

Small Exchange

FIX Drop Copy API Specification

Version 1.2

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1 Revision History

Version	Date	Author	Description
0.1	June-01-2018	Sergey Samushin	Initial draft
0.2	Nov-23-2018	Sergey Samushin	Added trade bust/correct messages Removed OrderStatusRequest
0.3	Feb-28-2019	Yury Kudryashov	Self-match prevention CTI Code in messages Expired and done-for-day orders Details on Exchange operation schedule and order identifiers
0.4	Mar-21-2019	Yury Kudryashov	ManualOrderIndicator (1028) tag MinQty (110) tag in execution reports SelfMatchPreventionToken (7928) replaced with SelfMatchPreventionID (2362) Standard tags 528 and 582 are used to report CTI codes and customer/firm order origin Operator ID and original trading firm reporting through Parties component Execution report format for triggered Stops Trade bust/correct reporting via UCC messages
0.5	Aug-07-2019	Yury Kudryashov	Subscriber identification LegRefID (654) in trade execution reports for spread fills PartyRole (44), ExecID (17), OrderID (37), SolicitedFlag (377) values clarification
1.0	Mar-03-2020	Yury Kudryashov	Tag 369 (LastMsgSeqNumProcessed) described Logon and sequence reset protocol revised and detailed
1.2	July-20-2020	Natalie Oblazny Yury Kudryashov	- SelfMatchPreventionId(2362) field length changed to 15 characters - Clarifies purpose and scope of tag 528 and tag 582 - Maximum supported sequence clarified

2 Confidentiality/Disclaimer

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3 Overview

This document describes the Small Exchange Drop Copy FIX API which can be configured for firms to receive orders execution reports associated with a clearing firm, a trading firm or a particular order management FIX line. The report summarizes the specified execution activity and is generated in near real-time.

The API uses FIX 4.4 version. The document is not intended to serve as a full-fledged specification of the FIX protocol. It is assumed the reader is acquainted with the protocol, please refer to the official FIX specifications at <https://www.fixtrading.org/> website for additional details.

3.1 The Small Exchange Hours of Operation

The Small Exchange’s current trading schedule can be found at <https://thesmallexchange.com>. Orders entered outside trading hours will be rejected. Firms are encouraged to stay connected 15 minutes after the official close to receive reports that are generated after the trade session closing logic is run (e.g. Done for Day or Expired reports).

The Small Exchange will reset its FIX sequences on a weekly basis. Reset schedule is configured during initial setup.

3.2 Weekly Sequence Reset

The Exchange will reset its FIX sequences on a weekly basis during the weekend. See details in [Logon Scenarios and Sequence Reset](#).

3.3 Firm Identifiers

All messages sent to and from the Small Exchange *must* contain both the SenderCompID (49) and TargetCompID (56) fields. The firm and the Exchange agree on these values at the time of the firm setup.

Field	Firm to Exchange	Exchange to Firm
SenderCompID	Id of the connection. A firm may have multiple connections, each connection will have its own CompID	Always SMALLEX

TargetCompID	Always SMALLEX	Id of the connection. A firm may have multiple connections, each connection will have its own CompID
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Maximum length of a connection identifier is 32 characters.

All application messages sent to or from the Exchange *must* also contain both the SenderSubID (50) and TargetSubID (57) fields.

Field	Firm to Exchange	Exchange to Firm
SenderSubID	Unique firm code as assigned by the Exchange during initial setup.	Identifies the environment on the Exchange side. This can be either "PROD" or "TEST". The firm can use this value to guard itself from accidentally issuing UAT or test orders on the live market.
TargetSubID	Identifies the target environment on the Exchange side. This can be either "PROD" or "TEST". The firm can use this value to guard itself from accidentally issuing UAT or test orders on the live market. The Exchange will reject any messages sent to unexpected environment (e.g. production environment will reject any TEST messages).	Contains the unique firm code as assigned by the Exchange during initial setup.

Maximum length of a firm identifier is 8 characters.

Original trading firm of every order is reported in FIX Drop Copy API through the [Parties Component](#) with PartyRole = 3 (see [PartyRole \(tag 452\)](#)).

3.4 Order Identifiers

All orders submitted to the Small Exchange have unique ClOrdID (tag 11). The Exchange only enforces the uniqueness of the identifier among working orders (for example, GTC and non-triggered stops). Non-unique ids can cause issues with reporting, clearing, and support.

ClOrdID can be at most 20 characters long.

3.5 Operator Identification

All orders submitted to the Small Exchange contain identification of the operator who placed the order. This is conveyed via the Parties FIX component with PartyRole = 44 (see [PartyRole \(tag 452\)](#)). See more details in [Parties Component](#) description.

3.6 Exchange Subscriber Identification

Orders submitted to the Small Exchange by a subscriber can contain a token issued by the Exchange to the subscriber. The token is captured by the Exchange and is echoed back in execution reports. This is conveyed

via the Parties FIX component with PartyRole = 2101 (see [PartyRole \(tag 452\)](#)). See more details in [Parties Component](#) description.

Maximum length of the subscriber token is 15 characters.

3.7 Done for Day and Expiration Reports

During initial setup a connection may be configured to distribute Done for Day execution reports for all the GTC orders that remain open after the trading day is closed. It is also possible to configure the API to distribute the Expired execution reports for the DAY orders that have been expired.

3.8 Self-Match Prevention

Self-match prevention functionality allows market participants to prevent Buy and Sell orders for the same account, firm or group of accounts to match with each other. The functionality is optional and is controlled with a pair of FIX tags in incoming orders:

- **SelfMatchPreventionID** (2362) – orders with the same Self Match Prevention Token for the same executing firm will not match. Maximum length of the ID is 15 characters.
- **SelfMatchPreventionStrategy** (8000) – this value defines the strategy of dealing with matching orders if self-match prevention is triggered. The Exchange will either cancel the aggressor order (unsolicited), the resting order or both. The Exchange uses the strategy from the *aggressor* order to deal with self-matched orders.

