

## Unit Clear Message

This message will be sent at startup each day. It would also be distributed in certain recovery events such as a data center fail-over.

Unit Clear Message		
Field	Data Type	Description
Message_Type	Integer	151 – Unit clear message
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_stamp	Long long integer	Nanosecond from midnight of London time

## Add Order Message

An Add Order Message represents a newly accepted visible order on the book. It includes a day-specific Order Id assigned by Cboe to the order.

Long Format

Add Order - Long		
Field	Data Type	Description
Message_Type	Integer	64 – Add order message long
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Day-specific identifier assigned to this order
Side_Indicator	Character	B = Buy Order S = Sell Order
Quantity	Long Integer	Number of shares being added to the book (may be less than the number entered)
Symbol	Alphanumeric	Stock Symbol
Price	Double	The limit order price

Short Format

Add Order - Short		
Field	Data Type	Description
Message_Type	Integer	34 – Add order message short
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Day-specific identifier assigned to this order
Side_Indicator	Character	B = Buy Order S = Sell Order
Quantity	Long Integer	Number of shares being added to the book (may be less than the number entered)
Symbol	Alphanumeric	Stock Symbol
Price	Double	The limit order price

## Expanded Format

<b>Add Order - Expanded</b>		
<b>Field</b>	<b>Data Type</b>	<b>Description</b>
Message_Type	Integer	47 – Add Order Message Expanded
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Day-specific identifier assigned to this order
Side_Indicator	Character	B = Buy Order S = Sell Order
Quantity	Long Integer	Number of shares applicable to this quote
Symbol	Alphanumeric	Stock Symbol
Price	Double	The quote price
Add_Flags	8-bit bitmap	Bit 1 - 'SI Quote' indicator. If set, indicates this Add represents an "SI Quote". Bits 0, 2-7 - Reserved for future use.
ParticipantID	Alphanumeric	Attributes this quote to a particular participant

## Order Executed Message

Order Execution Messages are sent when a visible order on the book is executed in whole or in part. The execution price equals the price found in the original Add Order Message or the price on the latest Modify Order Message referencing the Order Id.

<b>Order Executed</b>		
<b>Field</b>	<b>Data Type</b>	<b>Description</b>
Message_Type	Integer	35 – Order Executed Message
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Order Id of a previously send Add Order Message
Executed_Shares	Long integer	Number of shares executed
Execution_Id	Long long Integer	Cboe generated day-unique execution identifier of this execution. Execution Id is also referenced in the Trade Break Message.
Execution_Flags	Alphanumeric	Type flags based on MMT v.3.04 standard

## Order Executed At Price/Size Message

Order Execution at Price/Size Messages are sent when a visible order on the book is executed in whole or in part at different price than the price on the Add Order Message or the price on the latest Modify Order Message referencing the Order Id. If the Remaining Shares field contains a 0, the order should be completely removed from the book.

Order Executed At Price/Size		
Field	Data Type	Description
Message_Type	Integer	36 – Order Executed At Price/Size Message
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Order Id of a previously send Add Order Message
Executed_Shares	Long Integer	Number of shares executed
Remaining_Shares	Long Integer	Number of shares remaining after the execution
Execution_Id	Long long Integer	Cboe generated day-unique execution identifier of this execution. Execution Id is also referenced in the Trade Break Message.
Price	Double	The execution price of the order
Execution_Flags	Alphanumeric	Type flags based on MMT v.3.04 standard

## Reduce Size Message

Reduce Size Messages are sent when a visible order on the book is partially reduced.

Long Format

Reduce Size - Long		
Field	Data Type	Description
Message_Type	Integer	37 – Reduce Size Message Long
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Order Id of a previously sent Add Order Message
Cancelled_Shares	Long integer	Number of shares cancelled

Short Format

Reduce Size - Short		
Field	Data Type	Description
Message_Type	Integer	38 – Reduce Size Message Short
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Order Id of a previously sent Add Order Message
Cancelled Shares	Long integer	Number of shares cancelled

## Modify Order Message

The Modify Order Message is sent whenever an open order is visibly modified. The Order Id refers to the Order Id of the original Add Order Message.

