SpiderRock V7 FIX Reference

Order Entry Specification

May 12, 2022

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Introduction

User Support

Production support is available at 312-256-9602.

Please email questions or comments regarding this document to: cs@spiderrock.net

Hours of Operation

The SpiderRock Database is available from Sunday 12:00PM EST through Saturday 10:00AM EST year-round with normal software maintenance occurring on Saturday, during system shutdown.

About This Document

This document describes the application level FIX messages used to programmatically submit and manage orders for equities, equity options, futures, and futures options with SpiderRock. This includes single-leg and multi-leg orders; both standard order types and the more sophisticated order types offered by SpiderRock.

This document is intended to be used in conjunction with the SpiderRock FIX Session Guide which describes session level message handling and other SpiderRock FIX conventions in more detail.

In addition to this document, please refer to the SpiderRock V7 Execution Concept Guide. It provides an overview of the algo order types offered by SpiderRock.

Supported Order Types

- DMA style orders (market or limit orders with a simple limit price and a designated exchange)- These orders will be routed to the designated exchange.

- Smart/Sweep style orders (market or limit orders, with a simple limit price, and no designated exchange)- These orders will be routed to one or more exchanges at SpiderRock's discretion.

- Complex algo/parent orders (orders with more complex algo behavior)- These orders can be both active maker and active taker style orders with more complex price and size limits. They can both provide and interact with liquidity on any public exchange.

- MultiLeg/Spread orders (orders with more than one leg)- MultiLeg/Spread orders can have DMA, Smart/Sweep, or Complex Algo style order handling. They can also, if requested, work legs individually across all relevant exchanges.

- Opening/Closing auctions- Orders designated for participation in either exchange opening or closing auctions.

- Staged/Wait Start order management (orders that queue in SpiderRock systems until released by the client) are available for most order types. These order types can be used to integrate client risk/approval systems with orders generated by trading groups. Alternatively, they can be used to integrate trader approval of orders generated by automated strategies. Note that orders can be both staged and/or released in any combination of SpiderRock GUI tools, the SpiderRock SRSE API, and FIX messaging.

Application Messages

NewOrderSingle (Client to SpiderRock)

NewOrderSingle<D> messages are used to submit orders for single securities. Both the standard order types and the more complex order types offered by SpiderRock are communicated using this message.

The NewOrderSingle<D> fields listed in the following table are used in common by all SpiderRock single security order types. Additional fields are used by different order types to communicate their unique features. These fields are described in subsequent sections.

In addition to standard FIX fields, SpiderRock uses its own custom FIX fields for parameters in NewOrderSingle<D> messages. (The FIX specification allows for the definition of custom fields with a tag number in the 5000-9999 range). Please refer to the SpiderRock V7 Custom Tags Reference for a complete list of the custom SpiderRock FIX fields.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = D*
11	ClOrdId	Y	string	Client order ID (24 character max)
1	Account	Y	string	SR account acronym
100	ExDestination	N	string	SR Destination Code (see appendix) □ Required for DMA style orders
40	OrdType	N	char	1 = Market 2 = Limit 5 = Market on Close B = Limit on Close □ Required for DMA and Smart/Sweep style orders. Not required for more complex order types. If necessary, use Market as the order type when submitting orders with more complex behavior.
44	Price	N	float	Required for limit order types
59	TimeInForce	N	string	0 = Day 2 = Opening 3 = Immediate or Cancel (IOC) 6 = Good Till Date/Time (or Duration) 7 = Closing

207	SecurityExchange	N	string	Market used to identify a security's issuing authority (see Appendix A for those accepted by SpiderRock) • For Futures products: the issuing authority must be supplied in SecurityExchange<207> • For Equities and Equity Options (SecurityType<167> = CS, OPT, <blank>): in which the issuing authority SecurityExchange<207> is not explicitly supplied, NMS is assumed.
461	CFICode	N	string	ES = Equity Common Shares [CS] F = Future [FUT] OC = Option - Call [OPT] OP = Option - Put [OPT]
201	PutOrCall	N	int	Alternative to CFICode<461> 0 = Put 1 = Call
167	SecurityType	N	string	Alternative to CFICode<461> • If used, specify for Futures and Options • If not specified, Equity assumed FUT – Future/Future Options OPT – Equity Option CS or <empty> - Equity
55	Symbol	Y	string	Exchange symbol • May incorporate symbol suffix (e.g. VIA.A) • For OPRA options, SpiderRock accepts an OSI code in this field. • For standardized futures products, maturity information can be included in this field, (e.g. GCZ22 [for the Dec-22 Comex Gold Future]).
65	SymbolSfx	N	string	Symbol suffix
22	IDSource	N	string	8 = Exchange Symbol is accepted when used in conjunction with SecurityID<48> to communicate the Exchange Symbol.
48	SecurityID	N	string	Exchange symbol, when IDSource = 8 and Symbol<55> is blank.
541	MaturityDate	N	string	For Futures and Options YYYYMMDD
200	MaturityMonthYear	N	string	Alternative to MaturityDate<541> YYYYMM
205	MaturityDay	N	int	Alternative to MaturityDate<541> 1-31
202	StrikePrice	N	float	Option strike price

54	Side	Y	char	1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt Y= Sell auto (SR determines whether child orders should be selling long or short by looking up account/aggregate group position when child orders are created).
77	OpenClose	N	char	For Options O = Open C = Close A = Auto (SR determines whether child orders should be marked open or closed by looking up account/aggregate group position when child orders are created).
204	CustomerOrFirm	N	char	0 = Customer 1 = Firm 2 = Broker / Dealer 4 = Market Maker 5 = Non-Member Market Maker 8 = Customer Professional (Will default to SR account configuration if not specified)
528	OrderCapacity	N	char	A = Agency G = Prop I = Individual P = Principal R = Riskless W = AgentOtherMember (Will default to SR account configuration if not specified)
60	TransactTime	Y	utcDttm	Time this order request was initiated/released • YYYYMMDD-HH:MM:SS (Note: this order must arrive at SR within 15 seconds of TransactTime to be considered a valid order).
38	OrderQty	Y	int	Executable quantity
	Standard Trailer	*Y*		

