



xPOS
RIP/HDS
Technical Specification

Version 1.3
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1. Overview

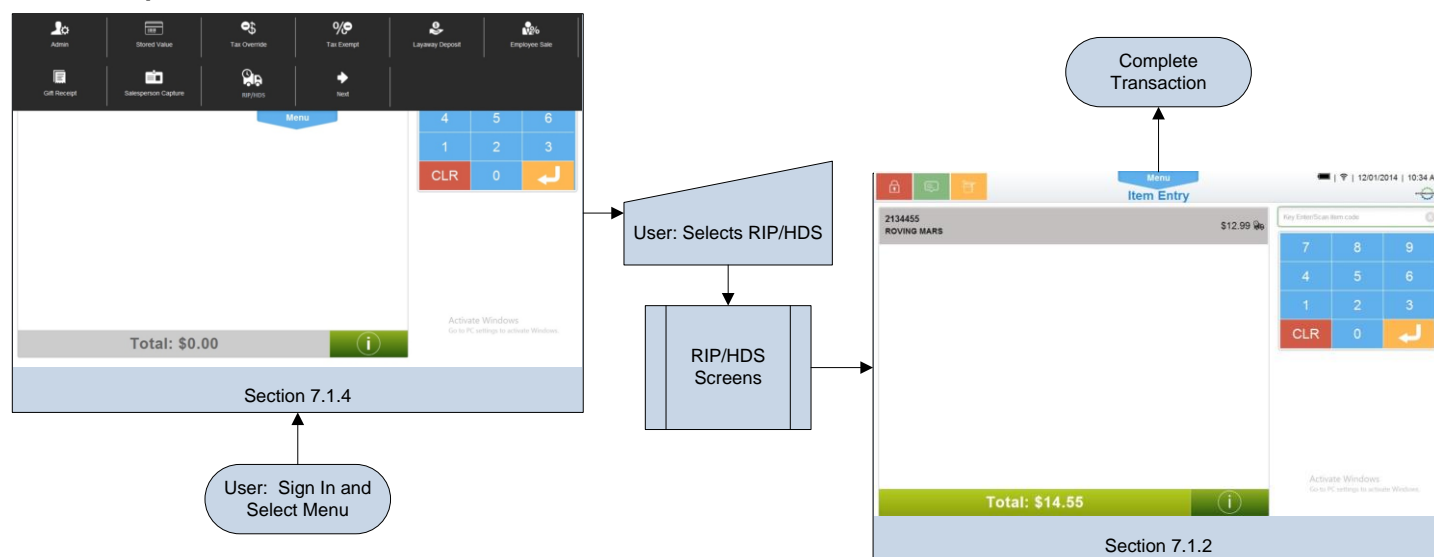
1.1 Description

RIP is the white goods ordering System for Best Buy Canada. xPOS will connect to the RIP application through a web browser and when User has completed the order, xPOS request order basket to import into the transaction. This document defines how xPOS connects to the RIP application.

