



Receipts and Payments Mismatch

1. Introduction

The purpose of this note is to document a request that we have had from Post Office in terms of presenting details of what happened as a result of a bug in HNG-X in September 2010 which caused a Receipts and Payments mismatch and also resulted in Discrepancies being lost.

The background to this is the fact that there was a BBC documentary broadcast on Monday 7th February 2011 reporting on postmasters being unhappy about being pursued for losses by Postmasters on Horizon.

It should be noted that the issues described here relates to HNG-X (Horizon Online) and that the implementation of the accounting mechanisms in the two systems is totally different (but they do produce the same reports and support the same business process).

This version of the note reflects my current understanding of Post Office Ltd's requirements.

2. The Original Problem

This is extracted from a note produced at the time and shared with Post Office Ltd called 'Correcting Accounts for "lost" Discrepancies' in document Lost Discrepancies.doc.

PC0204263 describes a problem with SU Balancing that will result in a Receipts and Payments mismatch. A fix was created for this Peak.

The fix has subsequently been fully deployed.

However any branch encountering the problem will have corrupted accounts and Peak PC0204765 is a Master Peak to record all affected branches and also to define the process for correcting the accounts.

It should be noted that PC0204263 was raised as a result of Fujitsu's monitoring of system events and not as a result of a customer call from NBSC or HSD (although there were subsequent calls from Branches). This shows that the system monitoring controls for Receipts and Payments mismatches were in place and were effective in detecting such problems.

The problem occurs as part of the process of moving Discrepancies into Local Suspense.

When Discrepancies are found when rolling a SU over into a new TP, then the User is asked if they should be moved to Local Suspense (MSG31316). Should they Cancel at this point the Discrepancy is zeroised in the Local Cache (but nothing is written to the BRDB). Note that there is no corresponding Balancing Transaction generated in the Local Cache and so the Local Cache is in an Unbalanced state.

If at the next screen (where the options are to: print or preview the trial balance again; to re-attempt the rollover; or to cancel the rollover) the rollover is Cancelled, then no harm is done.



However if the Rollover is re-attempted at this point, the rollover will continue with the corrupted Local Cache.

In practice this re-attempted rollover has usually been to a new BP, but it is the reattempted rollover that results in the corruption.

This has the following consequences:

- There will be a Receipts and Payment mismatch corresponding to the value of Discrepancies that were “lost”

Note that if the User doesn't check their Final Balance Report carefully they may be unaware of the issue since there is no explicit message when a Receipts and Payment mismatch is found on the Final balance (the User is only prompted when one is detected during a Trial balance)

- The Local Suspense will have no knowledge of this specific Discrepancy
- The Opening Figures for Discrepancies in the new Period will be zero rather than the actual value of the Discrepancy
- The data used for the BTS will also have a zero value for Discrepancies at the end of the period. When the BTS is produced this will result in a similar Receipts and Payment mismatch

Note that if the bug was not present, then the Discrepancy would have been transferred to Local Suspense and that would have been cleared, so there are a number of things wrong with the BTS. However the impact of the bug is that the Discrepancy is lost and so the simplest way to correct it is to re-introduce the lost Discrepancy in a subsequent period and allow the normal rollover process to correct it.

Note that if more than one SU has the issue then the value will be the total value of all errors.

- The level of Discrepancies when viewed at the Branch will no longer match the level as seen in POL SAP or POL MIS

The problem appears to have affected 62 Branches and details have been provided to Post Office Ltd of all the BTS and SU Rollover Reports for these Branches until they were clear of the issue.

3. What Post Office want now

Post Office are now looking to put together a “storyboard” showing the precise steps all the way through the problem, consisting of screen shots and snapshot reports from the system. This will assist in explaining the issue to senior management and, if necessary, the Press.

Post Office are seeking help from Fujitsu in doing this.

Fujitsu propose offer to do the following to meet that requirement:

1. Select one of the affected Branches

POL should be able to select a branch from the information they have. POL have responded that Fujitsu should select any of the 62 affected branches.



2. For this Branch, we need to describe exactly what happened in terms of screens that were displayed and reports that were actually produced. The reports that were produced are already available in the information we have provided to Post Office Ltd. We should be able to put together screenshots from a test or development system.
3. In addition, we can identify at key points in the sequence what the state of the Branch's accounts actually were, by mocking up what a SU Balance Snapshot would have looked like at that point of time. This can be done by taking the version of the report we have provided to POL and editing it to reflect the changed figures at that point in time.
4. This information can then be presented to POL either as a document or a PowerPoint slide show.

POL need to let us know which they want. POL have chosen 2, 3 and 4 to be presented in a document format followed with a walkthrough. The information is presented in section 4 below and a walkthrough will be arranged accordingly.

4. Detailed Scenario

Branch 135026 has been chosen to illustrate the problem. This Branch has two Stock Units, AA and ATM. The issue occurred during TP 09 when rolling over Stock Unit ATM from BP 01 to BP 02 on 23rd September 2010.

Stock Unit ATM is an Individual Stock Unit.

A variance between the daily cash declarations and the system figures of £88.77 had first been identified on 16th September (i.e. the first day after rolling over into TP 09 BP 01). Such a variance was consistently reported each time a Cash Declaration was made.

What I have attempted to do below is to reproduce the sequence of activities and screens that the User (JTH001) would have gone through when carrying out the Balancing process.

We have attempted to create accurate reports as they would have appeared at the time. The screens have been recreated as accurate as possible. The Date and Time at the top of each screen have not been adjusted and reflect the time that the transaction sequence was ran on the test system. All attempts have been made to ensure that the values in other parts of the screen are accurate.

4.1 Balancing SU ATM at the end of TP 9 BP 1

To show the initial state of affairs, Figure 1 shows what a Balance Snapshot would have looked like prior to starting the balancing process.

