

Forexster FIX API

Rules of Engagement

November 2009 Revision

1 Overview

Banks and clients may communicate with Forexster programmatically using either the Forexster API (Java) or FIX. For the Java API, refer instead to the *doc* directory in the ZIP file you were provided. The FIX protocol (<http://www.fixprotocol.org>) specifies several-dozen message types each comprised of a specific set of required and optional fields. This document describes how Forexster supports and interprets these various FIX messages and fields.

Integration with Forexster via the FIX protocol is available in three “access levels” depending on license terms: STP (Straight-Through Processing) Access, ABV (Automated Book Viewing) Access, and AT (Automated Trading) Access.

An XML specification of the messages and fields supported by Forexster is available at <http://www.forexster.com/download/FIX43-FXTR.xml>. If the client-side FIX engine is a recent variant of QuickFIX or QuickFIX/J, then this file can be used as the DataDictionary for message validation.

2 Connection Details

Forexster accepts FIX connections at an address and port designated on a customer-by-customer basis. The production Forexster site will only accept FIX connections from private-network routes or via an encrypted SSL tunnel. The field-level encryption types supported by FIX are not sufficient for our purposes.

An open-source SSL tunnel implementation is available from <http://www.stunnel.org>. Some FIX engines perform SSL encryption in-process, so the external SSL tunnel process may not be necessary.

Production connections will only be accepted from an approved client IP address.

Typically separate FIX sessions will be used for market data, trading, and “drop-copy”, since these functions have different heartbeat, sequence number reset, and message recovery requirements. Forexster will provide different SenderCompID, TargetCompID, TargetSubID, Username, and Password values for these sessions during the onboarding process.

2.1 Session Times

Forexster recommends a *weekly* FIX session from 11:00:00 Sunday to 18:00:00 Friday (New York time), with sequence numbers only reset during the weekend outage.

Custom *daily* session start and end times, with or without “dark” periods, can be provided as required by the client’s FIX implementation, with sequence numbers reset at an agreed time such as 17:00:00 New York time.

Please note that if the session times are defined in New York time, then a FIX engine that requires UTC start and end times must be reconfigured when Daylight Savings Time changes. If this is a problem, the session can easily be defined to use UTC start and end times instead.

2.2 Authentication

Forexster or the provisioning financial institution may provide separate usernames for UI versus FIX access.

To change either the UI or the FIX password, launch the Forexster Workstation using the appropriate username and choose “Change Password” from the file menu. Note that any other sessions active for that username at that time will be terminated.

The FIX username is probably not permissioned to place trades, so Forexster Workstation should be launched with a normal UI username for any trading activities. However, Forexster Workstation's "Trade Query" screen should be fully functional even using the FIX username.

The client must safeguard all passwords, and should change the password using the UI on a regular basis. If a password is lost or compromised, please contact fxsupport@forexster.com or call 1.919.321.0195 or your provisioning financial institution.

2.3 Sequence Numbers

Forexster's FIX Engine supports the 141=Y reset field as well as normal Resend Request and Sequence Number Reset negotiation as defined by the FIX specification. For problems with sequence numbers during testing or production use, please contact fxsupport@forexster.com or call 1.919.321.0195.

3 Standards Conformance

Forexster strives to conform to the FIX 4.3 specification to the greatest extent possible.

Deviations most likely to require special attention by the client are highlighted in yellow:

- **Logon:** Client must provide **Username(553)** and **Password(554)** fields. Forexster can accept transport-layer authentication (e.g. SSL certificates) if **Logon** authentication is not possible.
- **Security List:** Forexster provides fields **FutSettDate(64)**, **TradeDate(75)**, and **MinPriceIncrement(969)** in the repeating group along with each **Symbol(55)**. Since these are not part of the spec, Forexster will omit these "extra" fields if the client uses **SecurityListRequestType(559)=0** (Symbol) in the **Security List Request**.
- **Market Data Request:** Client may omit **MarketDepth(264)** and **MDEntryType(267+269)** repeating group marked as "required" by the standard. Forexster assumes both bids and offers are desired and defaults to **MarketDepth=5**. Forexster adds **OutrightTenor(7820)** and **SwapTenorList(7821)**.
- **Market Data:** Forexster adds **FutSettDate(64)** to communicate the current value date for Spot or the specified **OutrightTenor(7820)**. Note for Snapshot/Full Refresh, Forexster sends the **FutSettDate** outside the repeating group of **MDEntries**, but for Incremental Refresh, the **FutSettDate** is inside the repeating group. The standard FIX 4.3 specification does not include **FutSettDate** field in Market Data, but FIX 5.0 includes **FutSettDate** *inside the repeating group* for both Snapshot/Full Refresh and Incremental Refresh update types. Forexster can suppress the **FutSettDate(64)** on a per-session basis upon request.
- **Market Data:** If outright forward data is requested, Forexster adds **MDEntrySpotRate(1026)** and **MDEntryForwardPoints(1027)**.
- **Market Data:** If swap data is requested, Forexster adds **MDEntryForwardPoints(1027)**, **SwapNearDate(7822)** and **SwapFarDate(7823)** and does not send **FutSettDate(64)**.
- **New Order – Single:** Client may omit **HandlInst(21)** field. Forexster supports the **PegMoveType(835)**, **PegOffsetType(836)**, **PegRoundDirection(838)**, and **PegScope(840)** tags that were introduced in FIX 4.4, the **PegPriceType(1094)**, **DisplayQty(1138)**, **MatchIncrement(1089)**, and **TriggerPriceType(1107)** fields that were introduced in FIX 5.0, and custom tags 7700-7999. These will only appear in the **Execution Report** if the client used them in the corresponding **New Order** message.
- **New Order – Single:** For **TimeInForce(59)**, Forexster adds a value "9" (Good Till Elapsed). An **ExpireTime(126)** must be provided, for example 59=9, 126=00:00:30 would send an order good for 30 seconds.
- **Execution Report:** If the client's **New Order** message contained any of the Forexster-added fields **PegMoveType(835)**, **PegOffsetType(836)**, **PegRoundDirection(838)**, **PegScope(840)**, **PegPriceType(1094)**, **DisplayQty(1138)**, **MatchIncrement(1089)**, **TriggerPriceType(1107)**, or custom tags 7700-7999, then these will be reported back in the **Execution Report**.
- **Execution Report:** Forexster adds **AutoTPParentOrderID(7737)** and **AutoSLParentOrderID(7737)** to reports about the child orders if the client created the parent order with the **AutoTP** or **AutoSL** options.

- **Execution Report:** Forexster adds OcoOrderID(7757), OcoCumQty(7758) and OcoAvgPx(7759) if the client created an OCO pair via OcoStopPx(7751).
- **Execution Report:** Forexster adds CalculatedCcyLastQty(1056) to precisely communicate the opposite currency exchanged for each LastQty(32). For swap trades, Forexster also adds CalculatedCcyLastQty2(7764). Forexster can suppress these tags on a per-session basis upon request.
- **Execution Report:** Forexster adds AggressorIndicator(1057) if ExecType=TRADE. Forexster can suppress this tag on a per-session basis upon request.
- **Order Cancel / Replace Request:** Client may omit HandlInst(21), Symbol(55), Side(54), TransactTime(60), OrderQty(38), and OrdType(40) fields; Forexster identifies the original order only by the required OrigClOrdID(41) field.
- **Order Cancel / Replace Request:** If ExecInst(18) is omitted, Forexster *will bring forward* all the ExecInst(18) options that were specified in the original order. This differs from the specification which says “original order [ExecInst] values will not be brought forward to replacement order unless redefined within this message.”
- **Order Cancel / Replace Request:** The specification says “all of the application-level fields in the original order should be retransmitted” but Forexster instead *will bring forward* any Account(1), OrdType(40), OrderQty(38), CashOrderQty(152), Currency(15), TimeInForce(59), ExpireDate(432), ExpireTime(126), MinQty(110), MaxFloor(111), DisplayQty(1138), MatchIncrement(1089), TriggerPriceType(1107), AutoTP(7730-33), AutoSL(7740-43), Oco(7750-53), AvgPxLimit(7762), and AveragingInst(7763) fields from the original order.
- **Order Cancel / Replace Request:** When modifying an OCO pair, a single 35=G message results in simultaneous replacement of both the Limit Order and Stop Order (assuming both are still active). FIX has no standard specification for OCO order placement or modification.
- **Order Cancel Request:** Client may omit Symbol(55), Side(54), TransactTime(60), and OrderQty(38) fields; Forexster identifies the original order only by the required OrigClOrdID(41) field. If provided, additional fields in an Order Cancel Request (such as Symbol and Side) must agree with those values supplied in the original order.
- **Order Status Request:** Client may omit Symbol(55) and Side(54) fields; Forexster identifies the original order only by the required ClOrdID(11) field.
- **Order Mass Cancel Request:** Client may omit TransactTime(60) field.

