Market Data Feed – Version 1.92

PHLX Orders

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1. Overview

TOPO Plus Orders is a direct data feed product offered by Nasdaq PHLX® that includes the **TOPO** data feed as well as a **PHLX Orders** feed that provides the current state of Simple and Complex Orders on the PHLX book, hence the TOPO Plus Orders moniker for the overall data product.

* Please note that the following specification document outlines only the PHLX Orders portion of the TOPO Plus Orders data product.

The Top of PHLX Options(TOPO) specification document can be accessed at the following link:
http://www.nasdaqtrader.com/content/technicalsupport/specifications/dataproducts/topo fphlx.pdf

PHLX Orders features the following data elements:

- Current state of Simple and Complex Orders on a low latency, real time basis. This includes new orders and changes to orders resting on the PHLX book. Order information that is disseminated reflects the size of an order which is available for trading. This means that order volume can increase or decrease as orders are routed away from the exchange or reintroduced to the book when refused execution at an away exchange. Order types not sent by the PHLX Order feed are:
  - o Time in force IOC (Immediate or Cancel) Simple Orders are not sent. IOC Complex Orders are sent.
  - o Fully Executed Orders upon Receipt. These are orders which are fully executed by the matching engine upon entry to the PHLX trading system ⬚ Auction information for securities traded on the PHLX Options Market.
- COLA Notification Messages, which is a message for reporting a Complex Order Live Auction (COLA) taking place on the PHLX Options Market.
- Administrative and market event messages including:
  - o Trading action messages to inform market participants when a specific option or strategy is halted or released for trading on the PHLX Options Market. o Security open/closed message to inform market participants when a specific option or strategy is eligible for automatic execution on the PHLX Options Market.
  - o Options Directory messages to relay basic option symbol and contract information for those options traded on the PHLX Options Market.
  - o Complex Order Strategy Messages to relay information for those strategies traded on the PHLX Options Market. The Strategy Message lists the legs which compose the Strategy and the leg ratios which uniquely define this Strategy for an underlying. Alternatively, the reader can process the Strategy information in the Complex Order Message which contains the same strategy information as in the Complex Order Strategy message.

2. Architecture

The PHLX Orders feed will be made up of a series of sequenced frames. Each frame is composed of one message. The frames are typically delivered using a higher level protocol that takes care of sequencing and delivery guarantees.

PHLX plans to offer the PHLX Orders data feed in the following protocol options:

Protocol Option	Number of Outbound Channels
MoldUDP (multicast)	Multicast Feed: 4 Outbound Channels segregated by Underlying Symbol, per Group. The feed broadcasts in multicast.
MoldUDP (unicast)	Mold Rerequestors: 4 Channels segregated by Underlying Symbol, per Group. This set of channels is for retransmission of missing or dropped Multicast data, if required by the recipient.
SoupBinTCP Version 3.00	TCP Rerequestors: 4 Connections segregated by Underlying Symbol, per Group usually used to rerequest information missed for a period of time

The PHLX Orders MoldUDP multicast feed is composed of 2 groups of Multicast Channels: the "O" Group, for Simple Order related information; and the "X" Group, for Complex Order related information. Each group has 4 channels segregated by underlying symbol for a total of 8 channels.

The PHLX Orders MoldUDP unicast rerequest feed is composed of 2 groups of unicast UDP Connections: the "O" Group, for Simple Order related information; and the "X" Group, for Complex Order related information. Each group has 4 channels segregated by underlying symbol for a total of 8 channels. The MoldUDP channels are used for requesting lost multicast data from the MoldUDP feeds if required by the recipient.

The PHLX Orders SoupTCP rerequest is composed of 2 groups of TCP Connections: the "O" Group, for Simple Order related information; and the "X" Group, for Complex Order related information. Each group has 4 connections segregated by underlying symbol for a total of 8 channels. The SoupTCP connections should used for requesting large amounts of lost multicast data from the MoldUDP feeds if required by the recipient.

Both the primary ("A feed") and secondary ("B feed") connections will be hosted by servers co-located with the trading system and will have identical performance characteristics.

* Please note that Nasdaq has determined to provide local redundancy in the NY Metro Area ("A feed") and ("B feed"), while using the Mid-Atlantic Region ("C feed") for disaster recovery in the event XL II order entry is switched from the NY Metro Area.

