



Instinet Canada Cross FIX Application Notes

Note:

Continuous Block Crossing (CBX) order type, will be available **starting on March 4, 2016.**

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1 INTRODUCTION

The purpose of this document is designed to facilitate the work required to establish FIX trading connectivity to the Instinet Canadian Cross products and is intended to supplement the published FIX Protocol Specification, found at www.fixprotocol.org

Orders submitted to Instinet by a client OMS must be formatted using the Financial Information Exchange (FIX) protocol. It is assumed that readers of this document have a rudimentary working knowledge of FIX.

Developed by a financial industry consortium, FIX is a technical specification for the electronic transmission of financial trade information. This public domain specification has rapidly become the de facto standard for financial data transmission, and customers commonly deem it a requirement for transaction processing applications.

For an overview of the FIX protocol and related subjects, see the FIX web site at: <http://www.fixprotocol.org/>



2 RULES OF ENGAGEMENT

2.1 Start of Day/End of Day Procedures

Instinet FIX Interface is brought down daily at approximately 8:00 p.m EST and will come back up at 9:00 p.m. EST. When the system is brought back up, FIX sequence numbers will be reset to 1,1.

Orders may be entered to the ICX VWAP Cross at 7:00 a.m EST and the match time will occur at 9:15 a.m EST.

ICX continuous crossing services BLX and CBX will be available between the hours of 9:30 a.m EST and 4:00 p.m EST on trading days.

2.2 SenderCompID and TargetCompID

The SenderCompID field identifies the session to Instinet and must be unique from Instinet's perspective. Instinet's FIX Implementations team will assign a unique SenderCompID per session. The TargetCompID is used to identify Instinet, and will also be agreed upon before going live.

2.2.1 IP Addresses and Ports

Instinet Implementations team will provide clients with the following:

- Two production IP-addresses; and
- One or more test IP-addresses.

3 SESSION MANAGEMENT

This section describes session-level FIX messages sent between Instinet and the client.

The production servers consist of a primary and a standby server. If the session to the primary server fails, retry this connection after 30 seconds. If reconnection fails, establish a session with the standby server. The secondary session will continue where the primary session left off. Once a session is reestablished, Instinet will immediately begin sending execution reports that were not successfully delivered in the previous FIX session for the same trade date.

3.1 Message header format to Instinet

Instinet processes only the following fields in the message header and ignores all others:

Tag	Field Name	Req'd	Comments
8	BeginString	Y	FIX.4.2
9	BodyLength	Y	Must be the second field in the message.
34	MsgSeqNum	Y	See standard FIX explanation.
35	MsgType	Y	Must be the third field in the message.
43	PossDupFlag	N	Always required for retransmissions, whether prompted by the sending system or as the result of a resend request.
49	SenderCompID	Y	The value used must be recognized and agreed to by Instinet.
50	SenderSubID	N	Identity of the trader who entered the order. Any SenderSubID values must be pre-configured by Instinet. Any unrecognized SenderSubID value will be allocated against a common pre-assigned account for that client.
52	SendingTime	Y	Indicates the time the message was sent by the client.
56	TargetCompID	Y	Must be agreed to by Instinet.
97	PossResend	N	Required when message may be duplicate of another message sent under a different sequence number.

3.2 Message header format to Client

Instinet processes only the following fields in the message header and ignores all others:

Tag	Field Name	Req'd	Comments
8	BeginString	Y	FIX.4.2
9	BodyLength	Y	Will be the second field in the message.
34	MsgSeqNum	Y	See standard FIX explanation.
35	MsgType	Y	Will be the third field in the message.
43	PossDupFlag	N	Always required for retransmissions, whether prompted by the sending system or as the result of a resend request.
49	SenderCompID	Y	The value originally supplied to Instinet in the <i>TargetCompID</i> field in the logon message from the Client.
52	SendingTime	Y	Indicates the time the message was sent by Instinet.
56	TargetCompID	Y	The value originally supplied to Instinet in the <i>SenderCompID</i> field in the logon message from the Client.
57	TargetSubID	N	The value originally supplied to Instinet in the <i>SenderSubID</i> field in related application messages from the Client, if specified.