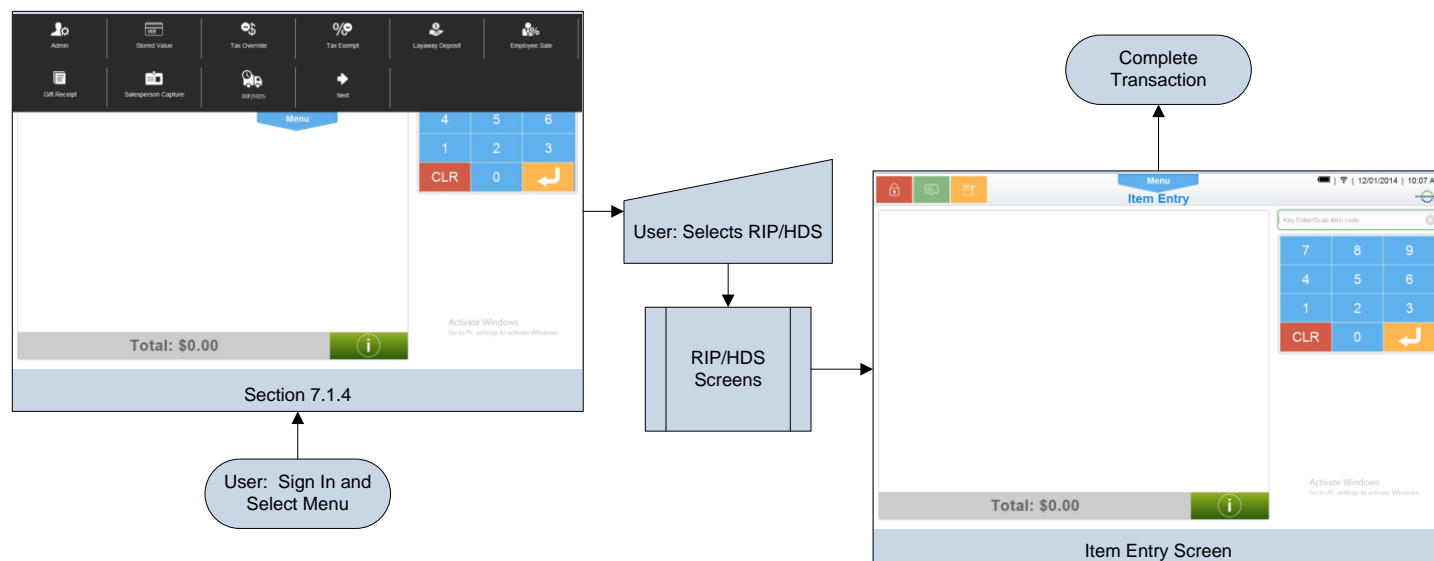
2. User Impacts

2.1 Sale

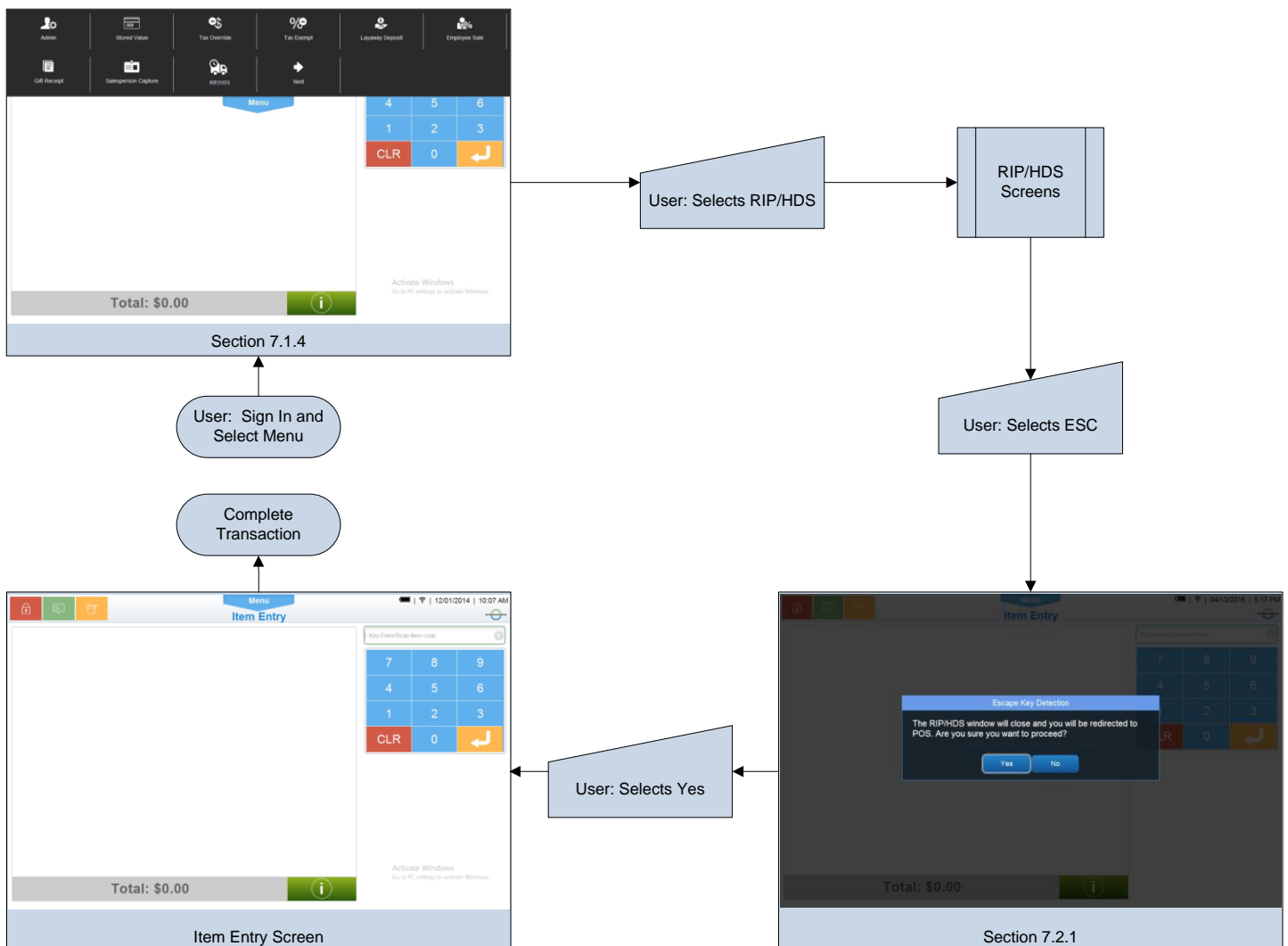
2.1.1 Complete/Success Process Flow



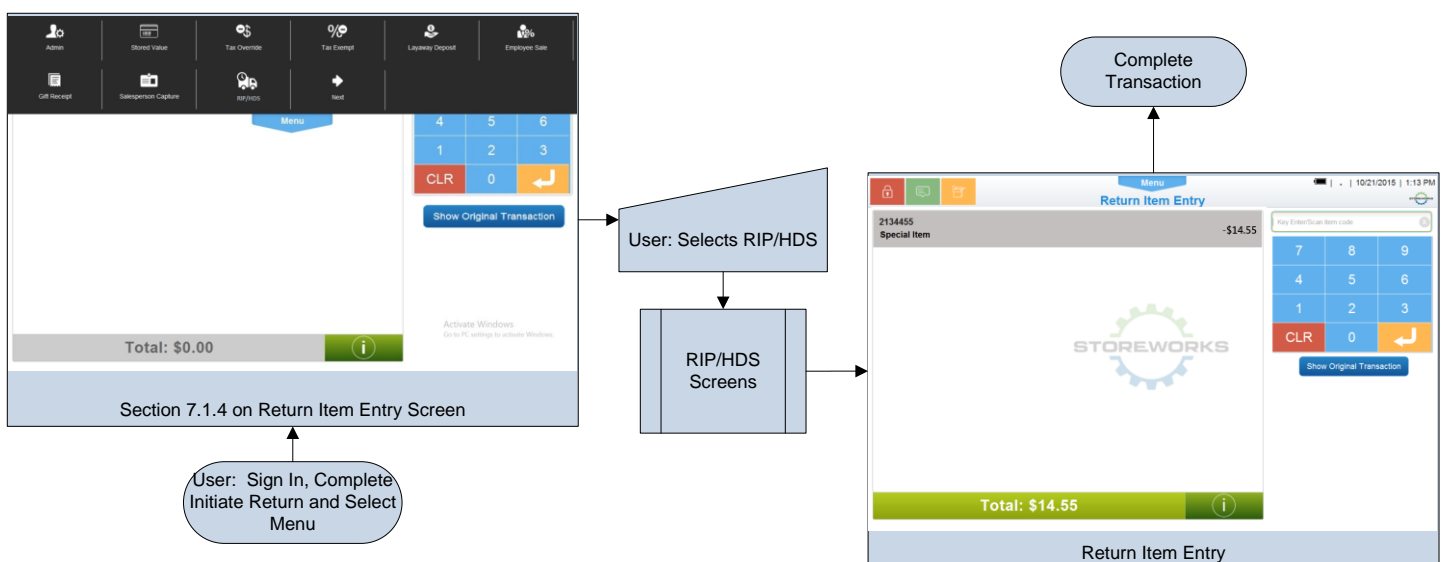
2.1.2 Cancel Process Flow



2.1.3 Abort Process Flow



2.2 Return



3. Use Case: Launch RIP Process

3.1 Use Case Flow

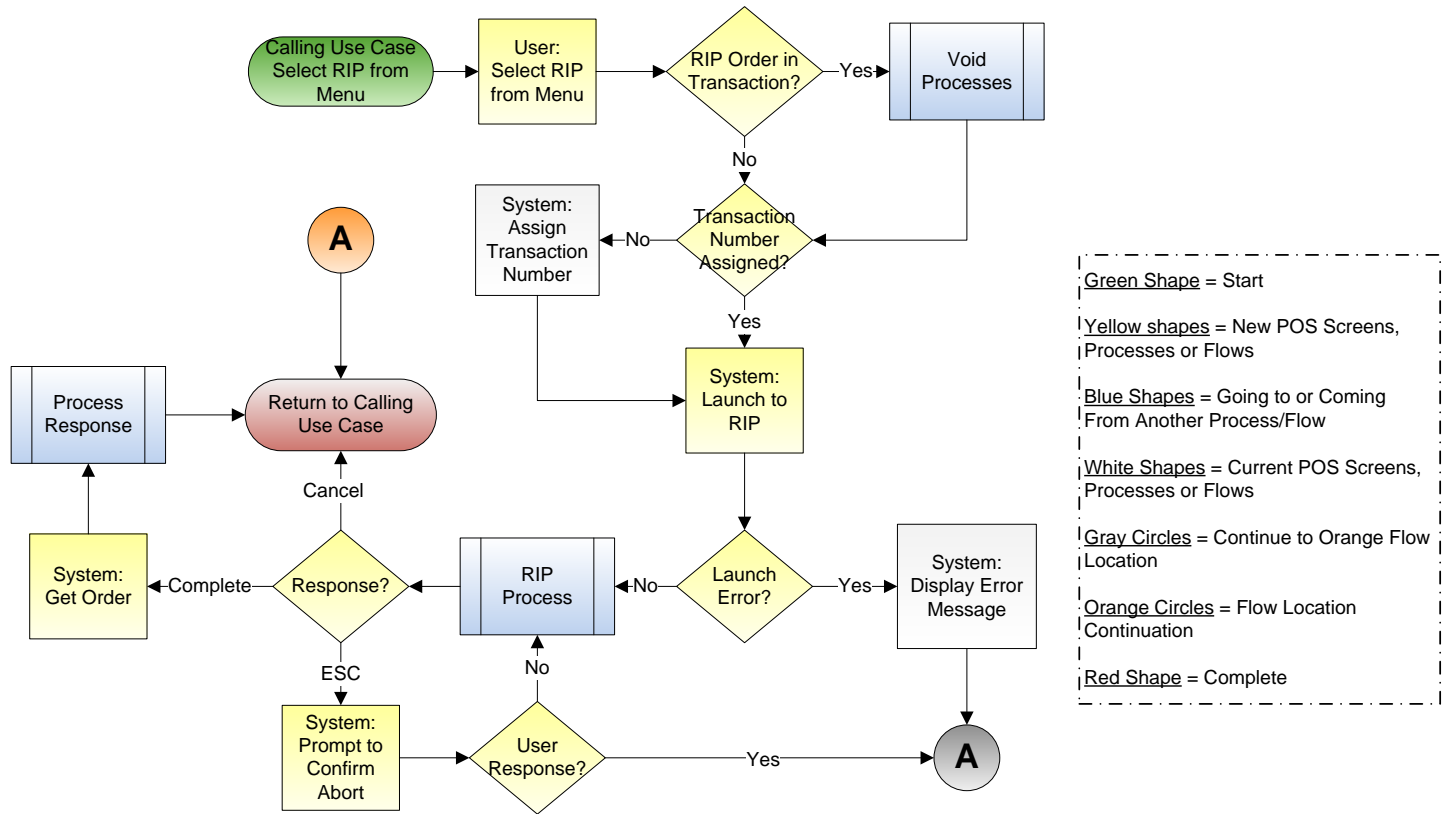


Figure 1: RIP Flow

3.2 Preconditions

- Select RIP/HDS from Menu

3.3 Main Flow

- System evaluates the transaction.
- If a RIP Order is in the transaction, System voids all RIP items from the transaction.
- If a transaction number has not been assigned, System assigns a transaction number.
- System launches RIP/HDS web application in a Windows browser using URL defined in section 8 and releases control to peripherals. **NOTE:** Browser address bar is not visible or accessible by User.
- If an error is received upon launch, System displays RIP Launch Offline Message (section 6.2.2).
- System monitors Esc key event, browser exit event and xPOS invoke command.
- If the ESC Key is detected, System executes the Abort Alternate Flow (section 3.4.1).
- If the Cancel (section 10.1.3) response is detected, System closes browser, returns to calling use case and use case ends.
- If the complete RIP/HDS (section 10.1.2) response is detected, System stops monitoring and closes the browser. **(NOTE:** System captures the first order number returned.)
- System sends a Request (section 10.2.1) with order number received from RIP response and executes the Process Get Order Alternate Flow (section 3.4.2).
- System returns to calling use case and use case ends.

3.4 Alternate Flow

3.4.1 Abort Alternate Flow

- System displays Abort RIP Message (section 6.2.1).

2. If User selects 'Yes', System closes browser, returns to calling use case and use case ends.
3. If User selects 'No', System returns focus to the browser and returns to Main Flow to continue monitoring URLs and ESC key.