A complete set of alternate connection parameters are available for each Multicast Channel and TCP Connection in the event of a failure in any of the primary connections.

3. Data Types

All integer fields are unsigned big-endian (network byte order) binary encoded numbers. Note that integers may be one, two or four bytes in length. The size is specified for each message field.

All alphanumeric fields are left justified and padded on the right with spaces.

Prices are signed integer fields. When converted to a decimal format, prices are in fixed point format with 6 whole number places followed by 4 decimal digits.

Timestamp reflects the PHLX system time at which the outbound message was generated. For every message, the timestamp is expressed in two fields: "Seconds", which is the number of whole seconds after midnight of the day that the message is sent; and "Nanoseconds", which is the sub-second portion of the time which represents the integer number of nanoseconds. The "Seconds" field will have a range of 0 to 86399 (i.e. 12:00:00am to 11:59:59pm) and "Nanoseconds" will have a range of 0 to 999999999. All times in this protocol are U.S. Eastern Time zone.

3.1 Message Transport

Messages are transported by the underlying MoldUDP or SoupTCP Version 3.00 protocols. Each PHLX Orders message described in the following sections will have a sequence number defined by the underlying Protocols. For MoldUDP, the sequence numbers are explicitly in the MOLD UDP header. For Soup TCP, the sequence numbers are implicit: they are calculated by the sender and recipient. Refer to the specifications for more information.

For data recovery purposes, the same PHLX Orders messages will be sent on Mold UDP and Soup TCP. This implies that for any particular PHLX Orders message sent, it will have the same Mold UDP and Soup TCP sequence number. This makes data recovery simple, if a sequence gap is detected in the multicast stream, then gap filling can take place using MoldUDP. Soup TCP has the same sequencing information, but is better suited for rerequesting large amounts of data, for example missed Options Directory messages sent in the morning hours before market opening.

4. Message Formats

All messages described below have byte sizes and offsets.

PHLX Orders will support four basic types of messages:

- o System Events o Administrative Data o PHLX order related information
- o PHLX auction information

Within the system event and administrative types, PHLX may support multiple message formats as outlined below.

4.1. System Event Message

The system event message type is used to signal a market or data feed handler event. The format is as follows:

System Event Message

Name	Offset	Length	Value	Notes
Message Type	0	1	"S"	System Event Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of the timestamp
Event Code	9	1	Alpha	Refer to System Event Codes below
Version	10	1	Integer	Version of PHLX Orders. Currently set to 1

System Event Codes

Code	Explanation	When (typically)
"O"	*Start of Messages.* This is always the first message sent in any trading day.	After ~2:00am
"S"	*Start of System Hours.* This message indicates that PHLX is open and ready to start accepting orders.	7:00am
"Q"	*Start of Opening Process.* This message is intended to indicate that PHLX has started its opening process.	9:30:00am
"N"	*End of Normal Hours Processing.* This message is intended to indicate that PHLX will no longer accept any new orders or changes to existing orders for options that trade during normal hours.	4:00:00pm
"L"	*End of Late Hours Processing.* This message is intended to indicate that PHLX will no longer accept any new orders or changes to existing orders for options that trade during extended hours.	4:15:00pm
"E"	*End of System Hours.* This message indicates that the PHLX options system is now closed.	~5:15pm
"C"	*End of Messages.* This is always the last message sent in any trading day.	~5:20pm
"W"	*End of WCO Early closing. This message is intended to indicate that the exchange will no longer accept any new orders or changes to existing Orders on last trading date of WCO options.*	12:00 Noon

This message is transmitted in both the "O" and "X" groups.

4.2. Options Directory Message

At the start of each trading day, PHLX disseminates directory messages for all symbols trading on the PHLX option system.