Tag	Field Name	Req'd	Comments
97	PossResend	N	Required when message may be duplicate of another message sent under a different sequence number.

3.3 Message trailer format

Instinet processes only the following fields in the message trailer and ignores all others:

Tag	Field Name	Req'd	Comments
10	Checksum	Y	(Always unencrypted, always last field in message)

3.4 Logon

3.4.1 Client logon

The first expected message Instinet will receive from a client is a **Logon** message. The following are the logon parameters:

- The sequence number, on the initial logon for each trading day, must be set to "1".
- The heartbeat interval must be greater than zero.
- The *SenderCompID (49)* must be recognized by Instinet.
- The client must set the *TargetCompID (56)* to the value agreed with Instinet.
- **If a client receives a sequence number less than expected, the client must terminate their session immediately, and should then contact Instinet to correct the problem, as per the FIX protocol.**

3.4.2 Instinet logon

Once Instinet receives a **Logon** request, it will validate the *SenderCompID* and perform a recovery process (see section titled *Recovery*). **No** messages should be sent to Instinet until a **Logon** message is received in reply from Instinet.

In some cases, some time will elapse before a response is sent from Instinet. Once the positive response is returned, the client's heartbeat interval timer should begin. The session is signed on and both parties can begin exchanging messages. The negative response to a **Logon** request is a **Logout** message with the reason for rejection.

3.5 Administrative messages

This section describes the minimum requirements to keep the session alive and synchronized.

Instinet must receive a message from the client at least **once** in the heartbeat interval defined in the logon. Instinet will assume the session is not alive if a message is not received in **two** heartbeat intervals, will send a **Logout** message to the client and then disconnect the session as per the FIX protocol.

Instinet will send a message at least once in the heartbeat interval. In addition, Instinet handles the following session level messages: **Resend Request**, **Sequence Reset** and **Test Request** messages and ignores the *OrigSendingTime (122)* in all messages.

3.6 Logout

This section concerns normal and abnormal termination of a session by either party.

3.6.1 Client

A Client's FIX session should remain established throughout the trading day. Instinet will logout client sessions before the start of the maintenance window. Abnormal session termination is treated as though the client had logged out from Instinet. The following are considered abnormal session terminations:

- Network level disconnection
- Failure to send a message after two heartbeat intervals (see section titled "[Administrative Messages](#)")

3.6.2 Instinet Nightly Maintenance

When Instinet shuts down for nightly maintenance, any live sessions will be terminated. All remaining open orders will be cancelled and a new trade date will begin. No **Execution Reports** will be sent for orders sent on previous trading days.

3.7 Reject messages

Reject messages sent by Instinet will include the sequence number of the rejected message and an explanation of the nature of the error, in the *text* field, whenever possible.

If Instinet receives a message with a sequence number *less* than expected during normal session processing, and it does not contain the *PossDupFlag* field, the message is discarded and a **Reject** message is sent to the client.

3.8 Recovery

When a client reconnects after a break in the session during the same trading day, Instinet begins the following recovery sequence:

- **If Instinet receives a sequence number less than expected the session will be terminated immediately without sending a logoff. The client should contact Instinet to correct the problem.**
- Instinet will transmit any unsent execution reports on receipt of a **Resend Request** from the client for the missing sequence numbers. If trades occur while the FIX session is down, Instinet's outgoing sequence number will be higher than expected by the client.
- When a FIX session is terminated, all open orders will remain open on Instinet.

The client is responsible for detecting message gaps for messages transmitted by Instinet that may have been lost in the previous session, as per the FIX protocol. Instinet will retransmit those messages when requested to do so by the client.

4 APPLICATION MESSAGES

This section discusses the application-level FIX messages sent and accepted by Instinet.