Long Format

Modify Order - Long		
Field	Data Type	Description
Message_Type	Integer	39 – Modify order message long
Message_Seq_Number	Long Integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Order Id of a previously sent Add Order Message
Shares	Long integer	Number of shares associated with this order after this modification (may be less than the number of shares entered)
Price	Double	The limit order price after this modify

Short Format

Modify Order - Short		
Field	Data Type	Description
Message_Type	Integer	40 – Modify order message short
Message_Seq_Number	Long Integer	message sequence number from exchange
Time_Stamp	Long long integer	nanosecond from midnight of London time
Order_Id	Long long integer	Order Id of a previously sent Add Order Message
Shares	Long Integer	Number of shares associated with this order after this modification (may be less than the number of shares entered)
Price	Double	The limit order price after this modify

## Delete Order Message

The Delete Order Message is sent whenever an open order is completely cancelled. The Order Id refers to the Order Id of the original Add Order Message.

Delete Order		
Field	Data Type	Description
Message_Type	Long Integer	41 – Delete order message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Order Id of a previously sent Add Order Message

## Trade Message

The Trade Message provides information about executions of hidden orders on the book and routed executions to other trading centres. Trade Messages are necessary to calculate Cboe execution based data. Trade Messages do not alter the book and can be ignored if you are just building a book.

No Add Order Message is sent for hidden orders, and thus, no modify order messages may be sent when hidden orders are executed. Instead, a Trade Message is sent whenever a hidden order is executed in whole or in part. As with visible orders, hidden orders may be executed in parts.

A complete view of all executions can be built by combining all Order Executed Messages and Trade Messages.

The Order ID of a hidden order is obfuscated by default in the Trade Message but may be optionally disseminated for a Participant's own orders upon request. As such, partial executions against the same hidden order will by default have different Order IDs.

### Long Format

Trade - Long		
Field	Data Type	Description
Message_Type	Long Integer	65 – Trade message long
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Obfuscated Order ID or Order ID of the non-displayed executed order
Side_Indicator	Character	Always B for hidden trades
Shares	Long Integer	Incremental number of shares executed
Symbol	Alphanumeric	Stock Symbol
Price	Double	The execution price
Execution_id	Long long Integer	Cboe generated day-unique execution identifier of this trade. Execution Id is also referenced in the Trade Break Message.
Trade_flags	Alphanumeric	Type flags based on MMT v3.04 standard

### Short Format

Trade - Short		
Field	Data Type	Description
Message_Type	Long Integer	43 – Trade message short
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Order_Id	Long long integer	Obfuscated Order ID or Order ID of the non-displayed executed order
Side_Indicator	Character	Always B for hidden trades
Shares	Long Integer	Incremental number of shares executed
Symbol	Alphanumeric	Stock Symbol
Price	Double	The execution price

Execution_id	Long long Integer	Cboe generated day-unique execution identifier of this trade. Execution Id is also referenced in the Trade Break Message.
Trade_flags	Alphanumeric	Type flags based on MMT v3.04 standard

#### Extended Format

<b>Trade - Extended</b>		
<b>Field</b>	<b>Data Type</b>	<b>Description</b>
Message_Type	Long Integer	50 – Trade message Extended
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Shares	Long Integer	Number of shares executed
Symbol	Alphanumeric	Stock Symbol
Price	Double	The execution price. This may be zero if the price is pending, as denoted by Level 3.8 of the Extended Trade Flags.
Trade_Id	Long long Integer	Cboe generated identifier of this trade. This identifier is guaranteed to be unique for at least 7 calendar days.
Trade_timestamp	Long long Integer	Date/Time on which the trade occurred, encoded as the number of nanoseconds since the January 1st 1970 UTC (also known as the Unix epoch).
Execution_Venue	Alphanumeric	The venue on which the trade executed, when applicable. This will contain the MIC representing the venue on which the trade occurred, where applicable. e.g. for Cboe NT trades, this shall be the segment MIC BATF for BXE off-book trades, CHIO for CXE off-book trades and BARO for REGM off-book trades. This will contain SINT if the trade occurred on a Systematic Internaliser or XOFF if OTC. Cboe LIS trades have the value LISX.
Currency	Alphanumeric	Traded currency.
Cboe_Trade_Timing_Indicator	Alphanumeric	`1' The trade was reported to Cboe `late', `2' The trade was reported to Cboe out of the Main Session, `3' The trade was reported to Cboe late and out of the Main Session `-' otherwise. NOTE: 2 and 3 are not valid values on the Trade Reporting Facility.
Extended_Trade_Flags	Alphanumeric	Type flags based on the MMT v3.04 standard.