The API will send the actual values of SelfMatchPreventionID and SelfMatchPreventionStrategy in all execution reports.

3.9 Supported Order Types and TIF

During regular trading sessions the following order types / TIF combinations are supported:

	DAY	GTC	IOC	FOK
Limit	Supported	Supported	Supported	Supported
Market	Supported	Not Supported	Not Supported	Not Supported
Stop	Supported	Supported	Not Supported	Not Supported
Stop-Limit	Supported	Supported	Not Supported	Not Supported

During the auction (pre-open / pre-open no cancel) sessions the following order types / TIF combinations are supported:

	DAY	GTC	IOC	FOK
Limit	Supported	Supported	Not Supported	Not Supported
Market	Not Supported	Not Supported	Not Supported	Not Supported
Stop	Supported	Supported	Not Supported	Not Supported
Stop-Limit	Supported	Supported	Not Supported	Not Supported

Unsupported order type / TIF combinations are rejected.

4 Session Protocol

Session protocol assures client identification, sequential request processing, session state control and ability to restore the session after downtime. In the scope of a session, all FIX messages are identified by unique integer sequence number and processed in that order. When an incoming sequence number does not match an expected one, the session must be recovered. If incoming sequence number is less than expected and PossDuplFlag is not set to Y, then it is considered a fatal error, and the connection is dropped by the server. If the sequence number of incoming message is greater than next expected number, then the Resend Request is issued for missed messages.

Client and server use the following administrative messages:

- **Logon** – initiates (client) or approves (server) session opening.
- **Logout** – initiates or approves session closing.
- **Resend Request** – requests missed fix messages.
- **Sequence Reset** – Gap Fill, must be used instead of resend of administrative messages.
- **Test Request** – used to control session state. For reply requires a **Heartbeat** message with properly filled TestReqID (112) field.
- **Heartbeat** – used to control session connection state.
- **Reject** – for administrative message reject.

Maximum sequence number supported by the Exchange is 9223372036854775807 ($2^{63} - 1$).

4.1 Logon Scenarios and Sequence Reset

The Exchange will reset both incoming and outgoing message sequence numbers to 1 during the weekend. Note that the use of the ResetSeqNum (141) tag can result in message loss and should generally be avoided. The Exchange does not require the use of this flag under normal operating conditions.

For the **first logon** on any week the Logon message can have its MsgSeqNum (34) set to 1 or the sequence can continue. The Exchange will reset the sequences if incoming MsqSeqNum (34) is greater than 1. If there are any undelivered messages for this connection, the Exchange will resend them after a successful logon.

For a **mid-week logon** (second and subsequent logon attempts on any week) the Logon message sequence should continue from the next sequence number where the client logged out or disconnected. If there are any undelivered messages for this connection, the Exchange will resend them after a successful logon.

If an incoming Logon message (first or midweek) has ResetSeqNum (141) flag set to 'Y', the Exchange will discard all undelivered messages it might have queued for this connection and reply with MsqSeqNum (34) = 1.

5 Messages Format

All FIX messages, either administrative or business, require standard header and trailer components. Note that SenderCompID and TargetCompID values pair is constant for a single FIX connection between a client and the Small Exchange system (see [Firm Identifiers](#)).

5.1 Standard Header Component

Tag	Field Name	Type	Req	Comments
8	BeginString	String	Y	“FIX.4.4”
9	BodyLength	Length	Y	Message length excluding the CheckSum field
35	MsgType	String	Y	Message type
49	SenderCompID	String	Y	<p>Connection identifier assigned by the Small Exchange.</p> <p>“SMALLEX” for messages sent from the Exchange system.</p> <p>See Firm Identifiers.</p>
50	SenderSubID	String	Y	<p>For messages sent to the Exchange contains the trading firm code.</p> <p>For messages from the Exchange it is an identifier of the message originating system (“PROD” or “TEST”).</p> <p>See Firm Identifiers.</p>
56	TargetCompID	String	Y	<p>“SMALLEX” for messages sent to the Exchange.</p> <p>Connection identifier assigned by the Small Exchange for messages sent from the Exchange system.</p> <p>See Firm Identifiers.</p>
57	TargetSubID	String	Y	<p>For messages sent to the Exchange identifies destination system – “PROD” or “TEST”.</p> <p>For messages sent from the Exchange contains the trading firm code.</p> <p>See Firm Identifiers.</p>
34	MsgSeqNum	SeqNum	Y	Integer message sequence number
43	PossDupFlag	Boolean	C	<p>Required for retransmitted messages</p> <p>“N” - original transmission</p> <p>“Y” - possible duplicate</p>

Tag	Field Name	Type	Req	Comments
52	SendingTime	UTCTimestamp	Y	Time of message transmission (always expressed in UTC)
122	OrigSendingTime	UTCTimestamp	C	Original time of message transmission, required for message resent as a result of a ResendRequest
369	LastMsgSeqNumProcessed	SeqNum	N	<p>Last incoming sequence received and processed by this drop copy connection.</p> <p>The Exchange sends this field in all outgoing messages and ignores this value in incoming messages.</p>

5.2 Standard Trailer Component

Tag	Field Name	Type	Req	Comments
10	Checksum	String	Y	Three byte, simple checksum. Always defined as three characters

6 Administrative Messages

6.1 Logon (MsgType = A)

Initiates connection from client side and approves connection if sent by the Exchange. ResetSeqNumFlag allows clients to start a new session (reset session sequence numbers). See [Logon Scenarios and Sequence Reset](#).