4 Administrative Messages

The standard Logon, Heartbeat, Test Request, Resend Request, Sequence Reset, Reject, Business Message Reject, and Logout message types will be used according to the FIX specification. Please note Forexster’s use of the Username and Password fields of the Logon message.

4.1 Logon

The Username and Password must be provided by the client when initiating a connection to Forexster. These fields will not be present in the Logon message sent back in response.

Tag	Field Name	Req'd	Type	Comments
35	MsgType	Y	string	A (Logon)
98	EncryptMethod	Y	int	Only type 0 (None) is supported
108	HeartBtInt	Y	int	Heartbeat interval (seconds); use 60 unless a different interval has been agreed
141	ResetSeqNumFlag	N	boolean	If 'Y', indicates both sides of the FIX session should reset sequence numbers
553	Username	Y*	string	A valid Forexster username authorized for FIX access

554	Password	Y*	string	The plaintext password
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*Forexster can accept transport-layer authentication (e.g. SSL certificates) if **Logon** authentication is not possible.

4.2 Logout

A Logout should be sent to ensure a clean termination. Most FIX engines send the Logout message automatically when necessary.

Whenever possible, Forexster will place an explanatory message in the Text(58) field, such as “Password mismatch” or “MsgSeqNum too low, expecting 1234 but received 567”.

Tag	Field Name	Req'd	Type	Comments
35	MsgType	Y	string	5 (Logout)
58	Text	N	string	A reason for the rejected Logon or unexpected Logout, if available

5 Pre-Trade Messages

5.1 Security List Request

A client may request a snapshot **Security List** of the currently-available symbols, or may subscribe and receive a **Security List** any time the list or parameters change (usually only at 07:00 NZ time when the NZD pairs roll to their new value date, and at 17:00 NY time when the trade date changes and all other pairs roll to their new value date).

If a second subscription is started, the first subscription will be silently dropped, so only one **Security List** will be received (using the latest ID) the next time the list changes.

Tag	Field Name	Req'd	Type	Example	Comments
35	MsgType	Y	string	x	x (Security List Request)
320	SecurityReqID	Y	string	list234	Client-specified identifier
559	SecurityListRequestType	Y	int	4	Values accepted by Forexster are: 0: Symbol only 4: All data (symbol plus FutSettDate, etc.)
263	SubscriptionRequestType	Y	char	1	Values accepted by Forexster are: 0: Snapshot 1: Subscribe 2: Unsubscribe

5.2 Security List

Forexster sends this message in response to **Security List Request**.

Tag	Field Name	Type	Example	Comments
35	MsgType	string	y	y (Security List)
320	SecurityReqID	string	list234	Client-specified identifier
322	SecurityResponseID	string	resp1234	Forexster-generated identifier

560	Security Request Result	int	1	Forexster uses the following values: 0: Valid Request 1: Invalid or Unsupported Request (check Text)
393	TotalNum Securities	int	45	Indicates the total number of symbols; Forexster does not use message fragmentation so this will always be the same as NoRelatedSym(146)
146	NoRelatedSym	int	45	Marks the beginning of the repeating group and indicates how many groups will follow
→55	Symbol	string	USD/JPY	FX Currency Pair in the form CCY1/CCY2
→75	TradeDate	string	20060215	FX Trade Date currently in force for this currency pair. <i>Left blank if SecurityListRequestType(559) = 0.</i>
→64	FutSettDate	string	20060217	SPOT Value Date currently quoted for this currency pair. <i>Left blank if SecurityListRequestType(559) = 0.</i>
→969	MinPrice Increment	float	0.001	Smallest price increment, typically one pip, ½ pip, or one tenth of a pip. Forexster will reject any New Order whose Price(44) or StopPx(99) is not a round multiple of this number. <i>Left blank if SecurityListRequestType(559) = 0.</i>
58	Text	string	[varies]	Descriptive reason for SecurityRequestResult(560) = 1.

5.3 Market Data Request

A client must send one or more Market Data Request messages to start or stop subscriptions for Market Data. All subscriptions are stopped upon **Logout** so the client must re-subscribe after the next **Logon**.

If the FIX username is not authorized for Automated Book Viewing (ABV) Access, the request will always be rejected.

If the current FIX session is already subscribed for the same symbol and options, the second request will always be rejected to prevent unnecessary (usually accidental) bandwidth consumption. However, it is permissible to have multiple streams for the same Symbol if different options such as Scope or SwapTenorList are used.

If a non-spot FutSettDate(64) or OutrightTenor(7820) is present (see **Appendix A**), the streamed market data will contain outright forward bids and offers in the MDEntry repeating group, i.e. MDEntryPx, MDEntrySpotRate, MDEntryForwardPoints, MDEntrySize, and FutSettDate.

If a SwapTenorList(7821) is present (see **Appendix A**), the streamed market data will contain swap bid and offer quotes in the MDEntry repeating group, i.e. MDEntryForwardPoints, MDEntrySize, SwapNearDate, and SwapFarDate. The FutSettDate(64) field is omitted.

Otherwise, the streamed market data will contain spot prices only, i.e. MDEntryPx, MDEntrySize, and FutSettDate.

Tag	Field Name	Req'd	Type	Example	Comments
35	MsgType	Y	string	V	V (Market Data Request)
262	MDReqID	Y	string	usdjpy	Client-specified identifier; Forexster allows this ID to be re-used and recommends simply using the Symbol as the MDReqID to help avoid accidentally subscribing twice for the same market data.
263	Subscription RequestType	Y	char	1	Values accepted by Forexster are: 0: Snapshot 1: Subscribe 2: Unsubscribe
264	MarketDepth	N	int	3	Number of tiers of market data, or 0 for full depth (up to credit-limited sweepable depth). Default is 5. This is currently ignored for swap streams; all available quotes are transmitted.

265	MDUpdateType	N	int	0	Values accepted by Forexster are: 0: Full Refresh (default) 1: Incremental Refresh
266	AggregatedBook	N	boolean	Y	Specifies whether orders are aggregated: Y: aggregate whenever possible (default) N: do not aggregate distinct orders Note that Forexster will not aggregate entries whose OrderID, ExecInst, MinQty, or Scope differ, so it is possible to have multiple MDEntry tiers at the same MDEntryPx even if AggregatedBook=Y. This is currently ignored for swap streams.
546	Scope	N	Multiple Char Value	123	If permissioned, allows selection of only market data from one or more Forexster-defined categories, default "123" is all categories: 1. Local (interest-only orders matchable immediately) 2. "National" (firm feeds matchable immediately) 3. "Global" (feeds requiring validity check)
267	NoMDEntryTypes	N	int	2	Specifies the number of MDEntryType repeating groups will follow
→269	MDEntryType	N	char	0	Forexster only accepts (and ignores) the following values: 0: Bid 1: Offer Regardless of requested MDEntryTypes, Forexster will send both Bid and Offer data.
146	NoRelatedSym	Y	int	1	Number of symbols requested
→55	Symbol	Y	string	USD/JPY	FX Currency Pair in the form CCY1/CCY2 . This must be the first field in each repeating group (before either SettlementType or FutSettDate).
→64	FutSettDate	N	Local Mkt Date	20060217	FX Value Date; typically left blank to allow Forexster to compute the correct value date for SPOT (default) or for an FX Forward tenor code in OutrightTenor.
→7820	OutrightTenor	N	string	IMM1	Tenor code or date, see Appendix A
→7821	SwapTenorList	N	string	1M,3M,6M	Comma-separated list of tenor codes or near/far dates; see Appendix A

5.4 Market Data Request Reject

Forexster sends this message in response to Market Data Request if the subscription could not be started.

Forexster only sends this message on failed **Snapshot** and **Subscribe** requests. If the MDReqID(262) is not recognized in an otherwise well-formed **Unsubscribe** request, Forexster does *not* send a reject.

Tag	Field Name	Type	Example	Comments
35	MsgType	string	Y	Y (Market Data Request Reject)
262	MDReqID	string	Req1234	Identifier supplied by client in Market Data Request
281	MDReqRejReason	char	0	Forexster uses the following values: 0: Unknown Symbol or Symbol Already Subscribed 1: Duplicate MDReqID 2: Insufficient Bandwidth (too many subscriptions) 3: Insufficient Permissions (ABV Access is required) 4-9, A-C: Unsupported This-or-That (check Text)
58	Text	string	[various]	Descriptive reason for the rejection

5.5 Market Data Snapshot / Full Refresh

Forexster sends this message in response to Market Data Request.

