
56.1.3 PWS PartsWatch Mode 2 Advanced User Guide R1.0

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1. DOCUMENT INFORMATION

1.1. Publication Record

Revision 1.0 is the current version of the *56.1.3 PWS PartsWatch Mode 2 Advanced User Guide*.

Rev.	Publication Date	Author Name	Description of Revisions
1.0	10/24/2016	Cathy Kuhlmann	Initial Publication

2. INTRODUCTION

2.1. Overview

Mode 2 is a process that enables a store to continue limited operation of customer sales offline when the database resources are interrupted. When a connection to the database cannot be established, the store or PC(s) goes into Mode 2, which is considered 'offline'. Invoicing is the only selection available from the menu when in Mode 2. Mode 2 enables the user to create, validate and finalize sales orders so that Point of Sale invoicing can continue even when connectivity to the data center is lost. When the connection is restored, the store or PC(s) is then considered 'online'.

Common causes of Mode 2 initiation include:

- T1 frame lines are down.
- Electrical interruption.
- Network communications are interrupted.
- Internet provider is unavailable.
- Network cable is disconnected from PC.

Typically, one PC in the store is designated as a Master and all other PCs in the store are designated as Slaves. The Master's role is to pull the latest data from the data center server each night at a designated time and build it into a database that each PC can utilize. The Slave's role is to pull this updated data from the Master.

The Mode 2 process has three stages.

Stage 1

- Master and Slave PCs are configured.
- Master pulls data from the application server.
- Master builds data into a database and places a zipped copy in the specified folder.

Stage 2

- Slave pulls data from the Master PC.
- Slave checks the Master PC at designated intervals for new data, if necessary.

Stage 3

- PC loses connection to data center database and goes into Mode 2.
- Transactions are created.
- PC restores connection to data center.
- Invoices are uploaded to the central database in the data center.
- Uploaded data is validated.
- Invoices are assigned reference numbers and, if they were finalized in Mode 2, invoice numbers and dates according to the next available values.

Functionalities available while in Mode 2 include:

- Acceptance of all forms of Tender, debit cards and gift/merchandise cards
- Catalog Lookup (when the network and Catalog database servers are up but the application database server is down)
- Commercial Account Lookup and Sales
- Default Retail 'Cash Customer' Sales
- Invoice Modifiers
- Line Code Lookup
- New, core and defective returns (No sales validation for returns during Mode 2. DCB credits will not be made.)
- Part Lookup
- Recall of Hold tickets created offline (during this Mode 2 session)
- UPC Code Scanning
- Temporary invoice number assignment

Functionalities not available while in Mode 2 include:

- Axiom Reverse Phone Append
- AR Posting
- Cash Drawer Tracking
- Vehicle Lookup (when the application database server is down)
- Commercial Account Creation
- Daily Day/Cash Close
- Gift Card Sale or Reload (They cannot be loaded electronically.)
- Gift Card Cash Out
- Gift Card and Merchandise Card Refund
- Returns to Gift Card and Merchandise Card
- LISA, Invoice Image, Part Ledger, PATI and any other reports or utilities
- Manifest
- Purchase Order Creation and Receipt
- Recall of Hold tickets created online (prior to this Mode 2 session)
- Retail Account Creation
- Retail Account Lookup
- ROA Creation
- Sales Histories Update
- Shelf Sourcing
- Sourcing
- Stock Quantity Update
- Stock Replenishment
- Vehicle Creation or Lookup

3. CONFIGURATION AND SETUP

Prior to initiating Mode 2 processing, configuration and setup of the following screens are necessary.

- TERMINAL SETUP
- MODE 2 DATA CENTER SETUP
- MODE 2 MONITOR

3.1. Terminal Setup Screen

The TERMINAL SETUP screen is used to configure a PC for Mode 2 processing.

The setup identifies the MASTER PC, SLAVE PC(s) and the directories needed for the MASTER and SLAVE PCs to push and pull data to allow continued invoice processing while offline. User Security permission controls access.

Access the TERMINAL SETUP screen from the Menu, PC Setup, Terminal Setup.