The Heartbeat Interval is declared by the session initiator using the HeartBtInt field in the Logon message. The heartbeat interval timer should be reset after every message is transmitted (not just heartbeats). The HeartBtInt value should be agreed upon and specified by the Logon initiator (client) and echoed back by the Logon acceptor. The same HeartBtInt value is used by both sides, the Logon “initiator” and Logon “acceptor”.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = “A”
98	EncryptMethod	Int	Y	“0” - None. Security must be guaranteed on transport level
108	HeartBtInt	Int	Y	Heartbeat interval in seconds
141	ResetSeqNumFlag	Boolean	N	<p>“N” - use previous sequences “Y” - reset sequences (start a new session).</p> <p>The use of the ResetSeqNum (141) tag can result in message loss and should generally be avoided. The Exchange does not require the use of this flag under normal operating conditions. See Logon Scenarios and Sequence Reset.</p> <p>If clients cannot recover the previous session they start new session with 1 and set this field to “Y”.</p>
<Standard Trailer>			Y	

Example: logon with MsgSeqNum too low:

MsgType = A (from client to the Exchange)

SenderCompID = TESTCLI1

TargetCompID = SMALLEX

SenderSubID = CLI1

TargetSubID = TEST

MsgSeqNum = 1

SendingTime = 20191120-15:01:53

MsgType = A (from the Exchange to client)

SenderCompID = SMALLEX

TargetCompID = TESTCLI1

SenderSubID = TEST

TargetSubID = CLI1

MsgSeqNum = 3

SendingTime = 20191120-15:01:53

LastMsgSeqNumProcessed=2

Text = MsgSeqNum too low, expecting 3 but received 1

6.2 Logout (MsgType = 5)

The message initiates or confirms termination of a FIX session.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "5"
58	Text	String	N	Logout reason
<Standard Trailer>			Y	

6.3 Resend Request (MsgType = 2)

The message is used to recover an inbound session sequence if a message was missed.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "2"
7	BeginSeqNo	SeqNum	Y	Sequence number of the first message in range to be resent
16	EndSeqNo	SeqNum	Y	Sequence number of the last message in range to be resent
<Standard Trailer>			Y	

6.4 Sequence Reset (MsgType = 4)

The message may be used in two modes:

- **Reset Mode** forces counterparty to adjust inbound message sequence, GapFillFlag = "N" or omitted.
- **Fill Gap Mode** is used during retransmission of messages missed by a client. Administrative messages and rejected business messages are not to be retransmitted. Instead a Sequence Reset message with GapFillFlag = "Y" must be used.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "4"
123	GapFillFlag	Boolean	N	"N" - sequence reset, the counterparty must adjust inbound sequence number. "Y" - indicates the message is used instead of administrative or business messages which are not to be resent
36	NewSeqNo	SeqNum	Y	New adjusted sequence number
<Standard Trailer>			Y	

6.5 Test Request (MsgType = 1)

A Test message is useful for checking sequence numbers or verifying the communication line status. Connection participant received the message is required to reply with Heartbeat message referring to TestReqID of the initial message.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "1"
112	TestReqID	String	Y	Identifier to be returned in resulting Heartbeat message
<Standard Trailer>			Y	

6.6 Heartbeat (MsgType = 0)

Used for replying to the Test request as well as checking the status of communication.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "0"
112	TestReqID	String	C	Identifier of a Test Request. Required when the message is the result of a Test Request
<Standard Trailer>			Y	

6.7 Reject (MsgType = 3)

Issued by a party if an incoming FIX message is unsupported or not property formed. Rejected messages must not be resent if a Resend Request is received; instead SequenceReset with GapFillFlag = "Y" is expected.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "3"
45	RefSeqNum	SeqNum	Y	Sequence number of the rejected message
58	Text	String	Y	Error message
373	SessionRejectReason	Int	Y	Reject reason code. See Session Reject Reason Codes (tag 373) .
<Standard Trailer>			Y	

7 Order Execution Report Messages

7.1 Overview

The Small Exchange Drop Copy FIX Line server sends Execution Report (MsgType = 8) messages related to execution of a clearing or a trading firm orders configured for the line:

- Order is accepted (ExecType = 0) – sent as a reply and referring to the NewOrderSingle or NewOrderMultileg messages to affirm the order is accepted in order book and working. The report is sent for every accepted order even for orders matched immediately.
- Order is cancelled (ExecType = 4) – sent as a reply and referring to OrderCancelRequest message to acknowledge that the cancel is accepted and the original order is no longer working. After receiving the message the original order is assumed to be cancelled, note that no separate individual execution is sent for the cancelled order itself.
- Order is replaced (ExecType = 5) – sent as a reply and referring to OrderCancelRequest or MultilegOrderCancel/Replace messages to affirm the replace is accepted. After receiving the message the original order is assumed to be replaced, no separate individual execution is sent for the replaced order itself.
- Stop order is triggered (ExecType = L) – sent when a stop order is triggered and is placed in the order book
- Order is rejected (ExecType = 8) – sent in case a new or cancel/replace order message is rejected
- Trade (ExecType = F) – sent whenever an order is filled completely or partially
- Trade Bust/Correct (MsgType = 8, ExecType = H / G) – sent on trade correct or bust
- Done for Day (ExecType = 3) – sent for all currently open orders after the trading day closes
- Expired (ExecType = C) – sent for the expired Day orders

7.2 Parties Component

This component is used to identify auxiliary information about the financial transaction.

