {
    "max_keywords_per_run": 20
  }
}
```

Aggressive Template (High Performance)

```json
{
  "optimization_rules": {
    "min_clicks": 10,
    "up_pct": 0.25,
    "down_pct": 0.30,
    "target_acos": 0.35
  },
  "campaign_management": {
    "acos_threshold": 0.40,
    "auto_pause": true
  },
  "keyword_discovery": {
    "max_keywords_per_run": 100
  }
}
```

Balanced Template (Recommended)

```json
{
  "optimization_rules": {
    "min_clicks": 15,
    "up_pct": 0.15,
    "down_pct": 0.20,
    "target_acos": 0.45
  },
  "campaign_management": {
    "acos_threshold": 0.50,
    "auto_pause": true
  },
  "keyword_discovery": {
    "max_keywords_per_run": 50
  }
}
```

💡 Best Practices

1. **Start Conservative** - Use higher `min_clicks` and smaller `up_pct` / `down_pct` initially
2. **Monitor First Week** - Check audit logs daily to understand changes
3. **Adjust ACOS** - Set `target_acos` based on your actual profit margins
4. **Use Dayparting** - Analyze your traffic patterns and adjust accordingly
5. **Limit Keywords** - Don't add too many keywords at once
6. **Test Dry-Run** - Always test configuration changes in dry-run mode first

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