Tag	Field Name	Type	Example	Comments
35	MsgType	string	W	W (Market Data Snapshot / Full Refresh)
262	MDReqID	string	Req1234	Identifier supplied by client in Market Data Request
55	Symbol	string	USD/JPY	FX Currency Pair
64	FutSettDate	string	20060217	FX Value Date for Spot or Outright Forward streams; omitted for Swap streams
268	NoMDEntries	int	10	Number of Market Data repeating groups to follow
→269	MDEntryType	char	0	Forexster currently only sends entries for type: 0: Bid 1: Offer
→270	MDEntryPx	Price	123.45	Price of this market data entry
→271	MDEntrySize	Qty	5000000	Quantity represented by the market data entry
→1026	MDEntrySpotRate	Price	123.45	The linked spot rate for Outright Forward streams; this field is omitted for spot and swap streams
→1027	MDEntryForwardPoints	Price Offset	0.006199	The forward points to be added to or subtracted from the spot rate to get the "all-in" rate in MDEntryPx. Expressed in decimal form, for example 61.99 points is expressed and sent as 0.006199.
→7822	SwapNearDate	string	20060217	The near date of this swap quote; omitted for Spot or Outright Forward streams
→7823	SwapFarDate	string	20060317	The far date of this swap quote; omitted for Spot or Outright Forward streams
→110	MinQty	Qty	10000	This entry is restricted to only match in amounts above a certain minimum quantity (thus smaller amounts will trade through this level)
→18	ExecInst	Multiple Value String	G	This entry has a special restriction (note that not all ExecInst values supported in a New Order message will be displayed in Market Data): G: All or none (AON) – smaller amounts will trade through this level
→37	OrderID	string	123456	Unique number assigned by Forexster, provided if this entry represents an order being worked by this client , for example orders placed by the current or a previous FIX session. In order to prevent confusion over dealable market depth, orders being worked by other traders or sessions in the same firm will NOT appear in this session's Market Data unless self-dealing within the firm is permitted by business rules.
→282	MDEntryOriginator	string	BK33	The quoting firm name, if permissioned
→290	MDEntryPositionNo	int	1	Display position of this entry, numbered starting with 1 in order from most competitive to least competitive, per market side
→546	Scope	char	1	Forexster-defined category, if permissioned: 1. Local (interest-only orders matchable immediately) 2. "National" (firm feeds matchable immediately) 3. "Global" (feeds requiring validity check)

5.6 Market Data Incremental Refresh

Forexster sends this message in response to Market Data Request if MDUpdateType(265) = 1. The client maintains its own image of the book by applying “New”, “Change”, and “Delete” updates according to the MDEntryID (278), as described by the FIX protocol specification.

A key difference between the Full Refresh and Incremental Refresh messages is that the latter can update multiple symbols at once, so the Symbol(55) and FutSettDate(64) fields – and SettlmntTyp(63) if provided by client – appear inside the repeating group after NoMDEntries(268).

For efficiency, as recommended by the FIX specification, when transmitting a group of market data entries from the same book, Forexster only includes fields 55, 64, 63 in the first one.

Tag	Field Name	Type	Example	Comments
35	MsgType	string	X	X (Market Data Incremental Refresh)
262	MDReqID	string	Req1234	Identifier supplied by client in Market Data Request
268	NoMDEntries	int	10	Number of Market Data repeating groups to follow
→279	MDUpdateAction	char	0	Type of update action represented by this market data entry: 0: New 1: Change 2: Delete
→278	MDEntryID	string	A1	The unique identifier for this market data entry in the stream
→55	Symbol	string	USD/JPY	FX Currency Pair. If omitted for a market data entry, the Symbol from the immediately preceding entry is implied.
→64	FutSettDate	string	20060217	FX Value Date for Spot or Outright Forward entries. If omitted for a market data entry, the FutSettDate from the immediately preceding entry is implied.
→269	MDEntryType	char	0	Forexster currently only sends entries for type: 0: Bid 1: Offer
→270	MDEntryPx	Price	123.45	Price of this market data entry. Omitted for a “Delete” entry.
→271	MDEntrySize	Qty	5000000	Quantity represented by the market data entry. Omitted for a “Delete” entry.
→1026	MDEntrySpotRate	Price	123.45	The linked spot rate for Outright Forward streams; this field is omitted for spot and swap streams
→1027	MDEntryForwardPoints	Price Offset	0.006199	The forward points to be added to or subtracted from the spot rate to get the “all-in” rate in MDEntryPx. Expressed in decimal form, for example 61.99 points is expressed and sent as 0.006199.
→7822	SwapNearDate	string	20060217	The near date of this swap quote; omitted for Spot or Outright Forward streams. If omitted for a market data entry, the SwapNearDate from the immediately preceding entry is implied.
→7823	SwapFarDate	string	20060317	The far date of this swap quote; omitted for Spot or Outright Forward streams. If omitted for a market data entry, the SwapFarDate from the immediately preceding entry is implied.
→110	MinQty	Qty	10000	This entry is restricted to only match in amounts above a certain minimum quantity (thus smaller amounts will trade through this level). For AON orders, this will be equal to the MDEntrySize.
→18	ExecInst	Multiple Value String	G	This entry has a special restriction (note that not all ExecInst values supported in a New Order message will be displayed in Market Data): G: All or none (AON) – smaller amounts will trade through this level

→37	OrderID	string	123456	Unique number assigned by Forexster, provided if this entry represents an order being worked by this client , for example orders placed by the current or a previous FIX session. Upon request, Forexster can remove your own orders from your Market Data stream to prevent confusion over dealable market depth.
→282	MDEntryOriginator	string	BK33	The quoting firm name, if permissioned
→290	MDEntryPositionNo	int	1	Display position of this entry, numbered starting with 1 in order from most competitive to least competitive, per market side
→546	Scope	char	1	Forexster-defined category, if permissioned: 1. Local (interest-only orders matchable immediately) 2. “National” (firm feeds matchable immediately) 3. “Global” (feeds requiring validity check)
→1089	MatchIncrement	Qty	1000000	This entry is restricted to only match in round multiples of this value, typically 1 (for whole-dollar fills) or 1000000 (for standard interbank lots). Since this field was introduced in FIX 5.0, Forexster does NOT transmit it unless the client requests it.

6 Trade Messages

6.1 New Order – Single

Order placement via FIX requires Automated Trading (AT) Access permission.

6.1.1 Specifying Currency Amounts

The Symbol for FX trading must be in the form CCY1/CCY2 with the currencies in the customary interbank quoting direction. For buying or selling some amount of CCY1, specify the order amount in OrderQty(38) and use Side(54) of 1 “BUY” or 2 “SELL” corresponding to whether it is desired to BUY CCY1 or SELL CCY1. Upon each partial fill, the **Execution Report** will report LastQty(32), LeavesQty(151), and CumQty(14) as amounts of CCY1 and the counter-amounts CalculatedCcyLastQty(1056) and GrossTradeAmt(381) as amounts of CCY2. Upon complete fill, the CumQty will equal the requested OrderQty.

For buying or selling some amount of CCY2, specify the desired CCY2 amount in CashOrderQty(152), and note the value for Side(54) will still correspond to whether it is desired to BUY CCY1 or SELL CCY1. The prices will still be in the customary CCY1/CCY2 terms and the order will appear (if not filled immediately) on the left side (for Side = BUY CCY1) or the right side (for Side = SELL CCY1) of the customary limit-order book display. Upon each partial fill, the **Execution Report** will still report LastQty(32), LeavesQty(151), and CumQty(14) as amounts of CCY1, and CalculatedCcyLastQty(1056) and GrossTradeAmt(381) as amounts of CCY2. Upon complete fill, the GrossTradeAmt will equal the requested CashOrderQty.

Some FX trading venues do not use CashOrderQty(152) but rather accept Currency(15) = CCY2 to allow trading amounts of the right-hand-side currency, as suggested by the FIX 5.0 Specification Volume 7, Foreign Exchange Usage Notes. This is the exact opposite of a literal interpretation of the (equity shares-oriented) FIX Specification in which the Currency(15) field “Identifies currency used for price.” The currency used for prices in a CCY1/CCY2 market is of course CCY2, such as 123.45 JPY prices in the USD/JPY market.

While Forexster recommends use of CashOrderQty(152) to avoid this critical ambiguity, due to accepted practice in FX the value of Currency(15) may be set to CCY2 to cause Forexster to interpret OrderQty(38) as an amount of the right-hand-side currency. In this case, LastQty(32), LeavesQty(151), and CumQty(14) will also be delivered in CCY2, while CalculatedCcyLastQty(1056) will be in CCY1, and GrossTradeAmt(381) will not be reported.

However, even if Currency(15) is CCY2, Forexster always interprets Side(54)=1 as BUY CCY1 (sell CCY2) and 2 as SELL CCY1 (buy CCY2) so that in price terms one always aims to “buy low and sell high”, and to be

consistent with the “side” of the limit-order book in which the order will be displayed (which is not a concern for brokers that only support immediate order types and never display the order in either side of a limit-order book).

For swap trades, a Side(54) of 1 (BUY) is interpreted as “SELL-AND-BUY”, that is, a sell of CCY1 on the near date and a buy of CCY1 on the far date. Side(54) of 2 (SELL) is interpreted as “BUY-AND-SELL”, that is, a buy of CCY1 on the near date and a sell of CCY1 on the far date.