Tag	Field Name	Type	Req	Comments
Repeating group 453	<i>NoPartyIDs</i>	<i>Int</i>	Y	<i>Number of 'Party' elements in the repeating group</i>
448	PartyID	String	Y	Identification of the party. Value depends on the PartyRole (452) tag value: <ul style="list-style-type: none"> • Operator ID (for PartyRole = 44). Maximum length is 18 characters. • Subscriber token (for PartyRole = 2101). Maximum length is 15 characters.
447	PartyIDSource	Char	Y	Always 'D' – proprietary / custom code
452	PartyRole	Int	Y	Type or role of the party ID. See PartyRole (tag 452) for the values.

7.3 Instrument Component

The component represents common instrument information in order messages:

Tag	Field Name	Type	Req	Comments
55	Symbol	String	C	Futures Exchange symbol. Not specified for multi-leg instruments
167	SecurityType	String	Y	FUT = futures MLEG = multi-leg instrument

7.4 Instrument Leg Component

The following tags are used to identify a leg of a complex instrument in order-related messages:

Tag	Field Name	Type	Req	Comments
600	LegSymbol	String	Y	Leg Instrument symbol
623	LegRatioQty	Qty	Y	The ratio of this leg. Leg quantity for this leg is OrderQty * LegRatioQty.
624	LegSide	Char	Y	Side of the leg. See Order Sides (tag 54 and tag 624) .
564	LegPositionEffect	Char	N	Indicates whether the resulting position after a trade should be opening or closing. If not specified treated as 'D' – default. See Position Effect (tag 77 and tag 564) .
654	LegRefID	String	N	Leg ID specified by a client. Reported by the Exchange back in execution report messages. Up to 8 characters length.

LegRatioQty values are normalized:

- OrderQty is the the greatest common factor of individual leg quantities. For example, an order to simultaneously buy 1 InstrumentA and 2 InstrumentB, OrderQty 10 should not be entered as “buy 10 InstrumentA and 20 InstrumentB, Order Qty 1”.
- LegRatioQty values is divided by their greatest common denominator to be accepted. For example, the Exchange will accept 1:2 ratios but won't accept 2:4.

7.5 Execution Report: Accepted Order (MsgType = 8, ExecType = 0 or 4 or 5)

Reports with execution type New (0), Cancelled (4), Replaced (5) represent an acknowledgement of successful acceptance of a New, Cancel or Cancel/Replace order.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = “8”
< Parties >			Y	Operator ID (PartyRole = 44) and Originating Firm ID (PartyRole = 13)
1	Account	String	Y	Unique identifier of an account in the system (as specified in the order).
6	AvgPx	Price	Y	Always “0”

Tag	Field Name	Type	Req	Comments
11	ClOrdID	String	Y	Accepted order identifier assigned by the client system (as defined in the order). See Order Identifiers .
14	CumQty	Qty	Y	Total traded quantity for the order chain (current order and all replaced orders in the chain)
17	ExecID	String	Y	Unique identifier of the execution as assigned by the Exchange. Maximum length is 20 characters.
37	OrderID	String	Y	Unique identifier of an order chain in the Small Exchange system. Maximum length is 20 characters.
38	OrderQty	Qty	Y	Quantity ordered
39	OrdStatus	Char	Y	Identifies the current status of an order. See Order Status (tag 39) .
40	OrdType	Char	Y	Order type as specified in the order. See Order Types (tag 40) .
41	OrigClOrdID	String	C	ClOrdID of replaced/cancelled order. Reported for cancel and cancel/replace orders acknowledgements. See Order Identifiers .
44	Price	Price	C	Price of the Limit or Stop-Limit order. Reported if specified for the order.
54	Side	Char	Y	Order side. See Order Sides (tag 54 and tag 624) .
59	TimeInForce	Char	Y	Specifies how long the order remains in effect. See Order Time-in-force (tag 59) .
60	TransactTime	UTCTimestamp	Y	Time of execution, expressed in UTC
75	TradeDate	LocalMktDate	Y	Business date of the execution.
99	StopPx	Price	C	Order stop price. Reported if specified for the order.
110	MinQty	Qty	C	Minimum quantity of an order to be executed. Reported if specified for the order; sent only for IOC orders.
150	ExecType	ExecType	Y	"0" - new order acknowledgement "4" – cancel order acknowledgement "5" – cancel/replace order acknowledgement
151	LeavesQty	LeavesQty	Y	Quantity available for further execution, working quantity

Tag	Field Name	Type	Req	Comments
377	SolicitedFlag	Boolean	N	Indicates whether or not the order was solicited. This flag is set when an order has been cancelled by the risk management procedures on the Exchange (kill switch activation etc.).
528	OrderCapacity	Char	Y	Capacity Origin Code copied from the order. Identifies the counterparty for surveillance/clearing purposes. Required for futures transactions. See OrderCapacity (tag 528) .
582	CustOrderCapacity	Int	Y	Customer Type Indicator Code (CTI) as defined by the NFA (copied from the order). Distinguishes for whom and on what type of account the trade is being placed. See CustOrderCapacity (tag 582) .
2362	SelfMatchPreventionID	String	N	Self-match prevention token as defined in the order. See Self-Match Prevention .
8000	SelfMatchPrevention Strategy	C	N	Self-match prevention strategy – see Self-Match Prevention for details. See SelfMatchPreventionStrategy (tag 8000) for supported values.
1028	ManualOrderIndicator	Boolean	Y	Indicates if the order was initially received manually (as opposed to electronically) or if it was entered manually (as opposed to entered by automated trading software)
	<Order Instrument Identity>		Y	
555	NoLegs	NumInGroup	C	Number of instrument legs. Only for multi leg orders
>	<Instrument Leg Identity>		C	Instrument of the leg
	<Standard Trailer>		Y	

7.6 Execution Report: Triggered Stop (MsgType = 8, ExecType = L)

Sent by the Small Exchange to report a triggered stop order event. Note that triggered stop orders do not change their type and are not converted to limit or market orders.

