



Overview

The Point-Of-Sale (POS) Business Application accounting software is designed to operate on one or more IBM PC computers each running the Windows operating system.

This POS Business Application provides the following main features:

1. Distributed Encrypted Network Databases
2. System User Password Control
3. Single or Multiple Networked Computer Systems (Server & Client Stations)
4. Point-Of-Sale (POS) Terminal
5. Inventory Control Module
6. Accounts Receivable Module
7. Database Import and Export
8. Database Backup and Restore

What sets this product apart from other POS Systems

The principal features which set this POS Business Application Software apart from other POS accounting software systems are the following:

- Distributed databases which allow POS transactions even when the server or network fails.
- Quicker Data Access via Calendar Indexed Databases
- The Re-Posting of POS Sales transactions if database recovery is required
- Non-Destructive Database Backup and Restore Operations

Distributed Encrypted Network Databases

Other POS Accounting Systems

The main restriction with many Point-Of-Sale systems is their reliance on both the network and the Server computer system. These POS systems locate their central database on the server computer and the client computer systems must access this database via the network in order to perform any Point-Of-Sale operations.

A major cause for concern with users of such systems is with regard to what would happen if the network or the server were to fail. If either of these failures were to occur then the client computer systems would not be able to access the central database and would therefore not be able to perform Point-Of-Sale transactions. In this situation, the counter staff would then be required to make hand written sales receipts and refer to previously printed (and perhaps outdated) price lists. This method of operation is tedious, slow and can easily generate errors.

Later, when the Server and/or network are once more operational, the handwritten sale transactions have to be manually entered into the accounting system – another time consuming operation which is also fraught with possible errors.

The POS Business Application

This POS Business Application system, however, is designed to minimize these conditions. It uses a distributed encrypted database and is therefore not totally reliant on the network nor on the Server. Although our Server contains the central database, any changes to this database are passed on to database copies which reside on each Client computer system. If the Server or the network were to subsequently fail, each POS Business Application Client computer system would still contain copies of the latest relevant inventory and accounts receivable databases and may still be used to perform Point-Of-Sale transactions with the current inventory stock part numbers and prices.

Once the Server and network are once more operational, the transaction sales data collected by each POS terminal may then be posted to the Server thereby updating the central database. All Server and Client databases are encrypted to provide basic system security. For higher level security, the file system encryption features of Windows XP Professional may be utilized.

Calendar Indexed Databases

Other POS Accounting Systems

In general, accounting systems are very responsive when the system is first installed. As the days and months progress, more and more data history is created and the system can start to get sluggish. After several years of data history has been collected, the system can take a long time to scan an entire database in order to access and obtain specific information pertaining to a report.

In order to minimize this effect, some accounting systems impose database size limitations which restrict the amount of data history which may be retained.

The POS Business Application

Firstly, this POS Business Application has no size limitation regarding the number of years of data history which may be retained. Also, in order to have direct, fast, access to sales history information, the POS Business Application Sales History database has been indexed by calendar year and month sub-directories. This means that when searching for data pertaining to a specific year and month, the data file for that calendar period can be quickly accessed and the information speedily obtained.

POS Sales Transaction Re-Posting

Other POS Accounting Systems

Most POS accounting systems use the Server to contain the central accounting databases. This database may also include the Point-Of-Sale transactions for each POS terminal. At the end of a business period, these POS sales transactions are posted to the sales history database and certain inventory database parameters (eg. the “On Hand” quantity) are updated. Once this posting operation has completed, the original information is then deleted since it is no longer required.

Normally this approach is successful, except under conditions when the database has had to be recovered due to system related problems.

If the database is to be recovered, the current day’s posted (and un-posted) sales transactions for each POS Terminal may be deleted during the server backup restoration process. The sales data for the period between the backup date and the current date will then have to be manually re-entered in order to bring the database up to date. This is another time consuming operation which is also fraught with possible errors.

The POS Business Application

This POS Business Application, however, keeps each POS terminal’s sales information on local files within each respective computer system. At the end of the business period, the collected sales data is posted to the server and the sales history and Inventory database updated.

On our system, the sales data is never deleted. It is placed into a local database directory and given a unique name which includes the date and time when the posting operation occurred. If a Server related problem were to occur at this point and a prior database was to be restored, the intervening sales data still exists and can simply be re-posted thereby quickly bringing the Server central database up to date. No manual re-entry of POS Sales transaction data would normally be required.