Little Thurrock
09:32 23/09/2010

FAD: 1350269
TP: 09 BP: 01 SU: ATM

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
Author: Gareth I Jenkins
Date: 16/05/2013 16:23:00



HNG-X System
Receipts and Payments Mismatch



Balance Snapshot - Office Copy

*****Discrepancies in this Account*****

*Discrepancy OVER	0.00	*
*Discrepancy SHORT	0.00	*
*	-----*	
*Nett discrepancy	0.00	*
*	-----*	

VALUE	ITEMS &MOP	VOLUME	VALUE
Cash			12541.23
Cash			12541.23
MOP			12541.23

TOTAL VALUE	ITEMS &MOP		12541.23

RECEIPTS	VOLUME	VALUE
Balance B/Fwd		6541.23
Transfers In		15000.00
Remittance In Detail		0.00
Discrepancy OVER Transferred		0.00
Discrepancy SHORT Resolved		0.00

TOTAL RECEIPTS		21541.23

PAYMENTS	VOLUME	VALUE
A&L ATM	8	9000.00
SELF FILL ATM		9000.00
Transfers Out		0.00
Remittance Out Detail		0.00
Discrepancy SHORT Transferred		0.00
Discrepancy OVER Resolved		0.00
Total VALUE ITEMS &MOP		12541.23
Nett discrepancies		0.00

TOTAL PAYMENTS		21541.23

Balance C/Fwd		12541.23
---------------	--	----------

STOCK VOLUMES	VOLUME
EXAMINATION	

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscdata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
 Author: Gareth I Jenkins
 Date: 16/05/2013 16:23:00



HNG-X System Receipts and Payments Mismatch



Drawer examined and cash and stock found as shown in this summary

Datestamp
+-----+

TRANSFER

Cash and stock in this summary have been transferred to me

Datestamp
+-----+

Signature

*** END OF REPORT ***

Figure 1 – Initial Balance Snapshot

When Balancing SU ATM, the following would have occurred:

The User JTH001 would have gone to the Back Office Stock Balancing menu.

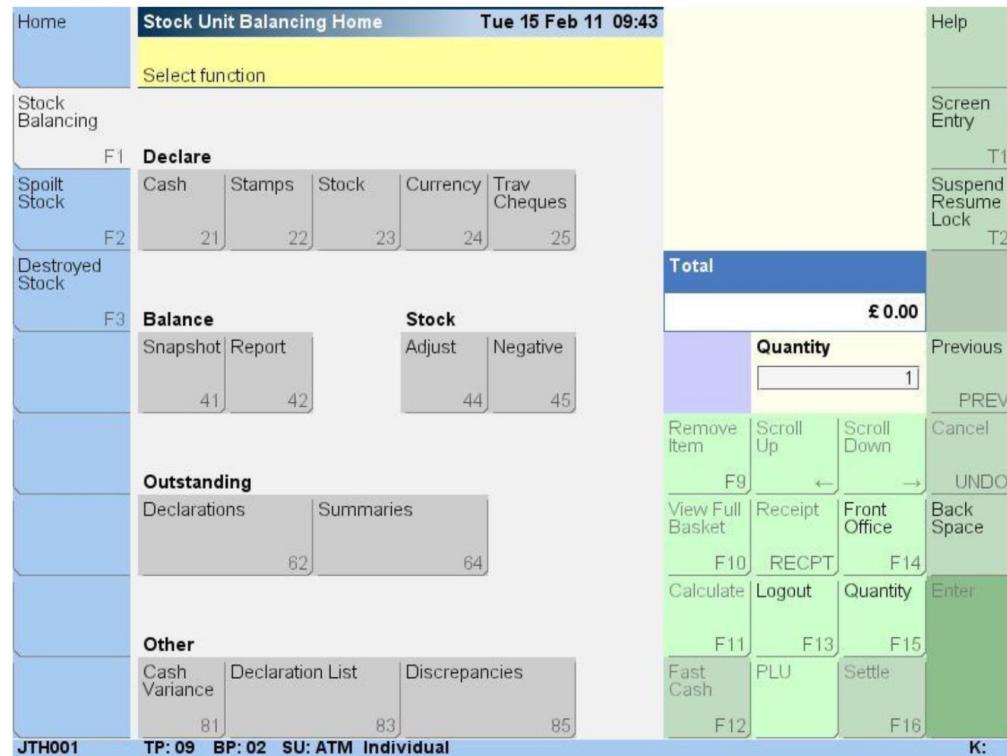


Figure 2 - Stock Balancing Menu

Figure 2 shows the Stock Balancing Menu.

On this menu, the Stamps button was used to declare stamps at £0.00

Then the Cash button was used to Declare Cash at £12,630.00. This figure is more than the System Cash figure, and so a message was displayed indicating that there was a discrepancy and then a screen showing the gain as in Figure 3.



HNG-X System
Receipts and Payments Mismatch



Home History F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 Page Up Page Down Page I/I JTH001 TP: 09 BP: 01 SU: ATM Individual	<p>Declare Cash Holding Tue 15 Feb 11 09:28</p> <p>TBC-024: Review declaration details then press Enter</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Type</th> <th style="width: 30%;">Amount</th> <th style="width: 40%;">Variance</th> </tr> </thead> <tbody> <tr> <td>cash</td> <td>£ 88.77</td> <td>Gain</td> </tr> </tbody> </table> <p style="text-align: right;">Total £ 0.00</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;">Quantity</td> <td style="width: 10%; text-align: center;">Previous</td> <td style="width: 10%; text-align: center;">Cancel</td> <td style="width: 10%; text-align: center;">UNDO</td> </tr> <tr> <td style="text-align: center;">1</td> <td></td> <td></td> <td></td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">Remove Item</td> <td style="width: 25%; text-align: center;">Scroll Up</td> <td style="width: 25%; text-align: center;">Scroll Down</td> <td style="width: 25%; text-align: center;">Front Office</td> </tr> <tr> <td style="text-align: center;">F9</td> <td style="text-align: center;">←</td> <td style="text-align: center;">→</td> <td style="text-align: center;">F14</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">View Full Basket</td> <td style="width: 25%; text-align: center;">Receipt</td> <td style="width: 25%; text-align: center;">Logout</td> <td style="width: 25%; text-align: center;">Quantity</td> </tr> <tr> <td style="text-align: center;">F10</td> <td style="text-align: center;">RECPT</td> <td style="text-align: center;">F13</td> <td style="text-align: center;">F15</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;">Calculate</td> <td style="width: 25%; text-align: center;">Fast Cash</td> <td style="width: 25%; text-align: center;">PLU</td> <td style="width: 25%; text-align: center;">Settle</td> </tr> <tr> <td style="text-align: center;">F11</td> <td style="text-align: center;">F12</td> <td style="text-align: center;">F16</td> <td></td> </tr> </table>	Type	Amount	Variance	cash	£ 88.77	Gain	Quantity	Previous	Cancel	UNDO	1				Remove Item	Scroll Up	Scroll Down	Front Office	F9	←	→	F14	View Full Basket	Receipt	Logout	Quantity	F10	RECPT	F13	F15	Calculate	Fast Cash	PLU	Settle	F11	F12	F16		Help Screen Entry T1 Suspend Resume Lock T2 PREV Back Space Enter K:
Type	Amount	Variance																																						
cash	£ 88.77	Gain																																						
Quantity	Previous	Cancel	UNDO																																					
1																																								
Remove Item	Scroll Up	Scroll Down	Front Office																																					
F9	←	→	F14																																					
View Full Basket	Receipt	Logout	Quantity																																					
F10	RECPT	F13	F15																																					
Calculate	Fast Cash	PLU	Settle																																					
F11	F12	F16																																						

Figure 3 - Cash Gain

The User would then have selected Enter to confirm this and had the option to print the Declaration report and would then have been returned to the Balancing menu as shown in Figure 2.