4.1 Symbologies

Instinet supports only the following stock naming identifiers in FIX messages (in order of preference):

1. Local/ exchange
2. RIC
3. ISIN
4. SEDOL

4.1.1 Client

When Instinet receives a FIX application-level client message, it processes the symbol definition fields in the message in the following order to yield a valid stock symbol:

- If the client elects to use ISIN or Sedol to identify stocks, the client must:
 1. Set the *IDSource (22)* field to "ISIN" or "Sedol";
 2. Put the ISIN/Sedol value into the *SecurityID (48)* field; and
 3. Use the *SecurityExchange (207)* field to identify which market the ISIN/Sedol trades in.
 4. Use the *Currency (15)* field to identify the currency the stock is listed in.
- If the *IDSource (22)* field is not set, Instinet will **expect** the Local/ exchange symbol to exist in the *Symbol (55)* field.

Please note that Instinet ignores the *Currency (15)* field in a client message if symbologies other than ISINs are used, since this information is derived from Instinet's internal Symbol Database.

4.2 Order Entry

4.2.1 Client

Instinet currently supports the **New Order Single**, **Order Cancel Request**, **Order/Cancel Replace Request** FIX messages.

4.2.1.1 New Order Single

In addition to the standard header, trailer, and Instinet's-accepted symbol definition fields, Instinet processes only the following fields in a **New Order Single** message, and ignores all others:

Tag	Field Name	Req'd	Comments
1	Account	N	Identifies the trading account.
11	CIOrdID	Y	Must be unique for each order throughout the trading day, across all stocks and sides from the same FIX Session ID.
18	ExecInst	N	Pegging options – N/A
21	HandlInst	Y	Instructions for order handling on Instinet's trading system. Value supported by Instinet: 1 = Automated execution order, private, no Broker intervention. NOTE: Values other than 1 will cause the order to be rejected.
22	IDSource	N	Value supported by Instinet: 2 = SEDOL 4 = ISIN Number 5 = RIC
38	OrderQty	Y	Quantity of order.
40	OrdType	Y	Values supported by Instinet: 1 = Market 2 = Limit P =Pegged (requires ExecInst = M or R or P) – N/A
44	Price	N	Required for limit orders. If included in a Market order, the order will be rejected.
48	SecurityID	N	RIC, ISIN or SEDOL code depending upon the value of the <i>IDSource</i> (22).

Tag	Field Name	Req'd	Comments
54	Side	Y	Values supported by Instinet: 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt
55	Symbol	Y	Local/ exchange symbol only
57	TargetSubid	N	Indicates how the order should be routed: ICXVWAPX ICXBLX ICXCBX
59	TimeInForce	N	Absence of this field indicates a day order. Values supported by Instinet: 0 = Day 3 = Immediate or Cancel - As much of the order as possible must be executed immediately. Any part of the order that is not executed immediately gets canceled. CBX only. 4 = Fill Or Kill (FOK) – Fill the order in its entirety or cancel it immediately. CBX only. 6 = Good Till Date (GTD) – Date must be today's trading date. This field must be used in conjunction with field <i>ExpireTime</i> (Field ID 126). Day orders are in effect until the client cancels the order, or until the end of the ICX Trading day (4:00 p.m EST.)
60	TransactTime	Y	Time this order request was initiated by client.
110	MinQty	N	Minimum Fill Order
126	ExpireTime	N	Time/Date of order expiration in GMT. Only valid when TimeInForce (59) = 6 (Good Till Date). Date must be today's Trading Date. Incorrect data results in a rejected order.
207	SecurityExchange	N	Required when the IDSource (Field ID 22) equals ISIN (4) or Sedol (2) Note: Instinet uses to specify the Market for the ISIN number.
211	PegDifference	N	Amount (signed) added to the price of the peg- N/A

