

Document title

## **TAQ NYSE ARCA TRADES CLIENT SPECIFICATION**

Version

1.0

Date

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## PREFACE

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### DOCUMENT HISTORY

The following table provides a description of all changes to this document.

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	16 Oct 2012	Updated Spec

### CONTACT INFORMATION

#### Service Desk

- Telephone: +1 212 383 3640 (International)
- Telephone: 866 873 7422 (Toll free, US only)
- Email: [service.desk@nyx.com](mailto:service.desk@nyx.com)

### FURTHER INFORMATION

- For additional product information, visit: [Product Page](#)
- For updated capacity figures, visit our capacity pages at: <http://www.nyxdata.com/capacity>
- For a full glossary, visit: <http://www.nyxdata.com/glossary/>

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# 1. INTRODUCTION

NYSE Arca Trades data is available on a historical/end-of-day basis in flat file format. This product is called *TAQ NYSE Arca Trades* (“TAQ” refers to “Trades and Quotes”). TAQ NYSE Arca Trades includes details of all transactions handled by NYSE Arca and NYSE ArcaEdge.

## 1.1 ACCESS AND DATA FORMAT

TAQ NYSE Arca Trades files are available in several flat files, in ASCII format. All files are compressed using GNU Zip. TAQ NYSE Arca Trades files are approximately 160 MB compressed. Files are available via File Transfer Protocol (FTP) or DVD.

Subscribers must execute the appropriate agreement (Exhibit A and/or NYSE Vendor Agreement). Upon approval, NYSE will send the FTP credentials for accessing the data.

## 1.2 DATA TYPES

All numeric fields are composed of a string of ASCII characters (0-9), left justified and NULL padded. All alpha fields are left justified and NULL padded.

Prices are given in decimal format, left justified and NULL padded. The decimal portion of the price can go back up to 6 decimal places. Examples; “25.222”, “0.125”, “100.6”, “2.30”.

The Sequence number is a sequential number that identifies the message per symbol. This number will start the trading session at one (1) and increment by one (1) for each new message per symbol.

## 1.3 FTP DIRECTORY STRUCTURE

**Table 1 FTP Details**

HOST	PATH
ftp2.nyxdata.com	Accessed directly from root.

**Table 2 Folder Names**

FILE TYPE	TOP LEVEL	SECOND LEVEL	THIRD LEVEL
Trade	/EQY_US_ALL_ARCA_TRADE	/EQY_US_ALL_ARCA_TRADE_Y YYY	EQY_US_ALL_ARCA_TRADE_YYYYMM
Trade Bust	/EQY_US_ALL_ARCA_TRADE_BUST	/EQY_US_ALL_ARCA_TRADE_BUST_YYYY	/EQY_US_ALL_ARCA_TRADE_BUST_YYYYMM

The file name comprises the folder name (for example, EQY\_US\_ALL\_ARCA\_TRADE\_BUST) concatenated with the trading date (in the format YYYYMMDD). Files are in compressed comma-separated value (CSV) format , for example:

- Trade: EQY\_US\_ALL\_ARCA\_TRADE\_20120501.csv.gz
- Trade Bust: EQY\_US\_ALL\_ARCA\_TRADE\_BUST\_20120501.csv.gz

#### 1.4 ALTERNATIVE PRODUCTS

For details of related TAQ products and the full range of TAQ offerings, please refer to the Historical Data Products section of NYXData at: <http://www.nyxdata.com/Data-Products/Historical-Data>.

## 2. TAQ NYSE ARCA TRADE MESSAGES

### 2.1 TRADE MESSAGE

The Trade message communicates details of all executions resulting from orders submitted to ArcaEx or ArcaEdge. Note that both of NYSE Arca’s platforms utilize smart routing logic, thus trades can execute within NYSE Arca’s order book or with an external market center. In addition, NYSE Arca supports “cross” order types. These orders are immediately executed and not included in the TAQ NYSE ArcaBook feed. As a result, some trades will not have a corresponding order message type in the TAQ NYSE ArcaBook file. If two orders “match” on the NYSE Arca order book, TAQ NYSE Arca Trade will include execution information for the side of the execution that was distributed via NYSE ArcaBook.

The Order Reference Number will be a unique identifier per system code. A substring of the order reference number can be used to match *executions* in the NYSE Arca Trade file to *orders* in the NYSE ArcaBook file.