Then the Balance Report button was used to Balance the Stock Unit.

The first screen shown when balancing the Stock Unit is as in Figure 4.



HNG-X System
Receipts and Payments Mismatch



Home Stock Balancing F1 Declare Spoilt Stock F2 Cash 21 Stamps 22 Stock 23 Currency 24 Trav Cheques 25 F3 Destroyed Stock Balance Snapshot Report 41 42 Stock Adjust 44 Negative 45	<p style="text-align: center;">Stock Unit Balancing Home Tue 15 Feb 11 09:30</p> <p>Select function</p> <p style="text-align: center;">MSG00152</p> <p>Confirm Loss/Gain</p> <p style="text-align: center;">One or more declaration totals do not match the system derived figure.</p> <p>Press Continue to see list of discrepancies for confirmation.</p> <p style="text-align: center;">Continue ENTER</p>	Help Screen Entry T1 Suspend Resume Lock T2 Total £ 0.00 Quantity 1 Remove item F9 Scroll Up F10 View Full Basket F11 Calculate F12 Fast Cash F13 PLU F14 Front Office F15 Quantity F16 Settle Receipt RECPT Logout F13 F14 F15 Cancel UNDO F16 Enter PREV F14 Back Space K:
---	---	---

Figure 4 - Discrepancies Exist

This indicates that there are one or more discrepancies between the System Figures and the Declarations that have been made.

The User would have selected Continue at this point.



HNG-X System
Receipts and Payments Mismatch



Home History F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 Page Up Page Down Page I/I JTH001	<p style="background-color: #ffffcc; border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;">Balance Stock Unit Report</p> <p style="text-align: center; font-weight: bold;">Tue 15 Feb 11 09:31</p> <p>BAC-761:Press Enter to continue</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="width: 30%;">Product Name</th> <th style="width: 30%;">Discrepancy</th> <th style="width: 40%;">Gain / Loss</th> </tr> </thead> <tbody> <tr> <td>Cash</td> <td>£ 88.77</td> <td>Gain</td> </tr> </tbody> </table> <p style="text-align: right; margin-top: 10px;"> Total £ 0.00 </p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 20%; background-color: #d9e1f2;">Quantity</td> <td style="width: 10%;"><input type="text" value="1"/></td> <td style="width: 10%;">Previous</td> <td style="width: 10%;">PREV</td> <td style="width: 10%;">Cancel</td> <td style="width: 10%;">UNDO</td> </tr> <tr> <td>Remove Item</td> <td>Scroll Up</td> <td>Scroll Down</td> <td>Front Office</td> <td>Back Space</td> <td>Enter</td> </tr> <tr> <td>View Full Basket</td> <td>Receipt</td> <td>Logout</td> <td>F14</td> <td>F15</td> <td>F16</td> </tr> <tr> <td>Calculate</td> <td>RECPT</td> <td>F13</td> <td>Quantity</td> <td>Settle</td> <td>F12</td> </tr> <tr> <td>Fast Cash</td> <td>PLU</td> <td>F11</td> <td>F10</td> <td>F1</td> <td>K:</td> </tr> </table>	Product Name	Discrepancy	Gain / Loss	Cash	£ 88.77	Gain	Quantity	<input type="text" value="1"/>	Previous	PREV	Cancel	UNDO	Remove Item	Scroll Up	Scroll Down	Front Office	Back Space	Enter	View Full Basket	Receipt	Logout	F14	F15	F16	Calculate	RECPT	F13	Quantity	Settle	F12	Fast Cash	PLU	F11	F10	F1	K:	Help Screen Entry T1 Suspend Resume Lock T2
Product Name	Discrepancy	Gain / Loss																																				
Cash	£ 88.77	Gain																																				
Quantity	<input type="text" value="1"/>	Previous	PREV	Cancel	UNDO																																	
Remove Item	Scroll Up	Scroll Down	Front Office	Back Space	Enter																																	
View Full Basket	Receipt	Logout	F14	F15	F16																																	
Calculate	RECPT	F13	Quantity	Settle	F12																																	
Fast Cash	PLU	F11	F10	F1	K:																																	

Figure 5 - Discrepancy List

Figure 5 is then displayed with a list of the one discrepancy that was identified. Note that this is the same as he would have seen in Figure 3.



Balance Stock Unit Report		Tue 15 Feb 11 09:32		Help	
0: No Screen Hint. Press Help for more information					
History					
F1 Balance - Office Copy <div style="display: flex; justify-content: space-around; align-items: center;"> Print Preview Roll Over </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 22 24 26 </div>					
Total <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> £ 0.00 Quantity </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> Remove Item Scroll Up Scroll Down </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> F9 ← → </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> View Full Basket Receipt Front Office </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> F10 RECPT F14 </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> Calculate Logout Quantity </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> F11 F13 F15 </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> Fast Cash PLU Settle </div> <div style="display: flex; justify-content: space-around; align-items: center; margin-top: 10px;"> F12 F16 </div>					
Screen Entry T1 Suspend Resume Lock T2					
Previous PREV Cancel UNDO Back Space Enter					

Figure 6 - Print Trial Balance Screen

Figure 6 is then displayed allowing the user to print (or preview) the Trial Balance.

Until the Trial Balance has been printed or previewed, then the Roll Over button is not available.

