Data Dictionary: Schemas + Units

Version: 3.1.0
Database: SQLite (wallet_graph.db)
Encoding: UTF-8

Table: wallets

Field	Type	Unit	Description
address	TEXT	Solana address	Primary key, base58 encoded
first_seen	TEXT	ISO 8601 UTC	When wallet was first discovered
last_activity	TEXT	ISO 8601 UTC	Most recent transaction
total_trades	INTEGER	count	Number of trades observed
winning_trades	INTEGER	count	Trades with positive PnL
total_pnl_sol	REAL	SOL	Cumulative profit/loss
tier	TEXT	enum	S/A/B/C classification
is_cex	INTEGER	boolean (0/1)	CEX wallet flag
confidence	REAL	0.0-1.0	Current trust score
last_confidence_update	TEXT	ISO 8601 UTC	Last decay calculation
metadata	TEXT	JSON	Additional attributes

Indexes: `idx_wallets_tier`, `idx_wallets_confidence`

Table: funding

Field	Type	Unit	Description
id	INTEGER	auto	Primary key
source_wallet	TEXT	Solana address	Funding source (FK → wallets)
target_wallet	TEXT	Solana address	Funded wallet (FK → wallets)
amount_sol	REAL	SOL	Amount transferred
timestamp	TEXT	ISO 8601 UTC	Transfer time
tx_signature	TEXT	base58	Transaction signature
hop_distance	INTEGER	count	Hops from original source

Indexes: `idx_funding_source`, `idx_funding_target`, `idx_funding_timestamp`

Table: signals

Field	Type	Unit	Description
id	TEXT	UUID	Primary key (signal_id format)
wallet_address	TEXT	Solana address	Wallet that generated signal
token_address	TEXT	Solana address	Token being traded
token_symbol	TEXT	string	Token ticker
action	TEXT	enum	BUY/SELL
amount_usd	REAL	USD	Trade size in USD
price_at_signal	REAL	USD	Token price when signal created
timestamp	TEXT	ISO 8601 UTC	Signal creation time
confidence	REAL	0.0-1.0	Calculated confidence score
source_version	TEXT	string	v2/v25/v3
graph_boost	REAL	0.0-0.3	Boost from graph analysis
asset_class	TEXT	enum	meme_coin_low_cap/mid_cap/large_cap
veto_reason	TEXT	string	NULL if approved, else reason
processed	INTEGER	boolean (0/1)	Whether signal was acted upon
outcome	TEXT	enum	WIN/LOSS/PENDING/SKIPPED
price_24h	REAL	USD	Token price 24h after signal
notes	TEXT	string	Optional operator notes

Indexes: `idx_signals_timestamp`, `idx_signals_token`, `idx_signals_wallet`, `idx_signals_outcome`

Table: trades

Field	Type	Unit	Description
id	TEXT	UUID	Primary key
signal_id	TEXT	UUID	FK → signals.id
execution_wallet	TEXT	Solana address	Wallet used for execution
token_address	TEXT	Solana address	Token traded
side	TEXT	enum	BUY/SELL
amount_sol	REAL	SOL	Amount in SOL
amount_tokens	REAL	tokens	Tokens received/sent
price	REAL	USD	Execution price
slippage_bps	INTEGER	basis points	Actual slippage
gas_lamports	INTEGER	lamports	Transaction fee
tx_signature	TEXT	base58	Transaction signature
timestamp	TEXT	ISO 8601 UTC	Execution time
paper	INTEGER	boolean (0/1)	Paper trade flag
pnl_sol	REAL	SOL	Realized P&L (NULL if open)
pnl_pct	REAL	percentage	P&L as percentage
exit_reason	TEXT	enum	TRAILING_STOP/TIME_STOP/PANIC/MANUAL/WHALE_EXIT
cluster_id	TEXT	string	Associated cluster (if any)

Indexes: `idx_trades_timestamp`, `idx_trades_signal`, `idx_trades_token`

Table: buys (Legacy Tracking)

Field	Type	Unit	Description
id	INTEGER	auto	Primary key
wallet_address	TEXT	Solana address	Buyer wallet
token_address	TEXT	Solana address	Token bought
amount_sol	REAL	SOL	Amount spent
timestamp	TEXT	ISO 8601 UTC	Purchase time
tx_signature	TEXT	base58	Transaction signature

Table: kill_switch_events

Field	Type	Unit	Description
id	INTEGER	auto	Primary key
trigger	TEXT	enum	Trigger type
timestamp	TEXT	ISO 8601 UTC	Activation time
details	TEXT	JSON	Additional context
resolved_at	TEXT	ISO 8601 UTC	Resolution time (NULL if active)
resolution_notes	TEXT	string	Operator notes on resolution

Table: system_state

Field	Type	Unit	Description
key	TEXT	string	Primary key
value	TEXT	JSON	State value
updated_at	TEXT	ISO 8601 UTC	Last update

Standard Keys:
- `capital_sol` : Current capital in SOL
- `peak_capital_sol` : Highest capital reached
- `current_phase` : 0-4
- `trade_count` : Total trades executed
- `mode` : NORMAL/CAPITAL_PRESERVATION/KILL_SWITCH
- `first_trade_date` : ISO 8601
- `last_backup` : ISO 8601

Canonical ID Formats

ID Type	Format	Example
signal_id	`sig_{timestamp}_{random8}`	`sig_1706198400_a1b2c3d4`
cluster_id	`cluster_{mother_addr_prefix}`	`cluster_7xKL...`
trade_id	`trade_{timestamp}_{random8}`	`trade_1706198400_e5f6g7h8`

Units Clarification

Concept	Storage Unit	Display Unit	Conversion
SOL amounts	SOL (REAL)	SOL	1:1
Lamports	lamports (INTEGER)	SOL	÷ 1,000,000,000
Basis points	bps (INTEGER)	%	÷ 100
Percentages	decimal (REAL)	%	× 100
Timestamps	ISO 8601 UTC	Local	TZ conversion
Addresses	base58 string	base58	1:1

CRITICAL: All timestamps stored in UTC. Convert for display only.

Event Types (for logging)

Event Type	Required Fields
SIGNAL_CREATED	signal_id, wallet, token, confidence
SIGNAL_VETOED	signal_id, veto_reason
TRADE_EXECUTED	trade_id, signal_id, tx_signature
TRADE_CLOSED	trade_id, exit_reason, pnl_sol
KILL_SWITCH_ON	trigger, timestamp
KILL_SWITCH_OFF	timestamp, resolution_notes
CAPITAL_PRESERVATION_ON	drawdown_pct, timestamp
CAPITAL_PRESERVATION_OFF	timestamp, approval_by
WALLET_DISCOVERED	address, source, hop_distance
MOTHER_IDENTIFIED	address, children_count, trust_score

Confidence Decay Formula

```
half_life = 30 days
decay_factor = 0.5 ^ (days_since_update / half_life)
new_confidence = old_confidence * decay_factor
```

Applied daily via scheduled task.