Tag	Field Name	Type	Req	Comments
	<Standard Header>		Y	MsgType = "8"
	<Parties>		Y	Operator ID (PartyRole = 44) and Originating Firm ID (PartyRole = 13)
1	Account	String	Y	Unique identifier of an account in the system (as specified in the order).
6	AvgPx	Price	Y	Always "0"

Tag	Field Name	Type	Req	Comments
11	ClOrdID	String	Y	Accepted order identifier assigned by the client system (as defined in the order). See Order Identifiers .
14	CumQty	Qty	Y	Total traded quantity for the order chain (current order and all replaced orders in the chain)
17	ExecID	String	Y	Unique identifier of the execution as assigned by the Exchange. Maximum length is 20 characters.
37	OrderID	String	Y	Unique identifier of an order chain in the Small Exchange system. Maximum length is 20 characters.
38	OrderQty	Qty	Y	Quantity ordered
39	OrdStatus	Char	Y	"0" – New order
40	OrdType	Char	Y	Order type as specified in the order. See Order Types (tag 40) .
44	Price	Price	C	Price of the Limit or Stop-Limit order. Reported if specified for the order.
54	Side	Char	Y	Order side. See Order Sides (tag 54 and tag 624) .
59	TimeInForce	Char	Y	Specifies how long the order remains in effect. See Order Time-in-force (tag 59) .
60	TransactTime	UTCTimestamp	Y	Time of execution, expressed in UTC
75	TradeDate	LocalMktDate	Y	Business date of the execution.
99	StopPx	Price	C	Order stop price.
110	MinQty	Qty	C	Minimum quantity of an order to be executed. Reported if specified for the order; sent only for IOC orders.
150	ExecType	ExecType	Y	"L" – triggered by the system
151	LeavesQty	LeavesQty	Y	Quantity available for further execution, working quantity
377	SolicitedFlag	Boolean	N	Indicates whether or not the order was solicited
528	OrderCapacity	Char	Y	Capacity Origin Code copied from the order. Identifies the counterparty for surveillance/clearing purposes. Required for futures transactions. See OrderCapacity (tag 528) .
582	CustOrderCapacity	Int	Y	Customer Type Indicator Code (CTI) as defined by the NFA (copied from the order). Distinguishes for whom and on what type of account the trade is being placed. See CustOrderCapacity (tag 582) .
2362	SelfMatchPreventionID	String	N	Self-match prevention token as defined in the order. See Self-Match Prevention .

Tag	Field Name	Type	Req	Comments
8000	SelfMatchPreventionStrategy	C	N	Self-match prevention strategy – see Self-Match Prevention for details. See SelfMatchPreventionStrategy (tag 8000) for supported values.
1028	ManualOrderIndicator	Boolean	Y	Indicates if the order was initially received manually (as opposed to electronically) or if it was entered manually (as opposed to entered by automated trading software)
<Order Instrument Identity>			Y	
555	NoLegs	NumInGroup	C	Number of instrument legs. Only for multi leg orders
>	<Instrument Leg Identity>		C	Instrument of the leg
<Standard Trailer>			Y	

7.7 Execution Report: Trade (MsgType = 8, ExecType = F)

Sent by the Small Exchange system to report order fill.

Note that multi-leg order fill reports are sent individually for each leg.

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "8"
<Parties>			Y	Operator ID (PartyRole = 44) and Originating Firm ID (PartyRole = 13)
1	Account	String	Y	Unique identifier of an account in the system (as specified in the order).
6	AvgPx	Price	Y	Always "0"
11	ClOrdID	String	Y	Accepted order identifier assigned by the client system (as defined in the order). See Order Identifiers .
14	CumQty	Qty	Y	Total traded quantity for the order chain (current order and all replaced orders in the chain)
17	ExecID	String	Y	Unique identifier of the execution as assigned by the Exchange. Maximum length is 20 characters.
<Order Instrument Identity>			Y	Instrument traded
31	LastPx	Price	Y	Price of the fill
32	LastQty	Qty	Y	Quantity bought or sold in this fill
37	OrderID	String	Y	Unique identifier of an order chain in the Small Exchange system. Maximum length is 20 characters.
38	OrderQty	Qty	Y	Order quantity
39	OrdStatus	Char	Y	Identifies the current status of an order. See Order Status (tag 39) .

Tag	Field Name	Type	Req	Comments
40	OrdType	Char	Y	Order type as specified in the order. See Order Types (tag 40) .
44	Price	Price	C	Price of the Limit or Stop-Limit order. Reported if specified for the order.
624	LegRefID	String	C	Unique identifier for a specific leg (included only for spread leg fill reports). References the value from the order request (see Instrument Leg Component).
54	Side	Char	Y	Order side. See Order Sides (tag 54 and tag 624) .
59	TimeInForce	Char	Y	Specifies how long the order remains in effect. See Order Time-in-force (tag 59) .
60	TransactTime	UTCTimestamp	Y	Time of execution, expressed in UTC
75	TradeDate	LocalMktDate	Y	Business date of the trade
99	StopPx	Price	C	Order stop price. Reported if specified for the order.
110	MinQty	Qty	C	Minimum quantity of an order to be executed. Reported if specified for the order; sent only for IOC orders.
150	ExecType	ExecType	Y	"F" – trade
151	LeavesQty	LeavesQty	Y	Quantity available for further execution, working quantity
442	MultiLegReportingType	Char	C	Reported for multi-leg order fills. Always "2" - individual leg of a multi-leg security
528	OrderCapacity	Char	Y	Capacity Origin Code copied from the order. Identifies the counterparty for surveillance/clearing purposes. Required for futures transactions. See OrderCapacity (tag 528) .
582	CustOrderCapacity	Int	Y	Customer Type Indicator Code (CTI) as defined by the NFA (copied from the order). Distinguishes for whom and on what type of account the trade is being placed. See CustOrderCapacity (tag 582) .
2362	SelfMatchPreventionID	String	N	Self-match prevention token as defined in the order. See Self-Match Prevention .
8000	SelfMatchPreventionStrategy	C	N	Self-match prevention strategy – see Self-Match Prevention for details. See SelfMatchPreventionStrategy (tag 8000) for supported values. This can be specified in connection-level configuration.
1028	ManualOrderIndicator	Boolean	Y	Indicates if the order was initially received manually (as opposed to electronically) or if it was entered manually (as opposed to entered by automated trading software)