3.4.2 Process Get Order Alternate Flow

1. If BillTo Customer is in the Get Order Response (section 10.2.2, rows 5 - 14), System attaches customer to the transaction.
2. If BillTo Customer is not in the Get Order Response (section 10.2.2, rows 5 - 14), System executes Customer Use Case (BBYC_mPOS_R8_Customer FDoc).
3. System evaluates the Order\DocumentType field (section 10.2.2, row 16)
4. If the value is 0001 and OfflineFlag field is 'N' (section 10.2.2, row 17), System executes Sale Item Alternate Flow (section 3.4.3).
5. If the value is 0001 and OfflineFlag field is 'Y' (section 10.2.2, row 17), System executes Modify Item Alternate Flow (section 3.4.5).
6. If the value is not 0001 or 0003, System displays Invalid Order Message (section 6.2.5), stops processing the RIP Order response, removes any items added from the order, returns to item entry and use case ends.
7. If the value is 0003 and ExchangeOrder@DocumentType is 0001, System executes Return/Exchange Order Alternate Flow (section 3.4.6).
8. If the value is 0003 and ExchangeOrder@DocumentType is not 0001 or empty, System displays Invalid Order Message (section 6.2.5), stops processing the RIP Order response, removes any items added from the order, returns to item entry and use case ends.
9. If the value is 0003 and ExchangeOrder@DocumentType is empty, System executes Simple Return or Exception Pickup Return Alternate Flow (section 3.4.8).
10. Any other combination of responses, System does not add item.
11. System evaluates next item in the response.
12. If no more items in the response, System returns to item entry and use case ends.

3.4.3 Sale Item Alternate Flow

1. If transaction type is Return, System changes transaction type to Exchange.
2. System completes item lookup for item ID defined in CustomerItem field (section 10.2.2, row 27).
3. If Item lookup times out, System displays Item Lookup Failed Message (section 6.2.3) and User selects No, System stops processing the RIP Order response, removes any items added from the order, returns to item entry and use case ends.
4. System receives item lookup response.
5. If the response indicates that the item was not found, System prompts Unable to Validate Item Message (section 6.2.4), stops processing the RIP Order response, removes any items added from the order, returns to item entry and use case ends.
6. If the item is marked as not authorized to be sold outside of the related item process, the System prompts Unable to Validate Item Message (section 6.2.4), stops processing the RIP Order response, removes any items added from the order, returns to item entry and use case ends.
7. If the item requires manager override when the item is sold, System executes the Manager Override use case (BBYC_mPOS_R7_Manager Override FDoc).
8. If the item requires a minimum age for purchase, System continues with adding the item without prompting.
9. If the item is a price required item or does not have a price in the Get Order Response, System executes the Price Required use case (BBYC_mPOS_R8_Sale FDoc).
10. If the item requires selection list relationships, System executes the Related Item – Selection List use case (BBYC_xPOS_Related Item FDoc).
11. If the item requires the capture of a serial number, System continues with adding the item without prompting.
12. If the item requires custom prompts, System continues with adding the item without prompting.
13. If the item requires capturing of credit card information, System executes the Capture Credit Card use case (BBYC_mPOS_R3_Capture Credit Card for Subscription FDoc).
14. If the item requires a signature, System executes the Terms & Conditions Signature Capture use case or Consolidated Terms & Conditions Signature Capture if consolidated signatures flag is set (BBYC_xPOS_Signature Capture FDoc).
15. The System adds the item to the transaction
16. If item is a 2 tier parent, system adds the child item.
17. The System journals the item information (description, quantity, price, discount information, final price, tax status, order information).
18. The System updates the transaction totals.

19. The System returns to calling use case/alternate flow.

3.4.4 Return Item Alternate Flow

1. If Initiate Return process has not completed, System executes Initiate Return Use Case (R11-BBYCA-Initate Returns Spec).
2. If the OrderLine does not contain values in each of the 4 part key components (section 10.2.2, rows 39 - 42) and 4 part key not captured during initiate return, System continues as a no receipt return, prompts for price, adds item as a return item and returns to calling use case/alternate flow.
3. If the OrderLine 4 part key (section 10.2.2, rows 39 - 42) matches the 4 part key captured during initiate return, System sends return item authorization request with 4 part key.
4. If the OrderLine does not contain values in each of the 4 part key components (section 10.2.2, rows 39 - 42) and 4 part key captured during initiate return, System sends return item authorization request with 4 part key captured during initiate return.
5. If the OrderLine 4 part key (section 10.2.2, rows 39 - 42) does not match the 4 part key captured during initiate return, System executes Mismatch 4 Part Key Alternate Flow (section 3.4.9).
6. If the authorization response is approved, System adds item to the transaction and returns to calling use case/alternate flow.
7. If the authorization response is offline, System prompts for price, adds item to the transaction and returns to calling use case/alternate flow.
8. If the authorization response is denied, System displays Unable to Add Item Message (section 6.2.7) stops processing the RIP Order response, removes any items added from the order, returns to item entry and use case ends..
9. If User selects to Void the transaction, System removes all items and voids the transaction.
10. System returns to calling use case/alternate flow.

3.4.5 Modify Item Alternate Flow

1. System executes Return Item Alternate Flow (section 3.4.4).
2. System executes Sale Item Alternate Flow (section 3.4.3).
3. The System returns to calling use case/alternate flow.

3.4.6 Return/Exchange Order Alternate Flow

1. System evaluates the Order\DraftOrderFlag.
2. If the Order\DraftOrderFlag is 'Y' and item is in Order\ExchangeOrders\ExchangeOrder\OrderLines\OrderLine, System executes the Sale Item Alternate Flow (section 3.4.3).
3. If the Order\DraftOrderFlag is 'Y' and item is in Order\OrderLines\OrderLine and the Order\OrderLines\OrderLine@FulfillmentMethod is 'SERVICE' (section 10.2.2, row 21). System executes the Sale Item Alternate Flow (section 3.4.3).
4. If the Order\DraftOrderFlag is 'Y' and item is in Order\OrderLines\OrderLine and the Order\OrderLines\OrderLine@FulfillmentMethod is 'DELIVERY' (section 10.2.2, row 21), System executes the Return Item Alternate Flow (section 3.4.4).
5. If the Order\DraftOrderFlag is 'N' and the MaxLineStatus (section 10.2.2, row 23) in Order or ExchangeOrder is 9000.100, System executes Cancel Item Alternate Flow (section 3.4.7).
6. If the Order\DraftOrderFlag is 'N' and the MaxLineStatus (section 10.2.2, row 23) in ExchangeOrder is 3700.8000, System displays Invalid Order Message (section 6.2.5), stops processing the RIP Order response, removes any items added from the order, returns to item entry and use case ends.
7. If the Order\DraftOrderFlag is 'N' and the MaxLineStatus (section 10.2.2, row 23) in Order is 3700.8000, System executes the Return Item Alternate Flow (section 3.4.4).
8. If the Order\DraftOrderFlag is 'N', the MaxLineStatus (section 10.2.2, row 23) in Order is 3700.8000 and FulfillmentMethod (section 10.2.2, row 21) in Order is 'SERVICE', System executes Modify Item Alternate Flow (section 3.4.5).
9. If the Order\DraftOrderFlag is 'N', item is in ExchangeOrder and no value in RegisterTransactionNumber (section 10.2.2, row 39), System Executes Sale Item Alternate Flow (section 3.4.3).

3.4.7 Cancel Item Alternate Flow

1. If Order\DocumentType is 0001, System executes Return Item Alternate Flow (section 3.4.4).
2. If Order\DocumentType is 0003 and item is in ExchangeOrders\ExchangeOrder\OrderLines\OrderLine, System executes Return Item Alternate Flow (section 3.4.4).
3. If item is in Order\DocumentType is 0003 and item is in Order\OrderLines\OrderLine with a FulfillmentMethod of 'SERVICE' (section 10.2.2, row 21), System executes Return Item Alternate Flow (section 3.4.4).

4. If Order\DocumentType is 0003 and item is in Order\OrderLines\OrderLine with FulfillmentMethod not 'SERVICE', System executes Sale Item Alternate Flow (section 3.4.3).

3.4.8 Simple Return or Exception Pickup Return Alternate Flow

1. If the Order\DraftOrderFlag is 'N' and the MaxLineStatus (section 10.2.2, row 23) in Order is 9000.100, System executes Cancel Item Alternate Flow (section 3.4.7).
2. If the Order\DraftOrderFlag is 'N' and the MaxLineStatus (section 10.2.2, row 23) in Order is 3700.8000, System executes the Return Item Alternate Flow (section 3.4.4).
3. If the Order\DraftOrderFlag is 'N', the MaxLineStatus (section 10.2.2, row 23) in Order is not 9000.100 or 3700.8000 and item is in Order\OrderLines\OrderLine with a FulfillmentMethod of 'SERVICE' (section 10.2.2, row 21), System executes Modify Item Alternate Flow (section 3.4.5).
4. If the Order\DraftOrderFlag is 'Y' and item is in Order\OrderLines\OrderLine and the Order\OrderLines\OrderLine@FulfillmentMethod is 'SERVICE' (section 10.2.2, row 21). System executes the Sale Item Alternate Flow (section 3.4.3).
5. If the Order\DraftOrderFlag is 'Y' and item is in Order\OrderLines\OrderLine and the Order\OrderLines\OrderLine@FulfillmentMethod is 'DELIVERY' (section 10.2.2, row 21), System executes the Return Item Alternate Flow (section 3.4.4).