During the re-posting operation, the POS Business Application software merges the new information with the currently existing information. Since Calendar Indexed Databases are used, only the sales history file for the re-posting day in question has to be scanned. The merging process ensures that no duplicate sales entries are stored in the database and that subsequent databases operations (ie. adjustment of the Inventory On-Hand quantity, etc.) only occur once. If multiple re-posting operations were to be performed in error using the same file, no harm would result to the database.

Other POS systems may not allow re-posting since the merging process would involve the scanning of the entire history database – a lengthy, time-consuming operation.

Database Backup and Database Restore

Other POS Accounting Systems

During Database Backup operations, some POS Accounting systems use the same backup storage file name and/or location, which may result in the previous backup file being overwritten.

During Database Restore operations the POS Accounting system's active directory database is overwritten. A healthy database can easily be destroyed if an incorrect restore operation was performed.

The POS Business Application

This POS Business Application Database Backup operation allows the various databases to be converted to a single backup file for transfer to removable media (eg. removable hard drive, DVD-ROM, etc.). The system generated backup file name includes the current date and time and is therefore easily identified as shown below:

For example: `POS_Database_Backup 2006-11-03 11-15-21.BAK`

Each database backup operation will create a new unique backup file and will never overwrite any previous backup file.

The POS Business Application Database Restore operation takes a specified backup file and expands it to create the required system directories and databases. Prior to performing the Database Restoration, the previously existing database directory is renamed and is therefore not overwritten during this process. The Database Restore operation also has the capability of restoring from a previous database directory.

The default Database Backup and Database Restore operations do not erase or modify any existing database files, therefore the user is never faced with the situation where the system database could be overwritten due to operator error. If the user wishes to overwrite the active database directory during a restore operation, an override option is provided.

Inventory Control

The Inventory Control module allows the user to edit and/or view the various inventory items. Inventory items are identified by a stock number and by one or more aliases. Each inventory item can have a four line description and can be associated as belonging to a specific category, brand and type. List and Markup pricing methods permit the item sale price to be defined as either a fixed price or as a percentage markup based on the last cost. Quantity price breaks may also be defined. Primary and alternate vendor information may be stored with the inventory item as an aid when ordering additional inventory.

The screenshot displays the 'Inventory' application window with the following details:

- System:** Database, Printer, Manuals, Help
- Stock | Report** (Tabs)
- General | Detailed** (Sub-tabs)
- Display Item:** Stock Number: 1011A, Pricing Method: List, Status: Active
- Description:** STEAM LOCOMOTIVE BR 89
- Break Table:**

Qty	Break	Markup %	Sale Price
Qty1:			2455.40000
Qty2:	2.0000		2350.00000
Qty3:	3.0000		2250.00000
Qty4:	4.0000		2150.00000
Qty5:	5.0000		1995.00000
- Part Information:** Part Category: STEAM, Part Brand: FLEISCHMANN, Part Type: LOCOMOTIVE
- Unit Information:** Purchase Unit: EA, Unit Pack: EA, Buy Conversion: 1.00000000, Sell Conversion: 1.00000000
- Aliases:** 45575010115
- Costs and Dates:** Last Cost: 180.000000, Last Sold: 06/01/2006, Last Invoice Number: V001-00035, Last Purchased: 12/29/2006, Last Ordered: (empty)
- Inventory Levels:** On Hand: 5.0000, Committed: 0.0000, On Order: 0.0000, Back Order: 0.0000, Min Qty: 2.0000, Max Qty: 15.0000
- Accounting:** GL Account: 9999.99, Taxable: Yes
- Vendor Information:** Primary Vendor: TRIANG, Part#: 1181A, Order#: 25-0098, Lead Time: 30 Days, Last Cost: 172.870000, Order in multiples of: 1, Last Purchased: 04/18/2006
- Edit Functions:** New Item, Save Item, Edit Item, Cancel
- Status Bar:** Date: 1/10/2007, Time: 06:07:46 pm, User: Supervisor, SERVER

The Report section allows a specific report to be selected and generated. Report Parameters may be specified to extract specific groups of inventory items. Multiple nested sorts may be performed to allow the report to be ordered as required.