6.1.2 One-Cancels-Other (OCO) Pairs

An OCO pair is a Limit Order linked with a “sibling” Stop Order for the same side and quantity. If the Limit Order is filled, the Stop Order is canceled, and vice versa.

An OCO pair can be used not only to bracket a position with take-profit and stop-loss *exit* orders, but also to *enter* a new position via a non-aggressive limit order linked to a stop-market order, perhaps just a few pips apart. Forexster reports the combined OcoCumQty(7758) and OcoAvgPx(7759) in the Execution Reports for both orders.

If either order is canceled, the other is automatically canceled as well; there is no way to “break” the OCO linkage.

To place an OCO pair, send a single New Order message with OrdType(40) = 2 (Limit), specifying the Limit Order details in their normal fields, but with the additional Stop Order specified by OcoStopPx(7751), and optionally OcoOrdID(7750), OcoStopLimitPx(7752), and OcoStopTriggerPriceType(7753).

Forexster will automatically reduce the size of the Stop Order if partial fills occur against its linked Limit Order sibling, so that $CumQty[1] + CumQty[2] + LeavesQty[1] + LeavesQty[2] = OrderQty$ at all times (until filled or canceled).

Because this chain of OCO Stop Orders is created automatically, Forexster must generate appropriate unique ClOrdID(11) values that the client will not know in advance. Unique IDs are created by appending the unique Forexster-assigned OrderID(37) to a prefix of “AutoOCO:”. This prefix may be customized via the OcoClOrdID(7750) field.

6.1.3 Automatic TP/SL (“If-Done”) Orders

Contingent (“child”) orders are requested via the AutoTP (7730-33) and/or AutoSL (7740-43) fields.

If the original (“parent”) order is canceled or expires with no fills, the child orders are never created.

Otherwise, each partial fill against the parent order results in creation or modification of a “take profit” Limit Order, a “stop loss” Stop Order, or an OCO-linked TP/SL pair if both are specified.

The exit price levels may be specified explicitly using AutoTPPrice(7731) and AutoSLPrice(7741).

Or exit price levels can be automatically computed from the fill price AvgPx(6) of the parent order. AutoTPOffsetValue(7732) or AutoSLOffsetValue(7742) values may be specified in price, pips, ticks (usually 0.1 pip), or in a “target P/L” quantity (e.g. 10000 USD), as controlled by the AutoTPOffsetType(7733) and AutoSLOffsetType(7743) fields.

If the parent order is part of an OCO-linked pair (P1 & P2), the child orders C1 & C2 will be created as soon as *either* of the parent orders is filled or partially filled. AutoTPOffsetValue(7732) or AutoSLOffsetValue(7742) offsets will be applied to the OcoAvgPx(7759). In most cases this is equal to the AvgPx(6) of either the parent Limit Order or Stop Order. However it is possible for the parent Limit Order to be only partially filled and later the reduced-size Stop Order is filled, in which case the OcoAvgPx must be calculated from partial fills of both orders.

As partial fills occur against the parent order(s), Forexster increases the child OrderQty values to maintain $OrderQty[C1] = OrderQty[C2] = OcoCumQty[P] = CumQty[P1] + CumQty[P2]$ at all times.

Because these chains of TP and/or SL orders are created automatically, Forexster must generate appropriate unique ClOrdID(11) values that the client will not know in advance. Unique IDs are created by appending the unique Forexster-assigned OrderID(37) to a prefix of “AutoTP:” or “AutoSL:”. This prefix may be customized via fields AutoTPClOrdID(7730) and AutoSLClOrdID(7740).

When an AutoTP/SL order status (New, Filled, Canceled, etc.) is reported to the FIX client in an **Execution Report**, the FIX client can tie this order back to the parent order using AutoTPParentOrderID(7737) or AutoSLParentOrderID(7747).

Tag	Field Name	Req'd	Type	Example	Comments
35	MsgType	Y	string	D	D (New Order – Single)
1	Account	N	string	987-00123	Leave blank unless Forexster has provided specific values to use for a single FIX session to place orders on behalf of multiple traders or accounts.
11	ClOrdID	Y	string	abc123	Unique client-assigned identifier (30-char max)
64	FutSettDate	N	Local Mkt Date	20060217	FX Value Date; typically left blank to allow Forexster to compute the correct value date for SPOT (default) or for the FX Forward tenor code in OutrightTenor
193	FutSettDate2	N	Local Mkt Date	20060317	Far date for a swap order; the near date is specified by FutSettDate(64), or is SPOT if FutSettDate is omitted
7820	OutrightTenor	N	string	IMM1	FX Forward tenor code or date, see Appendix A
461	CFIcode	N	string	FFCPNO	Used to differentiate the FX instrument types: RCSXXX – FX Spot (default) FFCPNO – FX Outright Forward FFCPNW – FX Swap If omitted, SPOT is assumed and the order will be rejected if FutSettDate2 or OutrightTenor is present.
18	ExecInst	N	Multiple Value String	H G	Space-separated list of order handling instructions; values accepted by Forexster are: G: All or none (AON) (no partial fills) H: Survives After Disconnect (default for CSV Order Upload and for AutoTP & AutoSL orders) Q: Kill On Disconnect (default for FIX, Java APIs) g: External Routing Allowed (match any price, including Scope 3 feeds) h: External Routing Not Allowed (only Scope 1 and 2 prices will be matched)
110	MinQty	N	Qty	10000	Partial Fill Restriction: order may only be matched in amounts of at least this quantity of CCY1.
111	MaxFloor	N	Qty	5000000	Reserve Size: only display this amount of CCY1. Upon any partial fill the amount will be replenished up to this amount until the full OrderQty(38) is exhausted.
55	Symbol	Y	string	USD/JPY	FX Currency Pair in the form CCY1/CCY2.
54	Side	Y	char	1	Side of the order: 1: BUY CCY1 (and sell CCY2) – place order on bid side, even if Currency(15)=CCY2 2: SELL CCY1 (and buy CCY2) – place order on offer side, even if Currency(15)=CCY2 For swap orders, this is the side of the CCY1 trade on the <i>far date</i>
60	TransactTime	Y	UTC Timestamp	20060215-09:12:34	Time the order was sent by the client in GMT; Forexster will reject orders that appear to have been delayed (e.g. by a FIX disconnect and message gap fill) so the client must have a correctly synchronized system clock. Milliseconds are optional.

38	OrderQty	N	Qty	8000000	Amount of CCY1 to buy or sell. If Currency(15) = CCY2, then this is an amount of CCY2 to buy or sell. Note that Side(54) always indicates whether to buy CCY1 or to sell CCY1. Either OrderQty(38) or CashOrderQty(152) must be specified, but not both.
152	CashOrderQty	N	Qty	987600000	This is one way to specify an amount of CCY2 to trade, rather than setting Currency(15) to CCY2. Note that Side(54) always indicates whether to buy CCY1 or to sell CCY1. Either OrderQty(38) or CashOrderQty(152) must be specified, but not both.
40	OrdType	Y	char	2	Forexster accepts the following values: 1: Market 2: Limit 3: Stop-market 4: Stop-limit
44	Price	N	Price	123.45	Limit price, required for OrdType = 2 or 4. For swap orders, this price must be in decimal format instead of in pips, for example a -22.33 pip EUR/USD swap price should be sent as -0.002233; a 3.45 pip USD/JPY swap price should be sent as 0.0345.
99	StopPx	N	Price	123.55	Stop trigger price, required for OrdType = 3 or 4.
15	Currency	N	string	USD	This may be set to CCY1 to indicate the OrderQty(38) is an amount of CCY1 (the default), or set to CCY2 to indicate the OrderQty(38) is an amount of CCY2. Note another way to trade in amounts of CCY2 is to specify CashOrderQty(152), in which case this field should be omitted.
59	TimelnForce	N	char	0	Specifies how long the order remains in effect. Absence of this field is interpreted as DAY. Valid values: 0: Day (expires at 17:00 NYT) 1: Good Till Cancel (GTC) 3: Immediate or Cancel (IOC) 6: Good Till Date (see ExpireTime and ExpireDate) 9: Good Till Elapsed (see ExpireTime)
432	ExpireDate	N	Local Mkt Date	20060215	Order will expire at 17:00 NYT on the specified day. Either ExpireDate or ExpireTime is required if TimelnForce(59) = 6 (Good Till Date).
126	ExpireTime	N	UTC Timestamp	20060215-09:34:56	Order will expire at the specified time. Either ExpireDate or ExpireTime is required if TimelnForce(59) = 6 (Good Till Date). Interpreted as an elapsed time if TimelnForce(59) = 9 (Good Till Elapsed).
211	PegOffsetValue	N	float	5.0	Forexster will automatically calculate the limit price based on the market prices at time of order placement. This is normally a <i>signed</i> (positive or negative) value that is <i>added</i> to the peg price. But Forexster can automatically flip the sign of this value if PegOffsetNegatedIfSelling(7761)=Y, in case it is easier to always send the same PegOffsetValue regardless of the Side(54).
7761	PegOffsetNegatedIfSelling	N	boolean	Y	If Y, causes Forexster to automatically negate the PegOffsetValue(211) for SELL orders, so that the client application can provide the same peg parameters for all orders