Options Directory

Name	Offset	Length	Value	Notes
Message Type	0	1	Integer	"D" = Options Directory Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of the timestamp
Option ID	9	4	Integer	PHLX Option ID assigned daily, valid for the trading day
Security Symbol	13	5	Alphanumeric	Denotes the option symbol (security symbol) post-symbology rollout. Denotes the root portion of the OPRA symbol pre-symbology rollout
Expiration Year, Month and Day	18	2	Integer	Denotes the explicit expiration date of the option. Bits 0-6 = Year (0-99) Bits 7-10 = Month (1-12) Bits 11-15 = Day (1-31) Bit 15 is least significant bit
Explicit Strike Price	20	4	Integer	Denotes the explicit strike price of the option. Refer to Data Types for field processing notes.
Option Type	24	1	Alpha	Option Type: "C" = Call "P" = Put
Source	25	1	Integer	Identifies the source of the Option, valid for the trading day
Underlying Symbol	26	13	Alpha	Denotes the unique underlying stock symbol for the option symbol. Normally matches the stock symbol. The exception is for corporate actions assigned by PHLX
Option Closing Type	39	1	Integer	Denotes the closing of the option. "N" = Normal Hours "L" = Late Hours "W" = WCO Early Closing at 12:00 Noon
PHLX Tradable	40	1	Integer	Denotes whether or not this option is tradable at the PHLX exchange. The allowable values are: "Y" = Option is tradable at PHLX

				"N" = Option is not tradable at PHLX

NOTE: The options directory messages are sent once per symbol, typically before the "Start of System Hours" System Event. Should it be necessary, intra-day updates to this message will be sent as they occur.

This message is transmitted in the "O" group only.

4.3. Complex Order Strategy Message

Whenever a complex order is added in the system for an underlying, the order is normalized and results in either the creation of a new complex strategy or is added to an existing strategy. A Complex Order Strategy Message containing the strategy definition will be sent. For GTC strategies, these will be assigned each trading day and will not be persistent across trading days. The Strategy ID assigned for a new complex strategy is unique for a particular complex instrument for a trading session. How ever, Strategy IDs are independent of session Options IDs and uniqueness of the IDs across both complex and simple options is not guaranteed.

Complex Order Strategy Message

	Name	Offset	Length	Value	Notes
	Message Type	0	1	Integer	"R" = Complex Order Strategy Message
	Seconds	1	4	Integer	Seconds portion of the timestamp
	Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
	Strategy ID	9	4	Integer	PHLX Strategy ID assigned daily, valid while there are any open complex orders for the day
	Source	13	1	Integer	Identifies the source of the Strategy, valid for the trading day
	Underlying Symbol	14	13	Alphanumeric	Underlying Symbol for the strategy. All legs in this strategy belong to this Underlying
	Action	27	1	Alphanumeric	Defines the state of the strategy: "A" = Add "D" = Delete
	Number of Legs	28	1	Integer	Number of legs in the strategy **NOTE:** Leg field offsets below are an equation, where "n" is the zero based leg number (0, 1, …)
Leg information, legs repeated. n = 0, 1	Option ID	$21n + 29$	4	Integer	PHLX Option ID for this leg, valid for the trading day. The same ID as the corresponding Option in the Options Directory Message. Zero (0) for Stock Leg.
	Security Symbol	$21n + 33$	5	Alphanumeric	Denotes the option symbol post-symbology rollout. Denotes the root portion of the OPRA symbol pre-symbology rollout Blank for Stock Leg. Use Underlying Symbol field.
	Expiration Year, Month and Day	$21n + 38$	2	Integer	Denotes the explicit expiration date of the option. Bits 0-6 = Year (0-99) Bits 7-10 = Month (1-12) Bits 11-15 = Day (1-31) Bit 15 is least significant bit

					Zero (0) for Stock Leg.
	Explicit Strike Price	21n + 40	4	Integer	Denotes the explicit strike price of the option. Refer to Data Types for field processing notes. Zero (0) for Stock Leg.
	Option Type	21n + 44	1	Alpha	Option Type: "C" = Call "P" = Put Blank (" ") for Stock Leg.
	Side	21n + 45	1	Alpha	Indicates the side of the leg: "B" = Leg is on Buy side "S" = Leg is on Sell side
	Leg Ratio	21n + 46	4	Integer	Strategy Leg Ratio

This message is transmitted in the "X" group only.

4.4. Security Trading Action Message

PHLX uses this administrative message to indicate the current trading status of an index or equity option within the PHLX Options Market.

Trading firms should assume that all tradable securities are eligible for trading. PHLX will send out a Trading Action message with "H" (HALTED) when an option is halted for trading. Thereafter throughout the trading day PHLX will use the Trading Action me ssage to relay changes in trading status for an individual security. Messages will be sent when an option is halted or is released for trading. Please note that securities may be halted in the PHLX system for regulatory or operational reasons.