The following reports are provided which may be viewed and/or printed as required:

1. Quick Stock List Report
2. Price Book Report
3. Under Stock Report
4. Over Stock Report
5. Stock Value Report
6. Stocktake Worksheet Report
7. Stock Labels (with Bar Code 39 Generation)

Point-Of-Sale (POS) Terminal

POS Register
System Printer Manuals Help

Sale Details

Sales Person: Steve Reg: 1 Receipt: R001-00160 Invoice: V001-00047 Sale Date: 1/10/2007 Sale Type: Retail (Tax)

Purchase Details

Item	Part Number	Description	Unit Price	Disc %	Disc Price	Quantity	Extended
1	1011A	STEAM LOCOMOTIVE BR 89	\$2455.40			1.00	\$2455.40
2	3120S	CROSSING	\$202.10			2.00	\$404.20
3	910656P	FLEXIBLE TRACK OO/HO	\$6.00			100.00	\$600.00
4	8100V	BAGGAGE CAR	\$307.50	15.00%	\$261.37	-1.00	\$-261.37
5	9108ER	STRAIGHT CONNECTION RAIL	\$147.90			1.00	\$147.90

Purchase Summary

Sub-Total: 3346.13
Discount: 2.50 % 75.19
Total Purchases: 3270.94
7.75% Sales Tax: 253.50
Total Due: 3524.44

Amount Tendered

Cash: 30.00
Check: 500.00
Credit Card: 2000.00
Gift Certificate: 1000.00
Account: 0.00

Amount Due to Customer

Cash: \$5.56

Buttons: Sale Completed, Create Quote, Recall Sale, Recall Quote, New Sale, Special Instructions, Print Receipt, Scanner - Manual

Date: 1/10/2007 Time: 06:12:38 pm User: SUPERVISOR SERVER

Note: Various options are included to control the manner in which purchase discounts may be applied.

- For example:
1. Account customers may be permitted or prevented from obtaining price breaks.
 2. The total purchase discount may be permitted or prevented from being applied to price break items.
 3. The total purchase discount may be permitted or prevented from being applied to discounted line items.

In the above example, the options “Total Discount Applies to Price Break Items” and “Total Discount Applies to Discounted Line Items” are both set to False. This prevents the price break item (ie. the Flexible Track OO/HO) and the returned “Baggage Car” from receiving the overall 2.5% discount which is why the discount amount is \$75.19 instead of \$83.65

The POS Terminal permits the user to perform cash or account sale transactions as well as creating quote statements. Cash or account sale transactions are recorded and transferred to the Server at the end of the business day. The POS Terminal permits the use of a bar code scanner during sales line item entry. Only one listing of each purchased product is displayed on the screen and on the receipt. When an additional, previously entered product is input, the previously entered product quantity is adjusted accordingly. This helps to visually ensure that the correct number of items are charged to the customer.

If the network or Server were to suddenly fail, all Client POS Terminals would still continue to operate, thereby allowing the current sale to be completed and also allowing subsequent sales to be performed.

The user may identify which system printers are to be used for reports, account statements and till slips. An ESC/POS till slip printer interface is also provided.

The following POS Terminal features are available:

1. Price breaks for quantity purchases
2. Transaction line item price modification (specify price or discount percentage)
3. Overall discount for items not previously discounted
4. Indicate special handling instructions (ie. delivery information appended to receipt)

Sales data is stored in a hierarchical directory file structure which permits fast and efficient access to database records. Any number of sales transactions may be stored without adversely affecting the system performance. Previous Sales may be accessed and viewed. Quotes may be created and printed. Quotes may be converted into a sale without the need to re-enter purchase information.

The following POS Reports are provided:

1. Register Summary Report
2. Register Full Report (identify sales transactions)
3. Register Year Report (spreadsheet providing register totals for each day of the year)
4. Sales Tax Report

Accounts Receivable Module

The Accounts Receivable module permits the user to identify various customers who may purchase items on credit. The customer's name and address, credit limit, purchase terms and tax code may be specified. Customer Job Names and authorization information may also be defined – this information may be viewed during a POS sale and is used to identify which customer employee may purchase against which specific job. Various charge, account, credit and aging statistics are collected and may be viewed. A Transaction / Payment history can be viewed and Payments / Adjustments can be applied to the account.