1094	PegPriceType	N	int	5	The type of the “related-to” price of the peg: 2: Mid Price Peg (peg to market midpoint) 4: Market Peg (peg to best bid for sell orders, best offer for buy orders) 5: Primary Peg (peg to best bid for buy orders, best offer for sell orders)
835	PegMoveType	N	int	1	Describes whether peg is static/fixed or floats. Valid values: 0: Floating (not yet supported) 1: Fixed
836	PegOffsetType	N	string	1	Type of the PegOffsetValue(211): 0: Price 1: Pips (default) 2: Ticks 8: CCY1 PL (pegged to some amount of CCY1; the price difference will depend on the OrderQty) 9: CCY2 PL (pegged to some amount of CCY2; the price difference will depend on the OrderQty) “USD” or other currency code (pegged to some amount of the specified currency; the price difference will depend on the OrderQty)
838	PegRoundDirection	N	Int	1	If the calculated peg price is not a valid price for this market, specifies whether to round the price to be more or less aggressive: 1: More Aggressive (on a buy order round the price up to the nearest tick; on a sell order round down to the nearest tick) 2: More Passive (on a buy order round the price down to the nearest tick; on a sell order round the price up to the nearest tick)
840	PegScope	N	int	3	The scope of the “related to” price of the peg: 3: Global (peg to any tradable price) 4: Exclude Local (default, when calculating peg price, exclude local interest only orders which may be small or otherwise not indicative of true market price)
1089	Match Increment	N	Qty	1000000	Partial Fill Restriction: only allow partial fills in multiples of this amount
1107	Trigger PriceType	N	char	1	Identifies which side of the book will trigger a stop order. Valid values: 1: Best Offer (default for Side=2, sell-stop orders) 3: Best Bid (default for Side=1, buy-stop orders)
1138	DisplayQty	N	Qty	5000000	Reserve Size: only display this amount of CCY1. Upon any partial fill the amount will be replenished up to this amount until the full OrderQty(38) is exhausted. Equivalent to MaxFloor(111).
7730	AutoTP ClOrdID	N	string	abc123-TP:	Specifies the ClOrdID(11) prefix to use for the chain of AutoTP “child” orders. If omitted, Forexster will use the prefix “AutoTP:”. (20-char max)
7731	AutoTP Price	N	float	123.70	When this (“parent”) order is filled, Forexster will automatically place a take-profit exit order at the specified price. If an AutoSL (7741 or 7742) is also present, the two “child” orders are OCO-linked. Child order will use ExecInst(18)=H (Survives After Disconnect) and TimeInForce(59)=1 (GTC)

7732	AutoTP OffsetValue	N	float	25	When this ("parent") order is filled, Forexster will automatically place a take-profit exit order this far above or below the parent AvgPx(6). If AutoSL (7741 or 7742) is also present, the two "child" orders are OCO-linked. Child order will use ExecInst(18)=H (Survives After Disconnect) and TimelnForce(59)=1 (GTC)
7733	AutoTP OffsetType	N	int	1	Type of the AutoTPOffsetValue(7732): 0: Price 1: Pips (default) 2: Ticks (as reported in MinPriceIncrement(969) field of Security List) 8: CCY1 P/L (price offset depends on order size) 9: CCY2 P/L (price offset depends on order size) <CCY> : (price offset depends on order size)
7740	AutoSL ClOrdID	N	string	abc123-SL:	Specifies the ClOrdID(11) prefix to use for the chain of AutoSL "child" orders. If omitted, Forexster will use the prefix "AutoSL:". (20-char max)
7741	AutoSL Price	N	float	122.95	When this ("parent") order is filled, Forexster will automatically place a stop-loss exit order at the specified price. If AutoTP (7731 or 7732) is also present, the two "child" orders are OCO-linked. Child order will use ExecInst(18)=H (Survives After Disconnect) and TimelnForce(59)=1 (GTC)
7742	AutoSL OffsetValue	N	float	50	When this ("parent") order is filled, Forexster will automatically place a stop-loss exit order this far above or below the parent AvgPx(6). If AutoTP (7731 or 7732) is also present, the two "child" orders are OCO-linked. Child order will use ExecInst(18)=H (Survives After Disconnect) and TimelnForce(59)=1 (GTC)
7743	AutoSL OffsetType	N	int	1	Type of the AutoSLOffsetValue(7742); same values as for AutoTPOffsetType(7733).
7750	OcoClOrdID	N	string	123-oco:	Specifies the ClOrdID(11) prefix to use for the chain of OcoStopPx(7751) "sibling" orders. If omitted, Forexster will use the prefix "AutoOCO:". (20-char max)
7751	OcoStopPx	N	Price	123.65	OCO (One-Cancels-Other) : If specified, the current order will be paired with a "sibling" Stop Order using the specified value as its StopPx(99). The current order must have OrdType(40)=2 (Limit). The Stop Order will have OrdType=3 (Stop-Market), or OrdType=4 (Stop-Limit) if OcoStopLimitPx(7752) is also present.
7752	Oco StopLimitPx	N	Price	123.75	If specified, the OcoStopPx(7751) "sibling" order will have OrdType(40)=4 (Stop-Limit) with Price(44) equal to this value.
7753	Oco StopTrigger PriceType	N	char	1	Identifies which side of the book will trigger a the "sibling" stop order. Valid values: 1: Best Offer (default for Side=2, sell-stop orders) 3: Best Bid (default for Side=1, buy-stop orders)
7762	AvgPxLimit	N	boolean	Y	If Y, then partial fills may occur at prices beyond the requested limit Price(44) if earlier partial fills occurred at a better price, as long as the overall AvgPx(6) remains better than the requested limit price.

7763	AveragingInst	N	char	F	Controls the post-trade multiple-ticket averaging mechanism (if enabled by the prime broker). Valid values: M: Manual (manually group trades after execution for averaging) C: One Block Per Chain (default; keep the block open through any number of Order Modify (reprice) operations (an order "chain") and then close the block automatically once the order chain is filled or canceled, even if the size was only partially filled) O: One Block Per Order (close the block automatically as soon as the order is filled or canceled, even if the size was only partially filled) F: On Complete Fill Only (close the block automatically only if this order's size is completely filled)
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6.2 Order Cancel / Replace Request

This message, which also requires AT Access permission, allows atomic cancel/replace (modification) of an active order.

The Side(54), Symbol(55), SettlmntTyp(63), FutSettDate(64), and Currency(15) fields may be omitted or else must be identical to that specified in the original order.

The replacement order may not change the terms currency. That is, if the original order specified an OrderQty(38) and left CashOrderQty(152) blank to indicate CCY1 terms, then the replacement may only specify a new OrderQty(38). If the original order specified a CashOrderQty(152) but left OrderQty(38) blank to indicate CCY2 terms, then the replacement may only specify a new CashOrderQty(152). If the original order used OrderQty(38) and Currency(15)=CCY2, then the replacement may only specify a new OrderQty(38) which will remain in CCY2 terms.

If ExecInst(18) is omitted, Forexster *will bring forward* all the ExecInst(18) options that were specified in the original order. This differs from the FIX 4.3 specification which says "original order [ExecInst] values will not be brought forward to replacement order unless redefined within this message."

The FIX 4.3 specification also says "all of the application-level fields in the original order should be retransmitted" but Forexster instead *will bring forward* any Account(1), OrdType(40), OrderQty(38), CashOrderQty(152), Currency(15), TimeInForce(59), ExpireDate(432), ExpireTime(126), MinQty(110), MaxFloor(111), DisplayQty(1138), MatchIncrement(1089), TriggerPriceType(1107), AutoTP(7730-33), AutoSL(7740-43), Oco(7750-53), AvgPxLimit(7762), and AveragingInst(7763) fields from the original order.

Forexster will conditionally bring forward the Price(44) and/or StopPx(99) from the original order based on the OrdType(40). If OrdType=1 (Market) then neither will be brought forward (and must be left blank); if OrdType=2 (Limit) then Price(44) will be brought forward; if OrdType=3 (Stop-market) then StopPx(44) will be brought forward; if OrdType=4 (Stop-limit) then both fields will be brought forward.

When modifying an OCO pair with both sides still active, both orders will be replaced and two **Execution Reports** will be sent.

Thus changes to size, price, and order type may be accomplished atomically, as can changes e.g. from one expiry time to another. But the only way to change the symbol, side, dealt currency, or to "clear" any of the other application-level fields to default (blank) values is to send **Order Cancel Request**, wait for "confirmed out" (or fills) via **Execution Report**, and then send a **New Order**. Changes to TimeInForce(59), ExpireDate(432), ExpireTime(126), and reductions in order size (OrderQty or CashOrderQty) do not result in loss of matching priority.