Tag	Field Name	Req'd	Comments
6750	UMIRAccountType	Y	Required for Canadian regulatory reporting. CL=Client (Default) NC=Non-Client ST=Specialist IN=Inventory OF = Options firm account OT = Options market maker Note: If unspecified, Default is applied
6751	UMIRUserID	Y	Required for Canadian regulatory reporting, the trading system's user ID for the trader.
6754	BasketTrade	N	Identification for order as part of a basket trade: N=No (Default) 1*5Digit=Basket Number
6755	ProgramTrade	N	An order that is part of a basket trade comprised of Index securities to offset a futures or options position. Y=Yes N=No (Default)
6757	Jitney	N	To mark an order as being executed on behalf of another broker: BrokerNumber
6761	Anonymous	N	(Subject to change –contact ICX Operations) Whether the execution should hide the TSX Broker Number. Y = Yes (Default) N = No
6763	UMIRRegulationID	N	Identification marker for UMIR-specific designations to orders and trades. IA=Insider Account NA=Not Applicable RT=Market Maker SS=Significant Shareholder
6774	BrokerNumber	Y	An exchange assigned number identifying a member firm 1*3Digit ; no default

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Tag	Field Name	Req'd	Comments
6776	PrincipalTrade	N	A principal transaction between a dealer and a dealer's customer's account. Y=Yes N=No (Default)
6777	WashTrade	N	A trade that has occurred between proprietary accounts of the same member firm. "Y" "N" ; default is "N"

4.2.1.2 Order Cancel Request

Instinet processes a Cancel Request quantity as the full remaining quantity. Instinet does not support partial cancels.

In addition to the standard header, trailer, and Instinet-accepted symbol definition fields, Instinet processes only the following fields in an **Order Cancel Request** message, and ignores all others:

Tag	Field Name	Req'd	Comments
11	CIOrdID	Y	Unique ID of cancel request assigned by the client.
38	OrderQty	Y	Required by the FIX protocol, ignored by Instinet. All cancel requests are for full remaining quantity.
41	OrigCIOrdID	Y	Unique ID of original order to be cancelled as assigned by client.
54	Side	Y	
55	Symbol	Y	
60	TransactTime	Y	Time this order request was initiated by client.

4.2.1.3 Order Cancel/Replace Request

Cancel/Replace requests will be handled as per the FIX protocol. Cancel/Replace requests that cannot be processed will be rejected using the **Cancel Reject** message; If Instinet rejects the Cancel/Replace request, the *CIOrdID* of the replacement order will be inserted in the *CIOrdID* field of the Cancel Reject message for identification purposes.

In addition to the standard header, trailer, and Instinet-accepted symbol definition fields, Instinet processes only the following fields in an **Order Cancel/Replace Request** message, and ignores all others

Tag	Field Name	Req'd	Comments
11	CIOrdID	Y	Unique ID of replacement order as assigned by the client.
18	ExecInst	N	For a replacement order, this field must be populated anew (i.e. original order values will not be brought forward to replacement order unless redefined within this message).
21	HandlInst	Y	
38	OrdQty	Y	Note: The quantity in the Cancel/Replace message is the total order quantity, as defined by the FIX protocol and total order quantity semantics. Please refer to Appendix A for more information.
40	OrdType	Y	New Order Type for the request. Values supported: 1 = Market 2 = Limit P = Pegged (must include value in ExecInst) N/A .

Tag	Field Name	Req'd	Comments
41	OrigClOrdID	Y	Unique ID of order to be replaced as assigned by client.
44	Price	N	Required for Limit orders
54	Side	Y	
55	Symbol	Y	
59	TimeInForce	N	Absence indicates a Day order
60	TransactTime	Y	Time this order request was initiated by client.
110	MinQty	N	See New Order Single section.
111	MaxFloor	N	See New Order Single section.
126	ExpireTime	N	If the client attempts to revise the expiration time to a time prior than the current time, the Cancel/Replace Request will be rejected.

4.2.2 Instinet Order Entry Messages

4.2.2.1 New Order Single Response

In addition to the standard header, trailer and Instinet-accepted symbol definition fields, Instinet will provide the following fields in an **Execution Report** message in response to a New Order Single request.