Example – DMA

DMA orders are used to send a single order to a specific exchange or destination. This order type allows the client to control where the order is traded. Note that DMA orders may interact with dark liquidity in the SpiderRock platform if this is desired.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = D*
Basic NewOrderSingle Fields (See NewOrderSingle above)				

100	ExDestination	Y	string	SR Destination Code (see appendix) - Required for DMA style orders
	Standard Trailer	*Y*		

Example - Smart/Sweep

Smart/Sweep orders are used to send an order without specifying a destination. SpiderRock will determine the optimal destination(s) for the order and will automatically sweep multiple destinations to maximize liquidity capture. This order type can optionally post any unfilled balance on an exchange.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = D*
Basic NewOrderSingle Fields (See NewOrderSingle above)				
	Standard Trailer	*Y*		

Example - Staged/WaitStart

The SRStartType<5090> tag is used to send staged/wait orders to SpiderRock. These orders will be sent to the exchange as market orders once the client commands their release. Note that orders can be released in multiple ways: via SpiderRock GUI tools, via the SpiderRock SRSE/SQL API, and via a Listexecute<L> fix message.

Staged orders will be acknowledged immediately; fills will only be reported after the order has been released.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = D*
Any Combination of Basic or SpiderRock Specific NewOrderSingle Fields				
5090	SRStartType	Y	int	2 = Staged (wait start)
	Standard Trailer	*Y*		

Example - MarketOnOpen/MarketOnClose

MarketOnOpen/MarketOnClose orders are used when participating in opening and closing exchange auctions.

Note: Either Fix4.2 or Fix4.4 style OrdType/TimeInForce tagging is allowed.

Tag	Field Name	Req'd	Type	Comments

	Standard Header	*Y*		*MsgType = D*
Basic NewOrderSingle Fields (See NewOrderSingle above)				
59	TimeInForce	Y	char	2 = At the Opening 7 = At the Close
	Standard Trailer	*Y*		

Example - Complex Algo/Parent

Complex Algo/Parent orders express intent to interact with the market in a variety of ways. These parent orders can, and frequently do, result in multiple child orders being generated and routed to the exchange.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = D*
Basic NewOrderSingle Fields (See NewOrderSingle above)				
5036	SRUsername	N	string	Client defined username - Used for customer service and futures compliance - If necessary, a default may be assigned to the FIX session. (24 character max)
5055	SRProgressExposeTime	N	int	Default = 0
5094	SROrderHandling	Y	int	Primary order handling algorithm 1 = ActiveTaker

				2 = PostOnly 3 = DMA 4 = MktOnOpn 5 = MktOnCls 6 = Facilitate 7 = Matrix 11 = CrossResponse 12 = AuctionResponse
5096	SRBalanceHandling	N	int	0 = None (non-marketable balance will not be posted) 1 = PostWith 2 = PostTurn 3 = PostImprove 4 = PostLimit 5 = PostLmtW 6 = MaxIntern (only when SROrderHandling=Matrix) 7 = PostWthF 9 = PostFlash 10 = PostFlashW 12 = PostFlashI
5090	SRStartType	N	int	0 = Immediate 1 = WaitTrigger (wait for RiskGroup/Sweep trigger) 2 = Staged (wait for order to be modified/released)
5084	SRTimeInForce	N	string	• Day = Order remains working until the end of the day's primary trading session. • EXT = Extended Day - Order remains working through the day's intended trading session until the next top of day rotation. • WK = Week - Order remains working for the remainder of the week's normal trading sessions. • EWK = Extended Week - Order remains working for the week's remaining extended trading sessions until the next Friday/EndOfWeek rotation. • IOC = Immediate or Cancel - Order expires after one attempt at execution OR after one second. • GTD = Good Till Duration - Order remains working through the day's extended trading session until the next top of day rotation OR when SRGoodTillDttm time is reached OR after working for SROrderDuration seconds.
5086	SROrderDuration	N	int	Order with SrTimeInForce = GTD expires after working for this number of seconds. 0/missing = ignore.
5088	SRGoodTillDttm	N	utcDttm	Order with SrTimeInForce = GTD expires at this time.
5028	SRAltRouteCode	N	string	Alternate child order routing code [assigned by SR]
5034	SRStrategy	N	string	Text field; visible on SR Order Manager
5082	SRExchanges	N	string	Comma separated exchange list; default = all available exchanges

5046	SRMaxExposureSize	N	int	Maximum simultaneous public exposure size across all exchanges
5048	SRNumMakeExchanges	N	int	Number of public exposure exchanges
5050	SRPublicSize	N	char	0 = None 1 = Randomize 2 = MktSize 3 = FullSize 4 = MktSizeA 5 = MktSizeB 6 = MktSizeC 7 = FullSizeR
5052	SRCanCxlOverlap	N	char	Y = Yes
5080	SRMaxChildOrders	N	int	Upper bound for the number of child orders generated for this parent order
5054	SRProgressRule	N	int	0 = Immediate (default) 1 = Twap 2 = Vwap (not available for options) 3 = TwapReset 4 = VwapReset (not available for options) 5 = FastReset 6 = SlowReset 7 = TwapAlpha 8 = VwapAlpha (not available for options) 11 = SpdrPulse
5056	SRTwapSliceCnt	N	int	Number of TWAP slices (default = 1)
5104	SRTakeReachRule	N	int	0 = Immediate 1 = Delayed 2 = Passive
5098	SROrderLimitType	N	int	0 = Market 1 = MarketArrival 2 = Prc 3 = PrcDe 4 = PrcDeX 5 = PrcDeT 6 = PrcDeP 7 = PrcDeXT 8 = PrcDeXP 9 = Vol 10 = VolX 11 = VolF 12 = VolFX 13 = VolPrc 14 = RelMid 15 = RelJoin 16 = RelCross 17 = SmrtFast 18 = SmrtNorm 19 = RelTurn