Tag	Field Name	Req'd	Type	Example	Comments
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35	MsgType	Y	string	G	G (Order Cancel / Replace Request)
1	Account	N	string	987-00123	If specified, must be identical to the value specified in the original order.
37	OrderID	N	string	123456	Forexster-assigned ID corresponding to OrigClOrdID. May be omitted; the request will be rejected if it does not match.
41	OrigClOrdID	Y	string	abc123	Client-assigned ID of the previous non-rejected order
11	ClOrdID	Y	string	abc124	Client-assigned ID of the new (replacement) order (30-char max)
64	FutSettDate	N	Local Mkt Date	20060217	If specified, must be identical to the value specified in the original order.
193	FutSettDate2	N	Local Mkt Date	20060317	If specified, must be identical to the value specified in the original order.
7820	OutrightTenor	N	string	IMM1	If specified, must be identical to the value specified in the original order.
461	CFICode	N	string	FFCPNO	If specified, must be identical to the value specified in the original order.
18	ExecInst	N	Multiple Value String	G	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
110	MinQty	N	Qty	10000	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
111	MaxFloor	N	Qty	5000000	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
55	Symbol	N	string	USD/JPY	If specified, must be identical to the value specified in the original order.
54	Side	N	char	1	If specified, must be identical to the value specified in the original order.
60	TransactTime	N	UTC Timestamp	20060215 09:23:45	Time the replacement request was sent by the client in GMT. Unlike with New Order , Forexster will NOT reject Order Cancel / Replace Request messages that appear to have been delayed (e.g. by a FIX disconnect and message gap fill), so this field is optional.
38	OrderQty	N	Qty	8000000	The replacement order will use the specified value; note the OrderQty should be the "total intended order quantity" including the amount already executed for this chain of orders.
152	CashOrderQty	N	Qty	987600000	The replacement order will use the specified value; note the CashOrderQty should be the "total intended CCY2 order quantity" including the amount already executed for this chain of orders.
40	OrdType	N	char	2	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
44	Price	N	Price	123.45	New limit price, required for OrdType = 2 or 4. If omitted, the value from the original order will be brought forward unless OrdType = 1 or 3.
99	StopPx	N	Price	123.55	New stop trigger price, required for OrdType = 3 or 4. If omitted, the value from the original order will be brought forward unless OrdType = 1 or 2.
15	Currency	N	string	USD	If specified, must be identical to the value specified in the original order.

59	TimeInForce	N	char	0	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
432	ExpireDate	N	Local Mkt Date	20060215	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
126	ExpireTime	N	UTC Timestamp	20060215-09:34:56	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
1089	Match Increment	N	Qty	1000000	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
1107	Trigger PriceType	N	char	1	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
1138	DisplayQty	N	Qty	5000000	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
7730	AutoTP ClOrdID	N	string	abc124-TP:	If specified, must be identical to the value specified in the original order.
7731	AutoTP Price	N	Price	123.70	If specified, must be identical to the value specified in the original order.
7732	AutoTP OffsetValue	N	float	25	If specified, must be identical to the value specified in the original order.
7733	AutoTP OffsetType	N	int	1	If specified, must be identical to the value specified in the original order.
7740	AutoSL ClOrdID	N	string	abc124-SL:	If specified, must be identical to the value specified in the original order.
7741	AutoSL Price	N	Price	122.95	If specified, must be identical to the value specified in the original order.
7742	AutoSL OffsetValue	N	float	50	If specified, must be identical to the value specified in the original order.
7743	AutoSL OffsetType	N	int	1	If specified, must be identical to the value specified in the original order.
7750	OcoClOrdID	N	string	124-oco:	The replacement OCO sibling order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
7751	OcoStopPx	N	Price	123.66	The replacement OCO sibling order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
7752	Oco StopLimitPx	N	Price	123.76	The replacement OCO sibling order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
7753	Oco StopTrigger PriceType	N	char	1	The replacement OCO sibling order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
7762	AvgPxLimit	N	boolean	Y	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.
7763	AveragingInst	N	char	F	The replacement order will use the specified value; see New Order for definition. If omitted, the value from the original order will be brought forward.

6.3 Order Cancel Request

To cancel a single active order, the **Order Cancel Request** should be used. The order remains active and eligible for fills until an **Execution Report** is received with OrdStatus = "Canceled."

Tag	Field Name	Req'd	Type	Example	Comments
35	MsgType	Y	string	F	F (Order Cancel Request)
41	OrigClOrdID	Y	string	abc123	Client-assigned ID of the previous non-rejected order
11	ClOrdID	Y	string	abc125	Client-assigned ID of this cancel request

6.4 Order Cancel Reject

Forexster sends this message in response to either an **Order Cancel Request** or an **Order Cancel / Replace Request** if the request could not be fulfilled.

Tag	Field Name	Type	Example	Comments
35	MsgType	string	9	9 (Order Cancel Reject)
37	OrderID	string	123456	Unique number assigned by Forexster
11	ClOrdID	string	abc125	Client-assigned ID of the Order Cancel Request or the Order Cancel / Replace Request
41	OrigClOrdID	string	abc123	Client-assigned ID of the original order
39	OrdStatus	char	4	The OrdStatus value after this reject is applied; see Execution Report for possible values.
434	CxlRejResponseTo	char	1	Identifies the type of request that this Cancel Reject is in response to. Valid values: 1: Order Cancel Request 2: Order Cancel / Replace Request
102	CxlRejReason	int	0	Code to identify reason for cancel rejection. Values used by Forexster: 0: Too late to cancel (already filled or canceled) 1: Unknown order 2: Broker – Exchange Option 3: Order already in Pending Cancel or Pending Replace status 6: Duplicate ClOrdID received
58	Text	string	[various]	Descriptive reason for the rejection, only provided when CxlRejReason(102) = 2 since others should be self-explanatory.

6.5 Order Mass Cancel Request

This message may be sent by the client to cancel orders en masse. Orders remain active and eligible for fills until an **Execution Report** is received with OrdStatus = "Canceled." After all the orders are canceled, an **Order Mass Cancel Report** is sent summarizing the orders (if any) which were canceled as a result of this request.

Tag	Field Name	Req'd	Type	Example	Comments
35	MsgType	Y	string	q	q (lowercase Q)
11	ClOrdID	Y	string	abc126	Client-assigned ID for the mass cancel request

530	MassCancel RequestType	Y	char	7	Specifies scope of Order Mass Cancel Request. Forexster recognizes the values: 1: Cancel orders for a security (symbol) 7: Cancel all orders
55	Symbol	N	string	USD/JPY	Required for request type 1
54	Side	N	char	1	Optional value to request cancellation only of orders on a particular side of the market. Forexster recognizes the values: 1: Cancel only buy orders 2: Cancel only sell orders 7: Undisclosed (cancel all orders)

6.6 Order Mass Cancel Report

Forexster sends this message in response to an Order Mass Cancel Request.

Tag	Field Name	Type	Example	Comments
35	MsgType	string	r	r (lowercase R)
11	ClOrdID	string	abc126	Client-assigned ID of the Order Mass Cancel Request
37	OrderID	string	Req1234	Forexster-assigned ID of the report
530	MassCancel RequestType	char	7	Same as the value provided in the request
531	MassCancel Response	char	7	Specifies the action taken by Forexster as a result of the Order Mass Cancel Request: 0: Cancel Request Rejected – see MassCancelRejectReason(532) 1: Cancel orders for a security 7: Cancel all orders
532	MassCancel RejectReason	char	1	Reason Order Mass Cancel Request was rejected: 1: Invalid or unknown Security
534	NoAffectedOrders	int	4	Indicates the number of OrigClOrdID(41) repeating groups to follow.
→41	OrigClOrdID	string	abc123	Client-assigned ID of an order that was canceled as a result of this mass cancel request
→535	AffectedOrderID	string	123456	Forexster-assigned ID of the immediately-preceding OrigClOrdID
55	Symbol	string	USD/JPY	Same as the value provided in the request, if any
54	Side	char	1	Same as the value provided in the request, if any
60	TransactTime	UTC Timestamp	20060215- 09:34:00	The timestamp of the report

6.7 Execution Report

A FIX STP Access session can expect to receive the following types of Execution Reports for non-FIX trades done by traders using the Forexster Workstation UI or the Java API:

- ExecType = “New”
- ExecType = “Trade”
- ExecType = “Trade Cancel”
- ExecType = “Order Status”

An Automated Trading (AT) Access session will see these reports as well as the full array of report types for orders submitted via FIX New Order messages. If the client’s order management system will become confused by these “unsolicited” Execution Reports (refer to Table 22 “Telephoned Order” in the FIX 4.3 Specification

“Appendix D” Order State Change Matrices), then please request the special “ForexsterReportNonFixTrades=N” option. If desired, a separate “drop copy” FIX session can be provided for STP of trades done by UI or Java API.