Trading Action Message

Name	Offset	Length	Value	Notes
Message Type	0	1	Integer	"H" = Trading Action Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Option ID	9	4	Integer	PHLX Option ID assigned daily, valid for the trading day
Security Symbol	13	5	Alphanumeric	Denotes the option symbol postsymbology rollout. Denotes the root portion of the OPRA symbol presymbology rollout
Expiration Year, Month and Day	18	2	Integer	Denotes the explicit expiration date of the option. Bits 0-6 = Year (0-99) Bits 7-10 = Month (1-12) Bits 11-15 = Day (1-31)
Explicit Strike Price	20	4	Integer	Denotes the explicit strike price of the option. Refer to Data Types for field processing notes.
Option Type	24	1	Alpha	Option Type: "C" = Call "P" = Put
Current Trading State	25	1	Integer	Reflects the current trading state for the option on the PHLX market. The allowable values are: H = Halt in effect T = PHLX Trading Resumed

Please note that recipients should continue to process the Trading Action message in order to determine if a contract is in a Halt state for the day. A security open message should _**NOT**_ override the Trading action message indicating if an index or equity option is halted. Recipients should use both messages in tandem to indicate if the issue is halted and/or or open for auto execution.

This message is transmitted in the "O" group only.

4.5. Complex Trading Action Message

PHLX uses this administrative message to indicate the current trading status of a strategy within the PHLX Options Market.

Trading firms should assume that all strategies are eligible for trading. PHLX will send out a Trading Action message with "H" (HALTED) when a strategy is halted for trading. Thereafter throughout the trading day PHLX will use the Trading Action message to relay changes in trading status for the strategy. Messages will be sent when the strategy is halted or is released for trading.

Trading Action Message

Name	Offset	Length	Value	Notes
Message Type	0	1	Integer	"I" = Strategy Trading Action Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Strategy ID	9	4	Integer	PHLX Strategy ID assigned daily, valid while there are any open complex orders for the day
Current Trading State	13	1	Integer	Reflects the current trading state for the strategy on the PHLX market. The allowable values are: H = Halt in effect T = PHLX Trading Resumed

Please note that recipients should continue to process the Trading Action message in order to determine if a strategy is in a Halt state during the day. A strategy open message should **_NOT_** override the Strategy Trading Action message indicating if a strategy is halted. Recipients should use both messages in tandem to indicate if the strategy is halted and/or or open for auto execution.

This message is transmitted in the "X" group only.

4.6. Security Open/Closed Message

PHLX uses this administrative message to indicate when an option has completed the opening process and is now available for auto execution or when the option has closed and is no longer available for auto execution.

Security Open/Closed Message

Name	Offset	Length	Value	Notes
Message Type	0	1	Integer	"P" = Security Open/Closed Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Option ID	9	4	Integer	PHLX Option ID assigned daily, valid for the trading day
Security Symbol	13	5	Alphanumeric	Denotes the option symbol postsymbology rollout. Denotes the root portion of the OPRA symbol presymbology rollout
Expiration Year, Month and Day	18	2	Integer	Denotes the explicit expiration date of the option. Bits 0-6 = Year (0-99) Bits 7-10 = Month (1-12) Bits 11-15 = Day (1-31)
Explicit Strike Price	20	4	Integer	Denotes the explicit strike price of the option. Refer to Data Types for field processing notes.
Option Type	24	1	Alpha	Option Type: "C" = Call "P" = Put
Open State	25	1	Integer	Reflects the current eligibility for auto execution of the options security on the PHLX. The allowable values are: "Y" = Open for auto execution "N" = Closed for auto execution

Please note that recipients should continue to process the Trading Action message in order to determine if a contract is in a Halt state for the day. A security open message should **_NOT_** override the Trading action message indicating if an index or equity option is halted. Recipients should use both messages in tandem to indicate if the issue is halted and/or or open for auto execution.

This message is transmitted in the "O" group only.

4.7. Strategy Open/Closed Message

PHLX uses this administrative message to indicate when a strategy has completed the opening process or when the strategy has closed and is no longer available for auto execution.