At this point the Trial Balance would have been printed and it would have looked like:

Little Thurrock FAD: 1350269
 09:32 23/09/2010 TP: 09 BP: 01 SU: ATM
 Trial Balance - Office Copy

*****Discrepancies in this Account*****

*Discrepancy OVER	88.77	*	
*Discrepancy SHORT	0.00	*	
*	-----	*	
*Nett discrepancy	88.77	*	
*	-----	*	
*****	*****	*****	
VALUE	ITEMS &MOP	VOLUME	VALUE
Cash			12630.00
Cash			12630.00



HNG-X System
Receipts and Payments Mismatch



MOP 12630.00

TOTAL VALUE ITEMS &MOP 12630.00

RECEIPTS	VOLUME	VALUE
Balance B/Fwd		6541.23
Transfers In		15000.00
Remittance In Detail		0.00
Discrepancy OVER Transferred		0.00
Discrepancy SHORT Resolved		0.00

TOTAL RECEIPTS 21541.23

PAYMENTS	VOLUME	VALUE
A&L ATM	8	9000.00
SELF FILL ATM		9000.00
Transfers Out		0.00
Remittance Out Detail		0.00
Discrepancy SHORT Transferred		0.00
Discrepancy OVER Resolved		0.00
Total VALUE ITEMS &MOP		12630.00
Nett discrepancies		88.77-

TOTAL PAYMENTS 21541.23

Balance C/Fwd 12630.00

STOCK VOLUMES VOLUME

EXAMINATION

Drawer examined and cash and stock found
as shown in this summary

Datestamp

-----+

Signature .

• •

• •

Time AM/PM +-----+

TRANSFER

Cash and stock in this summary have been
transferred to me

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
Author: Gareth I Jenkins
Date: 16/05/2013 16:23:00



HNG-X System Receipts and Payments Mismatch



Signature	Datestamp +-----+
Time	AM/PM +-----+

Figure 3. Original Trial Balance Report

Having printed the trial balance the user would then have selected Roll Over

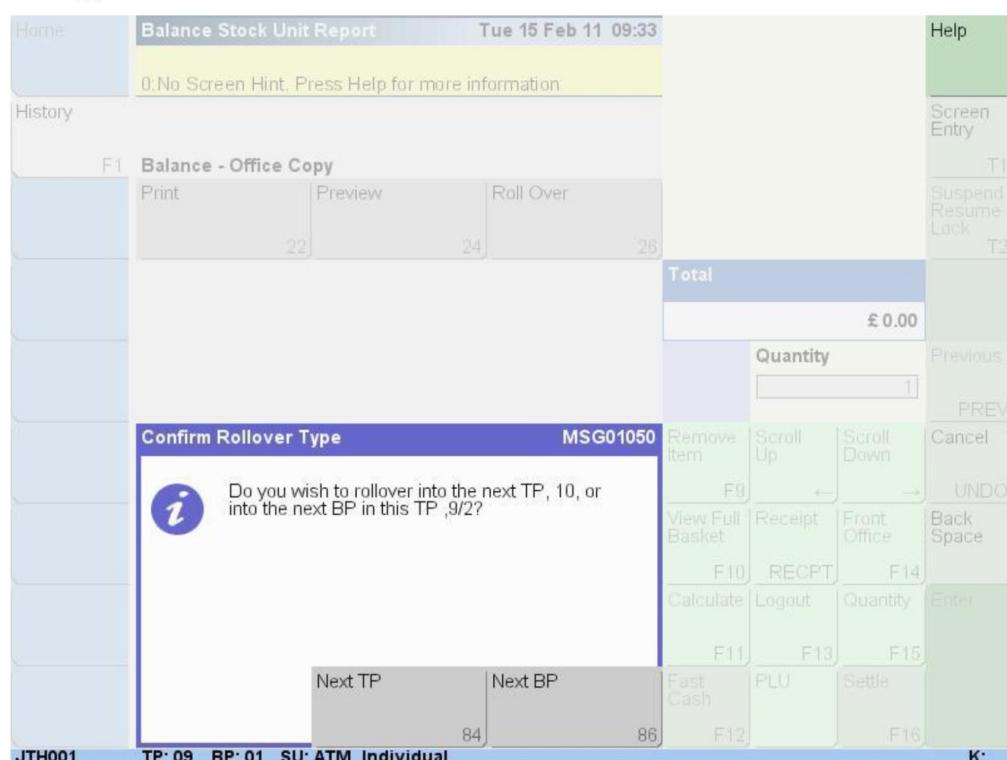


Figure 8 - TP or BP Rollover?

Figure 8 would have been displayed giving the User the option of rolling over into either the next TP (TP 10) or the next BP (BP 02 of TP 09).

In order to encounter the problem the user would have selected a new TP and so have selected the Next TP button. Note that this is incorrect as it is not time to rollover into TP 10 for another 3 weeks.