3.4.9 Mismatch 4 Part Key Alternate Flow

1. System prompts User to select 4 part key to use, enter a new 4 part key or void the transaction (section 6.1.1).
2. If User selects void, System voids the transaction and use case ends.
3. If User selects a 4 part key, System authorizes item with selected 4 part key and returns to calling use case/alternate flow.
4. If User selects to enter transaction information, System executes Initiate Return Use Case (R11-BBYCA-Initiate Returns Spec) and authorizes return item with approved 4 part key from the initiate process.
5. System returns to calling use case/alternate flow.

3.5 Order Processing Summary

Order Document Type	Order Offline Flag	Exchange Order Document Type	Order Draft Order Flag	In Node	Order Orderline Fulfillment Method	MaxLine Status	Tran # Present	Add Item Method
0001	N							Sale
0001	Y							Modify
Not 0001 or 0003								Error
0003		0001	Y	Exchange Order				Sale
0003		0001	Y	Order	SERVICE			Sale
0003		0001	Y	Order	DELIVERY			Return
0003		0001	N	Exchange Order		9000.100	Yes	Return
0003		0001	N	Order	SERVICE	9000.100	Yes	Return
0003		0001	N	Order	Not SERVICE	9000.100	Yes	Sale
0003		0001	N	Exchange Order		3700.8000	Yes	Error
0003		0001	N	Order		3700.8000	Yes	Return
0003		0001	N	Order	SERVICE	Not 9000.100 or 3700.8000	Yes	Modify
0003		0001	N	Exchange			No	Sale
0003		0001	N	Exchange		Not 9000.100 or 3700.8000	Yes	Modify
0003		Not 0001 or Empty						Error
0003		Empty	N	Order	Not SERVICE	9000.100		Sale
0003		Empty	N	Order	SERVICE			Return
0003		Empty	N	Order		3700.8000		Return
0003		Empty	N	Order	SERVICE	Not 9000.100 or 3700.8000		Modify
0003		Empty	Y	Order	SERVICE			Sale
0003		Empty	Y	Order	DELIVERY			Return

4. Other Feature Impacts

4.1 Sale Impacts

Document modified to call RIP Use Case to complete process.

4.2 Return Impacts

Document modified to call RIP Use Case to complete process.

4.3 Training Impacts

Document modified to indicate feature not available in training mode.

4.4 Suspend/Resume Impacts

Transactions containing RIP orders can be suspended and resumed. No special processes occur on suspend or resume.

5. Assumptions

1. RIP does not return Gift Cards in the Get Order Response.
2. RIP does not return Warranty/PSP items in the Get Order Response.
3. RIP does not return Loyalty/RZ enrollment or usage items in the Get Order Response.
4. RIP does not return activation items in the Get Order Response.

6. Screen Layouts

6.1 xPOS Screens

6.1.1 Mismatch 4 Part Key Prompt

Displays when the RIP/HDS original transaction key does not match the one entered by the User. From here, User can select one, enter a new one, or void the transaction.

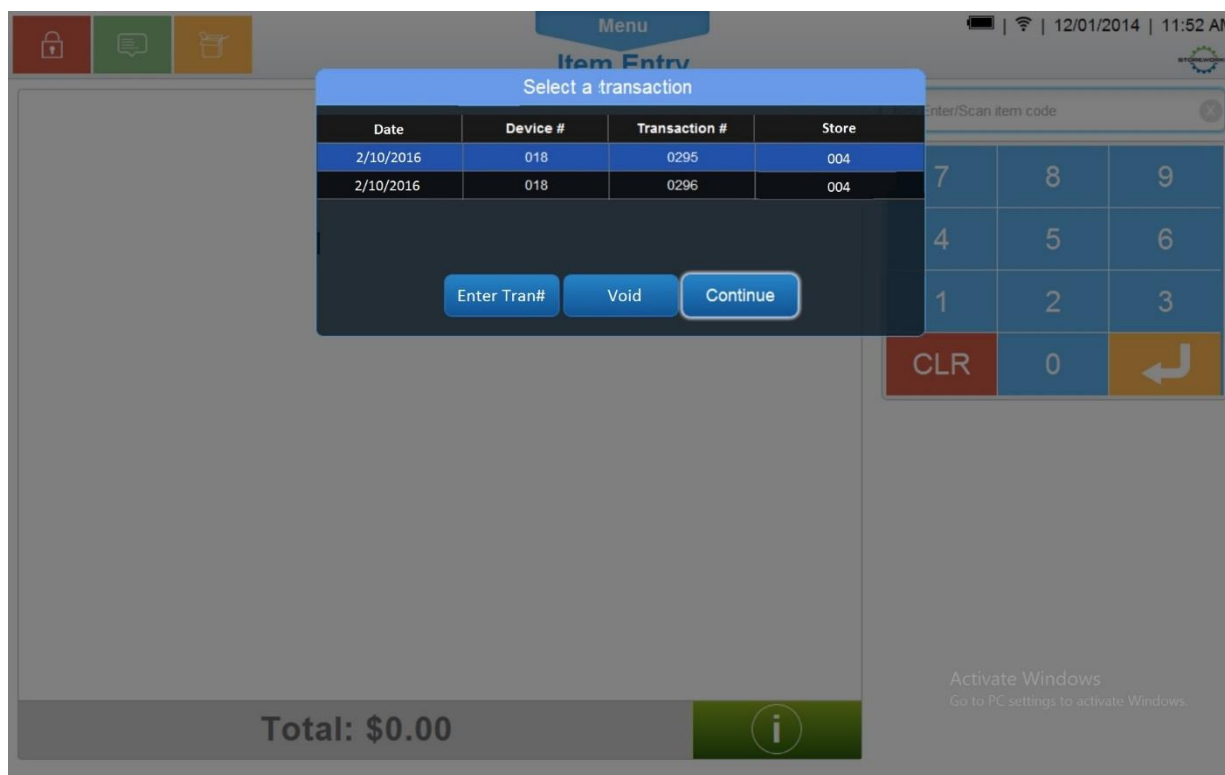


Figure 2: Mismatch 4 Part Key Prompt

6.1.1.1 Screen Definitions

6.1.1.1.1 Instruction Text

Instruction Text	Notes
Select a transaction	Text is Configurable

6.1.1.1.2 Navigation/Menu Keys

Label	State	Next Screen	Notes
Enter Tran#	Enabled	Initiate Return screen	Text is Configurable
Void	Enabled	Void the transaction and end use case	Text is Configurable
Continue	Enabled	Authorize item	Text is Configurable. Has focus when screen displays.

6.1.1.1.3 Data/Input Field Enhancements

Label	Editable	Req'd?	Data Type	Min Length	Max Length	Notes
Date	N	Y	Date	8	10	Label is configurable. Dates are from the initiate return and RIP Get Order Response Extn/EOMSOrderLineList/EOMSOrderLine/@TransactionBusinessDay field
Device #	N	Y	Alphanumeric	1	20	Label is configurable. Device Numbers are from the initiate return and RIP Get Order Response Extn/EOMSOrderLineList/EOMSOrderLine/@RegisterID
Transaction#	N	Y	Alphanumeric	1	20	Label is configurable. Transaction Numbers are from the initiate return and RIP Get Order Response Extn/EOMSOrderLineList/EOMSOrderLine/@RegisterTransactionNumber
Store	N	Y	Alphanumeric	1	20	Label is configurable. Stores are from the initiate return and RIP Get Order Response Extn/EOMSOrderLineList/EOMSOrderLine/@StoreNumber

6.1.2 Item Entry Item Indicator

A delivery icon, Delivery Date/Time and Delivery Type (Pick up in-store, In Home, pick up at warehouse.) are added to the current item entry screen. Displaying delivery information below the item is configurable. If item modification occurs information displays below the RIP information. **NOTE:** Only information changing is defined. All other definitions remain the same.