Security Open/Closed Message

Name	Offset	Length	Value	Notes

Message Type	0	1	Integer	"Q" = Strategy Open/Closed Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Strategy ID	9	4	Integer	PHLX Strategy ID assigned daily, valid while there are any open complex orders for the day
Open State	13	1	Integer	Reflects the current eligibility for auto execution of the options security on the PHLX. The allowable values are: "Y" = Open for auto execution "N" = Closed for auto execution

Please note that recipients should continue to process the Trading Action message in order to determine if a strategy is in a Halt state for the day. A Strategy Open/Closed Message should **_NOT_** override the Strategy Trading Action Message indicating if a strategy is halted. Recipients should use both messages in tandem to indicate if the strategy is halted and/or or open for auto execution.

This message is transmitted in the "X" group only.

4.8. Simple Order Message

When a Single Order is received or any change is made to an order, an Order message containing the current order status will be sent.

The Order ID field, a PHLX assigned identifier, is uniquely assigned for each order. Please note that the Order ID is designed to be unique only across a single day. That is, it is guaranteed to be unique for a given order for a given day only. A GTC order that persists across days may have a different Order ID assigned to it on any given day.

Simple Order Message

Name	Offset	Length	Value	Notes
Message Type	0	1	Alpha	"O" = Simple Order Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Option ID	9	4	Integer	PHLX Option ID assigned daily, valid for the trading day
Security Symbol	13	5	Alphanumeric	Denotes the option symbol postsymbology rollout. Denotes the root portion of the OPRA symbol presymbology rollout

Expiration Year, Month and Day	18	2	Integer	Denotes the explicit expiration date of the option.
				  Bits 0-6 = Year (0-99)
				  Bits 7-10 = Month (1-12)
				  Bits 11-15 = Day (1-31)
				Where bit 15 is the least significant bit of the integer

Explicit Strike Price	20	4	Integer	Denotes the explicit strike price of the option. Refer to Data Types for field processing notes.
Option Type	24	1	Alpha	Option Type: "C" = Call "P" = Put
Order ID	25	4	Integer	PHLX assigned order id
Side	29	1	Alpha	Indicates the side of the order: "B" = Buy order "S" = Sell order
Original Order Volume	30	4	Integer	Original Order Volume for this order
Executable Order Volume	34	4	Integer	Volume available for execution at PHLX. Note that this number can increase or decrease as the size available for trading changes due to away exchange routing

Order Status	38	1	Alpha	Indicates the current status of the order: "O" = Open "F" = Filled "C" = Cancelled (NOTE below)
Order Type	39	1	Alpha	Indicates the type of order: "M" = Market "L" = Limit
Market Qualifier	40	1	Alpha	 "O" = Opening Order "I" = Implied Order " " = N/A (field is space char)
Limit Price	41	4	Integer	Limit Price of Limit or Stop Order. Otherwise field is zero.
All or None	45	1	Alpha	Indicates if order is All or None Order: "Y" = Order is All or None Order "N" = Order is not All or None Order
Time in Force	46	1	Alpha	Indicates duration of the order: "D" = Day Order "G" = Good till cancelled (GTC) Order

Customer/Firm Indicator	47	1	Alpha	Indicates whether this is a: "C" = Customer Order "F" = Firm Order "M" = On-floor Market Maker "B" = Broker Dealer Order "P" = Professional Order " " = N/A (For Implied Order)
Open Close Indicator	48	1	Alpha	Indicates whether this Order opens or closes a position: "O" = Opens position "C" = Closes position " " = N/A (For Implied Order)

NOTES:
- An Order Status field value of "C" (Cancelled) indicates that the Executable Order Volume number of contracts sent previously for this Simple Order was cancelled
- Stop Orders are indicated as a new regular or market order once the stop order is elected and eligible for posting and execution

This message is transmitted in the "O" group only.

4.9. Complex Order Message

When a Complex Order is received or any change is made to a complex order for an underlying, a Complex Order Message containing the order information will be sent.

The Order ID field, a PHLX assigned identifier, is uniquely assigned for each order. Please note that the Order ID is designed to be unique only across a single day. That is, it is guaranteed to be unique for a given order for a given day only. A GTC order that persists across days may have a different Order ID assigned to it on any given day.

NOTE: Complex strategy information in the fields inclusively from "Underlying Symbol" to the end of the Complex Order Message are identical to the information in the Complex Order Strategy Message for the Strategy ID of the Order. The Strategy ID encapsulates the strategy information. The strategy information at the end of this message is presented as a convenience for users of this feed requiring complete strategy information for a given Complex Order.