**Table 3 Trade Message Format**

NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg_Type	1	Alpha	Executed order – “X”.
Sequence	2	Numeric	1-9999999999 (coming soon).
Trade_Date	3	Numeric	The transaction date.
Timestamp	4	Numeric	The time that the matching engine executes the trade (in seconds).
Ord_Refers	5	Numeric	The unique reference number per system code assigned to this transaction.
NasdaqID	6	Alpha	See <a href="#">NASDAQ Stock Symbol Suffixes</a> .
Symbol	7	Alpha	The stock symbol.
Volume	8	Numeric	Show size of order.
Price	9	Price	The limit price of the order.
System	10	Alpha	The system code. Valid values are: <ul style="list-style-type: none"> <li>■ ‘P’ – ArcaEx OTC</li> <li>■ ‘E’ – ArcaEx Listed</li> <li>■ ‘B’ – BB</li> </ul>
Buy_Sell	11	Alpha	The Buy/Sell Indicator. Valid values are: <ul style="list-style-type: none"> <li>■ ‘B’ – Buy order</li> <li>■ ‘S’ – Sell order</li> <li>■ ‘X’ – Sell Short</li> <li>■ ‘C’ – Cross</li> </ul>

NAME	FIELD ORDER	FORMAT	DESCRIPTION
			This field represents the buy/sell interest from the perspective of the ArcaEx client entering the order that leads to this execution. Because both sides of a trade executed within the ArcaEx platform are reflected as separate trade events in this file, there should be one buy trade event and one sell trade event for every trade executed within the ArcaEx system. For trades executed with an outside venue (for example, routed to INET or received via ITS), the buy/sell indicates the action taken by the ArcaEx client. There is not a second trade event in this file for these types of transactions.
<b>Arca_Bid_Price</b>	12	Numeric	Arca Bid Price at time of execution.
<b>Arca_Bid_Volume</b>	13	Numeric	Arca Bid Size at time of execution.
<b>Arca_Ask_Price</b>	14	Numeric	Arca Ask Price at time of execution.
<b>Arca_Ask_Volume</b>	15	Numeric	Arca Ask Size at time of execution.
<b>Market_Bid_Price</b>	16	Numeric	Consolidated Bid Price at time of execution.
<b>Market_Bid_Volume</b>	17	Numeric	Consolidated Bid Size at time of execution.
<b>Market_Ask_Price</b>	18	Numeric	Consolidated Ask Price at time of execution.
<b>Market_Ask_Volume</b>	19	Numeric	Consolidated Ask Size at time of execution.
<b>Type</b>	20	Alpha	Valid values are: <ul style="list-style-type: none"> <li>■ INTERNAL – Order was executed internally (that is, contra party is an ArcaEx client)</li> <li>■ EXTERNAL – Order was and external execution (for example, order routed to an away destination)</li> </ul>
<b>AB_Order_ID</b>	21	Numeric	This number (along with Symbol) can be used to match the trade back to the original order contained in the NYSE Arca Trade file (field “Order Reference Number”).

## 2.2 TRADE BUST MESSAGE

The Trade Bust message identifies trades that were busted after the execution was reported.

**Table 4 Trade Bust Message Format**

NAME	FIELD ORDER	FORMAT	DESCRIPTION
Msg_Type	1	Alpha	Trade bust – “B”.
Trade_Date	2	Numeric	The transaction date.
Timestamp	3	Numeric	The time that the matching engine processed the bust.
Ord_Refers	4	Numeric	The unique reference number per system code assigned to this transaction.
NasdaqID	5	Alpha	See <a href="#">NASDAQ Stock Symbol Suffixes</a> .
Symbol	6	Alpha	The stock symbol.
AB_Order_ID	7	Numeric	This number (along with Symbol) can be used to match the trade back to the original order contained in the NYSE Arca Trade file.  This field can be used to link to the NYSE Arca Trade file.