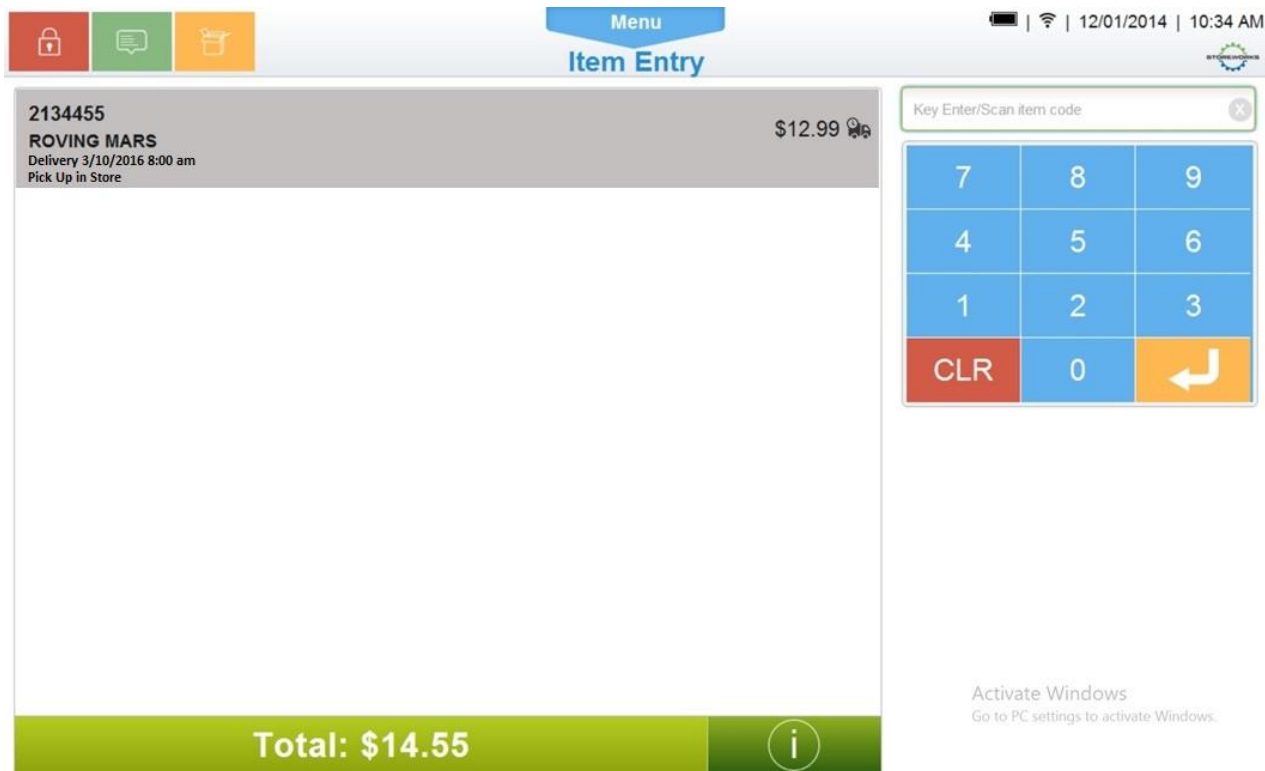


Figure 3: RIP Item on Item Entry Screen

6.1.2.1 Screen Definitions

6.1.2.1.1 Data/Input Field

Label	Editable	Req'd?	Data Type	Min Length	Max Length	Notes
Delivery Icon	N	Y	Graphic	N/A	N/A	Delivery icon is static. Displays on items from RIP/HDS
Delivery Date	N	N	Alphanumeric	0	250	The label is configurable. Displays when the @FulfillmentMethod is Delivery or ShipToHome. The date/time is from Get Order Response in @PromisedApptStartDate field. NOTE: If no data in response, line does not print.
Pickup Date	N	N	Alphanumeric	0	250	The label is configurable. Displays when the @FulfillmentMethod is Pickup. The date/time is from Get Order Response in @PromisedApptStartDate field. NOTE: If no data in response, line does not print.
Delivery Type	N	N	Alphanumeric	0	250	The delivery type is configurable and is mapped from Get Order Response in @FulfillmentMethod.

6.1.3 RIP on Menu

Menu displays when Menu selected. Current Menu screen with RIP added. If transaction is a no receipt return, RIP/HDS not visible on menu. **NOTE:** Only new items defined.

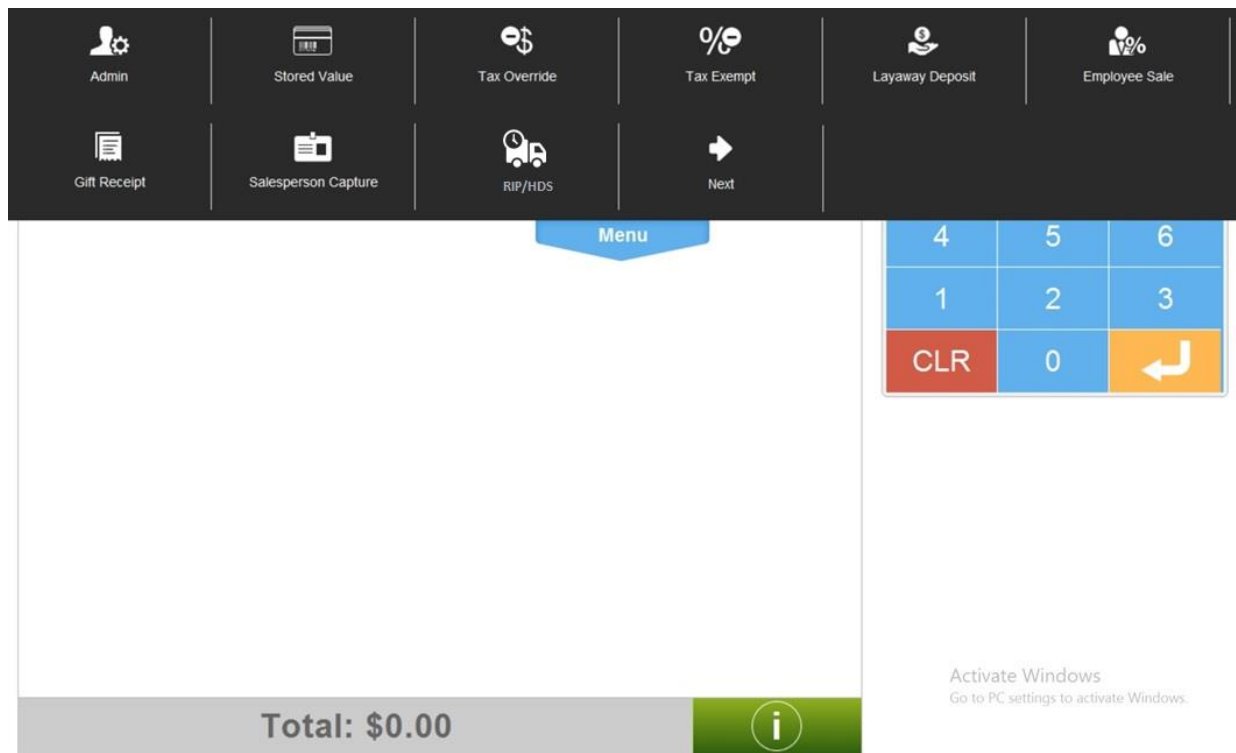


Figure 4: Main Menu

6.1.3.1 Screen Definitions

6.1.3.1.1 Navigation/Menu Keys

Label	State	Next Screen	Notes
RIP/HDS	Enabled	Launch RIP/HDS	Text is configurable

6.2 Dialog Messages/Message Boxes

6.2.1 Abort RIP Message

Description	Displays when User selects ESC while RIP/HDS application is in focus.
Message	The RIP/HDS window will close and you will be redirected to POS. Are you sure you want to proceed?
Key prompt	<ul style="list-style-type: none"> Yes – Returns to item entry No – Returns focus to RIP/HDS Application
Notes	<ul style="list-style-type: none"> Text is configurable. Yes has focus

6.2.2 RIP Launch Offline Message

Description	Displays when launching RIP and an error is received.
Message	RIP is Offline. Unable to continue.
Key prompt	OK – Returns to item entry screen
Notes	Text is configurable.

6.2.3 Item Lookup Failed Message

Description	Displays when an item lookup times out.
Message	Item Lookup Timed Out. Continue to Wait?
Key prompt	<ul style="list-style-type: none">• Yes – Continues to wait for item lookup response.• No – Stops processing RIP Order response, removes any items added from the order, returns to item entry and use case ends.
Notes	<ul style="list-style-type: none">• Text is configurable• Focus defaults to 'Yes' key

6.2.4 Unable to Validate Item Message

Description	Displays when item lookup returns item not found, unable to be sold, etc.
Message	Unable to validate item. Abort Order Import.
Key prompt	OK – Stops processing RIP Order response, removes any items added from the order, returns to item entry and use case ends.
Notes	Text is configurable.

6.2.5 Invalid Order Message

Description	Displays when Get Order response is not valid
Message	Invalid Order.
Key prompt	OK – Stops processing RIP Order response, removes any items added from the order, returns to item entry and use case ends.
Notes	Text is configurable.

6.2.6 Need Transaction Information Message

Description	Displays when original 4 part key cannot be determined Systematically.
Message	Need additional Transaction Information.
Key prompt	<ul style="list-style-type: none">• Enter Information – launches initiate return prompts• Void – Voids the transaction.
Notes	<ul style="list-style-type: none">• Text is configurable• Focus is on Enter Information Key.

6.2.7 Unable to Add Item Message

Description	Displays when return item authorization denies the return of the item.
Message	Unable to return item. ~text from authorization System~.
Key prompt	<ul style="list-style-type: none">• Enter Transaction Information – launches initiate return prompts• Void – Voids the transaction.
Notes	<ul style="list-style-type: none">• Text is configurable• Focus is on Enter Information Key.

7. Printing

7.1 Receipts

7.1.1 RIP Receipt

Order number and delivery date prints below the items on the receipt.