Tag	Field Name	Type	Req	Comments
1057	AggressorIndicator	Boolean	Y	Indicates if an order was aggressor or not. Y - aggressor order taking liquidity, N - passive/resting order. Note that all orders matched during an opening auction are reported as passive
<Standard Trailer>			Y	

Trade execution report example: multi-leg order fill

This example assumes a multileg order with the following parameters has been issued:

NoLegs = 2
 LegSymbol = S10YV19
 LegRefID = 16777225
 LegPositionEffect = C
 LegRatioQty = 1
 LegSide = 1
 LegSymbol = S10YX19
 LegRefID = 16777226
 LegPositionEffect = C
 LegRatioQty = 1
 LegSide = 2

First leg fill:

BeginString = FIX.4.4
 BodyLength = ...
 MsgType = 8
 SenderCompID = SMALLEX
 SenderSubID = TEST
 SendingTime = 20191102-10:15:41.383
 TargetCompID = dx1-fix
 TargetSubID = DX
 MsgSeqNum = 2
 NoPartyIDs = 1
 PartyID = trader11
 PartyIDSource = D
 PartyRole = 44
 OrderID = 72057594037977283
 ClOrdID = 4c2a1e5e:10c2002c007
 ExecID = 72057594037981287
 ExecType = F
 OrdStatus = 2
 Account = fixmleg
 Symbol = S10YV19
 SecurityType=FUT
 LegRefID = 16777225
 Side = 1

OrderQty = 1
OrdType = 2
Price = 0
TimeInForce = 0
LastQty = 2
LastPx = 15
LeavesQty = 0
CumQty = 0
AvgPx = 0
TradeDate = 20191003
TransactTime = 20191003-12:38:57.940
MultiLegReportingType = 2
CustOrderCapacity = 1
OrderCapacity = A
ManualOrderIndicator = Y
AggressorIndicator = Y
TrdMatchID = 78654
Checksum =

Second leg fill:

BeginString = FIX.4.4
BodyLength = ...
MsgType = 8
SenderCompID = SMALLEX
SenderSubID = TEST
SendingTime = 20191102-10:15:41.383
TargetCompID = dx1-fix
TargetSubID = DX
MsgSeqNum = 2
NoPartyIDs = 1
PartyID = trader11
PartyIDSource = D
PartyRole = 44
OrderID = 72057594037977283
ClOrdID = 4c2a1e5e:10c2002c007
ExecID = 72057594037981289
ExecType = F
OrdStatus = 2
Account = fixmleg
Symbol = S10YX19
SecurityType=FUT
LegRefID = 16777226
Side = 2
OrderQty = 1
OrdType = 2
Price = 0

TimeInForce = 0
 LastQty = 2
 LastPx = 15
 LeavesQty = 0
 CumQty = 0
 AvgPx = 0
 TradeDate = 20191003
 TransactTime = 20191003-12:38:57.940
 MultiLegReportingType = 2
 CustOrderCapacity = 1
 OrderCapacity = A
 ManualOrderIndicator = Y
 AggressorIndicator = Y
 TrdMatchID = 78654
 CheckSum =

7.8 Execution Report: Rejected New Order (MsgType = 8, ExecType = 8)

Sent as a reject for new single or multi-leg order request.

Tag	Field Name	Type	Req	Comments
<Standard Header>				
	<Parties>		Y	MsgType = "8"
			Y	Operator ID (PartyRole = 44) and Originating Firm ID (PartyRole = 13)
1	Account	String	Y	Unique identifier of an account in the system (as specified in the order).
6	AvgPx	Price	Y	Always "0"
11	ClOrdID	String	Y	Accepted order identifier assigned by the client system (as defined in the order). See Order Identifiers .
37	OrderID	String	Y	Unique identifier of an order chain in the Small Exchange system. Maximum length is 20 characters.
39	OrdStatus	Char	Y	"8" - rejected
40	OrdType	Char	Y	Order type as specified in the order. See Order Types (tag 40) .
54	Side	Char	Y	Order side. See Order Sides (tag 54 and tag 624) .
58	Text	String	N	Reject reason text
60	TransactTime	UTCTimestamp	Y	Timestamp of the execution report, expressed in UTC
75	TradeDate	LocalMktDate	Y	Business date of the execution
103	OrdRejReason	Int	Y	Reject reason code. See Order Reject Reason (tag 103) .
150	ExecType	ExecType	Y	"8" - rejected
151	LeavesQty	LeavesQty	Y	Always "0"