Selection Descriptions

Selection	Description
TERMINAL NAME	Displays the Windows computer name.
TERMINAL USE	Identifies whether the terminal is designated as a corporate terminal or a regular point of sale terminal depending on the value of the CORPORATE flag in the PartsWatch DATABASE CONFIGURATION screen. When CORPORATE is unchecked in the PartsWatch DATABASE CONFIGURATION screen, the TERMINAL USE field displays POINT-OF-SALE. The TERMINAL USE field is grayed out and not user-editable. When CORPORATE is checked in the PartsWatch DATABASE CONFIGURATION screen, the TERMINAL USE field displays CORPORATE and the user is not prompted for a terminal record at login regardless how often the database is changed. All fields in the TERMINAL SETUP screen are grayed out and are not user-editable.
STORE #	Indicates the store number.
DEVICE #	Indicates the number assigned to the PC.
DRAWER	Indicates the drawer identification name/number.
MASTER	Identifies the PC as a Master, when checked.
SLAVE	Identifies the PC as a Slave, when checked.
WORKING DIRECTORY	Indicates the location for the local database file (Master and Slave).
POST DIRECTORY	Indicates the shared location on the Master available for Slaves.
SHARE DIRECTORY	Indicates the Windows share path to the Master POST Directory. (i.e., \MODE2POST)
PHONE ROOM TERMINAL	Indicates that the terminal for that location is designated as a Phone Room terminal, when checked.
CLOSE	Closes the screen.
EDIT	Allows existing date to be modified.
UPD	Saves the edited information.

The POSTING DIRECTORY and WORKING DIRECTORY are used to set the offline file locations for Mode 2 processing. **Note:** The default directories (i.e., MODE2WORK and MODE2POST) exist in C:\ProgramData\PartsWatch.

On the Master PC, the WORKING DIRECTORY receives the nightly download from the database. This download is then copied to the POSTING DIRECTORY and made available to the Slave PCs.

On the Master PC, files move to a SHARE directory when a download successfully completes. Each Slave PC copies the data from this SHARE directory on the Master PC and stores the retrieved data on its local working directory.

Note: The POST DIRECTORY and SHARE DIRECTORY display on the Master's TERMINAL SETUP screen. When the PC is designated as a Slave, these directories are hidden.

3.2. Mode 2 Data Center Setup Screen

The MODE 2 DATA CENTER SETUP screen is used to configure the number of times to attempt to reconnect to the database before switching to Mode 2 and the waiting time between reconnection attempts. The screen is also used to set the download times for each store. Security permission controls access.

Access the MODE 2 DATA CENTER SETUP screen from Menu, Controls, System, Mode 2, Mode 2 Setup.

Mode 2 Data Center Setup

Auto Populate Options

INTERVALS OF MINUTES

BEGINNING AT CUTOFF AT

RECONNECTION ATTEMPTS WAIT TIME

Mode 2 Status

STORE #	# OF PC'S	DOWNLOAD START TIME	WINDOW	DOWNLOAD CUTOFF
0	0	12:00:00 AM		12:00:00 AM
1	26	12:00:00	AM	00:00:00
				12:00:00
				AM

FUNCTION KEYS: F1 HELP, F2 MENU, F3 RETAIL CUST, F4 COMM CUST, F5 EDIT, F6 CATALOG, F7 NEW INVOICE, F8 PART ENTRY, F9 UPDATE, F10 SHELF SRCING, F11 WINDOWS, F12 INTERCHANGE

Selection Descriptions

Selection	Description
<i>Auto Populate Options</i>	
INTERVALS OF / MINUTES	Indicates the user-defined number of minutes that the program uses to start each Master download to each store. The program calculates the number of PCs divided into 24 hours to determine the length of time allowed between each store's download.
AUTO POPULATE	Populates the <i>Mode 2 Status</i> grid with the download and cutoff times for each store. The Download Start Time for each store uses the Beginning At time for the first store and times using the Intervals Of length of time.

Selection	Description
BEGINNING AT	Indicates the user-defined time that the Master begins the pulling data from the server.
CUTOFF AT	Indicates the user-defined time that the Master stops pulling data from the server.
RECONNECTION ATTEMPTS	Indicates the number of times the program will try to reconnect to the database after losing connectivity.
WAIT TIME	Indicates the delay between Reconnection Attempts. Time is entered in seconds, up to 99 seconds.
<i>Mode 2 Status Grid</i>	
STORE	Indicates the number of each store within the enterprise. The program updates and maintains the information in this column.
# OF PCs	Indicates the number of PCs in each store. The program updates and maintains the information in this column.
DOWNLOAD START TIME	Indicates the time that the download begins for each store.
WINDOW	Indicates the length of time between the Download Start Time and the Download Cutoff Time.
DOWNLOAD CUTOFF	Indicates the time that the download concludes for each store.
MODE 2 MONITOR	Displays the MODE 2 MONITOR screen.