<p>Welcome to the POS Corporate Office (999) 999-9999 POS LAB TESTING</p> <p>BAR CODE</p> <p>Val # 1234-2432-2344-2542 0004 001 9620 09/29/2007 15:31 1234098</p> <p>EXCHANGE</p> <p>ORIGINAL TRAN 0055 004 0127 08/31/07</p> <p>RETURN ITEMS 645749 Sony Plasma TV 539.51- REG 600.00 with 60.49 Free Gift Card Serial # 98446572 LP#: Tax Rate 6.5% D Order # BBY02-070709014305002 Pickup Date: 1/31/2007</p>		<p>SALE ITEMS</p> <p>645749 Sony Plasma TV 539.51 REG 600.00 with 60.49 Free Gift Card Serial # 98446586 Tax Rate 6.5% D Order # BBY02-070709014305002 Delivery Date: 1/31/2007</p> <p>231456 Delivery 10.00 Home Delivery Order</p> <hr/> <p>TOTAL 10.00 6.5% TAX 0.65</p> <hr/> <p>TOTAL 10.65 CASH 10.65</p> <p>***** RECEIPT FOOTER from DB *****</p>
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Figure 5: Receipt Example

7.1.2 Field Definitions

Name	Description	Notes
Order Number	RIP Order Number	Label is configurable. Label number is in Get Order Response in the @OrderNo field.
Delivery Date	Date items to be delivered	The label is configurable. Displays when the @FulfillmentMethod is Delivery or ShipToHome. The date/time is from Get Order Response in @PromisedApptStartDate field. NOTE: If no data in response, line does not print.
Pickup Date	Date items to be picked up	The label is configurable. Displays when the @FulfillmentMethod is Pickup. The date/time is from Get Order Response in @PromisedApptStartDate field. NOTE: If no data in response, line does not print.

8. Configurable Settings

Mnemonic	Description	Valid Values	Configurable By
RIP/HDS URL	URL to launch the RIP/HDS web application	URL (currently http://zutas027.futureshop.com:7777/forms/frmservlet)	Store
Get Order URL	URL to get RIP/HDS order	URL	Store
RIP/HDS Certificate	Parameter to allow use of RIP/HDS only for Get Order	name	Store
RIP Return Reason Code	Return reason code to log in POSLog for items from RIP that are returned.		Store
RIP Parameter	Parameter to turn feature on/off by device group	1/0	Device Group
Get Order progID	Value to send in the progID parameter of the Get Order Request	Currently "pos"	Store
Get Order userID	Value to send in the userID parameter of the Get Order Request	Currently "pos"	Store
Get Order EnterpriseCode	Value to send in the EnterpriseCode parameter of the Get Order Request	Currently "RETAIL"	Store
Get Order OmsServerCompatibilityVersion	Value to send in the OmsServerCompatibilityVersion parameter of the Get Order Request	Currently "3.0"	Store

NOTE: No "?" at the beginning of any URL.

9. Logging

9.1 Data Output

Data defined in BBYC_xPOS_R11_POSLog FDoc and BBYC_xPOS_R11_Electronic Journal FDoc.

Data Element	Description	Destination	Definition
Transaction 4 Part Key	If multiple 4 part keys in the transaction, the original four part key with the highest transaction amount is used to logging.	<ul style="list-style-type: none"> POSLog Electronic Journal 	
RIP Delayed Delivery Indicator	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> POSLog 	<ul style="list-style-type: none"> R = Pass3Indicator Item (MaxLineStatus attribute = 3700.8000) D = Everything else returned
Fulfilling Location	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> POSLog 	System strips the leading "BBY_" from the /Order/OrderLines/OrderLine/@ShipNode
Order Number	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> POSLog Electronic Journal 	Get Order Response in the @OrderNo field.
TenderingRequired	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> POSLog 	Always log N
Document Type	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> POSLog 	Get Order Response in the @DocumentType

Data Element	Description	Destination	Definition
Fulfillment Type	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> • POSLog 	Get Order Response in the @FulfillmentMethod mapped to the following: <ul style="list-style-type: none"> • D = Delivery • S = Shipment • P = Pickup (In Store) • I = Installation
Prime Line Number	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> • POSLog 	Get Order Response in the @PrimeLineNo
Ship To Address	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> • POSLog 	Get Order Response in the PersonInfoShipTo/@AddressLine1, PersonInfoShipTo/@AddressLine2, PersonInfoShipTo/@City, PersonInfoShipTo/@Country, PersonInfoShipTo/@State, PersonInfoShipTo/@ZipCode
Ship To First Name	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> • POSLog 	Get Order Response in the PersonInfoShipTo/@FirstName
Depend On Line Key	Data returned from RIP necessary to Log	<ul style="list-style-type: none"> • POSLog 	Get Order Response in the @DependentOnLineKey

10. Interfaces

10.1 RIP Interface

10.1.1 Launching RIP

System uses the web browser control to launch the RIP/HDS application. The URL address is configurable (section 8). System adds the following URL parameter in following format when launching:

```
?Config=yy-
zzzzx&TranID=sssss^yyyymmdd^rrr^ttt&Training=N&TransactionType=x&EmployeeID=xxxx&OrderID=xxxxx&LangID=xxx&clientID=X
POS
```

(NOTE: x's do not define the length)

Each parameter is defined as

Parameter Name	Definition	Format
Config	Combination of the TransactionType and LangID separated by hyphen	yy-zzzz <ul style="list-style-type: none"> • yy = Transaction Type • zzzz = LangID • x = x
TranID	Best Buy 4 part key in standard format. If Transaction is in return/exchange mode, the original transaction 4 part key is sent; otherwise the current transaction 4 part key is sent. (NOTE: That the standard URL encoding will be used for special characters).	sssss^yyyymmdd^rrr^ttt <ul style="list-style-type: none"> • s=Store ID • yyyymmdd = Date • r = Register/Device ID • t = TransactionID
Training	Training Flag	<ul style="list-style-type: none"> • N = Transaction is not in training mode • Y = Transaction is in training mode

Parameter Name	Definition	Format
TransactionType	Denotes the current transaction type	One of the following are valid <ul style="list-style-type: none"> • 1 = Sale • 2 = Return • 3 = Exchange • 61 = Employee Sale • 62 = Employee Return • 63 = Employee Exchange
EmployeeID	Current signed on Employee	Employee number
OrderID	Order number NOTE: Only used in re-entering Rip/HDS	Value returned from previous successful launch
LangID	Language number used for the store	

10.1.2 RIP Complete Response

When RIP/HDS has successfully completed processes, the following is received.

```
xpos://rip/ordercomplete?Order=<order number>
```

10.1.3 RIP Cancel Response

When user has canceled from RIP/HDS, the following is received.

```
xpos://rip/ordercancel
```

10.2 Get Order Interface

After receiving the order from RIP, System sends the Get Order Request

10.2.1 Request

```
<YFSEnvironment progId="pos" userId="pos"/>
<Order OrderNo="{order number}" EnterpriseCode="RETAIL" OmsServerCompatibilityVersion="3.0">
  <Extn TrainingMode="N"/>
</Order>
```

Name	Definition
progId	The configuration value defined in section 8.
userId	The configuration value defined in section 8.
EnterpriseCode	The configuration value defined in section 8.
OmsServerCompatibilityVersion	The configuration value defined in section 8.
OrderNo	The order number returned from RIP complete response in orderno parameter (section 10.1.2)
TrainingMode	Always "N"

10.2.2 Response

Response format is as follows:

```
<Order> <-- Header Level below
  <OrderLines>
    <OrderLine/><-- Line Level below
  </OrderLines>
  <ExchangeOrders>
    <ExchangeOrder> <-- Header Level below
      <OrderLines>
        <OrderLine/><-- Line Level below
      </OrderLines>
    </ExchangeOrder>
  </ExchangeOrders>
</Order>
```