Tag	Field Name	Type	Req	Comments
377	SolicitedFlag	Boolean	N	Indicates whether or not the order was solicited, always Y for the rejected order
528	OrderCapacity	Char	Y	Capacity Origin Code copied from the order. Identifies the counterparty for surveillance/clearing purposes. Required for futures transactions. See OrderCapacity (tag 528) .
582	CustOrderCapacity	Int	Y	Customer Type Indicator Code (CTI) as defined by the NFA (copied from the order). Distinguishes for whom and on what type of account the trade is being placed. See CustOrderCapacity (tag 582) .
2362	SelfMatchPreventionID	String	N	Self-match prevention token as defined in the order. See Self-Match Prevention .
8000	SelfMatchPrevention Strategy	C	N	Self-match prevention strategy – see Self-Match Prevention for details. See SelfMatchPreventionStrategy (tag 8000) for supported values.
1028	ManualOrderIndicator	Boolean	Y	Indicates if the order was initially received manually (as opposed to electronically) or if it was entered manually (as opposed to entered by automated trading software)
	<Order Instrument Identity>		Y	
555	NoLegs	NumInGroup	C	Number of instrument legs. Only for multi leg orders
>	<Instrument Leg Identity>		C	Instrument of the leg
	<Standard Trailer>		Y	

7.9 Execution Report: Done for Day (MsgType = 8, ExecType = 3)

Reports with execution type ‘Done for Day’ (4) are sent by the Exchange to the firms that need the status of their open orders after the trading session is closed.

Tag	Field Name	Type	Req	Comments
	<Standard Header>		Y	MsgType = “8”
	<Parties>		Y	Operator ID (PartyRole = 44) and Originating Firm ID (PartyRole = 13)
1	Account	String	Y	Unique identifier of an account in the system (as specified in the order).
6	AvgPx	Price	Y	Always “0”
11	ClOrdID	String	Y	The order identifier assigned by the client system (as defined in the order). See Order Identifiers .

Tag	Field Name	Type	Req	Comments
14	CumQty	Qty	Y	Total traded quantity for the order chain (current order and all replaced orders in the chain)
17	ExecID	String	Y	Unique identifier of the execution as assigned by the Exchange. Maximum length is 20 characters.
37	OrderID	String	Y	Unique identifier of an order chain in the Small Exchange system. Maximum length is 20 characters.
38	OrderQty	Qty	Y	Quantity ordered.
39	OrdStatus	Char	Y	Identifies the current status of an order. Always 3 = Done for Day. See Order Status (tag 39) .
40	OrdType	Char	Y	Order type as specified in the order. See Order Types (tag 40) .
44	Price	Price	C	Price of the Limit or Stop-Limit order. Reported if specified for the order.
54	Side	Char	Y	Order side. See Order Sides (tag 54 and tag 624) .
59	TimeInForce	Char	Y	Specifies how long the order remains in effect. See Order Time-in-force (tag 59) .
60	TransactTime	UTC Timestamp	Y	Time of execution, expressed in UTC
75	TradeDate	LocalMktDate	Y	Business date of the execution.
99	StopPx	Price	C	Order stop price. Reported if specified for the order.
150	ExecType	ExecType	Y	"3" – Done for Day
151	LeavesQty	LeavesQty	Y	Quantity available for further execution, working quantity
528	OrderCapacity	Char	Y	Capacity Origin Code copied from the order. Identifies the counterparty for surveillance/clearing purposes. Required for futures transactions. See OrderCapacity (tag 528) .
582	CustOrderCapacity	Int	Y	Customer Type Indicator Code (CTI) as defined by the NFA (copied from the order). Distinguishes for whom and on what type of account the trade is being placed. See CustOrderCapacity (tag 582) .
2362	SelfMatchPreventionID	String	N	Self-match prevention token as defined in the order. See Self-Match Prevention .
8000	SelfMatchPrevention Strategy	C	N	Self-match prevention strategy – see Self-Match Prevention for details. See SelfMatchPreventionStrategy (tag 8000) for supported values.

Tag	Field Name	Type	Req	Comments
1028	ManualOrderIndicator	Boolean	Y	Indicates if the order was initially received manually (as opposed to electronically) or if it was entered manually (as opposed to entered by automated trading software)
<Order Instrument Identity>			Y	
555	NoLegs	NumInGroup	C	Number of instrument legs. Only for multi leg orders
>	<Instrument Leg Identity>		C	Instrument of the leg
<Standard Trailer>			Y	

7.10 Execution Report: Expired (MsgType = 8, ExecType = C)

Reports with execution type Expired (C) are sent by the Exchange to the firms that need to track the expiration of their time-limited orders (such as DAY).

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "8"
<Parties>			Y	Operator ID (PartyRole = 44) and Originating Firm ID (PartyRole = 13)
1	Account	String	Y	Unique identifier of an account in the system (as specified in the order).
6	AvgPx	Price	Y	Always "0"
11	ClOrdID	String	Y	The order identifier assigned by the client system (as defined in the order). See Order Identifiers .
14	CumQty	Qty	Y	Total traded quantity for the order chain (current order and all replaced orders in the chain)
17	ExecID	String	Y	Unique identifier of the execution as assigned by the Exchange. Maximum length is 20 characters.
37	OrderID	String	Y	Unique identifier of an order chain in the Small Exchange system. Maximum length is 20 characters.
38	OrderQty	Qty	Y	Quantity ordered.
39	OrdStatus	Char	Y	Identifies the current status of an order. Always C = Expired. See Order Status (tag 39) .
40	OrdType	Char	Y	Order type as specified in the order. See Order Types (tag 40) .
44	Price	Price	C	Price of the Limit or Stop-Limit order. Reported if specified for the order.
54	Side	Char	Y	Order side. See Order Sides (tag 54 and tag 624) .
59	TimInForce	Char	Y	Specifies how long the order remains in effect. See Order Time-in-force (tag 59) .