Complex Order Message

Name	Offset	Length	Value	Notes
Message Type	0	1	Integer	"X" = Complex Order Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Strategy ID	9	4	Integer	PHLX Strategy ID assigned daily, valid while there are any open complex orders for the day
Order ID	13	4	Integer	PHLX assigned order id

Side	17	1	Alpha	Indicates the side of the order: "B" = Buy order "S" = Sell order "*" = Side is hidden This field will be masked with "*" for new Complex Orders that initiated a COLA
Original Order Volume	18	4	Integer	Original Order Volume for this order
Executable Order Volume	22	4	Integer	Volume available for execution at PHLX
Order Status	26	1	Alpha	Indicates the current status of the order: "O" = Open "F" = Filled "C" = Cancelled (NOTE below) "R" = Re-notification (NOTE below)
Order Type	27	1	Alpha	Indicates the type of order: "M" = Market "L" = Limit "*" = Anonymous This field will be masked with "*" for new Complex Orders that initiated a COLA

Limit Price	28	4	Integer	Limit Price of Limit Order. Otherwise field is zero.	
Debit or Credit	32	1	Alpha	Price is: "D" = Net Debit "C" = Net Credit " " = Even (or Market Order) "*" = Anonymous This field will be masked with "*" for new Complex Orders that initiated a COLA	
All or None	33	1	Alpha	Indicates if order is All or None Order: "Y" = Order is All or None "N" = Order is not All or None	
Time in Force	34	1	Alpha	Indicates duration of the order: "D" = Day Order "G" = Good till cancelled (GTC) "I" = IOC (Immediate or Cancel)	
Customer/Firm Indicator	35	1	Alpha	Indicates whether this is a: "C" = Customer Order "F" = Firm Order "M" = On-floor Market Maker "B" = Broker Dealer Order "P" = Professional Order	
Underlying Symbol	36	13	Alphanumeric	Underlying Symbol for the strategy. All legs in this strategy belong to this Underlying	
Number of Legs	49	1	Integer	Number of legs in the strategy **NOTE:** Open Close and Leg field offsets below are an equation, where "n" is the zero based leg number (0, 1, …) and "L" is the number of legs	
Repeated n=0,…L-1	Open Close Indicator	n + 50	1	Alpha	Indicates whether this Order opens or closes a position for leg: "O" = Opens position "C" = Closes position This indicator is an array with "Number of Legs" elements. Each element represents the position for each strategy. Ordering of positions corresponds to the ordering of Strategies. Blank (" ") for Stock Leg.

Repeated n = 0,1,…L-1	Option ID	21n + 50+L	4	Integer	PHLX Option ID for this leg, valid for the trading day. The same ID as the corresponding Option in the Options Directory Message. Zero (0) for Stock Leg.
	Security Symbol	21n + 54+L	5	Alphanumeric	Denotes the option symbol postsymbology rollout. Denotes the root portion of the OPRA symbol pre-symbology rollout Blank for Stock Leg. Use Underlying Symbol field.
	Expiration Year, Month and Day	21n + 59+L	2	Integer	Denotes the explicit expiration date of the option. Bits 0-6 = Year (0-99) Bits 7-10 = Month (1-12) Bits 11-15 = Day (1-31) Bit 15 is least significant bit Zero (0) for Stock Leg.
	Explicit Strike Price	21n + 61+L	4	Integer	Denotes the explicit strike price of the option. Refer to Data Types for field processing notes. Zero (0) for Stock Leg.
	Option Type	21n + 65+L	1	Alpha	Option Type: "C" = Call "P" = Put Blank (" ") for Stock Leg.
	Side	21n + 66+L	1	Alpha	Indicates the side of the leg: "B" = Leg is on Buy side "S" = Leg is on Sell side
	Leg Ratio	21n + 67+L	4	Integer	Strategy Leg Ratio

This message is transmitted in the "X" group only.

NOTES:
- An Order Status field value of "C" (Cancelled) indicates that the Executable Order Volume number of contracts sent previously for this Complex Order was cancelled
- The Open Close Indicator field repeats as an array "Number of Legs" times
- The group of fields from Option ID to Leg Ratio inclusive repeats "Number of Legs" times
- An Order Status field value of "R" (Re-notification) indicates that the resting complex order published before is within the execution price range of the complex strategy's NBBO (best bid/offer).
- Firm Order Indicator "F" represents both Firm and JBO Firm

4.10. Auction Notification Message

When a symbol goes into an auction, an Auction Notification Message is sent. Also if any auction parameters change during the auction, size for example, a new Auction Notification message will be sent for that symbol.
This message is also sent when there is an exposed buy (sell) order available for execution at the National Best Offer (Bid). The exposed order volume may be routed away.