Document Reference ID	Attribute Name	Attribute Definition	Max Length	Level	XPath
1.	EnterpriseCode	The enterprise that is associated with this order. For example, RETAIL For retail channel, BESTBUY for the dotcom channel.	24	Header	@EnterpriseCode
2.	OrderNo	Customer's order number	40	Header	@OrderNo
3.	SearchCriteria1	Customer id is stored in this field	100	Header	@SearchCriteria1
4.	DraftOrderFlag	Flag to indicate if a new order or modified order	1	Header	@DraftOrderFlag
5.	AddressLine1	The bill to address line 1 field	70	Header	PersonInfoBillTo/@AddressLine1
6.	AddressLine2	The bill to address line 2 field	70	Header	PersonInfoBillTo/@AddressLine2
7.	City	The city in the address	35	Header	PersonInfoBillTo/@City
8.	Country	The country in the address	35	Header	PersonInfoBillTo/@Country
9.	FirstName	The first name of the person	40	Header	PersonInfoBillTo/@FirstNa me
10.	LastName	The last name of the person	40	Header	PersonInfoBillTo/@LastNa me
11.	State	The state in the address	35	Header	PersonInfoBillTo/@State
12.	ZipCode	The zipcode in the address	35	Header	PersonInfoBillTo/@ZipCode
13.	EveningPhone	The evening phone number	20	Header	PersonInfoBillTo/@Evening Phone
14.	DayPhone	The day phone number	20	Header	PersonInfoBillTo/@DayPho ne
15.	CustomerEMailID	Email id of the customer. This could be blank.	70	Header	@CustomerEMailID
16.	DocumentType	Determines whether a return or a sales order (0001 or 0003)		Header	@DocumentType
17.	Extn	Determines if System is offline Determines if the order was captured as offline		Header	@Extn Order\Extn\OfflineFlag
18.	PrimeLineNo	It is a number that uniquely identifies a line item on the order	24	Line	@PrimeLineNo
19.	OrderedQty	The quantity of the line item that has been ordered	14,4	Line	@OrderedQty
20.	ItemGroupCode	This field indicates what kind of item is on the order line. Valid values are PROD (indicates Product SKU), DS (Delivery Service), PS (Installation Service)	20	Line	@ItemGroupCode
21.	FulfillmentMethod	Fulfillment type requested by the customer (SHIPTOHOME, PICKUP, DELIVERY, SERVICE) The value will be SERVICE if the line is a PS or is a shipping sku or a delivery sku.	40	Line	@FulfillmentMethod
22.	DependentOnLineKey	Value if populated will specify the prime line# of the line item on which this line item is dependent on	24	Line	@DependentOnLineKey
23.	MaxLineStatus	Status value of the order line	NA	Line	@MaxLineStatus
24.	MaxLineStatusDesc	Status description of the order line	NA	Line	@MaxLineStatusDesc
25.	ItemDesc	The description of the SKU	200	Line	Item/@ItemDesc
26.	UnitOfMeasure	Unit of measure	40	Line	Item/@UnitOfMeasure
27.	CustomerItem	SKU Id	40	Line	Item/@CustomerItem
28.	ProductClass	Indicates whether the item is open box or not. This field will have the value "Open Box"	10	Line	Item/@ProductClass
29.	FirstName	The first name of the person	40	Line	PersonInfoShipTo/@FirstNa me

Document Reference ID	Attribute Name	Attribute Definition	Max Length	Level	XPath
30.	LastName	The last name of the person	40	Line	PersonInfoShipTo/@LastName
31.	AddressLine1	The address line 1 field in the ShiptoAddress	70	Line	PersonInfoShipTo/@AddressLine1
32.	AddressLine2	The address 2 field in the ShiptoAddress	70	Line	PersonInfoShipTo/@AddressLine2
33.	City	The city in the ShiptoAddress	35	Line	PersonInfoShipTo/@City
34.	Country	The country in the ShiptoAddress	35	Line	PersonInfoShipTo/@Country
35.	State	The state in the ShiptoAddress	35	Line	PersonInfoShipTo/@State
36.	ZipCode	The zipcode in the ShiptoAddress	35	Line	PersonInfoShipTo/@ZipCode
37.	UnitPrice	The unit price for the order line	19,6	Line	LinePriceInfo/@UnitPrice
38.	LotNumber	This attribute will have the LPN number for open box items	40	Line	OrderLineInvAttRequest/@LotNumber
39.	RegisterTransactionNumber	Transaction number	40	Line	Extn/EOMSOrderLineList/EOMSOrderLine/@RegisterTransactionNumber
40.	StoreNumber	The store number for a transaction	10	Line	Extn/EOMSOrderLineList/EOMSOrderLine/@StoreNumber
41.	RegisterID	Register id for a transaction at a particular store	10	Line	Extn/EOMSOrderLineList/EOMSOrderLine/@RegisterID
42.	TransactionBusinessDay	Business day of transaction	NA	Line	Extn/EOMSOrderLineList/EOMSOrderLine/@TransactionBusinessDay
43.	OldUnitPrice	All old charges will be in this attribute regardless of shipping, delivery or my time.	19.6	Line	/LinePriceInfo/@OldUnitPrice
44.	PromisedApptStartDate	Customer selected start date		Line	@PromisedApptStartDate
45.	PromisedApptEndDate	Customer selected end date		Line	@PromisedApptEndDate
46.	OriginalSalesDeliveryEndDate	Applicable to return only, refers to date of original sale. DocumentType=0003		Line	@OriginalSalesDeliveryEndDate
47.	OriginalSalesDeliveryStartDate	Applicable to return only, refers to date of original sale. DocumentType=0003		Line	@OriginalSalesDeliveryStartDate
48.	ShipNodePhysicalLocationId	Physical location id of the shipnode location		Line	@ShipNodePhysicalLocationId
49.	ShipNode	-In the instance of store, it represents the physical store location id sourced from RMS -In the instance of DDC's, XDCSs, it represent the virtual location id sourced from RMS -In the instance of DC's, it represent the virtual location id sourced from RMS with the exception of Findlay and Franklin, wherein the physical location id is represented -In the instance of Special Order Vendors, represent the master vendor id sourced from RMS		Line	@ShipNode
50.	ChargeCategory	Refers to the type of the charges paid for shipping or delivery – valid options are: SHIPPING on the shipping sku line, UPCHARGE on the delivery line.		Line	@ChargeCategory

Document Reference ID	Attribute Name	Attribute Definition	Max Length	Level	XPath
51.	ChargeName	Refers to the type of the charges paid for shipping or delivery – valid options are: SHIPPING on the shipping sku line, MYTIME on the delivery line.		Line	@ChargeName

11. Out Of Scope

- This Specification covers the changes needed to implement the RIP/HDS integration.
- ESC key support is available for Windows platform only. This feature is not available on iOS or Android platforms.

12. Business Sign Off (Sections 6 & 7)

Name	Organization	Approval Email and/or Date Received
Jesse Wielgan	Best Buy	

13. Technical Sign Off

Name	Organization	Approval Email and/or Date Received
Mark Houghton	Best Buy	
Kevin Bahng	Best Buy	

14. Technical Review

Name	Organization	Approval Email and/or Date Received
Andy Liang	Best Buy	
Jessyka McLean	Best Buy	
Anne Shetty	Best Buy	

15. Technical Inform

Name	Organization	Approval Email and/or Date Received
Gaurav Savant	Best Buy	
Greg Irvine	Best Buy	
David Hawkins	Storeworks	
Vinodh Narayanan	Storeworks	
Paul Leung	Storeworks	

16. Revision History

16.1 Reviews

Date	Iteration	Result
3/2/2016	V1.0 – Best Buy Review	Updates in version 1.1

16.2 Revision History

Reviser	Revision	Date	Version
Amy Byers	Initial document	2/16/2016	1.0
Amy Byers	<ul style="list-style-type: none"> – Section 2.1.3: Added user selecting ESC to abort process. – Section 3.3: Corrected System actions when RIP/HDS launched. – Section 3.4.3: <ul style="list-style-type: none"> ○ Removed checking if item is eligible for sell on mobile device ○ Removed calling tax service. ○ Added 2 tier processing – Section 3.4.4: <ul style="list-style-type: none"> ○ Removed no receipt return processes. ○ Added if item fails return authorization, system stops import process. – Former Section 3.4.5: Removed alternate flow for no receipt 4 part key alternate flow. – Former Section 4.0: Removed get order use case as this is not current ePOS functionality. – Section 6.1.2: Added clarification that current item modification information displays below RIP information on virtual receipt. – Former Section 6.1.3: Removed Get Order Prompt Screen as Get Order functionality is not in ePOS. – Section 6.1.3: Indicated that RIP/HDS is not available on the menu if transaction is a no receipt return transaction. – Section 8: <ul style="list-style-type: none"> ○ Removed RIP TCP/IP Port configuration as not used. ○ Clarified that the RIP/HDS certificate configuration is a name. ○ Added note that there are no “?” before any URL parameters. – Section 10.1.1: Clarified that original 4 part key is sent for return/exchange transactions. – Section 10.1.2: <ul style="list-style-type: none"> ○ Removed TCP/IP Port info ○ Added Complete URL example. – Section 10.2.1: Added location of the order number for the request. – Section 11: Added that ESC key support is only available through Windows platform. 	3/21/2016	1.1

Reviser	Revision	Date	Version
Amy Byers	<ul style="list-style-type: none"> Sections 2.1.1, 2.1.2, 2.1.3, 2.2 & 6.1.3: Corrected screen shot to remove Get Order option. Section 2.1.3: Added correct abort screen. Section 3.3: Corrected that Cancel and Complete are not URLs, but a callback response. Section 8 <ul style="list-style-type: none"> Added current value of the RIP URL. Added parameters for the Get Order Request message. Section 10.1.1: Removed OrderID and added clientID to launching RIP URL parameters. Section 10.1.2: corrected the Order number parameter name. Section 10.1.3: Added the Cancel response definition. Section 10.2.1: <ul style="list-style-type: none"> Corrected Get Order Request Added definition for the parameters Removed DocumentType parameter 	4/18/2016	1.2
Amy Byers	<ul style="list-style-type: none"> Section 4.4: Added section for suspend resume and indicated no changes for RIP. Section 10.1.1: <ul style="list-style-type: none"> Added orderID back to the parameters Added x to Config parameter 	4/22/2016	1.3