Mode 2 Status

Mode 2 download time must be configured separately for each store. The *Mode 2 Status* grid is used to set up the download times for each store. The user can either manually enter and edit the time for each store or set up all stores at one time by auto populating the grid using the *Auto Populate Options* fields and clicking AUTO POPULATE.

Within the designated Download Start Time and Download Cutoff Time window, the Slave checks the Master for updated data every five minutes. Once updated data is received, the Slave continues to check the Master every hour up to the designated Download Cutoff Time. The Slave discontinues checking the Master when the window expires. The download attempt resumes when the designated Download Start Time and Download Cutoff Time window re-initiates.

3.3. Mode 2 Monitor Screen

The MODE 2 MONITOR screen is used to view errors and possible error conditions of PCs that are utilizing Mode 2 processing. This information is also used for corporate tracking. Security permission controls access. Mode 2 monitoring is not performed while in Mode 2.

Access the MODE 2 MONITOR screen from Menu, Controls, System, Mode 2, Mode 2 Monitor.

Selection Descriptions

Selection	Description
<i>Select Locations</i>	Displays all available locations for the enterprise and is viewed based on Security permissions. By default, all stores are selected. Stores can be selected or unselected individually, or can all be selected or unselected by checking or unchecking the top checkbox.
STORE #	Indicates the store number of the store that is set up for Mode 2. The checkbox to the left of the column heading enables the user to select or deselect all locations in the <i>Mode 2 Status</i> grid. The checkbox to the left of individual Store # in the <i>Select Locations</i> grid allows the user to select or deselect individual stores that will display in the <i>Mode 2 Status</i> grid.
STORE NAME	Indicates the store name associated with the store number.

Selection	Description
SHOW FAIL ONLY	Displays only the PCs in the selected locations with a Fail status, when checked. When unchecked, displays all PCs for the selected store(s) and their current status, regardless of Success or Fail status. Defaults to show Fail only.
<i>Mode 2 Status Grid</i> – Allows a store to quickly and easily view the download status of each PC in the store and allows corporate to view the status of each PC in the enterprise.	
TERMINAL NAME	Displays the Windows computer name.
LOC	Displays the location of the PC.
PC #	Displays the PC's Device Number.
TYPE	Indicates if the PC is a Master or Slave.
LAST DOWNLOAD	Indicates the last date and time that the PC was updated with data from either the server, if the PC is a Master, or the Master, if the PC is a Slave.
STATUS	Indicates the status of the last download. Options are: - SUCCESS - FAILURE
LAST OFFLINE	Indicates the last date and time the PC went into Mode 2. The data is recorded in Mode 2 and uploaded when back online.
# REC UPLOADED	Indicates the number of records that were uploaded the last time the PC went back online from Mode 2. The data is recorded in Mode 2 and uploaded when back online.
LAST UPLOAD STATUS	Indicates the status of the last upload. Options are: - SUCCESS - FAILURE - RUNNING
<i>Failure Message Grid</i> – When a download to a Master, download to a Slave or upload from Mode 2 does not complete, an error is logged to the Failure Messages. These messages can be viewed from any PC that has the program installed and has access to the central database. These Failure Messages display in the <i>Failure Message</i> grid. The most recent Failure Message displays at the top of the list in the grid. The status of each upload and download attempt overwrites the previous status. Errors that result from a download or upload, regardless of the current status, display in the <i>Failure Message</i> grid to alert the user that the download/upload succeeded, but only after multiple attempts. The <i>Failure Message</i> grid displays the Date/Time of the failure, Store #, PC # and Failure Reason. Failure Messages are uploaded to the System Messages. When a Failure Message is double-clicked, the System Messages with that failure displays.	
DATE / TIME	Indicates the date and time of the failure.

Selection	Description
STORE #	Indicates the store that experienced the failure.
PC #	Indicates the PC that experienced the failure.
FAILURE REASON	Indicates the reason for the failure. For example, 'Download to Master did not complete', 'Could not access Master', and XX# Records did not upload'.
FULL SCREEN	Expands the grid to the display additional failure messages.