Auction Notification Message

Name	Offset	Length	Value	Notes
Message Type	0	1	Integer	"A" = Auction Notification Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Option ID	9	4	Integer	PHLX Option ID assigned daily, valid for the trading day
Security Symbol	13	5	Alphanumeric	Denotes the option symbol postsymbology rollout. Denotes the root portion of the OPRA symbol presymbology rollout
Expiration Year, Month and Day	18	2	Integer	Denotes the explicit expiration date of the option. Bits 0-6 = Year (0-99) Bits 7-10 = Month (1-12) Bits 11-15 = Day (1-31)
Explicit Strike Price	20	4	Integer	Denotes the explicit strike price of the option. Refer to Data Types for field processing notes.
Option Type	24	1	Alpha	Option Type: "C" = Call "P" = Put
Auction ID	25	4	Integer	Uniquely identifies the Auction for the trading day. Presently the Auction ID will be zero for non-PIXL auctions.
Auction Type	29	1	Alpha	Type of Auction: "O" = Opening "R" = Reopening "P" = PIXL "S" = Solicitation "I" = Order Exposure
Price	30	4	Integer	Price at which auction is started. For PIXL auctions, price is zero. The price at which an exposed order is available for execution.
Side	34	1	Alpha	Indicates the side of the auction: "B" = Buy side "S" = Sell side "*" = Solicitation auction
Matched	35	4	Integer	Volume that can be traded at Price. For

Volume				Order Exposure, Matched Volume is zero
Imbalance Volume	39	4	Integer	Total number of contracts better than Price (includes Orders that cannot be filled). The Exposed Order size.
Customer/ Firm Indicator	43	1	Alpha	For Order Exposure (AuctionType=I) only. Indicates the order capacity: "C" = Customer "F" = Firm "M" = On-floor Market Maker "P" = Professional Customer "B" = Broker Dealer/ Non-PHLX Registered Market Maker/ Remote Specialist
Reserved	44	3	N/A	Reserved for future use

This message is transmitted in the "O" group only.

4.11. Complex Auction Notification Message

When a Complex Order Live Auction (COLA) or PIXL/Solicitation auction starts for a strategy of an underlying, a COLA/PIXL/Solicitation notification message containing the auction information will be sent.

COLA Notification Message

Name	Offset	Length	Value	Notes
Message Type	0	1	Integer	"C" = COLA Notification Message
Seconds	1	4	Integer	Seconds portion of the timestamp
Nanoseconds	5	4	Integer	Nanoseconds portion of timestamp
Strategy ID	9	4	Integer	PHLX Strategy ID assigned daily, valid while there are any open complex orders for the day
Auction ID	13	4	Integer	Uniquely identifies the Auction for the trading day.
Auction Type	17	1	Alpha	Type of Auction: "C" – COLA "P" – PIXL "S" - Solicitation
Price	18	4	Integer	Price at which COLA/PIXL/Solicitation is started. This field is set to zero for PIXL auctions and under certain conditions for COLA when the strategy is opening.
Side	22	1	Alpha	Indicates the side of the auction: "B" = Buy side "S" = Sell side "*" = Solicitation auctions and under certain conditions for COLA when the strategy is opening.
Debit or Credit	23	1	Alpha	Price is: "D" = Net Debit "C" = Net Credit " " = Even (or Market Order) "*" = Anonymous This field will be masked with "*" for PIXL auctions and under certain conditions for COLA when the strategy is opening.

Volume	24	4	Integer	Total volume available in COLA/PIXL/Solicitation. This field will be 0 under certain conditions for COLA when the strategy is opening.

This message is transmitted in the "X" group only.

4.12. Support

For general product support for Nasdaq PHLX data feeds, please contact Nasdaq Global Information Services at 301.978.5307 or datasales@nasdaq.com

For technical questions please contact devsupport@nasdaq.com

Appendix A – PHLX Order Addresses

The MoldUDP Data Feed Addressing Information section on Nasdaq trader currently outlines the configuration of both the **TOPO** data feed and the **PHLX Orders** data feed.