5106	SROrderPrcLimit	N	float	Applies if LimitType = Prc[]
5126	SROrderPrcOffset	N	float	Default=0
5132	SRTakeAlphaFactor	N	float	
5134	SRMakeAlphaFactor	N	float	
5136	SRTakeProbability	N	float	
5138	SRMakeProbability	N	float	
5253	SRMaxAccDayDDeltaLn	N	float	max accnt day $delta long (positive number; -1=no limit); risk limit = max limits - current net counter
5254	SRMaxAccDayDDeltaSh	N	float	max accnt day $delta short (positive number; -1=no limit); risk limit = max limits + current net counter
5259	SRMaxSymDayDDeltaLn	N	float	max acct+symbol day $delta long (positive number; -1=no limit); risk limit = max limits - current net counter
5260	SRMaxSymDayDDeltaSh	N	float	max acct+symbol day $delta short (positive number; -1=no limit); risk limit = max limits + current net counter
5058	SRVwapParticipation	N	float	Target vwap participation rate (target % of trade activity)
5290	SRUserData1	N	string	User defined field (max 255 chars) - Can be returned on exec reports - Forward to drop lines or forwarded to child orders - Please advise SpiderRock support staff of intended behavior.
5291	SRUserData2	N	string	User defined field (max 255 chars) - Can be returned on exec reports - Forward to drop lines or forwarded to child orders - Please advise SpiderRock support staff of intended behavior.
SR Option Specific Fields (See below)				
	Standard Trailer	*Y*		

Complex Algo/Parent – Option Specific Fields

The following fields can be included in Algo/Parent orders when SecurityType<167> = Option.

If autohedging is enabled, then any resulting autohedge fills will be reported using the SRAutoHedgeClOrdID. Note that since autohedge orders and fills are generated in response to option fills, some accommodations must be made in the resulting autohedge underlier execution reports.

- OrdStatus<39> - Will be reported as PartiallyFilled until the option order has been fully terminated and all corresponding underlying orders have been resolved, after which, it will be reported as Filled.

- ExecType<150> - Will always be reported as PartialFill, Fill or DoneForDay

- Side<54> - Will contain the autohedge order side (depends on option side and callput flag)

- CumQty<39> - Will contain the cumulative autohedge quantity filled so far

- AvgPx<6> - Will contain the average autohedge price so far

- OrderQty<38> - Will always be greater than or equal to CumQty<39> (can increase or decrease)

- LeavesQty<151> - Will be zero when ExecType = Fill or DoneForDay. Will be the balance of the current working autohedge underlier child order when execType = PartialFill. Note: LeavesQty = 0 does NOT indicate that the autohedge order is terminated.

If an autohedge execution occurs, it will be reported immediately with OrdStatus<39> = PartiallyFilled. If the option parent order terminates (Filled, User Canceled, Expired, Broker Canceled), it will not be reported as closed until all corresponding autohedge child orders have been Canceled, all pending autohedge executions have been reported, and the autohedge OrdStatus<39> has been reported as Filled (if any autohedge fills have occurred).

Tag	Field Name	Req'd	Type	Comments
5170	SRPositionType	N	int	Primary position type (single leg orders)
5060	SRAuctionResponder	N	string	If set, parent order can be an auction responder
5108	SROrderRefUPrc	N	float	The stock reference price, a contribution to the order premium. Default: 0.
5110	SROrderRefDelta	N	float	Default=option.delta
5112	SROrderRefGamma	N	float	Default=option.gamma
5192	SROrderRefRMetric1	N	float	User supplied custom risk metric #1
5194	SROrderRefRMetric2	N	float	User supplied RMetric2 value (used in RiskGroupID risk controls)
5196	SROrderRefRMetric3	N	float	User supplied RMetric3 value (used in RiskGroupID risk controls)
5198	SROrderRefRMetric4	N	float	User supplied RMetric4 value (used in RiskGroupID risk controls)
5116	SROrderVolLimit	N	float	Order volatility limit • Valid range: [0.005, 9.000]. • Required if `orderLimitType` is Vol, VolX or VolPrc • Ignored if `orderLimitType` is Market • Otherwise must be set to 0
5118	SRRateOverride	N	float	zero = ignore; > zero = override
5120	SRSDivOverride	N	float	Default: 0
5122	SRDDivOverride	N	string	Discrete dividend string override • ([years:amount,years:amount,years:amount ...])

5124	SROverrideCode	N	char	SDiv/DDiv override rule (applies if LimitType = Vol) S = SDivOnly D = DDivOnly B = Both
5228	SRMakeSurfWidthOffset	N	float	Default=0
5229	SRTakeSurfWidthOffset	N	float	Default=0
5140	SRTakeSurfPrcOffset	N	float	Default=0
5142	SRTakeSurfVolOffset	N	float	Default=0
5144	SRMakeSurfPrcOffset	N	float	Default=0
5146	SRMakeSurfVolOffset	N	float	Default=0
5072	SRCxlUPrcRange	N	char	Cancel spdr order if/when outside stock price range
5074	SRMinUBid	N	float	Any non-hold status will revert to markup if stkNbboMid is outside midStockPx,maxUAsk range.
5076	SRMaxUAsk	N	float	See description for minUBid
5078	SRMinOptionPx	N	float	[Optional] option price floor for tied to stock orders
5152	SRAutoHedge	N	char	Autohedge type from option order (if generated as an Autohedge order) N = NoHedge F = AutoCrx S = AutoTrn M = AutoMid A = SpdrAuto 1 = Spdr10S 3 = Spdr30S 9 = Spdr90S 5 = Spdr5M H = Spdr30M T = Static
5172	SRShortSaleFlag	N	int	1 = Long 2 = Short 3 = Exempt 4 = Auto 5 = NA
5251	SRMaxAccDayWtVegaLn	N	float	max accnt day wvega (time weighted) long (positive number; -1=no limit); risk limit = max limits - current net counter
5252	SRMaxAccDayWtVegaSh	N	float	max accnt day wvega (time weighted) short (positive number; -1=no limit); risk limit = max limits + current net counter
5255	SRMaxExpDayWtVegaLn	N	float	max accnt+expiration day wvega (time weighted) long (positive number; -1=no limit); risk limit = max limits - current net counter
5256	SRMaxExpDayWtVegaSh	N	float	max accnt+expiration day wvega (time weighted) short (positive number; -1=no limit); risk limit = max limits + current net counter