HNG-X System
Receipts and Payments Mismatch

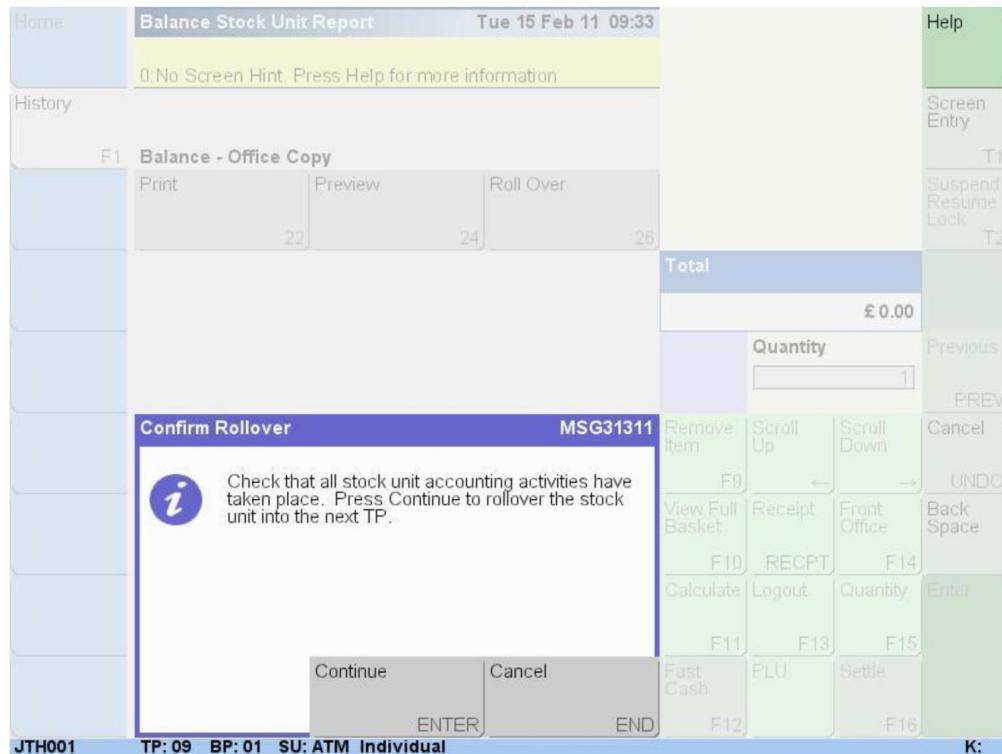


Figure 9 - Prepare for new TP

Figure 9 would be displayed requesting the user to confirm that all relevant Business Processes to roll into a new TP have been followed. They would then have selected Continue to progress. Note that if the User had realised their error and Cancelled at this point all would have been well and the User would have been returned to the screen show in Figure 6 and if they had then chosen to produce a Trial Balance again it would have been as shown in Figure 7. In particular, if the SU was then rolled over into a new BP the Discrepancy would not have been lost.

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscdata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
 Author: Gareth I Jenkins
 Date: 16/05/2013 16:23:00



HNG-X System
Receipts and Payments Mismatch

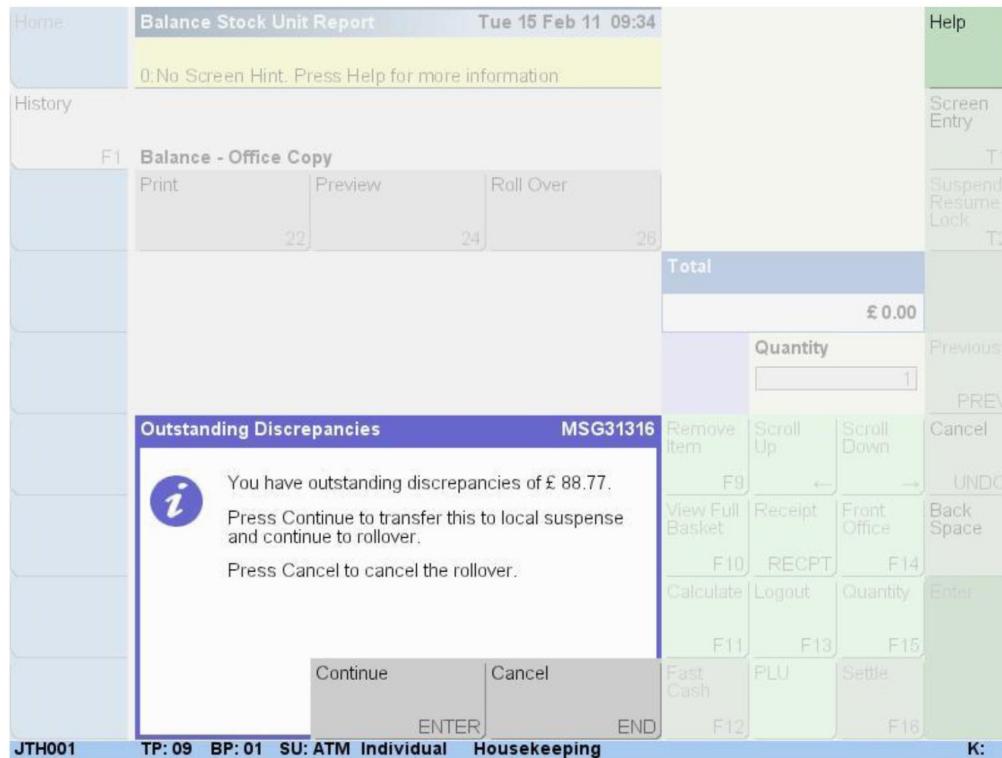


Figure 10 - Post Discrepancy to Local Suspense

Figure 10 would then be shown indicating that the SU Discrepancy is to be posted to Local Suspense.

At this point the user realises that they didn't mean to rollover into a new TP (posting of discrepancies and hence this screen only appear during TP rollovers), and so they select Cancel. It is at this point that the bug occurs. The local memory cache in the counter has the discrepancy cleared at this point, but no corresponding balancing transaction has been added into the cache to balance it.

They then return to the screen shown in Figure 6.

At this point they could have selected cancel and all would have been well. If the Print or Preview option had been selected at this point to re-print the Trial Balance, then the following would have been printed:

```

Little Thurrock          FAD: 1350269
09:33 23/09/2010      TP: 09 BP: 01 SU: ATM
Trial Balance - Office Copy

*****Discrepancies in this Account*****
*Discrepancy OVER          0.00      *
*Discrepancy SHORT         0.00      *
*-----*

```



HNG-X System
Receipts and Payments Mismatch



*Nett discrepancy 0.00 *

VALUE	ITEMS &MOP	VOLUME	VALUE
Cash		12630.00	
Cash		12630.00	
MOP		12630.00	

TOTAL VALUE ITEMS &MOP			12630.00

RECEIPTS	VOLUME	VALUE
Balance B/Fwd		6541.23
Transfers In		15000.00
Remittance In Detail		0.00
Discrepancy OVER Transferred		0.00
Discrepancy SHORT Resolved		0.00

TOTAL RECEIPTS		21541.23

PAYMENTS	VOLUME	VALUE
A&L ATM	8	9000.00
SELF FILL ATM		9000.00
Transfers Out		0.00
Remittance Out Detail		0.00
Discrepancy SHORT Transferred		0.00
Discrepancy OVER Resolved		0.00
Total VALUE ITEMS &MOP		12630.00
Nett discrepancies		0.00

TOTAL PAYMENTS		21630.00

Balance C/Fwd 12630.00

STOCK VOLUMES VOLUME

EXAMINATION

Drawer examined and cash and stock found
as shown in this summary

Datestamp

-----+

Signature

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscdata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc

Author: Gareth I Jenkins

Date: 16/05/2013 16:23:00

Page 15 of 30



HNG-X System
Receipts and Payments Mismatch



Time AM/PM +-----+

TRANSFER

Cash and stock in this summary have been transferred to me

Datestamp

+-----+

Signature

.

.

Time AM/PM +-----+

*** END OF REPORT ***

Figure 11 – Revised Trial Balance

In Figure 11, I have highlighted the differences from Figure 7, namely that the Discrepancy figures have been zeroised and the Total Payments no longer matches Total Receipts.