For trades placed by a trader using the Forexster Workstation UI, the “New” message conveys no interesting information that is not repeated in the immediately subsequent “Trade” message, but Forexster can send it anyway to conform to the FIX specification. If this behaviour is desired, please request the special “ForexsterReportsNewNonFixOrders=Y” option.

A single order placed by a trader may result in multiple distinct trades at different prices. A trader may also use the reprice feature to bump the balance amount of a bid or offer to a new price, so trades against the original order amount may occur at different prices. Forexster’s FIX STP Access mode treats these Non-FIX trades as having been submitted as separate orders rather than as partial fills against a single order or chain of orders. This simplifies reconciliation against the distinct trades that the clearing bank will know. If instead the client wishes to have Forexster report all the trades as partial fills against a single order or chain of orders, please request the “ForexsterTracksNonFixOrderChains=Y” option.

If a trader executes new non-FIX trades while no FIX session is active, or if an ExecInst(18)=H (Survives-After-Disconnect) FIX order is filled after **Logout**, the “Trade” report will be sent immediately after the next **Logon** and will be assigned a FIX SeqNum larger than that of the Logon message itself. If any **Execution Report** is in-transit at the time of an unexpected FIX disconnect (Forexster assigned a FIX SeqNum but the client did not receive that SeqNum), then the standard FIX resend request / gap fill procedure will ensure the message gets delivered.

If the client requests the “ForexsterResendsTodaysTradesOnLogon=Y” option, then a “Trade” report will be sent for every trade with today’s trade date (since last 17:00 NYT) upon each **Logon**.

In any case, the TransactTime(60) field describes the time that the trade actually occurred.

Tag	Field Name	Type	Example	Comments
35	MsgType	string	8	8 (Execution Report)
1	Account	string	987-00123	The trader or account booking code, only present if specified in the New Order
37	OrderID	string	123456	Unique number assigned by Forexster
11	ClOrdID	string	abc123	Client-assigned identifier, from the New Order . For orders placed via the Forexster Workstation UI, a tag such as “NonFix:123456” will be assigned. For AutoTP, AutoSL, and OCO stop orders, Forexster will construct an identifier by appending the OrderID(37) to a default prefix of “AutoTP:”, “AutoSL:”, or “AutoOCO:”, or to the client-specified prefixes AutoTPClOrdID(7730), AutoSLClOrdID(7740), or OcoClOrdID(7750).
41	OrigClOrdID	string	abc122	The ClOrdID of the previous accepted order in this chain of orders. Only present in response to a Cancel or Cancel/Replace request while ExecType(150)=4, 5, 6, or E (Canceled, Replaced, Pending Cancel, Pending Replace).
453	NoPartyIDs	int	1	Number of PartyID repeating groups
→448	PartyID	string	trader01	For Entering Trader role, this is the FIX Username, or the Forexster username of the trader who placed the order; for Contra Firm role, this is the Short Name for the Forexster counterparty firm as configured in the client’s “Relationships” screen.
→447	PartyIDSource	char	D	Will always be D (Proprietary – Custom Code)
→452	PartyRole	int	36	Forexster uses the following codes: 17: Contra Firm (counterparty short name) 36: Entering Trader (trader username) 37: Contra Trader (if Self-Dealing is enabled, and the two traders matched are within the same firm)

17	ExecID	string	12345678910	For "Trade" and "Trade Cancel" reports this will be the "Txn Seq Num" visible in the Recent Transactions screen or Trade Tickets. For "Order Status" reports, this will be 0. Other report types (e.g. "New") will simply have a unique timestamp-based report ID assigned by the FIX session handler.
19	ExecRefID	string	12345678910	Only present for "Trade Cancel" reports, and identifies the previously transmitted "Trade" ExecID that has been busted.
150	ExecType	char	F	Describes the purpose of the Execution Report: 0: New 4: Canceled 5: Replace 6: Pending Cancel 8: Rejected A: Pending New C: Expired E: Pending Replace F: Trade H: Trade Cancel I: Order Status
39	OrdStatus	char	2	Defines the current status of the order; see FIX specification for precedence rules when an order exists in multiple states simultaneously: 0: New 1: Partially Filled 2: Filled 4: Canceled 6: Pending Cancel 8: Rejected A: Pending New C: Expired E: Pending Replace
103	OrdRejReason	int	1	The following codes are used by Forexster; additional information may be provided in Text(58). 1: Unknown Symbol 6: Duplicate Order – check ClOrdID(11) 8: Stale Order – check local timestamps 11: Unsupported Order Characteristic 99: Other – see Text(58)
64	FutSettDate	LocalMkt Date	20060217	FX Value Date of a Spot or Outright Forward trade, or the near date of a Swap trade; this is provided by Forexster even if it was not used in the original order
193	FutSettDate2	LocalMkt Date	20060317	The far date of a Swap trade
7820	OutrightTenor	string	IMM1	FX Forward tenor code or date, see Appendix A
461	CFIcode	string	RCSXXX	Used to differentiate the FX instrument types: RCSXXX – FX Spot FFCPNO – FX Outright Forward FFCPNW – FX Swap
55	Symbol	string	USD/JPY	FX Currency Pair in the form CCY1/CCY2.
54	Side	char	1	1: BUY CCY1 2: SELL CCY1
38	OrderQty	Qty	250000.00	The amount of CCY1* requested, as specified in the original order. *If Currency(15) = CCY2 was specified in the original order, then this is an amount of CCY2.

152	CashOrderQty	Qty	987600000	The amount of CCY2 requested, if specified in the original order.
192	OrderQty2	Qty	250000.00	The far date amount of a swap trade, in the same currency as OrderQty.
40	OrdType	char	2	Order type values used by Forexster are: 1: Market (or Stop Market order which has triggered) 2: Limit (or Stop Limit order which has triggered) 3: Stop Market 4: Stop Limit
44	Price	Price	123.45	The limit price from the original order for OrdType=2 or 4 (Limit or Stop Limit), or omitted for OrdType=1 or 3 (Market or Stop Market); NOTE: this is not the traded price; see LastPx and AvgPx
99	StopPx	Price	123.40	The stop trigger price from the original order for OrdType=1 or 3, or omitted for OrdType=2 or 4.
15	Currency	currency	USD	This is the currency of the OrderQty(38) as specified in the original order. Forexster will leave this blank unless the Currency(15) field was used in the New Order message.
59	TimeInForce	char	3	Values used by Forexster are: 0: Day 1: Good Till Cancel (GTC) 3: Immediate or Cancel (IOC) 6: Good Till Date (see ExpireTime and ExpireDate) 9: Good Till Elapsed (see ExpireTime)
432	ExpireDate	LocalMkt Date	20060215	The last day the order could trade, if specified in the original order (day ends at 17:00 NYT)
126	ExpireTime	UTC Timestamp	20060215-13:30:00	Time and date or elapsed time of order expiration, if specified in the original order
18	ExecInst	Multiple Value String	G	Space-separated list of order handling instructions; values used by Forexster are: G: All or none (AON) – no partial fills H: Survives After Disconnect Q: Kill On Disconnect g: External Routing Allowed h: External Routing Not Allowed
1057	Aggressor Indicator	boolean	Y	Used to identify whether the order initiator is an aggressor or not; only present if ExecType=TRADE.
32	LastQty	Qty	250000.00	Amount of CCY1* bought or sold on this (last) fill. <i>*If Currency(15) = CCY2 was specified in the original order, then this is an amount of CCY2.</i>
31	LastPx	Price	123.45	FX Rate of this (last) fill. For an Outright Forward trade, this is the “all-in” price equal to LastSpotRate + LastForwardPoints.
1056	CalculatedCcy LastQty	Qty	30862500	Amount of CCY2* exchanged for LastQty, a more precise alternative to LastQty * LastPx. <i>*If Currency(15) = CCY2, then this is an amount of CCY1 and is a more precise alternative to LastQty divided by LastPx.</i>
7764	CalculatedCcy LastQty2	Qty	30862500	The far date amount of a Swap trade, in the currency corresponding to that of CalculatedCcyLastQty.
194	LastSpotRate	Price	123.45	FX Spot Rate of this (last) fill, only present for Swap and Outright Forward trades
195	LastForward Points	Price Offset	0.006199	FX Forward Points added to LastSpotRate(194) for an Outright Forward or for the near leg of a Swap. May be a negative value. Expressed in decimal form. For example, 61.99 points is expressed and sent as 0.006199.