5257	SRMaxSymDayWtVegaLn	N	float	max acct+symbol day vega long (positive number; -1=no limit); risk limit = max limits - current net counter
5258	SRMaxSymDayWtVegaSh	N	float	max acct+symbol day $delta short (positive number; -1=no limit); risk limit = max limits + current net counter

OrderCancelReplace (Client to SpiderRock)

The OrderCancelReplace<G> request is used to change the parameters of an existing single security order.

Do not use this message to cancel the remaining quantity of an outstanding order. Use the OrderCancelRequest<F> message for this purpose.

An ExecutionReport<8> with ExecType<150>=Pending Replace will be sent unless the OrderCancelReplace<G> can immediately be accepted (ExecutionReport<8> with ExecType<150>=Replaced) or rejected (OrderCancelReject<9> message).

An OrderCancelReplace<G> request will only be accepted if the associated child order(s) can successfully be pulled back. Requests that cannot be processed will be rejected with a CancelReject<3> message.

Only a limited number of fields can be changed via the OrderCancelReplace<G> message. All other instructions will be carried forward from the previous order. The fields which can be changed via this message are:

- OrderQty<38>
- TimeInForce<59>

It can be used to re-open a filled order by increasing OrderQty<38>.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = G*
11	ClOrdId	Y	string	Client order ID of the cancel request (24 character max)
41	OrigClOrdID	Y	string	ClOrdID<11> of the previous order (NOT the initial order of the day) when canceling an order. (24 character max)
Modifiable NewOrderSingle Fields (See list above)				
	Standard Trailer	*Y*		

NewOrderMultileg (Client to SpiderRock)

A NewOrderMultileg<AB> message is used to submit an order for up to 6 option legs and one equity leg as a package. Both standard multi-leg order types and the more complex ones offered by SpiderRock are communicated using this message.

The NewOrderMultileg<AB> fields listed in the following table are used in common by all SpiderRock multileg orders. Additional fields are used by different order types to communicate their unique features. These fields are described in subsequent sections.

In addition to standard FIX fields, SpiderRock uses its own custom FIX fields as NewOrderMultileg<AB> parameters. The FIX specification allows for the definition of custom fields (tags in range 5000-9999). See the SpiderRock V7 Custom Tags Reference for a complete list of the custom SpiderRock FIX fields.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = AB*
11	ClOrdId	Y	string	Client order ID (24 character max)
1	Account	Y	string	SR account acronym
38	OrderQty	Y	int	Executable quantity
54	Side	N	char	1 = Buy is assumed for the spread. Use LegSide.
100	ExDestination	N	string	SR Destination Code (see appendix) • Required for DMA style orders
40	OrdType	N	char	1 = Market 2 = Limit • Required for DMA and Smart/Sweep style orders
44	Price	N	float	Required for limit order types
59	TimeInForce	N	string	0 = Day 3 = Immediate or Cancel (IOC)
60	TransactTime	Y	utcDttm	Time this order request was initiated/released. • Note: This order must arrive at SR within 15 seconds of TransactTime to be considered a valid order.
SR Order Parameters (See below)				
555	NoLegs	Y	int	Number of legs
=654	LegRefId	Y	string	Used to identify a specific leg
=616	LegSecurityExchange	N	string	Market used to identify a security's issuing authority • See Appendix A for those accepted by SpiderRock. • For Futures products: the issuing authority must be supplied in SecurityExchange<207>. • For Equities and Equity Options (SecurityType<167> = CS, OPT, <blank>): in which the issuing authority SecurityExchange<207> is not explicitly supplied, NMS is assumed.

=608	LegCFICode	N	string	ES = Equity Common Shares [CS] F = Future [FUT] OC = Option - Call [OPT] OP = Option - Put [OPT]
=609	LegSecurityType	N	string	Alternative to LegCFICode<608> for Equities and Futures only. - Must be specified for Futures and Options - If not specified, Equity assumed FUT – Future/Future Options OPT – Equity Option CS or <empty> - Equity
=600	LegSymbol	Y	string	Leg Exchange symbol - May incorporate symbol suffix, e.g. VIA.A - For OPRA options, SpiderRock accepts an OSI code in this field. - For standardized futures products, maturity information can be included in this field, (e.g. GCZ22 [for the Dec-22 Comex Gold Future]).
=601	LegSymbolSfx	N	string	Leg Symbol Suffix
=611	LegMaturityDate	N	string	For Futures and Options YYYYMMDD
=612	LegStrikePrice	N	float	Option strike price
=624	LegSide	Y	char	1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt Y = Sell auto (SR determines whether child orders should be selling long or short by looking up account/aggregate group position when child orders are created).
=623	LegRatioQty	Y	int	The ratio of quantity for this individual leg relative to the entire multileg security
=564	LegPositionEffect	N	char	For Options O = Open C = Close A = Auto (SR determines whether child orders should be marked open or closed by looking up account/aggregate group position when child orders are created).
	Standard Trailer	*Y*		

Example - DMA

DMA orders are used to send a multi-leg order to a specified exchange or destination. This order type is appropriate when the client wishes to control where the order is traded. Note that DMA orders may interact with dark liquidity in the SpiderRock platform if configured to do so.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = AB*
Basic NewOrderMultileg Fields (See NewOrderMultileg above)				
100	ExDestination	Y	string	SR Destination Code (see appendix) - Required for DMA style orders
	Standard Trailer	*Y*		

Example - Smart/Sweep

Smart/Sweep orders are used to send an order without specifying a destination. SpiderRock will determine the optimal destination(s) for the order and will automatically sweep multiple destinations to maximize liquidity capture. This order type can optionally post any unfilled balance on an exchange.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = AB*
Basic NewOrderMultileg Fields (See NewOrderMultileg above)				
	Standard Trailer	*Y*		

Example - Staged/WaitStart

The SRStartType<5090> tag is used to send staged/wait orders to SpiderRock. These orders will be sent to exchange as market orders once the client commands their release. Note that orders can be released in multiple ways: via SpiderRock GUI tools, via the SpiderRock SRSE/SQL API, and via a Listexecute<L> fix message.