## Trade Message – Unknown Symbol

Only used on the Cboe European Trade Reporting Facility. This message provides details of trades reported to Cboe, but traded on a symbol not currently known to Cboe. These trades are identified by the ISIN and the reported currency. Like other Trade messages, these do not alter the book, and can be ignored if you are just building a book.

Trade – Unknown symbol		
Field	Data Type	Description
Message_Type	Long Integer	53 – Trade–Unknown Symbol
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Shares	Long Integer	Number of shares executed
Symbol	Alphanumeric	Symbol in ISIN
Price	Double	The reported price. This may be zero if the price is pending, as denoted by Level 3.8 of the Extended Trade Flags.
Trade_Id	Long long Integer	Cboe generated identifier of this trade. This identifier is guaranteed to be unique for at least 7 calendar days.
Trade_timestamp	Long long Integer	Date/Time on which the trade occurred, encoded as the number of nanoseconds since the January 1st 1970 UTC (also known as the Unix epoch).
Execution_Venue	Alphanumeric	The venue on which the trade executed, when applicable. This will contain the MIC representing the venue on which the trade occurred, where applicable. This will contain SINT if the trade occurred on a Systematic Internaliser or XOFF if OTC.
Currency	Alphanumeric	Reported currency.
Cboe_Trade_Timing_Indicator	Alphanumeric	`1' The trade was reported to Cboe `late', `-' otherwise.
Extended_Trade_Flags	Alphanumeric	Type flags based on the MMT v3.04 standard.

## End of Session Message

The End of Session Message is sent for each unit when the unit shuts down. No more sequenced messages will be delivered for this unit, but heartbeats from the unit may be received.

End of Session		
Field	Data Type	Description
Message_Type	Long Integer	45 – End of Session message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time

## Trade Status Message

The Trading Status Message is used to indicate the current trading status of a security. A Trading Status Message will be sent whenever a security's trading status changes. In addition, Cboe will send a Trading Status Message for all securities that are "Suspended" before the start of trading hours.

End of Session		
Field	Data Type	Description
Message_Type	Long Integer	49 – Trade Status message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Symbol	Alphanumeric	Stock Symbol
Status	Character	T = Trading R = O_-Book Reporting C = Closed S = Suspension N = No Reference Price V = Volatility Interruption O = Opening Auction E = Closing Auction H = Halt1 M = Market Order Imbalance Extension P = Price Monitoring Extension
Reserved1	Alphanumeric	Reserved



## Statistics Message

Only used on the Cboe European platform. The Statistics Message is used to disseminate the statistics prices: opening, closing, high, low. When a value changes a new message will be sent. At the start of each trading day a "Previous Closing Price" will be sent with the closing price of the previous trading day. If a trade that generated the price is subsequently busted another Statistics Message will be sent. The "Price Determination" will by default be "Normal". The value of "Manual" arises from prices being adjusted by market supervision. A lower "High Price" or higher "Low Price" could result from breaking a trade, these will be flagged with "Manual".

Cboe reserves the right to add additional values to the "Statistics Type" and "Price Determination" fields without notice. Participants should develop their decoders to ignore unknown values.

Statistics Message		
Field	Data Type	Description
Message_Type	Long Integer	52 – Statistics message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Symbol	Alphanumeric	Stock Symbol
Price	Double	Price
Statistic_Type	Character	C = Closing Price H = High Price L = Low Price O = Opening Price P = Previous Closing Price
Price Determination	Character	0 = Normal 1 = Manual (Price override by Market Supervision)

## Auction Update Message

Auction Update messages are used to disseminate indicative price and size information during auctions for Cboe auction eligible securities. The Auction Update messages are published periodically during the call and extension phases of the auction process.

There is a legacy Auction Update Message that has a different message type and a different record format. See below.