## APPENDIX A: NYSE STOCK SYMBOL SUFFIXES

Table 5 NYSE Stock Symbol Suffixes

SUFFIX	DESCRIPTION
<v>	<v> represents a character; Series (or Class) A-T & V-Z; Examples include the following: ZZZ A is the same as ZZZ/A ZZZ T is the same as ZZZ/T
<v>CL	Series (or Class) A-T & V-Z Called. Examples include the following: ZZZ ACL is the same as ZZZ/A/CL
<v>CV	Series (or Class) A-T & V-Z Convertible. Examples include the following: ZZZ ACV is the same as ZZZ/A/CV
<v>WI	Series (or Class) A-T & V-Z When Issued. Examples include the following: ZZZ AWI is the same as ZZZ/Aw
CL	Called. Examples include the following: ZZZ CL is the same as ZZZ/CL
CT	Certificates. Examples include the following: ZZZ CT is the same as ZZZ/CT
CV	Convertible. Examples include the following: ZZZ CV is the same as ZZZ/CV (ZZZ/CV)
CVR	Contingent Value Right. Examples include the following: ZZZ CVR is the same as ZZZ/CVR
CVCL	Convertible Called. Examples include the following: ZZZ CVCL is the same as ZZZ/CV/CL
DP	Amount of most-recent dividend to go “ex-distribution”. Examples include the following: ZZZ DP is the same as ZZZ/DP
DV	Accumulated dividend per share, net of expenses, through and including the previous day’s close of trading. Examples include the following: ZZZ DV is the same as ZZZ/DV
EC	Emerging Company Marketplace. Examples include the following: ZZZ EC is the same as ZZZ/EC
EU	Estimated cash amount for creation unit. Examples include the following: ZZZ EU is the same as ZZZ/EU
FN	Foreign News. Examples include the following: ZZZ FN is the same as ZZZ/F/N
ID	Index – differentiates an index from a stock with the same root symbol. Examples include the following: III ID is the same as III/ID
IV	Intra-day Net Asset Value per share. Examples include the following: ZZZ IV is the same as ZZZ/IV
NV	Net Asset Value per share, as of the close on the previous trading day. Examples include the following: ZZZ NV is the same as ZZZ/NV
PP	Partial Paid. Examples include the following: ZZZ PP is the same as ZZZ/PP

SUFFIX	DESCRIPTION
<b>PTCL</b>	Part Called. Examples include the following: ZZZ PTCL is the same as ZZZ/PT/CL
<b>PR</b>	Preferred. Examples include the following: ZZZ PR is the same as ZZZp
<b>PR&lt;v&gt;</b>	<v> represents a character; Preferred Series A-T & V-Z. Examples include the following: ZZZ PRA is the same as ZZZpA ZZZ, PRB is the same as ZZZpB
<b>PR&lt;v&gt;CL</b>	<v> represents a character; Preferred Series A-T & V-Z Called. Examples include the following: ZZZ PRACL is the same as ZZZpA/CL ZZZ, PRBCL is the same as ZZZpB/CL
<b>PR&lt;v&gt;CV</b>	<v> represents a character; Preferred Series A-T & V-Z Convertible. Examples include the following: ZZZ PRACV is the same as ZZZpA/CV ZZZ, PRBCV is the same as ZZZpB/CV
<b>PR&lt;v&gt;WI</b>	<v> represents a character; Preferred Series A-T & V-Z When Issued. Examples include the following: ZZZ PRAWI is the same as ZZZpAw ZZZ, PRBWI is the same as ZZZpBw
<b>PRWI</b>	Preferred When Issued. Examples include the following: ZZZ PRWI is the same as ZZZpw
<b>PRCL</b>	Preferred Called. Examples include the following: ZZZ PRCL is the same as ZZZp/CL
<b>PRCV</b>	Preferred Convertible. Examples include the following: ZZZ PRCV is the same as ZZZp/CV
<b>PRWD</b>	Preferred When Distributed. Examples include the following: ZZZ PRWD is the same as ZZZp/WD
<b>PRC&lt;v&gt;</b>	Indicates Class A; could also be B-K and M-S; Second Category of Preferred. Examples include the following: ZZZ PRCA is the same as ZZZpCA ZZZ, PRCB is the same as ZZZpCB
<b>RT</b>	Rights. Examples include: ZZZ R is the same as ZZZr
<b>RWI</b>	Rights When Issued. Examples include: ZZZ RWI is the same as ZZZrw
<b>SC</b>	Small Corporate Offering Registration. Examples include the following: ZZZ SC is the same as ZZZ/SC
<b>SP</b>	Special. Examples include the following: ZZZ SP is the same as ZZZ/SP
<b>SD</b>	Stamped. Examples include the following: ZZZ SD is the same as ZZZ/SD
<b>SO</b>	Current Shares Outstanding, in thousands. Examples include the following: ZZZ SO is the same as ZZZ/SO
<b>TC</b>	Total cash amount per creation unit, in thousands. Examples include the following: ZZZ TC is the same as ZZZ/TC
<b>TEST</b>	Exclusive suffix used for intraday test message. Examples include the following: ZZZ TEST is the same as ZZZ/TEST
<b>TT</b>	Tier II Securities. Examples include the following: ZZZ TT is the same as ZZZ/TT