Tag	Field Name	Req'd	Comments
6	AvgPx	Y	The average price of all shares traded. Defaulted to 0 for order acknowledgements.
11	ClOrdID	N	Instinet will always populate this field with the original value assigned by client in the New Order Single message.
14	CumQty	Y	The total shares traded against the original order quantity. Defaulted to 0 for order acknowledgements.
15	Currency	N	Currency associated with symbol in Symbol (55) field
17	ExecID	Y	A unique identifier of execution message as assigned by Instinet.
20	ExecTransType	Y	0 = New
31	LastPx	Y	Defaulted to 0 for order acknowledgements.
32	LastShares	Y	Defaulted to 0 for order acknowledgements.
35	MsgType	Y	8 = Execution Report
37	OrderID	Y	Instinet order reference number.
38	OrderQty	Y	Quantity of original order.
39	OrdStatus	Y	0 = New 8 = Rejected

Tag	Field Name	Req'd	Comments
40	OrdType	N	Values supported by Instinet: 1 = Market 2 = Limit P = Pegged (requires ExecInst of M or R)
44	Price	N	Limit Price Required for limit orders only.
54	Side	Y	Values supported by Instinet: 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt
55	Symbol	Y	Local/ exchange symbol
59	TimeInForce	N	Will be returned if supplied in original New Order Single message.
103	OrdRejReason	N	Used with OrdStatus = 8 (Rejected) if reason is definable.
150	ExecType	Y	0 = New 8 = Rejected
151	LeavesQty	Y	Amount of shares open for further execution.

4.2.2.2 Order Cancel Acknowledgment

In addition to the standard header, trailer and Instinet-accepted symbol definition fields, Instinet will provide the following fields in an **Execution Report** message in response to an order cancel request that is accepted by Instinet.

Tag	Field Name	Req'd	Comments
6	AvgPx	Y	The average price of all shares traded.
11	ClOrdID	N	Instinet will always populate this field with the original value assigned by client in the New Order Single message.
14	CumQty	Y	The total shares traded against the original order quantity.
15	Currency	N	Currency associated with symbol in Symbol (55) field.
17	ExecID	Y	A unique identifier of execution message as assigned by Instinet.
20	ExecTransType	Y	0 = New.
31	LastPx	Y	Defaulted to 0 for order cancel acknowledgements.
32	LastShares	Y	Defaulted to 0 for order cancel acknowledgements.
35	MsgType	Y	8 = Execution Report.

Tag	Field Name	Req'd	Comments
37	OrderID	Y	Instinet order reference number.
38	OrderQty	Y	Quantity of original order.
39	OrdStatus	Y	4 = Cancelled.
40	OrdType	N	Values supported by Instinet: 1 = Market 2 = Limit P = Pegged (requires ExecInst of M or R) N/A .
41	OrigClOrdID	Y	Unique ID of original order to be cancelled as assigned by client.
44	Price	N	Limit Price Required for limit orders only.
54	Side	Y	Values supported by Instinet: 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt
55	Symbol	Y	Local/ exchange symbol
59	TimeInForce	N	Will be returned if supplied in original New Order Single message.
150	ExecType	Y	4 = Cancelled.
151	LeavesQty	Y	0

4.2.2.3 Order Cancel Reject

In addition to the standard header, trailer and Instinet-accepted symbol definition fields, Instinet will provide the following fields in a Cancel Reject message in response to an order cancel request that is rejected.

Tag	Field Name	Req'd	Comments
11	ClOrdID	Y	Instinet will always populate this field with the original value assigned by client in the New Order Single message.
35	MsgType	Y	9 = Order Cancel Reject.
37	OrderID	Y	Instinet order reference number.
39	OrdStatus	Y	OrdStatus value after this cancel reject is applied.
41	OrigClOrdID	Y	ClOrdID that could not be canceled.
58	Text	N	The reason for the cancel reject.
66	ListID	N	Required for rejects against orders which were submitted as part of a list.