Staged orders will be acknowledged immediately; fills will only be reported after the order has been released.

Tag	Field Name	Req'd	Type	Comments

	Standard Header	*Y*		*MsgType = AB*
Any Combination of Basic or Complex NewOrderMultiLeg Fields				
5090	SRStartType	Y	int	2 = Staged
	Standard Trailer	*Y*		

Example - Complex Algo/Parent

Complex Algo/Parent orders express intent to interact with the market in a variety of ways. These parent orders can, and frequently do, result in multiple child orders being generated and routed to the exchange.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = D*

Basic NewOrderMultileg Fields (See NewOrderMultileg above)				
5036	SRUsername	N	string	Client defined username. • Used for customer service and futures compliance • If necessary, a default may be assigned to the FIX session (24 character max).
5055	SRProgressExposeTime	N	int	Default = 0
5094	SROrderHandling	Y	int	Primary order handling algorithm 8 = Legger 9 = Seeker 10 = SeekerLegger 20 = CobMaker
5096	SRBalanceHandling	N	int	0 = None (non-marketable balance will not be posted) 4 = PostLimit
5090	SRStartType	N	int	0 = Immediate 1 = WaitTrigger (wait for RiskGroup/Sweep trigger) 2 = Staged (wait for order to be modified/released)
5084	SRTimeInForce		string	• Day = Day – Order remains working until the end of the day's primary trading session. • EXT = Extended Day - Order remains working through the day's extended trading session until the next top of day rotation. • WK = Week - Order remains working for the remainder of the week's normal trading sessions. • EWK = Extended Week - Order remains working for the week's remaining extended trading sessions until the next Friday/EndOfWeek rotation. • IOC = Immediate or Cancel – Order expires after one attempt at execution OR after one second. • GTD = Good Till Duration – Order remains working through the day's extended trading session until the next top of day rotation OR when SRGoodTillDttm time is reached OR after working for SROrderDuration seconds.
5086	SROrderDuration		int	Order with SrTimeInForce = GTD expires after working for this number of seconds 0/missing = ignore
5088	SRGoodTillDttm		utcDttm	Order with SrTimeInForce = GTD expires at this time working for this number of seconds
5028	SRAltRouteCode		string	Alternate child order routing code [assigned by SR]
5034	SRStrategy		string	Text field; visible on SR Order Manager
5082	SRExchanges		string	Comma separated exchange list; default = all available exchanges

5046	SRMaxExposureSize		int	Maximum simultaneous public exposure size across all exchanges
5048	SRNumMakeExchanges		int	Number of public exposure exchanges
5050	SRPublicSize	N	char	0 = None 1 = Randomize 2 = MktSize 3 = FullSize 4 = MktSizeA 5 = MktSizeB 6 = MktSizeC 7 = FullSizeR
5080	SRMaxChildOrders		int	Upper bound for the number of child orders generated for this parent order
5054	SRProgressRule		int	0 = Immediate (default) 1 = Twap 3 = TwapReset 5 = FastReset 6 = SlowReset 7 = TwapAlpha 11 = SpdrPulse
5056	SRTwapSliceCnt		int	Number of TWAP slices (default = 1)
5104	SRTakeReachRule		int	0 = Immediate 1 = Delayed 2 = Passive
5098	SROrderLimitType		string	0 = Market 1 = MarketArrival 2 = Prc 3 = PrcDe 4 = PrcDeX 6 = PrcDeP 8 = PrcDeXP 14 = RelMid 15 = RelJoin 16 = RelCross
5100	SRTakeLimitClass		char	Simple=0 Surface=1 Probability=2 SurfProb=3
5102	SRMakeLimitClass		char	Simple=0 Surface=1 Probability=2 SurfProb=3
5106	SROrderPrcLimit		float	Applies if LimitType = Prc[]
5109	SROrderRefUAsk		price	
5110	SROrderRefDelta		float	Default=option.delta

5112	SROrderRefGamma		float	Default=option.gamma
5114	SROrderRefTheta		float	
5116	SROrderVolLimit		float	Order volatility limit - Valid range: [0.005, 9.000]. - Required if \`orderLimitType\` is Vol, VolX or VolPrc - Ignored if \`orderLimitType\` is Market - Otherwise must be set to 0
5126	SROrderPrcOffset		float	Default=0
5128	SRTakeAlphaType		char	1 = Static 2 = Hawk 3 = Eagle 4 = Falcon 5 = Relative
5130	SRMakeAlphaType		char	1 = Static 2 = Hawk 3 = Eagle 4 = Falcon 5 = Relative
5132	SRTakeAlphaFactor		float	
5134	SRMakeAlphaFactor		float	
5136	SRTakeProbability		float	
5138	SRMakeProbability		float	
5202	SRLeadSide		char	Legger Only 1 = BUY 2 = SELL
5204	SRMaxCompletionSlippage		float	Legger Only
5206	SROrderRefPremium		float	Reference premium (mleg orders only)
5290	SRUserData1	N	string	User defined field (max 255 chars) - Can be returned on exec reports; forward to drop lines or forwarded to child orders - Please advise SpiderRock support staff of intended behavior.
5291	SRUserData2	N	string	User defined field (max 255 chars) - Can be returned on exec reports; forward to drop lines or forwarded to child orders - Please advise SpiderRock support staff of intended behavior.
	Standard Trailer	*Y*		