SUFFIX	DESCRIPTION
<b>U</b>	Units (a combination of securities composed of two or more of warrants, common stocks, preferred stocks and/or bonds). Examples include the following: ZZZ U is the same as ZZZ/U
<b>VR</b>	Variable Common Rights. Examples include the following: ZZZ VR is the same as ZZZ/VR
<b>WD</b>	When Distributed. Examples include the following: ZZZ WD is the same as ZZZ/WD
<b>WI</b>	When Issued. Examples include the following: ZZZ WI is the same as ZZZw
<b>WS</b>	Warrants. Examples include the following: ZZZ WS is the same as ZZZ/WS
<b>WWS</b>	With Warrants. Examples include the following: ZZZ WWS is the same as ZZZ/W/WS
<b>WS&lt;v&gt;</b>	Warrants Series <v>; Series A-T & V-Z. Examples include the following: ZZZ WSA is the same as ZZZ/WSA
<b>WSWI</b>	Warrants When Issued

Table 6 Suffix Definitions

SUFFIX	DESCRIPTION
<b>Called</b>	An issue being redeemed by its issuing corporation under definite conditions before maturity.
<b>Certificate</b>	Refers to a negotiable certificate representing deposit of stock with a pending change in its condition.
<b>Convertible</b>	A preferred share which its owner may convert into common stock or another security, usually in the same company, in accordance with the terms of issue.
<b>Preferred</b>	A class of stock with priority over common stock in regard to earnings and/or liquidations.
<b>Rights</b>	Represent the privilege to subscribe (in proportion to the number of shares owned) to new or additional securities, usually at or below the current market price. Rights ordinarily have market values of their own and are traded actively. In most cases they must be exercised within a relatively short period of time.
<b>Stamped</b>	Indicates rights and privileges different from securities of the same issue, class, or series not stamped.
<b>Warrant</b>	Indicates a certificate giving its holder the right to purchase securities at a stipulated price, either within a specified time limit or in perpetuity.
<b>When Distributed</b>	Signifies a short form of “when, as, and if distributed” (see ‘When Issued’).
<b>When Issued</b>	Means a short form of “when, as, and if issued”; indicates a transaction in a security authorized for issuance, but not yet issued. All “When Issued” transactions are on an “if” basis, to be settled if and when the actual security is issued.

SUFFIX	DESCRIPTION
<b>With Warrants</b>	A security with a warrant attached that entitles the holder to purchase another security at stipulated price(s), either within a specified time or in perpetuity. Warrants may be immediately detachable from their underlying securities or detachable after specified periods.
<b>Without Warrants</b>	A security from which the warrant(s) has been removed.

## APPENDIX B: NASDAQ STOCK SYMBOL SUFFIXES

Source: Nasdaq web site: <http://www.nasdaq.com/reference/glossary.stm>

**Table 7 NASDAQ Stock Symbol Suffixes**

SUFFIX	DESCRIPTION
<b>A</b>	Class A
<b>B</b>	Class B
<b>C</b>	Issuer qualification exception – the issuer has been granted a continuance in NASDAQ under an exception to the qualification standards for a limited period.
<b>D</b>	New
<b>E</b>	Delinquent in required filings with the SEC
<b>F</b>	Foreign
<b>G</b>	First convertible bond
<b>H</b>	Second convertible bond, same company
<b>I</b>	Third convertible bond, same company
<b>J</b>	Voting
<b>K</b>	Nonvoting
<b>L</b>	Miscellaneous situations, such as depositary receipts, stubs, additional warrants, and units
<b>M</b>	Fourth preferred, same company
<b>N</b>	Third preferred, same company
<b>O</b>	Second preferred, same company
<b>P</b>	First preferred, same company
<b>Q</b>	Bankruptcy - the issuer is involved in bankruptcy proceedings.
<b>R</b>	Rights
<b>S</b>	Shares of beneficial interest
<b>T</b>	With warrants or with rights
<b>U</b>	Units
<b>V</b>	When-issued and when-distributed
<b>W</b>	Warrants
<b>Y</b>	ADR (American Depositary Receipt)
<b>Z</b>	Miscellaneous situations, such as depositary receipts, stubs, additional warrants, and units