Tag	Field Name	Type	Req	Comments
60	TransactTime	UTC Timestamp	Y	Time of execution, expressed in UTC
75	TradeDate	Local MktDate	Y	Business date of the execution.
99	StopPx	Price	C	Order stop price. Reported if specified for the order.
150	ExecType	ExecType	Y	"C" – Expired.
151	LeavesQty	LeavesQty	Y	Quantity available for further execution, working quantity. Always "0".
528	OrderCapacity	Char	Y	Capacity Origin Code copied from the order. Identifies the counterparty for surveillance/clearing purposes. Required for futures transactions. See OrderCapacity (tag 528) .
582	CustOrderCapacity	Int	Y	Customer Type Indicator Code (CTI) as defined by the NFA (copied from the order). Distinguishes for whom and on what type of account the trade is being placed. See CustOrderCapacity (tag 582) .
2362	SelfMatchPreventionID	String	N	Self-match prevention token as defined in the order. See Self-Match Prevention .
8000	SelfMatchPrevention Strategy	C	N	Self-match prevention strategy – see Self-Match Prevention for details. See SelfMatchPreventionStrategy (tag 8000) for supported values.
1028	ManualOrderIndicator	Boolean	Y	Indicates if the order was initially received manually (as opposed to electronically) or if it was entered manually (as opposed to entered by automated trading software)
<Order Instrument Identity>			Y	
555	NoLegs	NumInGroup	C	Number of instrument legs. Only for multi leg orders
>	<Instrument Leg Identity>		C	Instrument of the leg
<Standard Trailer>			Y	

7.11 Trade Cancel/Correct (MsgType = UCC)

Sent by the Small Exchange system to report trade cancel or correction (price or size).

Notes:

- Busts and corrections for multi-leg trades are sent individually for each leg
- Busts and corrections do not change the open quantity of orders
- Each trade bust or correction will result in the UCC message for both sides of the trade

Tag	Field Name	Type	Req	Comments
<Standard Header>			Y	MsgType = "UCC"

Tag	Field Name	Type	Req	Comments
1	Account	String	Y	Unique identifier of an account in the system (as specified in the order).
11	ClOrdID	String	Y	Accepted order identifier assigned by the client system (as defined in the order). See Order Identifiers .
17	ExecID	String	Y	Unique identifier of this report as assigned by the Exchange. Maximum length is 20 characters.
19	ExecRefID	String	Y	Unique identifier of the original (cancelled or corrected) execution report
<Order Instrument Identity>			Y	Filled single instrument identity
31	LastPx	Price	C	Corrected price of the fill Reported for trade corrects
32	LastQty	Qty	C	Corrected quantity of the fill Reported for trade corrects
37	OrderID	String	Y	Unique identifier of an order chain in the Small Exchange system. Maximum length is 20 characters.
60	TransactTime	UTCTimestamp	Y	Time of execution, expressed in UTC
75	TradeDate	LocalMktDate	Y	Business date of the trade
150	ExecType	ExecType	Y	"H" – trade cancel "G" – trade correct
<Standard Trailer>			Y	

8 Tag Values

8.1 PartyRole (tag 452)

Value	Description
13	Order Origination Firm. Corresponds to SenderSubID field in the original order.
44	Order Entry Operator ID. Identifier of the operator who placed the order.
2101	Subscriber token. If the order is placed by the Exchange subscriber, order messages and execution reports will include a separate 'party' with the token value.

8.2 Order Status (tag 39)

Value	Description
0	New
1	Partially filled
2	Filled
3	Done for day
4	Cancelled
6	Pending cancel
8	Rejected

A	Pending new
C	Expired
E	Pending replace

8.3 Order Types (tag 40)

Value	Description
1	Market
2	Limit
3	Stop
4	Stop Limit

8.4 Order Sides (tag 54 and tag 624)

Value	Description
1	Buy side
2	Sell side

8.5 Order Time-in-force (tag 59)

Value	Description
0	Day order
1	Good Till Cancel (GTC)
3	Immediate Or Cancel (IOC)
4	Fill Or Kill (FOK)

8.6 Cancel Reject Reason (tag 102)

Value	Description
0	Too late to cancel
1	Unknown order

8.7 Order Reject Reason (tag 103)

Value	Description
1	Unknown symbol
2	Exchange closed
6	Duplicate order
18	Invalid price increment
99	Other

8.8 Execution Types (tag 150)

Value	Description
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0	New, order is placed
3	Done for day
4	Cancelled
5	Replace
8	Rejected
C	Expired
F	Trade
I	Order status

8.9 Session Reject Reason Codes (tag 373)

Value	Description
0	Invalid tag number
1	Required tag missing
3	Undefined Tag
4	Tag specified without a value
5	Value is incorrect (out of range) for this tag
6	Incorrect data format for value
9	CompID problem
99	Other

8.10 Position Effect (tag 77 and tag 654)

Value	Description
O	Open
C	Close
D	Default

8.11 CustOrderCapacity (tag 582)

Customer Type Indicator Code as defined by the NFA. Distinguishes for whom and on what type of account the trade is being placed (see <https://www.nfa.futures.org/news/newsNotice.asp?ArticleID=1362>).

Value	Description
1	CTI 1: For orders placed by an executing broker for their own account.
2	CTI 2: For orders placed by an executing broker for a firm proprietary account.
3	CTI 3: For orders placed by an executing broker for another broker who also has access to the system.
4	CTI 4: For orders placed by an executing broker on behalf of a customer.

8.12 OrderCapacity (tag 528)

Capacity Origin Code. Identifies the counterparty for surveillance/clearing purposes. Required for futures transactions.

Value	Description
A	Customer's segregated account.
P	Firm's proprietary account.

8.13 SelfMatchPreventionStrategy (tag 8000)

Value	Description
A	Cancel aggressing order
R	Cancel resting order
B	Cancel both aggressing and resting orders