17. Appendix A: Referenced Documentation

- BBYC_mPOS_R7_Manager Override FDoc_1.1
- BBYC_mPOS_R8_Sale FDoc_v1.0
- BBYC_mPOS_R8_Customer FDocv_1.2
- BBYC mPOS_R3_Capture Credit Card for Subscription FDoc_v1.2
- BBYC_xPOS_Signature Capture FDoc_v1.5
- R11-BBYCA-Initiate Returns Spec v1.4
- R11_BBYCA_Return Items Tech Spec v1.2
- BBYC_xPOS_R11_POSLog FDoc_1.5
- BBYC_xPOS_R11_Electronic Journal FDoc_1.5

18. Appendix B: Source Documentation

- Requirements Specification - RIPHDS for XPOS - v1.1.xlsx
- R43C - Canada - Rip-HDS Tech Spec v1.6 Addendum v1.3.doc
- 43B -PNP Decoupled Returns v1.12 CR 63 and 1039 v1.5.doc
- R43B - QO Full Tech Spec v1.11.doc
- QO Lite_OMS Spec v1 23.doc
- AP475_Integration_Technical_Design-OMS Get Order Response Message V2[1].1.doc

18.1 Functional Requirements

ID	Description	Section(s)
1.0	XPOS on NCR and on tablets shall have the RIP/HDS application available in order to do RIP/White Goods transactions.	<ul style="list-style-type: none"> Not a POS Requirement
1.1	Current EPOS RIP functionalities shall remain as is for XPOS. XPOS shall perform RIP functionalities we currently have for EPOS.	<ul style="list-style-type: none"> BBYC_xPOS_R10_RIP
1.2	The user shall be able to launch the RIP/HDS application by selecting it from the Admin menu. It shall be the same structure for XPOS tablet and Registers.	<ul style="list-style-type: none"> 3 Use Case: Launch RIP Process 6.1.3 RIP on Menu

ID	Description	Section(s)
1.3	The RIP/HDS Applications shall be available for XPOS: RIP/HDS Invoice Inquiry RIP/HDS Availability	<ul style="list-style-type: none"> 3 Use Case: Launch RIP Process 6.1.3 RIP on Menu
1.4	RIP/HDS application shall available to be launched before an item is entered (prior to item entry) or after an item has already been entered (within item entry)	<ul style="list-style-type: none"> 3 Use Case: Launch RIP Process 4.1 Sale Impacts 4.2 Return Impacts BBYC_mPOS_R8_Sale FDoc_v1.1 R11_BBYCA_Return Items Tech Spec v1.3
1.5	Once the RIP application forms are completed for ordering and scheduling, the SKU and other RIP details shall be imported into XPOS. Item – Actual RIP product SKU Delivery Fee SKU Recycling Fee SKU Fulfillment method/type – delivery or pick up Delivery Date Pick Up Location	<ul style="list-style-type: none"> 3.4.2 Process Get Order Alternate Flow
1.6	XPOS shall have the ability to close the RIP application when a user decides to not continue after opening the RIP application. -- As occurs today for EPOS, XPOS will monitor the Escape Key after the initiating the launch. If the Escape key is selected POS will assume an abort has been requested and POS will prompt Cashier to confirm the abort. On confirmation POS will abort the application, and return to item entry screen. If the cashier decides not to abort then POS will resume the launch. --	<ul style="list-style-type: none"> 3.3 Main Flow 3.4.1 Abort Alternate Flow
1.7	Once the RIP/HDS SKU is imported into XPOS, an indicator (i.e. truck icon) shall be added to be able to differentiate the RIP imported SKUs (i.e. RIP SKU and Delivery SKU) from the rest of the SKUs (i.e. regular brown good SKU) in the transaction. The SKUs imported from RIP to XPOS will have the indicator.	<ul style="list-style-type: none"> 6.1.2 Item Entry Item Indicator
1.8	Once Import of RIP SKU to XPOS is complete, XPOS shall have the ability to show the delivery information on the screen (i.e. delivery date and time, delivery type - Pick up in-store, In Home, pick up at warehouse). This shall also be configurable to show or not to show this information.	<ul style="list-style-type: none"> 6.1.2 Item Entry Item Indicator
1.9	XPOS Receipts for RIP/HDS Transactions shall be the same as EPOS today.	<ul style="list-style-type: none"> 7.1.1 RIP Receipt
2.0	The Java client running on Oracle 11g shall be fully supported by XPOS	<ul style="list-style-type: none"> Tech Design Document
2.1	XPOS with RIP/HDS solution shall pass the application scan for security.	<ul style="list-style-type: none"> Tech Design Document
2.2	XPOS shall use the Windows web browser to launch the RIP/HDS application	<ul style="list-style-type: none"> Tech Design Document
2.3	Browser shall not display the address bar.	<ul style="list-style-type: none"> 3.3 Main Flow
2.4	RIP Invoice Inquiry URL shall be configurable in XPOS.	<ul style="list-style-type: none"> 8 Configurable Settings
2.5	RIP Availability URL shall be configurable in XPOS.	<ul style="list-style-type: none"> 8 Configurable Settings
2.6	The base URL for launching RIP shall be configurable in XPOS.	<ul style="list-style-type: none"> 8 Configurable Settings
2.7	When launching RIP, XPOS shall add the query string to the base URL. The query string is in the format: Config=yy-zzzz&TranID=xxx^xxx^xxxx^xxx&Training=N&TransactionType=x&EmployeeID=xxxx&OrderID=xxxxx&LangID=xxx All parameters are the same as what EPOS send to RIP, except removing the question mark ? at the beginning of the string.	<ul style="list-style-type: none"> 10.1.1 Launching RIP
2.8	The order retrieval web service URL shall be configurable in XPOS.	<ul style="list-style-type: none"> 8 Configurable Settings

ID	Description	Section(s)
2.9	When aborting order creation in RIP and exiting RIP, the browser shall be redirected to a callback URL to call XPOS.	<ul style="list-style-type: none"> 3.3 Main Flow 8 Configurable Settings
2.10	When RIP order has been successfully created, the browser shall be redirected to a callback URL with the RIP order number.	<ul style="list-style-type: none"> 3.3 Main Flow 8 Configurable Settings 10.1.2 RIP Complete Response
2.11	When RIP order is created successfully and the callback URL has the order number, XPOS shall call the order retrieval web service and import the RIP order.	<ul style="list-style-type: none"> 3.3 Main Flow 8 8 Configurable Settings
2.12	A certificate parameter shall be added to XPOS for configuring a client cert for calling the order retrieval web service.	<ul style="list-style-type: none"> 8 Configurable Settings
2.13	The order retrieval interface remains the same as the one used in EPOS.	<ul style="list-style-type: none"> 10.2 Get Order Interface
2.14	Order number as well as everything on the initial launch shall be passed in the call when re-launching RIP/HDS.	<ul style="list-style-type: none"> 10.2 Get Order Interface
2.15	The ETLs I-911 RIP Order Confirm (order confirmation sent from EAI to RIP/HDS based on POSLOG data) and I-933 Order Details Pull (Basket Import) shall continue to be used for XPOS and RIP/HDS exchange of data.	<ul style="list-style-type: none"> Not an xPOS Requirement
2.16	Basket Import (aka. I-933 RIP Order Details Pull) - shall be triggered when XPOS detects the Success URL RIP forms navigate to upon completing a transaction - shall utilize existing EPOS/XPOS Order Import Web Service (aka. YIF Web Service) - shall Import data captured in RIP/HDS forms (launched from XPOS) into XPOS basket, based on the RIP Order# XPOS takes from the Success URL	<ul style="list-style-type: none"> 3.3 Main Flow 8 8 Configurable Settings 10.2 Get Order Interface
2.17	RIP Upload (aka. I-911 RIP Order Confirmation) - shall be triggered from POSLog Dispatcher - shall approve in RIP/HDS database transactions captured in RIP/HDS Forms - will create in RIP/HDS database these types: Store Stock Sales/Returns, Price Match for White Goods items, Layaways/Rainchecks	<ul style="list-style-type: none"> Not an xPOS Requirement
2.18	XPOS Poslog for RIP/HDS transactions shall be the same as EPOS today.	<ul style="list-style-type: none"> BBYC_xPOS_R11_P OSLog FDoc_1.5
2.19	XPOS EJ for RIP/HDS transactions shall be the same as EPOS today.	<ul style="list-style-type: none"> BBYC_xPOS_R11_EI ectronic Journal FDoc_1.5
2.20	XPOS shall disable RIP functionalities when XPOS is in training mode.	<ul style="list-style-type: none"> 4.3 Training Impacts BBYC_mPOS_R8_Tra ining Mode FDoc_1.3
2.21	XPOS shall have the ability to Turn On-Off RIP/HDS functionality by Register Personality.	<ul style="list-style-type: none"> 8 Configurable Settings

19. Appendix C: Glossary

Term	Definition
4 Part Key	Unique identifier for a transaction. Consists of Device #, Store #, Transaction # and Date.