Example - Legger

Legger orders allow SpiderRock to determine optimal destination(s) for the order. SpiderRock will automatically sweep multiple destinations to maximize the order's liquidity capturer. Any unfilled balance can optionally be posted to exchange.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = AB*
Basic NewOrderMultileg Fields (See NewOrderMultileg above)				
5094	SROrderHandling	Y	int	Primary order handling algorithm 8 = Legger
5096	SRBalanceHandling	N	int	0 = None (non-marketable balance will not be posted) 4 = PostLimit
5202	SRLeadSide		char	Legger Only 1 = BUY 2 = SELL
5204	SRMaxCompletionSlippage		float	Legger Only
	Standard Trailer	*Y*		

MultilegCancelReplace (Client to SpiderRock)

The MultilegCancelReplace<AD> is used to change the parameters of an existing multi-leg order.

Do not use this message to cancel the remaining quantity of an outstanding order. Use the OrderCancelRequest<F> message for this purpose.

An ExecutionReport<8> with ExecType<150>=Pending Replace will be sent unless the OrderCancelReplace<G> can immediately be accepted (ExecutionReport<8> with ExecType<150>=Replaced) or rejected (OrderCancelReject<9> message).

An OrderCancelReplace<G> request will only be accepted if the associated child order(s) can successfully be pulled back. Requests that cannot be processed will be rejected with a CancelReject<3> message.

Only a limited number of fields can be changed via the OrderCancelReplace<G> message. All other instructions will be carried forward from the previous order. The fields which can be changed via this message are:

- OrderQty<38>
- TimeInForce<59>

It can be used to re-open a filled order by increasing OrderQty<38>.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = AC*

11	ClOrdId	Y	string	Client order ID of the cancel request (24 character max)
41	OrigClOrdID	Y	string	ClOrdID<11> of the previous order (NOT the initial order of the day) when canceling an order. (24 character max)
Modifiable NewOrderMultileg Fields (See list above)				
	Standard Trailer	*Y*		

ExecutionReport (SpiderRock to Client)

SpiderRock natively follows FIX 4.4 rules for ExecutionReport handling but can switch to FIX 4.2 on request.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = 8*
37	OrderID	Y	string	Unique ID for order chain assigned by SpiderRock
198	SecondaryOrderID	N	string	Value from executing venue
11	ClOrdID	Y	string	Value from client request
41	OrigClOrdID	N	string	Conditionally required for response to a Cancel or Cancel/Replace request • (ExecType=PendingCancel, Replaced, or Canceled)
76	ExecBroker	N	string	Value from executing venue
5036	SRUsername	N	string	Used for customer service and futures compliance
5012	SRAltAccnt	N	string	
5410	SRExtTraderId	N	string	
5350	SRExecBrokerMPID	N	string	Executing broker MPID
17	ExecID	Y	string	Unique ID assigned by SpiderRock
20	ExecTransType	Y	int	
19	ExecRefID	N	string	
150	ExecType	Y	char	
60	TransactTime	Y	utcDttm	Time the transaction represented by this ExecutionReport occurred
39	OrdStatus	Y	char	
103	OrdRejReason	N	int	For optional use with ExecType = 8 (Rejected)
378	ExecRestatementReason	N	int	If replaced in the SpiderRock System using another order entry method
1	Account	Y	string	Assigned by SpiderRock

54	Side	Y	char	Value from executing venue • Value may differ from client's order if execution order is sold short.
38	OrderQty	Y	int	
40	OrdType	Y	char	Order type of this execution
77	OpenClose	N	char	Value from client's order
44	Price	N	float	Value from client's order
528	OrderCapacity	N	char	Value from order to venue
32	LastShares	Y	int	
31	LastPx	Y	float	
30	LastMkt	N	string	Value from executing venue
29	LastCapacity	N	string	Value from executing venue
151	LeavesQty	Y	int	0 if order is not active, not (OrderQty-Cum)
14	CumQty	Y	int	
6	AvgPx	Y	float	Execution price
58	Text	N	string	
5605	SRRejectCode	N	int	See Appendix C for a list of SR reject codes
442	MultiLegReportingType	N	char	Used to indicate what an Execution Report represents (e.g. used with multi-leg securities, such as option strategies, spreads, etc.). 1 = SINGLE_SECURITY 2 = INDIVIDUAL_LEG 3 = MULTI_LEG_SECURITY
654	LegRefID	N	string	Used to identify a specific leg for multileg order execution reports
439	ClearingFirm	N	string	Value from client's order, or SpiderRock account config
440	ClearingAccount	N	string	Value from client's order, or SpiderRock account config
Symbology				
22	IdSource	N	int	Value from client's order
48	SecurityId	N	string	Value from client's order
167	SecurityType	N	string	Value from client's order
55	Symbol	Y	string	Value from client's order
65	SymbolSfx	N	string	Value from client's order
207	SecurityExchange	Y	string	Exchange
461	CFICode	N	string	Value from client's order
201	PutOrCall	N	int	Value from client's order

541	MaturityDate	N	string	Value from client's order YYYYMMDD
200	MaturityMonthYear	N	string	Value from client's order YYYYMM
205	MaturityDay	N	int	Value from client's order 1-31
202	StrikePrice	N	price	Value from client's order
Billing Parameters				
5648	SRBillingCategory	N	string	B = Basic T = Tied A = Alpha A50 = AlphaTop50 S = Seeker L = Legger P = Post M = Matrix F = Facilitate D = DMA E = Extern DR = Drop TK = Ticket MN = Manual SO = SymOverride AU = Auction
5613	SRBillingRate	N	float	Tier 1 billing rate
5610	SRLiquidityTag	N	string	From SpiderRock normalized venue liquidity tag
5614	SRExchFeeEst	N	float	From exchange published Fee Schedules
5611	SRExchLiqTag	N	string	Exchange supplied liquidity code
	Standard Trailer	*Y*		

OrderCancelRequest (Client to SpiderRock)

An OrderCancelRequest<F> message requests the cancelation of all the remaining quantity of an order. The request will only be accepted if the order can be successfully pulled back from an exchange floor or equivalent venue.