The consequences of this are that the Discrepancy (which was in the postmaster's favour in this case) has been lost and so the postmaster will not be advised that they can remove the £88.77 surplus.

Note also that if this had occurred, then a Receipts and Payments mismatch event would have been recorded and a message would have been displayed to the User.

However they decide to roll into a new BP instead and so select the Roll Over button and the screen in Figure 8 is redisplayed.

This time the Next BP button is selected. This results in the Final Balance for the BP being printed.

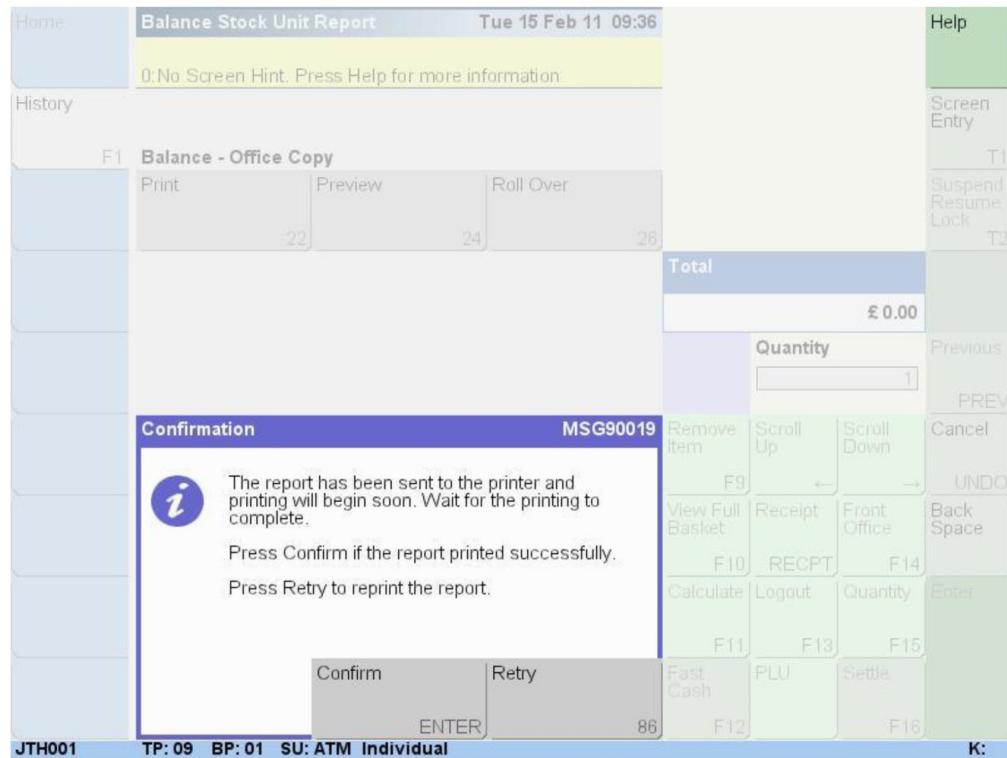


Figure 12 - Final Balance Printing

This would have matched the Trial balance shown above other than saying it was a Final balance.

Note that the user is not warned about receipts and payments mismatches on the Final balance as it is assumed that they would already have been seen on the trial balance.

This particular bug shows that is not necessarily the case!

Also note that no Business event indicating a Receipts and Payments mismatch is generated during the printing of the Final balance.

However a System (NT) Event is generated at this point regarding the Receipts and Payments mismatch.

Figure 12 is displayed for the User to confirm that the Final balance has printed OK. On completion of the Print then Confirm is selected.



HNG-X System
Receipts and Payments Mismatch

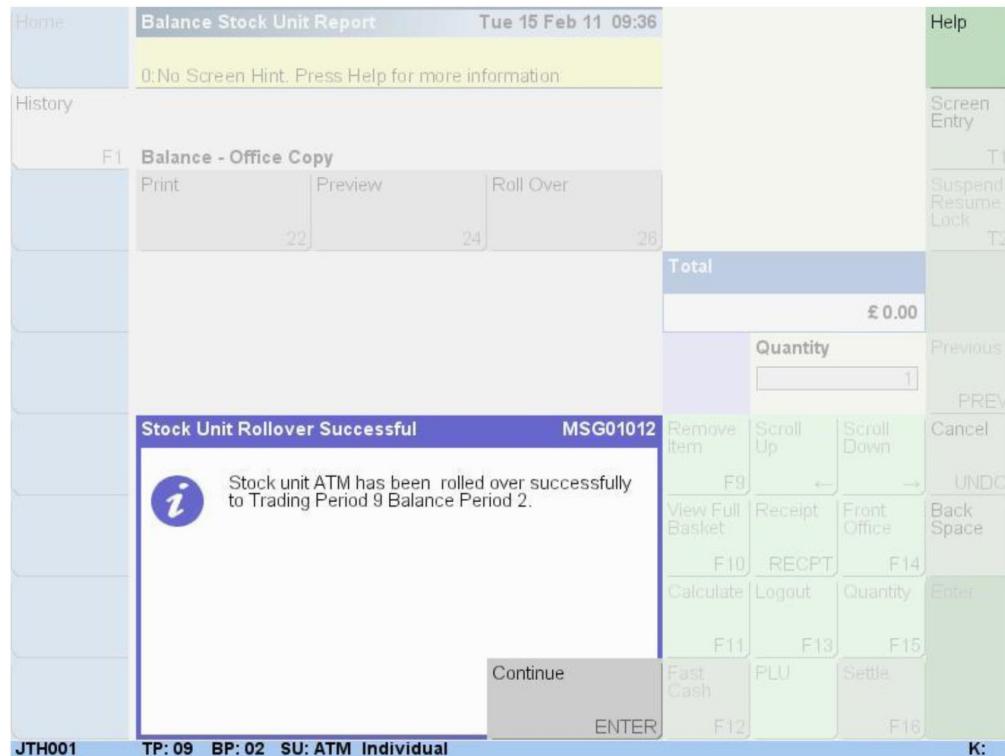


Figure 13 - Rollover Complete

Figure 13 is then displayed confirming that the rollover has been completed. Once the message has been read then Continue is selected returning the user to the Stock balancing Menu as in Figure 2.

Internally, Horizon would have recorded Opening Figures for the new BP and these would be incorrect since the Discrepancy of £88.77 (gain) should have been carried forward into the new BP.