Tag	Field Name	Req'd	Comments
434	CxlRejResponseTo	Y	Type of request to which this is a response: 1=Order Cancel Request 2=Order Cancel/Replace request

4.2.2.4 Cancel/Replace Response

Please refer to the section "New Order Single Response" for how Instinet responds to Cancel/Replace requests as per the FIX protocol.

4.2.2.5 Trade Report/Trade Cancel/Trade Correct

Instinet sends your trade reports, Trade Cancel and Trade Corrects via the **Execution Report** message. The trade report provides fill information as orders trade, including: average price of shares traded; total shares traded against the original order quantity; transaction time; and trade date. Please note that this does not include settlement information such as commission or tax information.

On Trades done with ICX's VWAP Cross, the Execution Report will be sent back immediately after the cross with an indicative price. The VWAP Calculation is done at 4:10 p.m EST, at which time ICX will send a Trade Correct with the corrected trade price.

NOTE: The *ExecID* is considered to be the unique identifier of an execution message by Instinet, as per the FIX protocol. It is the client's responsibility to detect and appropriately process possible duplicate ExecIDs, regardless of whether the *PossResend* flag has been set on the message or not.

In addition to the standard header, trailer, and Instinet-accepted symbol definition fields, Instinet provides only the following fields in an **Execution Report**:

Tag	Field Name	Req'd	Comments
6	AvgPx	Y	Average price of shares traded.
11	ClOrdID	N	Instinet will always populate this field with the original value assigned by client in the New Order Single message.
14	CumQty	Y	Total shares traded against the original order quantity.
15	Currency	N	Currency in which the security is traded.
17	ExecID	Y	A unique identifier of execution message as assigned by Instinet.
19	ExecRefID	N	Used in a trade correct or cancel message (i.e. <i>ExecTransType</i> = 1 or 2) to refer to the previous Execution Report to which the current message applies.
20	ExecTransType	Y	Values supported by : 0 = New to indicate a trade report 1 = Cancel to indicate a trade cancel 2 = Correct to indicate a trade revision

Tag	Field Name	Req'd	Comments
22	IDSource	N	Value supported by Instinet: 2 = SEDOL 4 = ISIN Number 5 = RIC
31	LastPx	Y	Price of shares bought or sold on this fill. On a VWAP Cross execution, the LastPx will be a indicative price. The final VWAP Price will be determined at the end of the day with a ExecutionReport to correct the trade.
32	LastShares	Y	Quantity of shares bought or sold on this fill.
37	OrderID	Y	Instinet order reference number.
38	OrderQty	Y	Quantity of original order.
39	OrdStatus	Y	1 = Partially filled 2 = Filled
40	OrdType	N	Values supported by Instinet: 1 = Market 2 = Limit P = Pegged (requires ExecInst of M or R) N/A.
44	Price	N	Limit Price Required for limit orders only.
48	SecurityID	N	Security ID of traded security when IDSource is set.
54	Side	Y	Values supported by Instinet: 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt
55	Symbol	Y	Returns the Local/ exchange symbol of the security traded.
60	TransactTime	N	Time and date of execution (expressed as GMT).
75	TradeDate	N	Date of trade in YYYYMMDD format.
76	ExecBroker	N	Executing Broker: INCA
150	ExecType	Y	1 = Partially filled 2 = Filled
151	LeavesQty	Y	Amount of shares open for further execution.

Tag	Field Name	Req'd	Comments
6776	PrincipalTrade	N	A principal transaction between a dealer and a dealer's customer's account. Y=Yes N=No (Default)
6777	WashTrade	N	A trade that has occurred between proprietary accounts of the same member firm. Y=Yes N=No (Default)

4.2.2.6 Unsupported FIX Messages

Instinet ICX does not support the following FIX message types:

Allocation and Allocation ACK messages

Quote Request and Quote messages

Advertisement, Email and News messages

Order List, Order Status

List Cancel, List Execute and List Status