An OrderCancelRequest<F> must assign a unique ClOrdID<11> (different from the ClOrdID<11> of the order to be canceled). If the OrderCancelRequest<F> is rejected, the ClOrdID<11> of the OrderCancelRequest<F> is sent in the ClOrdID<11> field of CancelReject<3> message, and the ClOrdID<11> of the order intended to be canceled, is communicated in the OrigClOrdID<41> field of the CancelReject<3> message.

An OrderCancelRequest<F> must contain either an OrigClOrdID<41> or an OrderID<37> to determine which order to cancel. If both the OrigClOrdID<41> and the OrderID<37> fields are populated and refer to different orders, both orders will be canceled. All other fields are optional and will not be used to validate the OrderCancelRequest<F> against the order to be canceled.

If the OrigClOrdID or OrderID are from an earlier order in a cancel/replace chain (either the initial order of the day or a subsequent order, but not the previous order) then the OrderCancelRequest will be rejected; however, the previous (most recent) order in the chain will be canceled.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = F*
11	ClOrdId	Y	string	Client order ID of the cancel request (24 character max)
41	OrigClOrdID	Y	string	ClOrdID<11> of the previous order (NOT the initial order of the day) when canceling an order (24 character max)
37	OrderID	N	string	SR assigned OrderID (from an ExecutionReport message) • Note: one of OrigClOrdID or OrderID must be supplied.
55	Symbol	N	string	
65	SymbolSfx	N	string	
167	SecurityType	N	string	Must be specified if a Future or Option • If a Future: Symbol<55>, SecurityType<167>, and MaturityMonthYear<200> are required • If an Option: Symbol<55>, SecurityType<167>, MaturityMonthYear<200>, PutOrCall<201>, and StrikePrice<202> are required
200	MaturityMonthYear	N	string	For Futures and Options
205	MaturityDay	N	int	For Futures and Options
201	PutOrCall	N	int	For Options
202	StrikePrice	N	float	For Options
54	Side	N	char	1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt Y = Sell auto (SR determines whether child orders should be selling long or short by looking up account/aggregate group position when child orders are created)
60	TransactTime	Y	utcDttm	Time this order request was initiated/released • (Note: this order must arrive at SR within 15 seconds of TransactTime to be considered a valid order.)
38	OrderQty	N	int	Executable quantity
58	Text	N	string	User supplied text such as a cancel reason
	Standard Trailer	*Y*		

OrderCancelReject (SpiderRock to Client)

SpiderRock FIX Gateways follow FIX 4.4 style rules for CancelReject handling but can switch to FIX 4.2 on request.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = 8*
37	OrderID	Y	string	Unique ID for order chain assigned by SpiderRock
11	ClOrdID	Y	string	Value from client request
41	OrigClOrdID	Y	string	Conditionally required for response to a Cancel or Cancel/Replace request (ExecType=PendingCancel, Replaced, or Canceled)
434	CxlRejResponseTo	Y	char	Valid values: 1 = OrderCancelRequest <F> 2 = OrderCancel/Replace Request <G>
102	CxlRejReason	N	int	
39	OrdStatus	Y	char	OrdStatus value after this cancel reject is applied
58	Text	N	string	
	Standard Trailer	*Y*		

MassCancelRequest (Client to SpiderRock)

MassCancelRequest<q> causes the immediate cancelation of the remaining quantity of either:

- all the orders,
- or just orders for a given underlying symbol.

Order cancelation may be for only a specific Account<1>, or if no Account<1> is specified in the message, all orders active on the FIX session are canceled.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = q*
11	ClOrdId	Y	string	Unique ID (24 character max)
1	Account	Y	string	SpiderRock supplied account
530	MassCancelRequestType	Y	int	Specifies the type of cancelation requested 2 - Cancel orders for an Underlying security 7 – All Orders (for the specified Account<1>, or all orders on the Fix session if no account is specified).
60	TransactTime	Y	utcDttm	Time this order request was initiated/released by the trader or trading system

	Standard Trailer	*Y*		

MassCancelReport (SpiderRock to Client)

The MassCancelReport<r> message acknowledges a MassCancelRequest<q>. Note that each affected order receives its own ExecutionReport<8> or OrderCancelReject<9> response.

Tag	Field Name	Req'd	Type	Comments
	Standard Header	*Y*		*MsgType = r*
11	ClOrdID	Y	string	Unique ID (24 character max)
1	Account	Y	string	SpiderRock supplied account
37	OrderID	Y	string	Unique ID for order assigned by SpiderRock
530	MassCancelRequestType	Y	char	Specifies the type of cancelation requested 2 - Cancel orders for an Underlying security 7 – All Orders (for the specified Account<1>, or all orders on the Fix session if no account is specified).
531	MassCancelResponse	Y	int	Indicates the action taken by the counterparty order handling system as a result of the Cancel Request • 0 – Indicates Order Mass Cancel Request was rejected
532	MassCancelRejectReason	N	string	
58	Text	N	string	
	Standard Trailer	*Y*		

Appendix A - Issuing Authority

Issuing authority symbol prefixes accepted in SecurityExchange<207> by SpiderRock

Prefix	**Issuing Authority**
CBOT	CBOT – CME Group
CFE	Chicago Future Exchange
CME	Chicago Mercantile Exchange – CME Group
COMEX	COMEX – CME Group
ICE	Intercontinental Exchange
NMS	US Equity National Market System Tickers (NYSE, NASDAQ, AMEX, etc)
NYMEX	NYMEX – CME Group