641	LastForward Points2	Price Offset	0.006199	FX Forward Points added to LastSpotRate(194) for the far leg of a Swap. May be a negative value. Expressed in decimal form. For example, 61.99 points is expressed and sent as 0.006199.
151	LeavesQty	Qty	0	Quantity open for further execution.
14	CumQty	Qty	250000.00	Cumulative amount of CCY1* bought or sold for this chain of orders. <i>*If Currency(15) = CCY2 was specified in the original order, then this is an amount of CCY2.</i>
6	AvgPx	Price	123.45	Calculated average price of all fills on this chain of orders.
75	TradeDate	LocalMkt Date	20060215	Rolls at 17:00 NYT.
60	TransactTime	UTC Timestamp	20060215-13:25:33	Time the order was placed ("New") or the trade was matched ("Trade"). Not present if ExecType(150)=8 (Rejected) or 1 (Order Status). Milliseconds available by request.
381	GrossTradeAmt	Amt	30862500	Total amount of CCY2 traded (e.g. CumQty * AvgPx). <i>If Currency(15) = CCY2 was specified in the original order, then this field is omitted.</i>
110	MinQty	Qty	10000	The minimum match size, if specified in the original order.
111	MaxFloor	Qty	5000000	The reserve size display maximum, if specified in the original order.
58	Text	string	Stop triggered, OrdType is now Limit	Free-form information transmitted by Forexster about this report, used for stop trigger info and for details of an Order Reject
211	PegOffsetValue	float	5.0	<i>Left blank for non-FIX orders.</i> The PegOffsetValue, if specified in the original order.
7761	PegOffset Negated IfSelling	boolean	Y	<i>Left blank for non-FIX orders.</i> The value of PegOffsetNegatedIfSelling, if specified in the original order.
1094	PegPriceType	int	5	<i>Left blank for non-FIX orders.</i> The PegPriceType, if specified in the original order.
835	PegMoveType	int	1	<i>Left blank for non-FIX orders.</i> The PegMoveType, if specified in the original order.
836	PegOffsetType	int	1	<i>Left blank for non-FIX orders.</i> The PegOffsetType, if specified in the original order.
838	PegRound Direction	int	1	<i>Left blank for non-FIX orders.</i> The PegRoundDirection, if specified in the original order.
840	PegScope	int	4	<i>Left blank for non-FIX orders.</i> The PegScope, if specified in the original order.
1089	Match Increment	Qty	1000000	<i>Left blank for non-FIX orders.</i> The match size increment, if specified in the original order.
1107	Trigger PriceType	char	1	<i>Left blank for non-FIX orders.</i> Values used by Forexster are: 1: Best Offer (default for Side=2, sell-stop orders) 3: Best Bid (default for Side=1, buy-stop orders)
1138	DisplayQty	Qty	5000000	<i>Left blank for non-FIX orders.</i> The reserve size display maximum, if specified in the original order.
7730	AutoTP ClOrdID	string	abc123-TP:	<i>Left blank for non-FIX orders.</i> The ClOrdID(11) prefix for use with AutoTP orders, if specified in the original order.
7731	AutoTPPrice	Price	123.70	<i>Left blank for non-FIX orders.</i> The Price(44) of the AutoTP order, if specified in the original order.
7732	AutoTP OffsetValue	float	25	<i>Left blank for non-FIX orders.</i> The offset (usually in pips) of the AutoTP order, if specified in the original order.
7733	AutoTP OffsetType	int	1	<i>Left blank for non-FIX orders.</i> The offset type of the AutoTP order, if specified in the original order

7737	AutoTP ParentOrderID	string	123456	Left blank for non-FIX orders. If this order was automatically created by Forexster due to the fill of a “parent” order, this field helps the client tie this order back to its parent.
7740	AutoSL CLOrdID	string	abc123-SL:	Left blank for non-FIX orders. The CLOrdID(11) prefix for use with AutoSL orders, if specified in the original order.
7741	AutoSLPrice	Price	122.95	Left blank for non-FIX orders. The StopPx(99) of the AutoSL order, if specified in the original order.
7742	AutoSL OffsetValue	float	50	Left blank for non-FIX orders. The offset (usually in pips) of the AutoSL order, if specified in the original order.
7743	AutoSL OffsetType	int	1	Left blank for non-FIX orders. The offset type of the AutoSL order, if specified in the original order.
7747	AutoSL ParentOrderID	string	123456	Left blank for non-FIX orders. If this order was automatically created by Forexster due to the fill of a “parent” order, this field helps the client tie this order back to its parent.
7750	OcoCLOrdID	string	123-oco:	Left blank for non-FIX orders. The CLOrdID(11) prefix for use with OCO stop orders, if specified in the original order.
7757	OcoOrderID	string	123457	Left blank for non-FIX orders. The Forexster-assigned OrderID(37) of the OCO sibling of this order. This will change each time there is a partial fill of a limit order, to point to the new, smaller stop order.
7758	OcoCumQty	Qty	5000000	Left blank for non-FIX orders. The cumulative amount of CCY1* bought or sold for this chain of orders, combined across OCO-linked sibling orders as well. *If Currency(15) = CCY2 was specified in the original order, then this is an amount of CCY2.
7759	OcoAvgPx	Price	123.45	Left blank for non-FIX orders. The calculated average price of all fills on this chain of orders, combined across OCO-linked sibling orders as well.
7762	AvgPxLimit	boolean	Y	Left blank for non-FIX orders. The flag controlling the Average-Price-Limit mode, if specified in the original order.
7763	AveragingInst	char	F	Left blank for non-FIX orders. The post-trade averaging instruction, if specified in the original order.

6.8 Order Status Request

A client may send this message to request an “Order Status” **Execution Report** for a single order. Order status for filled or canceled orders is only available for five minutes after the order has been filled, canceled, or replaced; after that an “Unknown Order” will be reported.

Tag	Field Name	Req'd	Type	Example	Comments
35	MsgType	Y	string	H	H (Order Status Request)
11	CLOrdID	Y	string	abc123	The client-assigned ID of the order for which a status report is desired.

6.9 Order Mass Status Request

A client may send this message to request an “Order Status” **Execution Report** for all active orders. Order status for filled or canceled orders is only available for five minutes after the order has been filled, canceled, or replaced.

No reports are sent for orders that have been (or are currently being) worked by traders using the Forexster Workstation UI, unless the “ForexsterTracksNonFixOrderChains=Y” option has been requested.

Note that if no trades have occurred, there will be no response. Any reports available will be sent within a few seconds of the request.

Tag	Field Name	Req'd	Type	Example	Comments
35	MsgType	Y	string	AF	AF (Order Mass Status Request)
584	MassStatusReqID	Y	string	abc123	Client-assigned identifier.
585	MassStatusReqType	Y	int	1	Values accepted by Forexster are: 1: Status for orders for a security (Symbol) 7: Status for all orders
55	Symbol	N	string	EUR/USD	Conditionally required if MassStatusReqType=1
54	Side	N	char	1	Optional qualifier to indicate the side of the market for which orders will be returned: 1: Buy 2: Sell 7: Undisclosed (report all orders; default)

7 Appendix A: Tenor Codes

The Forexster service translates tenor codes to dates, taking into account the current trade date, the end-end rule, the IMM date roll convention, and relevant holidays for the currencies involved.

The Forexster custom tag OutrightTenor(7820) may be set to any of the following codes, or to a date in YYYYMMDD or YYYY-MM-DD format.

Tenor Code	Definition
SPOT	Spot date, usually T+1 or T+2 depending on the currency pair
SN	Next day after spot
TOD, O	Aliases for T+0
TOM, T	Aliases for T+1
T+0	Same day
T+1	One day after trade date
T+2	2nd day after trade date
T+3	3rd day after trade date
T+4	4th day after trade date
T+5	5th day after trade date
IMM1	Third Wednesday of 1st upcoming Mar, Jun, Sep, or Dec
IMM2	Third Wednesday of 2nd upcoming Mar, Jun, Sep, or Dec
IMM3	Third Wednesday of 3rd upcoming Mar, Jun, Sep, or Dec
IMM4	Third Wednesday of 4th upcoming Mar, Jun, Sep, or Dec
1W	One week past spot
SW	Spotweek; alias for 1W
2W	Two weeks past spot
3W	Three weeks past spot
1M	One month past spot
2M	Two months past spot
3M	Three months past spot
4M	Four months past spot
5M	Five months past spot
6M	Six months past spot
7M	Seven months past spot
8M	Eight months past spot
9M	Nine months past spot
10M	Ten months past spot
11M	Eleven months past spot
12M	Twelve months past spot

1Y	One year past spot (same as 12M)
15M	15 months past spot
18M	18 months past spot
21M	21 months past spot
24M	24 months past spot
2Y	Two years past spot (same as 24M)

The Forexster custom tag SwapTenorList(7821) may be set to a comma-separated list of tenor pairs, where each tenor pair contains a near date or tenor and a far date or tenor, separated by a slash (“/”). If no slash is present, then the near date is assumed to be SPOT.

For example, 7821=T+3, 1M, IMM1, 3M/6M, 20091130 would result in a stream of swap quotes for the T+3 date, the 1 month forward date, the first IMM futures date, a three-to-six month forward/forward swap, and the November 30th date.