Appendix B – Revision Control Log

Documentation Revision Control Log

January 9, 2023: Top of PHLX Orders 1.92
- Version updated to 1.92
- Clarifying the Data Types: Added "signed" to "Prices are signed integer fields".

October 29, 2018: PHLX Orders - Version 1.91
Updated the Simple Auction notification message for customer indicator.

November 2, 2017: PHLX Orders - Version 1.9
Updated the Start of Messages (System Event Code "O") time to ~2:00 am.

November 30, 2015: PHLX Orders - Version 1.80
- Updated the Start of Messages (System Event Code "O") time to ~4:00 am.
- Updated the End of System Hours (System Event Code "E") time to ~5:15 pm to more accurately reflect current practice.
- Updated the End of Messages (System Event Code "C") time to ~5:20 pm to more accurately reflect current practice.

August 10, 2015: PHLX Orders - Version 1.70.8
- Added WCO Early Close Time 'W' for Option Directory Message.
- Added WCO Early Close Event 'W' for System Event Message.

March 2, 2015: PHLX Orders - Version 1.70.7
- Updated the language in section 4.3 Complex Order Strategy Message

April 21, 2014: PHLX Orders - Version 1.70.6
- Updated the complex and simple auction messages for Solicitation auctions.
- Clarified that Firm Order Indicator "F" represents both Firm and JBO Firm

October 25, 2013: PHLX Orders - Version 1.70.5
- Updated the complex and simple auction messages for PIXL auctions.
- Updated the Simple Order message for Implied Orders.

August 30, 2013: PHLX Orders - Version 1.70.4
- Updated the Complex Auction Notification Message for COLA notifications.

August 13, 2012: PHLX Orders - Version 1.70.3
- Updated the Auction Notification Message for Solicitation and Order Exposure (only simple orders)
- Updated the Complex Auction Notification Message for PIXL/Solicitation
- Updated the Complex Order Message with a new re-notification value for Order Status.
- Removed references to Market Exhaust, which is obsolete.

March 23, 2010: PHLX Orders - Version 1.70.1
- Updated the placement of "I" = IOC (Immediate or Cancel) from the Order Type field to the Time in Force field in the Complex Order Message

January 19, 2010: PHLX Orders - Version 1.70
- Modified explanation for Option ID, Security Symbol, Expiration Year/ Month / Day, Explicit Strike Price and Option Type Leg information fields for Complex Order Strategy Message
- Modified explanation for Open Close Indicator, Option ID, Security Symbol, Expiration Year/ Month / Day, Explicit Strike Price and Option Type Leg information fields for Complex Order Message
- Modified explanation for Auction ID field for Complex Auction Notification Message

January 08, 2009: PHLX Orders - Version 1.60
- Added "P" value to Customer/Firm Indicator for Simple Order and Complex Order Messages to indicate the Order is a Professional Order

October 28, 2009: PHLX Orders - Version 1.50
- Changed Overview to state that IOC Complex Orders are sent by TOPO Orders Enhanced explanation of Order Status field for Simple and Complex Orders.
- Added enumeration "I" for Order Type field in Complex Order Message
- Modified explanation of blank Debit or Credit field in Complex Order Message and Complex Auction Notification Message

October 13, 2009: PHLX Orders - Version 1.40
- Interchanged order of Customer Firm Indicator and Open Close Indicator fields in Simple Order Message
- Open Close Indicator field of Complex Order Message is defined at Leg level (instead of Order level)

September 23, 2009: PHLX Orders - Version 1.30
- Added Option ID to Leg description of Complex Order Strategy Message and Complex Order Message

September 22, 2009: PHLX Orders - Version 1.20
- Added Option ID to all PHLX Orders messages associated with Options
- Changed Strategy ID to an Integer for all PHLX Orders messages associated with Strategies
- Added Auction ID field to Auction Notification Message and Complex Auction Notification Message

September 10, 2009: PHLX Orders - Version 1.10
- Underlying Symbol is now a 13 character field
- Added two fields to Simple Order and Complex Order Messages

August 3, 2010: PHLX Orders - Version 1.70.2
- Updated the Auction Notification Message for PIXL

August 30, 2009: PHLX Orders - Version 1.00
 Initial Release.