If at this point a Balance Snapshot was taken it would appear as in Figure 14.

```

Little Thurrock          FAD: 1350269
09:32 23/09/2010      TP: 09 BP: 02 SU: ATM
Balance Snapshot - Office Copy

*****Discrepancies in this Account*****
*Discrepancy OVER          0.00  *
*Discrepancy SHORT         0.00  *
*                                -----
*Nett discrepancy          0.00  *
*                                -----
***** ****

```



HNG-X System Receipts and Payments Mismatch



ITEMS	VALUE	VOLUME	ITEMS	VALUE
Cash	12630.00			
Cash	12630.00			
MOP	12630.00			

TOTAL	12630.00		ITEMS	VALUE

RECEIPTS	VOLUME	VALUE
Balance B/Fwd		12630.00
Transfers In		0.00
Remittance In Detail		0.00
Discrepancy OVER Transferred		0.00
Discrepancy SHORT Resolved		0.00
<hr/>		
TOTAL RECEIPTS		12630.00

PAYMENTS	VOLUME	VALUE
Transfers Out		0.00
Remittance Out Detail		0.00
Discrepancy SHORT Transferred		0.00
Discrepancy OVER Resolved		0.00
Total VALUE ITEMS &MOP		12630.00
Nett discrepancies		00.00

TOTAL PAYMENTS 12630.00

Balance C/Fwd 12630.00

STOCK VOLUMES

VOLUME

EXAMINATION

Drawer examined and cash and stock found
as shown in this summary

TRANSFER

Cash and stock in this summary have been



HNG-X System Receipts and Payments Mismatch



transferred to me

Datestamp

+-----+

•

*** END OF REPORT ***

Figure 14 – Balance Snapshot in new BP

4.2 Balancing the Branch

All subsequent BP rollovers for this Stock Unit would have been OK and the next time an issue would be noticeable would be when rolling over the Branch into the next TP on 21/10/2010.



**HNG-X System
Receipts and Payments Mismatch**



The BTS produced was as follows:

Little Thurrock FAD 1350269

1

10:12 21/10/2010

Final Branch Trading Statement - Office Copy From 16/09/10 To 14/10/10

	Branch Total	Suspense	SU AA	SU ATM
Cash On Hand B Fwd	53272.23		46731.00	6541.23
All Currencies Awaiting Collection B Fwd	66.39	66.39		
Suspense B Fwd	0.00	0.00		
Other MOP B Fwd	0.00		0.00	0.00
ForEx B Fwd	3293.29		3293.29	0.00
Other Postage B Fwd	2786.84		2786.84	0.00
Remittances In Total	1767.50		1767.50	0.00
All Currency Rems from SUs	113422.00	113422.00		
Gains to/from Suspense	0.00	0.00	0.00	0.00
All Currency Pouches Despatched	113488.39		113488.39	0.00
Transfers In from other SUs	45000.00		0.00	45000.00
Other Receipts	356755.05		356755.05	0.00
Remittances Out Total	132485.28		132485.28	0.00
All Currency Pouches Despatched via Sus	113488.39	113488.39		
Losses to/from Suspense	0.00	0.00	0.00	0.00
All Currency Rems to Suspense	113422.00		113422.00	0.00
Transfers Out to other SUs	45000.00		45000.00	0.00
Other Payments	229755.25		186695.25	43060.00

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc

Author: Gareth I Jenkins

Date: 16/05/2013 16:23:00

Page 21 of 30



HNG-X System
Receipts and Payments Mismatch



Cash On Hand C Fwd	49526.86		40956.86	8570.00
All Currencies Awaiting Collection C Fwd	0.00	0.00		
Suspense C Fwd	0.00	0.00		
Other MOP C Fwd	0.00		0.00	0.00
ForEx C Fwd	2912.41		2912.41	0.00
Other Postage C Fwd	3350.27		3350.27	0.00
Total C Fwd	55789.54	0.00	47219.54	8570.00
Trading position (+/-)	88.77-		0.00	88.77-
Discrepancy OVER Transferred	0.00		0.00	0.00
Discrepancy SHORT Transferred	20.86		20.86	0.00
Discrepancy OVER Resolved	0.00		0.00	0.00
Discrepancy SHORT Resolved	20.86		20.86	0.00
Total Branch Adjustments	20.86-		20.86-	0.00

Little Thurrock FAD 1350269

2

10:12 21/10/2010 Reprint for 10:12 21/10/2010

09

Final Branch Trading Statement - Office Copy From 16/09/10 To 14/10/10

Stock Holdings at End of Period

DESCRIPTION	VOLUME	DESCRIPTION	VOLUME	DESCRIPTION
Christmas 10 PP	4	Instants £5	78	
Medical PP	5	Instants £2	382	
WinniePoohPP	5			
RSF 1st Class	148			

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc

Author: Gareth I Jenkins

Date: 16/05/2013 16:23:00

Page 22 of 30



HNG-X System
Receipts and Payments Mismatch



1st class stmp	4757
RSF 1st Large	199
1st class Large	584
2nd class Large	618
2nd class stmp	7191
SplDel SD3	41
Airsure World	9
Int Sign Euro	8
Int Sign World	9
Airsure Europe	10
Airletter Single	26
SplDel SD2	23
SplDel by 9.00am	29
S/a 2ndx100	49
S/a 1stx100	42
1st Large x 4	61
2nd Large x 4	82
SAS bk 1st x 12	634
SAS bk 2nd x 12	762
SAS bk 1st x 6	232
PO Phonecrd £5	7
PO Phonecrd £10	5
PO Phonecrd £20	22
Postal Orders	93

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
Author: Gareth I Jenkins
Date: 16/05/2013 16:23:00

Page 23 of 30



HNG-X System
Receipts and Payments Mismatch



MVL Discs	809
Instants £1	536
Transaction Corrections	6

I certify that the content of this balancing and trading statement is an accurate reflection of the cash and stock or

Signature:

*** END OF REPORT ***

Figure 15 – Branch Trading Statement

This shows a Trading Position of £88.77 (highlighted) corresponding to the lost discrepancy.

However if we assume that there was no further transactions done in SU ATM in the remaining BPs, we would have a BTS as follows:

I have also adjusted the data for SU AA to remove any transfers to SU ATM so that it all balances other then the £88.77 due to the bug.

