



US Equity Standard Daily OHLC Guide

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algoseek | the market data company

We provide research market data for machine learning and quantitative trading



CONTACT US

We are here to help you do great things with our market and reference data. For questions, feedback, and other concerns, you may reach our team of experts using the following contact information:

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INTRODUCTION

This guide describes the Standard Daily OHLC data available for algoseek US Equities. The dataset provides the Daily Open, High, Low, and Close with Open being the first trade and close being the last trade during regular market hours.

The data is built from the Trade events of the Securities Information Processor (SIP) data, also known as the “Consolidated Feed” for all listed stocks, ETNs, ETFs, ADRs, and funds.

There are two data aggregation options for this dataset that provide exactly the same data fields:

tradedate: one CSV file with data for all symbols per trading day

secid: one CSV file with data for all trading days per Security ID - a unique security identifier used by algoseek that remains unchanged when the ticker changes

BAR CALCULATIONS

Open/High/Low/Close With Limited Trades Or Single Trade

Some stocks may only have a single trade during the entire day. For example, with a single trade at 12:00:00 ET then,

`Open = High = Low = Close = 12:00:00 Trade price`

EXCHANGE MARKET HOURS

The US Stock Market trading hours are split into the pre-market, market, and post-market hours.

Pre-Market Hours: 04:00:00 to 09:30:00 (excluding)

Market Hours: 09:30:00 to 16:00:00 (excluding)

Post-Market Hours: 16:00:00 to 20:00:00

Note: Occasionally, trade events are recorded several minutes after 20:00.

The “Open” normally refers to the Opening Cross at 09:30:00 ET. The “Close” normally refers to the Closing Cross at 16:00:00 ET.



Market Holidays and Early Closes

The stock market is closed for trading on most US holidays. For reference, algoseek publishes a list of historical holidays, which is available at

s3://us-equity-market-holidays/holidays.csv (direct download link: <https://us-equity-market-holidays.s3.amazonaws.com/holidays.csv>).

Markets sometimes close early at 13:00:00 on the day before holidays such as Independence Day and Thanksgiving. You can download algoseek's early close date and time list from AWS S3 storage at

s3://us-equity-market-holidays/earlycloses.csv (or use a direct link us-equity-market-holidays.s3.amazonaws.com/earlycloses.csv).

DATA ORGANIZATION AND FILE FORMAT

algoseek provides Equity market data in plain-text CSV files. The first row of the CSV file is a fixed header, and then rows of data corresponding to individual events (see Table 1). By default, the dataset is organized either by trading day or by secid. It means, for example, that all daily OHLC data for Mar 3, 2020, are stored in a separate CSV file under a tradedate aggregation. For the secid-based aggregation, all data for the security with an ID 33449 (AAPL) for a single year is stored in a separate CSV file.

Table 1: Daily OHLC Sample Data

Secid	TradeDate	Ticker	Open	High	Low	Close	MarketHoursVolume
33449	20200102	AAPL	296.27	300.60	295.19	300.35	32433732
33449	20200127	AAPL	309.90	313.33	304.88	308.95	37858540
33449	20200128	AAPL	312.50	318.40	312.19	317.69	31901695
33449	20200129	AAPL	324.65	327.85	321.39	324.34	51777101
33449	20200130	AAPL	320.67	324.08	318.75	323.87	30448816
33449	20200131	AAPL	320.94	322.68	308.29	309.51	48180449

Table 2 below summarizes the name, description, and data type for each data field (column). Field order corresponds to secid-based aggregation. For tradedate-based data aggregation, the "TradeDate" is the first column instead and "Secid" is the second.