<b>Auction Update Message</b>		
<b>Field</b>	<b>Data Type</b>	<b>Description</b>
Message_Type	Long Integer	172 – Auction Update Message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Symbol	Alphanumeric	Stock Symbol
Auction Type	Character	O = Opening Auction C = Closing Auction H = Halt Auction V = Volatility Auction P = Periodic Auction
Reference Price	Double	Reference price used in tie-breaker situations
Indicative Price	Double	Price at which the auction would match if executed at the time of the message
Indicative Shares	Long Integer	Number of shares at the Indicative Price
Outside Tolerance	Character	Indicates whether the price on this update is outside the Cboe EBBO collar: O = Outside tolerance I = Inside tolerance - = Not specified
Includes Primary	Character	Indicates whether the Cboe EBBO used to collar this update includes the Primary Market quotes: P = Includes Primary N = Excludes Primary - = Not specified

## Legacy Auction Update message

<b>Auction Update Message</b>		
<b>Field</b>	<b>Data Type</b>	<b>Description</b>
Message_Type	Long Integer	149 – Auction Update Message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Symbol	Alphanumeric	Stock Symbol
Auction Type	Character	O = Opening Auction C = Closing Auction H = Halt Auction V = Volatility Auction P = Periodic Auction
Reference Price	Double	Reference price used in tie-breaker situations
Buy Shares	Long Integer	Number of shares on the buy side at the Indicative Price
Sell Shares	Long Integer	Number of shares on the sell side at the Indicative Price
Indicative Price	Double	Price at which the auction would match if executed at the time of the message
Reserved	Long Integer	

## Auction Summary Message

Auction Summary messages are used to disseminate the results of an auction in a Cboe auction eligible security.

<b>Auction Summary Message</b>		
<b>Field</b>	<b>Data Type</b>	<b>Description</b>
Message_Type	Long Integer	150 – Auction Summary Message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Symbol	Alphanumeric	Stock Symbol
Auction Type	Character	O = Opening Auction C = Closing Auction H = Halt Auction V = Volatility Auction P = Periodic Auction
Price	Double	Auction Price
Shares	Long integer	Cumulative number of shares executed during the auction

## Legacy messages

### Trade Break Message

The Trade Break Message is sent whenever an execution on BATS Chi-X Europe is broken. Trade breaks are rare and only affect applications that rely upon execution based data. Applications that simply build a book can ignore Trade Break Messages.

Trade Break Message		
Field	Data Type	Description
Message_Type	Long Integer	44 – Trade Break Message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Execution ID	Long long Integer	BATS Chi-X Europe execution identifier of the execution that was broken. Execution Id refers to a previously sent Order Execution or Trade Message.

### Off-Book Trade Break Message

Only used on BATS' European platform. The Off-Book Trade Break message is sent whenever a previously published Off-Book Trade message is cancelled. Applications need only process this message if they are also processing Off-Book Trade messages.

Off-Book Trade Break Message		
Field	Data Type	Description
Message_Type	Long Integer	51 – Off-Book Trade Break Message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Trade ID	Long long Integer	BATS Chi-X Europe identifier of the off-book trade that was broken. Trade Id refers to a previously sent Off-Book Trade Message, which may have been sent on a previous day.

## Off-Book Trade Message

Only used on BATS' European platform. The Off-Book Trade Message provides details of off-book trades reported to BATS Chi-X Europe. This includes, for example, privately negotiated trades brought 'on-exchange'. Like Trade messages, these do not alter the book, and can be ignored if you are just building a book.

Off-Book Trade Message		
Field	Data Type	Description
Message_Type	Long Integer	50 – Off-Book Trade message
Message_Seq_Number	Long long integer	Message sequence number from exchange
Time_Stamp	Long long integer	Nanosecond from midnight of London time
Shares	Long Integer	Number of shares executed
Symbol	Alphanumeric	Stock Symbol
Price	Double	The execution price.
Trade_Id	Long long Integer	BATS Chi-X Europe generated identifier of this trade. This identifier is guaranteed to be unique for at least 7 calendar days.
Trade_timestamp	Long long Integer	Date/Time on which the trade occurred, encoded as the number of nanoseconds since the January 1st 1970 UTC (also known as the Unix epoch).
Execution_Venue	Alphanumeric	The venue on which the trade executed, when applicable. This will contain the MIC representing the venue on which the trade occurred, where applicable. e.g for BATS Chi-X Europe NT trades, this shall be BATE or CHIX as applicable. Where no MIC is applicable, this field will be blank.
Currency	Alphanumeric	Traded currency.
Trade Type Flags	Alphanumeric	Type flags based on the MMT v2.0 standard.