Little Thurrock	FAD 1350269			
1				
10:12 21/10/2010				
Final Branch Trading Statement - Office Copy From 16/09/10 To 14/10/10				
	Branch Total	Suspense	SU AA	SU ATM
Cash On Hand B Fwd	53272.23		46731.00	6541.23
All Currencies Awaiting Collection B Fwd	66.39	66.39		
Suspense B Fwd	0.00	0.00		
Other MOP B Fwd	0.00		0.00	0.00
ForEx B Fwd	3293.29		3293.29	0.00
Other Postage B Fwd	2786.84		2786.84	0.00

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc

Author: Gareth I Jenkins

Date: 16/05/2013 16:23:00

Page 24 of 30



**HNG-X System
Receipts and Payments Mismatch**



Remittances In Total	1767.50		1767.50	0.00
All Currency Rems from SUs	113422.00	113422.00		
Gains to/from Suspense	0.00	0.00	0.00	0.00
All Currency Pouches Despatched	113488.39		113488.39	0.00
Transfers In from other SUs	15000.00		0.00	15000.00
Other Receipts	356755.05		356755.05	0.00
Remittances Out Total	132485.28		132485.28	0.00
All Currency Pouches Despatched via Sus	113488.39	113488.39		
Losses to/from Suspense	0.00	0.00	0.00	0.00
All Currency Rems to Suspense	113422.00		113422.00	0.00
Transfers Out to other SUs	15000.00		15000.00	0.00
Other Payments	195695.25		186695.25	9000.00
Cash On Hand C Fwd	83586.86		70956.86	12630.00
All Currencies Awaiting Collection C Fwd	0.00	0.00		
Suspense C Fwd	0.00	0.00		
Other MOP C Fwd	0.00		0.00	0.00
ForEx C Fwd	2912.41		2912.41	0.00
Other Postage C Fwd	3350.27		3350.27	0.00
Total C Fwd	89849.54	0.00	77219.54	12630.00
Trading position (+/-)	88.77-		0.00	88.77-
Discrepancy OVER Transferred	0.00		0.00	0.00
Discrepancy SHORT Transferred	20.86		20.86	0.00
Discrepancy OVER Resolved	0.00		0.00	0.00
Discrepancy SHORT Resolved	20.86		20.86	0.00

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
 Author: Gareth I Jenkins
 Date: 16/05/2013 16:23:00



HNG-X System
Receipts and Payments Mismatch



Total Branch Adjustments 20.86- 20.86- 0.00

Little Thurrock FAD 1350269

2

10:12 21/10/2010 Reprint for 10:12 21/10/2010

09

Final Branch Trading Statement - Office Copy From 16/09/10 To 14/10/10

Stock Holdings at End of Period

DESCRIPTION	VOLUME	DESCRIPTION	VOLUME	DESCRIPTION
Christmas 10 PP	4	Instants £5	78	
Medical PP	5	Instants £2	382	
WinniePoohPP	5			
RSF 1st Class	148			
1st class stmp	4757			
RSF 1st Large	199			
1st class Large	584			
2nd class Large	618			
2nd class stmp	7191			
SplDel SD3	41			
Airsure World	9			
Int Sign Euro	8			
Int Sign World	9			
Airsure Europe	10			
Airletter Single	26			
SplDel SD2	23			

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc

Author: Gareth I Jenkins

Date: 16/05/2013 16:23:00

Page 26 of 30



HNG-X System
Receipts and Payments Mismatch



SplDel by 9.00am	29
S/a 2ndx100	49
S/a 1stx100	42
1st Large x 4	61
2nd Large x 4	82
SAS bk 1st x 12	634
SAS bk 2nd x 12	762
SAS bk 1st x 6	232
PO Phonecrd £5	7
PO Phonecrd £10	5
PO Phonecrd £20	22
Postal Orders	93
MVL Discs	809
Instants £1	536
Transaction Corrections	6

I certify that the content of this balancing and trading statement is an accurate reflection of the cash and stock or

Signature:

*** END OF REPORT ***

Figure 16 – Adjusted Branch Trading Statement

Given the same assumptions as above (no further transactions done in SU ATM in the remaining BPs) then the Trial Balance Report at the end of BP 4 for SU ATM would have looked as follows:

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
Author: Gareth I Jenkins
Date: 16/05/2013 16:23:00



HNG-X System
Receipts and Payments Mismatch



Little Thurrock FAD: 1350269

09:32 21/10/2010 TP: 09 BP: 04 SU: ATM

Balance Snapshot - Office Copy

*****Discrepancies in this Account*****

*Discrepancy OVER	0.00	*
*Discrepancy SHORT	0.00	*
*	-----*	
*Nett discrepancy	0.00	*
*	-----*	

VALUE	ITEMS &MOP	VOLUME	VALUE
Cash		12630.00	
Cash		12630.00	
MOP		12630.00	

TOTAL	VALUE	ITEMS &MOP	12630.00

RECEIPTS	VOLUME	VALUE
Balance B/Fwd		12630.00
Transfers In		0.00
Remittance In Detail		0.00
Discrepancy OVER Transferred		0.00
Discrepancy SHORT Resolved		0.00

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc

Author: Gareth I Jenkins

Date: 16/05/2013 16:23:00

Page 28 of 30



HNG-X System



TOTAL RECEIPTS 12630.00

PAYMENTS	VOLUME	VALUE
Transfers Out		0.00
Remittance Out Detail		0.00
Discrepancy SHORT Transferred		0.00
Discrepancy OVER Resolved		0.00
Total VALUE ITEMS &MOP		12630.00
Nett discrepancies		00.00

TOTAL PAYMENTS 12630.00

Balance C/Fwd 12630.00

STOCK VOLUMES VOLUME

EXAMINATION

Drawer examined and cash and stock found as shown in this summary

Datestamp

+-----+

Signature

Time AM/PM +-----+

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscdata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
Author: Gareth I Jenkins
Date: 16/05/2013 16:23:00 Page 29 of 30



HNG-X System
Receipts and Payments Mismatch



TRANSFER

Cash and stock in this summary have been
transferred to me

Datestamp

+-----+

Signature

. .

. .

Time AM/PM +-----+

*** END OF REPORT ***

Figure 17 – Adjusted Trial Balance for SU ATM

FUJITSU RESTRICTED (COMMERCIAL IN CONFIDENCE)

Ref: c:\gij\pathway\miscredata\1209.discrepancies\branch 159632\receipts&paymentsv0.4.doc
Author: Gareth I Jenkins
Date: 16/05/2013 16:23:00

Page 30 of 30