The MODE 2 MONITOR screen displays the current store only with the *Select Locations* grid grayed or hidden, or all stores with the *Select Locations* grid active, based on Security permission.

3.4. Database Reconnection

3.4.1. Automated Recovery

Mode 2 Upload when Continuing to Work

The program checks for connections to the database based on the Reconnection Attempts and Wait Time information established in the MODE 2 DATA CENTER SETUP screen. When connection is established, the program prompts the user with the message, 'Do you want to upload Mode 2 Data? The program is back online'. To upload Mode 2 data, click Yes. A pop-up displays that shows the progress of the update. The user cannot continue working until the upload is completed. When the upload is completed, each PC logs the date and time of the successful completion of the upload. When the user does not want to upload the Mode 2 data, click No. The user is back online and no upload is performed until the user logs out or exits the application.

Mode 2 Upload when Logging Out and Exiting the Application

The GENMODE2FRCUPLDONLGO appswitch determines if Mode 2 transactions are forced to be uploaded at Logout/Exit. When set to force upload, the application automatically uploads the transactions.

The following procedures ensure the Mode 2 transactions are uploaded in a timely basis and are reflected in the appropriate daily or monthly reports.

Procedure to Upload Mode 2 Data at Logout after Re-establishing Network Connection and Bringing Application Back Online

Note: The network connection is re-established (terminal icon located in right screen border turns green) and the M2 icon, which displays over the terminal icon when in Mode 2, does not display indicating the application is not in Mode 2.

To upload Mode 2 data at logout after the network connection has been re-established and the application is back online, follow the steps below:

1. Click No when the network connection is re-established and a pop-up displays asking if the user wants to upload the records.
A series of pop-ups display about being back online.
2. Click LOGOUT, the X icon on the border or the CLOSE button.
3. Click Yes when asked if you are sure you want to close.
The UPLOADING MODE 2 DATA pop-up displays stating, 'Mode 2 data uploading...Application will close upon upload completion. Please do not reboot or turn off your computer until this process completes'.

Procedure to Upload Mode 2 Data at Logout after Re-establishing Network Connection Without Bringing Application Back Online

To upload Mode 2 data at logout after the network connection has been re-established but the application has not been brought back online, follow the steps below:

Note: The network connection is re-established (terminal icon located in right screen border turns green) and the M2 icon, which displays over the terminal icon, indicates that the application is still in Mode 2.

1. Click LOGOUT, the X icon on the border or the CLOSE button.
A pop-up displays after the user confirms that he wishes to Logout/Exit stating, 'Your database connection has been re-established. Mode 2 data will now be uploaded. Please do not reboot or turn off your computer until this process completes.'
2. Click OK.
The UPLOADING MODE 2 DATA pop-up displays. (The pop-up displays automatically if the user does not click OK within a short time.) When completed, pop-ups display stating, 'MODE 2 data upload complete' and 'You are back online'. The LOGON screen displays or the application closes.

3.4.2. Validate Upload

After completing transactions in Mode 2 and reconnecting to the database, validate that all Mode 2 transaction information uploaded to the database.

To validate the uploaded data:

- From the LISA TRANSACTIONS screen, check for the invoices created while in Mode 2.
- From the INVOICE screen, click INVOICE IMAGE and select an invoice created while in Mode 2.
- From the PART LEDGER REPORT screen, check for the parts sold while in Mode 2.
- From the MAIN ACCOUNT ENTRY screen, verify that the available credit changed by the price of the parts sold to the account while in Mode 2.
- From the MAIN PART ENTRY screen, enter the number of the part sold while in Mode 2 and check if the Part Quantity Available changed.
- Check the Invoice Journal table for information on invoices created while in Mode 2.
- Print an invoice that was created in Mode 2 and verify that the invoice has been given a 'real' invoice number.