The screenshot displays the 'Accounts Receivable' software interface. At the top, there is a menu bar with 'System', 'Database', 'Printer', 'Manuals', and 'Help'. Below this is a 'Customer' tab and a 'Reports' sub-tab. The main area is titled 'Display Customer' and contains several fields for customer information:

- Customer ID:** AJONES (dropdown)
- Account Type:** Billing Account (dropdown)
- Status:** Inactive (dropdown)
- Customer / Company Name:** ANDREW JONES (dropdown)
- GL Account:** 1400.00
- Created:** 01/01/2006
- Contact Person:** ANDREW JONES
- Balance Forward:** 0.00
- Terms Code:** 30 DAYS (dropdown)
- Office Phone:** 555-111-2121, **Ext:** (empty)
- Home Phone:** (empty), **Ext:** (empty)
- Cell Phone:** 555-090-8898
- Credit Limit:** 1200.00
- Last Charge Date:** 01/04/2007
- Fax:** 555-090-8899
- Amount Due:** 12793.82
- Tax Code:** STATE TAX (dropdown)

On the right side, there is an 'Edit Functions' box with buttons for 'New Item', 'Save Item', 'Edit Item', and 'Cancel'. Below the main form is a navigation bar with tabs: 'Address', 'Job Names / Authorizations', 'Statistics', 'History', 'Payments / Adjustments', and 'Notes'. The 'Address' tab is active, showing 'Bill To' and 'Ship To' information:

- Bill To:** Name: ANDREW JONES, Address 1: 121 ELOFF STREET, Address 2: (empty), City: ANYTOWN, State: CA, Zip: 90000
- Ship To:** Name: J. JONES, Address 1: PLOT 85, Address 2: (empty), City: ANYTOWN, State: CA, Zip: 90001

At the bottom, there are fields for 'Email' and 'Internet WWW Address'. The status bar at the very bottom shows 'Date: 1/10/2007', 'Time: 06:05:38 pm', 'User: Supervisor', and 'SERVER'.

The following Accounts Receivable reports are available:

1. Customer Summary Report
2. Customer Full Report
3. Address Labels
4. Aged Analysis Report
5. Statements Report

System User Password Control

The POS Business Application software provides user login and password control to permit user access only to authorized system features. During POS Sales operations unauthorized users require a supervisor to enter an override password in order to change discount prices or select higher level features.

Single or Multiple Networked Computer Systems (Server / Clients)

The POS Business Application may operate either on a single IBM PC compatible computer system (Server) or on multiple networked IBM PC compatible computers (Server plus Clients).

Database Import / Export

The Database Import Section allows existing data from a different accounting system to be imported into the POS Business Application. Imported data must be in Comma Separated Variable (CSV) format. A conversion utility has also been provided to convert dBASE files to CSV format. The Database Import feature permits the user to specify the name/location of specific CSV variables to be imported as well as their destination position within the new database structure. Multiple databases can be combined during the import process into a single destination database.

The Database Export Section permits exportation of POS Business Application database data to CSV files.

System Requirements (Server / Client PC Computer Systems)

The Server / Client PC Computer Systems may use any one of the following operating systems:

1. Windows Vista
2. Windows XP (Professional or Home Editions, or later versions)
3. Windows 2000 (or later versions)
4. Windows 2000, 2003 Server (or later versions)

Note: The Server PC Computer System need not use a Windows Server Operating System unless high secure network access is required.

Hardware Requirements

The following minimum IBM PC compatible computer features are required:

- Pentium III 1GHz
- 512MB RAM
- LAN Network Interface
- Video Monitor (800 x 600 minimum)
- Mouse
- Keyboard

The POS Business Application program interface screens have been designed to fit on a monitor set to 800 x 600 pixel resolution. This permits the image to fill the entire screen thereby allowing the text to be easily read by both the customer and the counter staff.

Note: A DVD R/W device would be recommended for storing Server Database Backups.

Server / Client Operation

In a single computer environment, the computer will be configured as a POS Business Application Server.

In a multiple networked computer environment, one computer will be configured as a POS Business Application Server and the remaining computers will be configured as POS Business Application Clients.

The POS Business Application Server can execute the following modules:

1. Inventory Module
2. Point-Of-Sale Module
3. Accounts Receivable Module

POS Business Application Demo Version:

A demo version of the POS Business Application may be downloaded from the Quantum Blue Technology web site. This is a fully operational version with a trial period limitation. The demo version may be converted into a full version with the purchase of a POS Business Application software license.

POS Business Application Software License:

A POS Business Application software license may be purchased – please contact us or refer to the Quantum Blue Technology web site for details. This is a fixed price license and permits the user to utilize a system comprised of a POS Business Application “Server” with up to 99 associated “Client” computer systems.

Due to ongoing development, this brochure may be modified at any time.

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