Appendix B - LastMkt/ExDest Values

These values are based on the MIC codes http://www.iso15022.org/MIC/homepageMIC.htm

Exchange	**Stock**	**Options**	**Spreads/COB**
AMEX	XASE	AMXO	
ARCA	ARCX	ARCO	
BATS	BATS	BATO	
BATS-Y	BATY		
BOX		XBOX	
CBOE		XCBO	XCBO
C2		C2OX	
EDGA	EDGA		
EDGX	EDGX		
ISE Gemini		GMNI	
ISE		XISX	XISX
Miami MIAX		XMIO	
NYSE	XNYS	*see ARCA*	
NASDAQ	XNAS	XNDQ	
NASDAQ BX	XBOS	XBXO	
PHLX		XPHL	XPHL
AMEX	XASE	AMXO	
ARCA	ARCX	ARCO	
BATS	BATS	BATO	
ISE Mercury		MCRY	MCRY
Edge Options		EDGO	
IEX	IEXG		

Appendix C - Reject Codes – SRRejectCode<5605>

Code			
0 = None	32 = DupLegID	64 = BadLegKeyType	96 = MarMaxFc2
1 = AccntHold	33 = MixedRoots	65 = UnknwnRefStk	97 = MarNoRec3
2 = UnknwnOpt	34 = OffMkt	66 = BadRefMktPrc	98 = MarDisabled3
3 = UnknwnStk	35 = CentVol	67 = UnknwnRefFut	99 = MarMaxCn3
4 = Expired	36 = CentLeg	68 = UnknwnRefAtm	100 = MarMaxSh3
5 = BadSize	37 = CentRng	69 = BadRefVe	101 = MarOptMny3
6 = BadOrdNum	38 = CentSAtm	70 = BadProdDef	102 = MarStkMny3
7 = DupOrdNum	39 = CentSpln	71 = MarNoRec	103 = MarRestricted3
8 = BadVolPx	40 = CentErr	72 = MarDisabled	104 = MarCrdtAcc3
9 = BadLmtType	41 = NoRiskGrp	73 = MarMaxCn	105 = MarCrdtDay3
10 = BadMktPrc	42 = BadDDivs	74 = MarMaxSh	106 = MarTotExp3
11 = BadLimit	43 = NoPricer	75 = MarOptMny	107 = MarOddLot3
12 = SysReject	44 = CalcErr	76 = MarStkMny	108 = MarFutMny3
13 = TestOrder	45 = TwapLate	77 = MarRestricted	109 = MarMaxFc3
14 = CustType	46 = TwapTime	78 = MarCrdtAcc	110 = SpdrMaxSh
15 = NoFirmPos	47 = NoAcctMap	79 = MarCrdtDay	111 = SpdrMaxFc
16 = BadCent	48 = UserUnk	80 = MarTotExp	112 = SpdrMaxCn
17 = NoSurface	49 = UserHold	81 = MarOddLot	113 = SpdrStkMny
18 = UnknwnAcc	50 = GTCHold	82 = MarFutMny	114 = SpdrFutMny
19 = UnknwnRoot	51 = SysException	83 = MarMaxFc	115 = SpdrOptMny
20 = OrdSpacing	52 = StkCrossed	84 = MarNoRec2	116 = SpdrHold
21 = BadOptMkt	53 = BadOrdType	85 = MarDisabled2	117 = SpdrOptNv
22 = BadStkMkt	54 = BadSSaleFlag	86 = MarMaxCn2	118 = SpdrDayCn
23 = SendFailed	55 = NoBorrow	87 = MarMaxSh2	119 = SpdrDayFc
24 = BadExpose	56 = NoFacilitateAccnt	88 = MarOptMny2	120 = SpdrDaySh
25 = BadPrem	57 = UnknwnFut	89 = MarStkMny2	121 = SpdrDayNv
26 = NoOptLeg	58 = MktNotOpen	90 = MarRestricted2	122 = SpdrFutPosDeAbs
27 = Min2Leg	59 = NoRoutes	91 = MarCrdtAcc2	123 = SpdrFutDayDeAbs
28 = Max6Leg	60 = NoLocate	92 = MarCrdtDay2	124 = SpdrFutDayDeBot
29 = BadStkSz	61 = SSaleRstr	93 = MarTotExp2	125 = SpdrFutDayDeSld
30 = BadRatio	62 = NoLegs	94 = MarOddLot2	126 = SpdrExpPosDeAbs
31 = BadLegID	63 = BadSide	95 = MarFutMny2	127 = SpdrExpDayDeAbs

128 = SpdrExpDayDeBot	160 = NoProdDef		
129 = SpdrExpDayDeSld	161 = BadRiskID		
130 = UserRisk	162 = InvldAutoH		
131 = UserMaxCn	163 = LegChange		
132 = UserMaxSh	164 = CxlSpacing		
133 = UserOptMny	165 = BadHedgeInst		
134 = UserStkMny	166 = TooLateToReduce		
135 = UserFutMny	167 = PendCxlRepl		
136 = UserOptNv	168 = InvldCxlRepl		
137 = UserDayCn	169 = InvldCxl		
138 = UserDayNv	170 = DmaReject		
139 = UserDayFc	171 = NoUPrc		
140 = UserDaySh	172 = TwapSteps		
141 = USymFutMny	173 = UnknwnFirm		
142 = UserMaxFc			
143 = USymMaxFc			
144 = USymHold			
145 = USymMaxCn			
146 = USymMaxSh			
147 = USymOptMny			
148 = USymStkMny			
149 = USymOptNv			
150 = USymDayCn			
151 = USymDayNv			
152 = USymDayFc			
153 = USymDaySh			
154 = AccFrozen			
155 = ConfigErr			
156 = NoFMFuture			
157 = NoSpdrSymCtrl			
158 = NoSpdrSymExpCtrl			
159 = NoLinkage			

Version History

Version	Date	Comment