4. MODE 2 SETUP PROCEDURES

4.1. Set Up Master

To set up PC configuration to MASTER, follow the steps below:

1. From the Menu, select PC Setup, Terminal Setup.
The TERMINAL SETUP screen displays.
2. Click the MASTER checkbox to set the PC to MASTER.
3. Specify the WORKING DIRECTORY.
The default setting creates a folder in C:\ProgramData\PartsWatch named MODE2WORK.
4. Specify the POST DIRECTORY.
The default setting creates a folder in C:\ProgramData\PartsWatch named MODE2POST.
5. Click Start, My Computer, C:\ProgramData\PartsWatch.
6. Right-click the MODE2POST folder.
7. Click on Sharing and Security.
8. Click the Share this folder option.
9. Click Apply.
10. Specify the SHARE DIRECTORY in the TERMINAL SETUP screen.
The SHARE DIRECTORY is the Windows file sharing name and path. For example: MODE2POST.
11. Click UPD and CLOSE.
All screens close. PC is set to MASTER and will pull data from the database when the specified time is reached.

4.2. Set Up PC Configuration to Slave

To set up PC configuration to SLAVE, follow the steps below:

1. From the Menu, select PC Setup, Terminal Setup.
The TERMINAL SETUP screen displays.
2. Click the SLAVE checkbox to set the PC to SLAVE.
3. Specify the WORKING DIRECTORY.
The default setting creates a folder in C:\ProgramData\PartsWatch named MODE2WORK.
4. Click UPD and CLOSE.
The screen closes. The PC is set to SLAVE and will pull data from the MASTER PC, when needed.

4.3. Configure Mode 2 Data Center Setup

To configure the Mode 2 Data Center Setup, follow the steps below:

1. From the Menu, select Controls, System, Mode 2, Mode 2 Setup.
The MODE 2 DATA CENTER SETUP screen displays.
2. Enter the appropriate values in the *Auto Populate Options* fields.
3. Click AUTO POPULATE to set up all stores simultaneously. Or, choose to edit each store's times individually.
4. Enter the number of reconnection attempts in the RECONNECTION ATTEMPTS field.
5. Enter the waiting time in the WAIT TIME field.
6. Click UPD.
The information is saved.

4.4. View Errors and Possible Error Conditions

To view errors and error conditions, follow the steps below:

1. From the Menu, select Controls, System, Mode 2, Mode 2 Monitor.
The MODE 2 MONITOR screen displays.
2. Select an individual store(s) or all stores to view errors or possible error conditions resulting from Mode 2 processing.
3. Check SHOW FAIL ONLY to display only those stores that with errors.
The MODE 2 MONITOR screen populates with a list of PCs with their Mode 2 statuses and resulting failure messages.

5. INITIATE MODE 2 PROCESSING

To start Mode 2 processing, follow the steps below:

1. Click Yes when the 'Start Mode 2 Processing?' prompt displays.
A prompt displays stating, 'Mode 2 processing is ready, your active screens have been closed'.
2. Click OK.
All open screens are closed, including invoices with unreserved items. All unsaved work is lost. The terminal icon in the right screen border turns red to indicate the database connection has been lost. 'M2' displays in green over the terminal icon when the program is in Mode 2.
3. Click OK.
A message may display. The message content is determined by the task that the user was doing at the time the program goes into Mode 2. The system is unable to complete the task. If the last action was to open a new INVOICE screen, the action completes and the INVOICE screen displays. In all other cases, the SYSTEM INFORMATION screen displays.
4. If necessary, select Invoicing Screen from Menu, Invoicing.
Invoicing is the only menu selection available when in Mode 2.
5. Sell, as usual, within the constraints of Mode 2 functionality.
A pop-up displays when the user clicks a button or tries to access a screen that is not available during Mode 2.
6. To view invoices (both finalized and open) created in Mode 2 while still in Mode 2, click REF in the INVOICE screen.
The EXISTING INVOICE REFS window displays that lists all the invoices. The INVOICE IMAGE button is not available in Mode 2.
7. When connection is re-established but the program is still in Mode 2, a message displays stating, 'Your database connection has been re-established. Would you like to upload Mode 2 data?'
Click Yes.
The uploading meter displays, followed by the message, 'Mode 2 data upload complete'. The reference number, invoice number and date/time for finalizing invoices is established when the invoices are uploaded. Open invoices are assigned a new reference number.
8. Click OK.
The message, 'You are back online', displays.
9. Click Yes.
10. To view finalized invoices created in Mode 2 after the Mode 2 upload, click VIEW MODE 2 ONLY in the INVOICE IMAGE window in the INVOICE screen.

To view open invoices in Mode 2 after the Mode 2 upload, click REF to display the EXISTING INVOICE REFS window.
A list of Mode 2 invoices displays.