Table 2: CSV File Fields Schema

Field	Type (Format)	Description
SecId	integer	algoseek unique Security ID
TradeDate	string (yyyymmdd)	Trading date for OHLC fields in yyyymmdd format
Ticker	string	Symbol Name
Open	decimal	Opening price
High	decimal	Highest trade price from any exchange or Trade Reporting Facility (TRF)
Low	decimal	Lowest trade price from any exchange or Trade Reporting Facility (TRF)
Close	decimal	Closing trade
MarketHoursVolume	integer	Listed exchanges trading volume during regular market hours only



APPENDIX A. BAR CALCULATIONS FROM TRADE EVENTS

This section describes the logic for daily bar calculations based on events from the Trade Only dataset. Please also refer to the Equity Trade Only Guide for more details on the data fields and condition flags used.

In this section, Market hours refer to 9:30:00 (including) - 16:00:00 (excluding) for regular trading days and to 9:30:00 (including) - 13:00:00 (excluding) when there was an early close.

Filtering

- Exclude any trade with Price = 0
- Exclude any trade with Quantity = 0
- Exclude Trade Cancel events

Opening Trade

The Opening Trade is selected from the following priority order list:

- the last event with tOfficialOpen flag from the Primary Exchange
- the last event with tOpeningPrint flag from the Primary Exchange
- a Regular Open from the Primary Exchange
- a Regular First from the Primary Exchange

Regular Open

The Regular Open corresponds to the first event satisfying all the conditions below:

- not an Open/Close event (tOpeningPrints, tClosingPrints, tOfficialClose and tOfficialOpen flags)
- not having tExtendedHours flag set
- the largest volume between 09:30:00 (including) and 09:40:00 (including)

Regular First

Regular First is the first event satisfying all the conditions below:

- not an Open/Close event (tOpeningPrints, tClosingPrints, tOfficialClose and tOfficialOpen flags)
- not having either of the following flags set: tDerivativelyPrices, tStockOption, tAveragePrice, tRule155
- not having tOddLot flag set
- not having tExtendedHours flag set



- the event time is within market hours

Closing Trade

The Closing Trade is selected from the following priority order list:

- the first event with tOfficialClose flag from the Primary Exchange
- the first event with tClosingPrint flag from the Primary Exchange
- a Regular Close from the Primary Exchange
- a Regular Last from the Primary Exchange

Regular Close

The Regular Close is the last event satisfying all the condition below:

- not an Open/Close event (tOpeningPrints, tClosingPrints, tOfficialClose and tOfficialOpen flags)
- not having tExtendedHours flag set
- the largest volume between 16:00:00 (including) and 16:05:00 (including) for regular trading days or between 13:00:00 (including) and 13:05:00 (including) for an Early Close

Regular Last

Regular Last is the last event satisfying all the conditions below:

- not an Open/Close event (tOpeningPrints, tClosingPrints, tOfficialClose and tOfficialOpen flags)
- not having either of the following flags set: tDerivativelyPrices, tStockOption, tAveragePrice, tRule155
- not having tOddLot flag set
- not having tExtendedHours flag set
- the event time is within market hours

Daily High

Daily High is the first event satisfying all the conditions below:

- not an Open/Close event (tOpeningPrints, tClosingPrints, tOfficialClose and tOfficialOpen flags)
- not having either of the following flags set: tDerivativelyPrices, tStockOption, tAveragePrice, tRule155
- not having tOddLot flag set
- not having tExtendedHours flag set
- the exchange is not FINRA



- the event with the largest price within market hours

Daily Low

Daily Low corresponds to the first event satisfying all the conditions below:

- not an Open/Close event (tOpeningPrints, tClosingPrints, tOfficialClose and tOfficialOpen flags)
- not having either of the following flags set: tDerivativelyPrices, tStockOption, tAveragePrice, tRule155
- not having tOddLot flag set
- not having tExtendedHours flag set
- the exchange is not FINRA
- the event with the smallest price within market hours

Volume

All events are accounted unless any of the flags from Table 3 are present.

Table 3: Flags for Trade Events to be Excluded During Volume Calculations

Bit Mask Position	Flags
24	tOfficialClose
26	tOfficialOpen